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Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

AMD Renoir versus Intel Ice Lake Linux benchmarks by Michael Larabel.

Automated Executive Summary

Ryzen 7 4700U had the most wins, coming in first place for 87% of the tests.

Based on the geometric mean of all complete results, the fastest (Ryzen 7 4700U) was 1.724x the speed of the slowest (Core i7 1065G7).

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

OpenArena (Resolution: 1920 x 1080 - Total Frame Time) at 19.5x

GpuTest (Test: Triangle - Resolution: 1920 x 1080 - Mode: Fullscreen) at 4.663x

Stress-NG (Test: Crypto) at 4.398x

C-Ray (Total Time - 4K, 16 Rays Per Pixel) at 4.028x

toyBrot Fractal Generator (Implementation: C++ Threads) at 3.73x

Stress-NG (Test: Vector Math) at 3.55x

toyBrot Fractal Generator (Implementation: TBB) at 3.463x

Basis Universal (Settings: UASTC Level 3) at 3.459x

toyBrot Fractal Generator (Implementation: C++ Tasks) at 3.451x

Basis Universal (Settings: UASTC Level 2) at 3.442x.

Test Systems:

Ryzen 7 4700U

Processor: AMD Ryzen 7 4700U @ 2.00GHz (8 Cores), Motherboard: LENOVO LNVNB161216 (DTCN18WWV1.04 BIOS), Chipset: AMD Renoir Root Complex, Memory: 16GB, Disk: 512GB SAMSUNG MZALQ512HALU-000L2, Graphics: AMD Renoir 512MB (1600/400MHz), Audio: AMD Device 1637, Network: Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.7.0-999-generic (x86_64) 20200511, Desktop: GNOME Shell 3.36.1, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 4.6 Mesa 20.0.4 (LLVM 9.0.1), Vulkan: 1.2.128, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

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

Processor Notes: Scaling Governor: acpi-cpufreq ondemand - CPU Microcode: 0x8600102

Python Notes: Python 3.8.2

Security Notes: i1lb_multithit: Not affected + I1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retrpeline IPBP: conditional IBRS_FW STIBP: disabled RSB filling + tsx_async_abort: Not affected

Core i7 1065G7

Processor: Intel Core i7-1065G7 @ 3.90GHz (4 Cores / 8 Threads), Motherboard: Dell 06CDVY (1.0.9 BIOS), Chipset: Intel Device 34ef, Memory: 16GB, Disk: KBG40ZPZ512G NVMe TOSHIBA 512GB, Graphics: Intel Iris Plus G7 3GB (1100MHz), Audio: Realtek ALC289, Network: Intel Killer Wi-Fi 6 AX1650i 160MHz

OS: Ubuntu 20.04, Kernel: 5.7.0-999-generic (x86_64) 20200511, Desktop: GNOME Shell 3.36.1, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 4.6 Mesa 20.0.4, Vulkan: 1.2.131, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

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

Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x78

Java Notes: OpenJDK Runtime Environment (build 11.0.7+10-post-Ubuntu-3ubuntu1)

Python Notes: Python 3.8.2

Security Notes: i1lb_multithit KVM: Mitigation of Split huge pages + I1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IPBP: conditional RSB filling + tsx_async_abort: Not affected

	Ryzen 7 4700U	Core i7 1065G7
C-Blosc - blosclz (MB/s)	4997	6402
Normalized	78.04%	100%
Standard Deviation	0.4%	0.3%
Crypto++ - All Algorithms (MiB/s)	1688	1386
Normalized	100%	82.08%
Standard Deviation	0.2%	1.6%
Crypto++ - Keyed Algorithms (MiB/s)	671.438599	574.745623
Normalized	100%	85.6%

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	Standard Deviation	0.1%	1%
Crypto++ - Unkeyed Algorithms (MiB/s)	351.533162	311.257334	
Normalized	100%	88.54%	
Standard Deviation	0.1%	0.8%	
Crypto++ - I.E.C.P.K.A (MiB/s)	5155	4071	
Normalized	100%	78.97%	
Standard Deviation	0%	0.2%	
NAS Parallel Benchmarks - BT.C (Mop/s)	12814	7412	
Normalized	100%	57.85%	
Standard Deviation	2.8%	0.1%	
NAS Parallel Benchmarks - CG.C (Mop/s)	4657	1803	
Normalized	100%	38.7%	
Standard Deviation	1.4%	0.3%	
NAS Parallel Benchmarks - EP.C (Mop/s)	572.38	262.68	
Normalized	100%	45.89%	
Standard Deviation	0.3%	0.3%	
NAS Parallel Benchmarks - EP.D (Mop/s)	565.92	258.86	
Normalized	100%	45.74%	
Standard Deviation	0.1%	0.2%	
NAS Parallel Benchmarks - FT.C (Mop/s)	8150	4462	
Normalized	100%	54.75%	
Standard Deviation	0.2%	0.1%	
NAS Parallel Benchmarks - LU.C (Mop/s)	17812	8502	
Normalized	100%	47.73%	
Standard Deviation	0.1%	0.2%	
NAS Parallel Benchmarks - MG.C (Mop/s)	6308	5534	
Normalized	100%	87.72%	
Standard Deviation	0.1%	0.2%	
NAS Parallel Benchmarks - SP.B (Mop/s)	3577	3814	
Normalized	93.78%	100%	
Standard Deviation	0.1%	0.7%	
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	3.66325	10.30543	
Normalized	100%	35.55%	
Standard Deviation	0.2%	0.1%	
toyBrot Fractal Generator - TBB (ms)	147456	510668	
Normalized	100%	28.88%	
Standard Deviation	0.2%	0.3%	
toyBrot Fractal Generator - OpenMP (ms)	159542	497214	
Normalized	100%	32.09%	
Standard Deviation	0%	0.1%	
toyBrot Fractal Generator - C++ Tasks (ms)	147210	507997	
Normalized	100%	28.98%	
Standard Deviation	0%	0.3%	
toyBrot Fractal Generator - C++ Threads (ms)	147637	550754	
Normalized	100%	26.81%	
Standard Deviation	0%	0.4%	
Izbench - XZ 0 - Compression (MB/s)	41	35	
Normalized	100%	85.37%	
Izbench - XZ 0 - Decompression (MB/s)	125	98	
Normalized	100%	78.4%	
Izbench - Zstd 1 - Compression (MB/s)	529	413	
Normalized	100%	78.07%	
Standard Deviation		0.4%	
Izbench - Zstd 1 - Decompression (MB/s)	1434	1089	
Normalized	100%	75.94%	

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	Standard Deviation	0.1%	0.6%
Izbench - Zstd 8 - Compression (MB/s)	75	81	
	Normalized	92.59%	100%
	Standard Deviation	1.3%	
Izbench - Zstd 8 - Decompression (MB/s)	1571	1177	
	Normalized	100%	74.92%
	Standard Deviation	0.3%	0.1%
Izbench - Crush 0 - Compression (MB/s)	75	83	
	Normalized	90.36%	100%
	Standard Deviation		0.7%
Izbench - Crush 0 - Decompression (MB/s)	485	386	
	Normalized	100%	79.59%
	Standard Deviation		1.1%
Izbench - Brotli 0 - Compression (MB/s)	514	409	
	Normalized	100%	79.57%
	Standard Deviation	0.3%	0.3%
Izbench - Brotli 0 - Decompression (MB/s)	583	478	
	Normalized	100%	81.99%
	Standard Deviation	0.6%	
Izbench - Brotli 2 - Compression (MB/s)	202	160	
	Normalized	100%	79.21%
	Standard Deviation	0.6%	
Izbench - Brotli 2 - Decompression (MB/s)	664	569	
	Normalized	100%	85.69%
	Standard Deviation	0.6%	0.4%
Izbench - Libdeflate 1 - Compression (MB/s)	253	205	
	Normalized	100%	81.03%
	Standard Deviation	0.4%	
Izbench - Libdeflate 1 - Decompression (MB/s)	1198	874	
	Normalized	100%	72.95%
	Standard Deviation	0.2%	0.3%
Java Gradle Build - Reactor (sec)	223.950	407.353	
	Normalized	100%	54.98%
	Standard Deviation	3.1%	6.4%
Botan - KASUMI (MiB/s)	85.948	83.929	
	Normalized	100%	97.65%
	Standard Deviation	0.1%	1.2%
Botan - Twofish (MiB/s)	259.569	296.022	
	Normalized	87.69%	100%
	Standard Deviation	0.1%	2%
Botan - Blowfish (MiB/s)	296.296	369.437	
	Normalized	80.2%	100%
	Standard Deviation	0%	1.4%
Botan - CAST-256 (MiB/s)	125.248	125.876	
	Normalized	99.5%	100%
	Standard Deviation	0%	1.6%
dav1d - Chimera 1080p (FPS)	234.46	127.84	
	Normalized	100%	54.53%
	Standard Deviation	2.1%	1.6%
dav1d - Summer Nature 4K (FPS)	81.11	30.45	
	Normalized	100%	37.54%
	Standard Deviation	0.2%	0.5%
dav1d - S.N.1 (FPS)	233.89	118.70	
	Normalized	100%	50.75%
	Standard Deviation	0.6%	1.5%

dav1d - C.1.1.b (FPS)	78.10	33.22
Normalized	100%	42.54%
Standard Deviation	0.2%	0.4%
Embree - Pathtracer - Crown (FPS)	4.8146	1.6033
Normalized	100%	33.3%
Standard Deviation	0.4%	0.3%
Embree - Pathtracer ISPC - Crown (FPS)	4.6517	1.7872
Normalized	100%	38.42%
Standard Deviation	0.1%	0.1%
Embree - Pathtracer - Asian Dragon (FPS)	5.6838	1.9709
Normalized	100%	34.68%
Standard Deviation	0.9%	0.3%
Embree - Pathtracer - Asian Dragon Obj (FPS)	5.2000	1.7984
Normalized	100%	34.58%
Standard Deviation	0.1%	0.5%
Embree - Pathtracer ISPC - Asian Dragon (FPS)	5.7313	2.2369
Normalized	100%	39.03%
Standard Deviation	0.5%	0.2%
Embree - Pathtracer ISPC - Asian Dragon Obj (FPS)	5.1089	2.6588
Normalized	100%	52.04%
Standard Deviation	0.1%	13.7%
SVT-VP9 - VMAF Optimized - Bosphorus 1080p (FPS)	87.61	45.02
Normalized	100%	51.39%
Standard Deviation	1.2%	3.4%
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS)	90.76	45.27
Normalized	100%	49.88%
Standard Deviation	0.3%	5.5%
SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS)	75.36	33.42
Normalized	100%	44.35%
Standard Deviation	0.8%	4.2%
Intel Open Image Denoise - Memorial (Images / Sec)	5.23	3.48
Normalized	100%	66.54%
Standard Deviation	1.7%	2.2%
OpenVKL - vkIBenchmark (Items / Sec)	72.17	57.00
Normalized	100%	78.98%
Standard Deviation	0.6%	0.8%
LuxCoreRender - DLSC (M samples/sec)	0.89	0.30
Normalized	100%	33.71%
Standard Deviation	0.3%	2.9%
LuxCoreRender - R.C.a.P (M samples/sec)	0.99	0.33
Normalized	100%	33.33%
Standard Deviation	0.3%	2.9%
7-Zip Compression - C.S.T (MIPS)	27659	13369
Normalized	100%	48.34%
Standard Deviation	0.5%	3.2%
Timed Linux Kernel Compilation - Time To Compile	156.474	443.144
Normalized	100%	35.31%
Standard Deviation	0.9%	0.5%
Timed LLVM Compilation - Time To Compile (sec)	1224	3375
Normalized	100%	36.26%
Standard Deviation	0.1%	0.2%
YafaRay - T.T.F.S.S (sec)	268.563	858.778
Normalized	100%	31.27%
Standard Deviation	0.4%	1%
GROMACS - Water Benchmark (Ns/Day)	0.525	0.266

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Normalized	100%	50.67%
Standard Deviation	0.3%	0.2%
Basis Universal - ETC1S (sec)	59.010	118.931
Normalized	100%	49.62%
Standard Deviation	0.2%	2.2%
Basis Universal - UASTC Level 0 (sec)	8.280	15.524
Normalized	100%	53.34%
Standard Deviation	0.3%	0.3%
Basis Universal - UASTC Level 2 (sec)	47.137	162.241
Normalized	100%	29.05%
Standard Deviation	3.9%	0.1%
Basis Universal - UASTC Level 3 (sec)	94.679	327.532
Normalized	100%	28.91%
Standard Deviation	0%	0.2%
Basis Universal - U.L.2.R.P.P (sec)	700.908	1591
Normalized	100%	44.05%
Standard Deviation	0.5%	0%
G'MIC - P.I.O.A.3.V.1.T (sec)	19.710	21.908
Normalized	100%	89.97%
Standard Deviation	0.1%	0.9%
Stress-NG - MMAP (Bogo Ops/s)	58.82	20.17
Normalized	100%	34.29%
Standard Deviation	0.7%	0.7%
Stress-NG - NUMA (Bogo Ops/s)	117.25	47.92
Normalized	100%	40.87%
Standard Deviation	2.5%	0.1%
Stress-NG - MEMFD (Bogo Ops/s)	232.75	121.04
Normalized	100%	52%
Standard Deviation	0.4%	1%
Stress-NG - Atomic (Bogo Ops/s)	492689	167882
Normalized	100%	34.07%
Standard Deviation	0.1%	2.9%
Stress-NG - Crypto (Bogo Ops/s)	1572	357.32
Normalized	100%	22.74%
Standard Deviation	0.3%	0.2%
Stress-NG - Malloc (Bogo Ops/s)	28091580	12853770
Normalized	100%	45.76%
Standard Deviation	0.1%	1.7%
Stress-NG - Forking (Bogo Ops/s)	36147	17317
Normalized	100%	47.91%
Standard Deviation	1.3%	0.9%
Stress-NG - SENDFILE (Bogo Ops/s)	86886	29575
Normalized	100%	34.04%
Standard Deviation	0.7%	0.3%
Stress-NG - CPU Cache (Bogo Ops/s)	36.95	21.43
Normalized	100%	58%
Standard Deviation	0.6%	1.1%
Stress-NG - CPU Stress (Bogo Ops/s)	2276	820.29
Normalized	100%	36.04%
Standard Deviation	0.2%	0.5%
Stress-NG - Semaphores (Bogo Ops/s)	484137	570155
Normalized	84.91%	100%
Standard Deviation	0.1%	1.8%
Stress-NG - Matrix Math (Bogo Ops/s)	23434	8585
Normalized	100%	36.64%

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	Standard Deviation	1.8%	0.2%
Stress-NG - Vector Math (Bogo Ops/s)	42212	11891	
	Normalized	100%	28.17%
	Standard Deviation	0.6%	0.2%
Stress-NG - Memory Copying (Bogo Ops/s)	868.00	1041	
	Normalized	83.37%	100%
	Standard Deviation	0.2%	0.1%
Stress-NG - Socket Activity (Bogo Ops/s)	2318	1757	
	Normalized	100%	75.78%
	Standard Deviation	1.7%	0.6%
Stress-NG - Context Switching (Bogo Ops/s)	2201519	754892	
	Normalized	100%	34.29%
	Standard Deviation	1.7%	0.3%
Stress-NG - G.C.S.F (Bogo Ops/s)	675941	217768	
	Normalized	100%	32.22%
	Standard Deviation	1%	1%
Stress-NG - G.Q.D.S (Bogo Ops/s)	72.27	26.29	
	Normalized	100%	36.38%
	Standard Deviation	0.9%	0.6%
Stress-NG - S.V.M.P (Bogo Ops/s)	6856635	3627742	
	Normalized	100%	52.91%
	Standard Deviation	8.7%	1.7%
Git - T.T.C.C.G.C (sec)	53.079	65.564	
	Normalized	100%	80.96%
	Standard Deviation	0.2%	1.2%
Milpack Benchmark - scikit_ica (sec)	77.12	119.94	
	Normalized	100%	64.3%
	Standard Deviation	4.7%	1.6%
Milpack Benchmark - scikit_qda (sec)	95.90	185.44	
	Normalized	100%	51.71%
	Standard Deviation	1.5%	0.3%
Milpack Benchmark - scikit_svm (sec)	21.73	30.38	
	Normalized	100%	71.53%
	Standard Deviation	0.4%	0.1%
Milpack Benchmark - scikit_linearridge regression	5.12	9.69	
	Normalized	100%	52.84%
	Standard Deviation	4%	1.5%
ET: Legacy - Renderer2 - 1920 x 1080 (FPS)	139.5	70.2	
	Normalized	100%	50.32%
	Standard Deviation	0.6%	0.2%
OpenArena - 1920 x 1080 (FPS)	120.7	78.3	
	Normalized	100%	64.87%
	Standard Deviation	0.6%	0.3%
Tesseract - 1920 x 1080 (FPS)	125.5715	97.35154	
	Normalized	100%	77.53%
	Standard Deviation	1.4%	2.9%
Xonotic - 1920 x 1080 - Low (FPS)	284.9692587	269.1211033	
	Normalized	100%	94.44%
	Standard Deviation	0.4%	0.7%
Xonotic - 1920 x 1080 - High (FPS)	198.3815553	165.7609328	
	Normalized	100%	83.56%
	Standard Deviation	2%	0.6%
Xonotic - 1920 x 1080 - Ultra (FPS)	165.4308479	83.5365743	
	Normalized	100%	50.5%
	Standard Deviation	0.4%	0.9%

Xonotic - 1920 x 1080 - Ultimate (FPS)	130.4112096	64.6409086
Normalized	100%	49.57%
Standard Deviation	0.3%	0.5%
GpuTest - GiMark - 1920 x 1080 - Fullscreen (Points)	1422	1201
Normalized	100%	84.46%
Standard Deviation	0%	
GpuTest - Plot3D - 1920 x 1080 - Fullscreen (Points)	24127	8818
Normalized	100%	36.55%
Standard Deviation	0.2%	0.2%
GpuTest - Furmark - 1920 x 1080 - Fullscreen (Points)	1128	740
Normalized	100%	65.6%
Standard Deviation	0.2%	0.3%
GpuTest - TessMark - 1920 x 1080 - Fullscreen	3908	2523
Normalized	100%	64.56%
Standard Deviation	0.1%	0.1%
GpuTest - Triangle - 1920 x 1080 - Fullscreen (Points)	248605	53314
Normalized	100%	21.45%
Standard Deviation	3%	0.2%
GpuTest - Pixmark Piano - 1920 x 1080 - Fullscreen (Points)	427	224
Normalized	100%	52.46%
GpuTest - Pixmark Volplosion - 1920 x 1080 - Fullscreen (Points)	1110	579
Normalized	100%	52.16%
Timed MrBayes Analysis - P.P.A (sec)	101.989	200.633
Normalized	100%	50.83%
Standard Deviation	0.9%	0.2%
Timed MAFFT Alignment - M.S.A (sec)	3.712	7.580
Normalized	100%	48.97%
Standard Deviation	0.8%	0.1%
TTSIOD 3D Renderer - P.R.W.S.S.M (FPS)	298.378	103.268
Normalized	100%	34.61%
Standard Deviation	0.4%	0.6%
Himeno Benchmark - P.P.S (MFLOPS)	4387	3354
Normalized	100%	76.45%
Standard Deviation	2.9%	0.1%
Timed Apache Compilation - Time To Compile (sec)	29.035	59.656
Normalized	100%	48.67%
Standard Deviation	0.1%	0.1%
Timed FFmpeg Compilation - Time To Compile (sec)	99.130	301.599
Normalized	100%	32.87%
Standard Deviation	3.1%	0.3%
Timed GDB GNU Debugger Compilation - Time To Compile (sec)	157.910	297.124
Normalized	100%	53.15%
Standard Deviation	0.5%	0.3%
Timed MPlayer Compilation - Time To Compile (sec)	69.550	218.216
Normalized	100%	31.87%
Standard Deviation	1.7%	0.1%
Timed PHP Compilation - Time To Compile (sec)	99.847	224.809
Normalized	100%	44.41%
Standard Deviation	0.5%	0.2%
Build2 - Time To Compile (sec)	199.077	582.627
Normalized	100%	34.17%
Standard Deviation	0.4%	0.4%

C-Ray - Total Time - 4.1.R.P.P (sec)	93.195	375.368
Normalized	100%	24.83%
Standard Deviation	0.1%	0.1%
POV-Ray - Trace Time (sec)	86.865	283.479
Normalized	100%	30.64%
Standard Deviation	0.1%	0.1%
Smallpt - G.I.R.1.S (sec)	19.876	55.776
Normalized	100%	35.64%
Standard Deviation	0.4%	0.3%
Darktable - Boat - CPU-only (sec)	16.141	32.622
Normalized	100%	49.48%
Standard Deviation	0.1%	0.3%
Darktable - Masskrug - CPU-only (sec)	8.549	19.331
Normalized	100%	44.22%
Standard Deviation	0.3%	0.4%
Darktable - Server Rack - CPU-only (sec)	0.234	0.292
Normalized	100%	80.14%
Standard Deviation	0.2%	1.3%
Darktable - Server Room - CPU-only (sec)	5.387	15.345
Normalized	100%	35.11%
Standard Deviation	1%	0.7%
GEGL - Crop (sec)	8.084	11.282
Normalized	100%	71.65%
Standard Deviation	0.5%	0.9%
GEGL - Scale (sec)	5.656	9.355
Normalized	100%	60.46%
Standard Deviation	0.9%	0.2%
GEGL - Cartoon (sec)	91.659	117.368
Normalized	100%	78.1%
Standard Deviation	0.2%	0.5%
GEGL - Reflect (sec)	31.008	38.282
Normalized	100%	81%
Standard Deviation	0.2%	0.4%
GEGL - Antialias (sec)	39.194	52.430
Normalized	100%	74.75%
Standard Deviation	0.1%	0.5%
GEGL - Tile Glass (sec)	31.627	40.015
Normalized	100%	79.04%
Standard Deviation	0.2%	0.4%
GEGL - Wavelet Blur (sec)	62.656	79.832
Normalized	100%	78.48%
Standard Deviation	0.1%	0.3%
GEGL - Color Enhance (sec)	58.099	72.737
Normalized	100%	79.88%
Standard Deviation	0.1%	0.1%
GEGL - Rotate 90 Degrees (sec)	41.057	56.431
Normalized	100%	72.76%
Standard Deviation	0.2%	0.1%
GIMP - resize (sec)	9.983	15.247
Normalized	100%	65.48%
Standard Deviation	0.7%	0.4%
GIMP - rotate (sec)	13.562	13.427
Normalized	99%	100%
Standard Deviation	0.1%	0.6%
GIMP - auto-levels (sec)	13.797	16.772

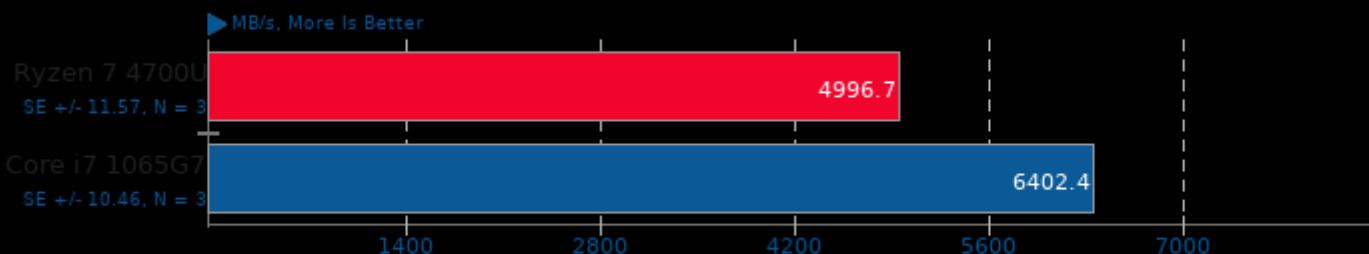
Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

	Normalized	100%	82.26%
	Standard Deviation	0.4%	0.8%
GIMP - unsharp-mask (sec)	16.157	21.009	
	Normalized	100%	76.91%
	Standard Deviation	0.1%	0.4%
Inkscape - SVG Files To PNG (sec)	27.264	27.483	
	Normalized	100%	99.2%
	Standard Deviation	0.1%	0.3%
LibreOffice - 2.D.T.P (sec)	7.499	7.706	
	Normalized	100%	97.31%
	Standard Deviation	3.2%	2.8%
Selenium - ARES-6 - Firefox (ms)	54.97	53.39	
	Normalized	97.13%	100%
	Standard Deviation	0.9%	0.9%
Selenium - Kraken - Firefox (ms)	921.1	1099	
	Normalized	100%	83.83%
	Standard Deviation	0.3%	0.4%
Selenium - Octane - Firefox (Geometric Mean)	27799	26304	
	Normalized	100%	94.62%
	Standard Deviation	1%	1.4%
Selenium - WebXPRT - Firefox (Score)	208	225	
	Normalized	92.44%	100%
	Standard Deviation		1%
Selenium - Basemark - Firefox (Overall Score)	475.73	492.10	
	Normalized	96.67%	100%
	Standard Deviation	1.5%	2%
Selenium - Jetstream - Firefox (Score)	172.67	166.43	
	Normalized	100%	96.39%
	Standard Deviation	0.4%	0.4%
Selenium - CanvasMark - Firefox (Score)	10606	11304	
	Normalized	93.83%	100%
	Standard Deviation	22.4%	16.4%
Selenium - StyleBench - Firefox (Runs / Minute)	63.0	65.3	
	Normalized	96.48%	100%
	Standard Deviation	0.6%	0.4%
Selenium - Jetstream 2 - Firefox (Score)	75.298	77.879	
	Normalized	96.69%	100%
	Standard Deviation	2.8%	2.4%
Selenium - Maze Solver - Firefox (sec)	6.2	5.4	
	Normalized	87.1%	100%
	Standard Deviation	0.9%	1.1%
Selenium - Speedometer - Firefox (Runs/min)	63.7	69.4	
	Normalized	91.79%	100%
	Standard Deviation	0.2%	0.5%
Selenium - PSPDFKit WASM - Firefox (Score)	1719	2321	
	Normalized	100%	74.06%
	Standard Deviation	1.6%	1.2%
Selenium - W.i - Firefox (ms)	27.8	30.4	
	Normalized	100%	91.45%
	Standard Deviation	0.2%	2.2%
Selenium - W.c - Firefox (ms)	376.1	492.8	
	Normalized	100%	76.32%
	Standard Deviation	0%	0.7%

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

C-Blosc 2.0 Beta 5

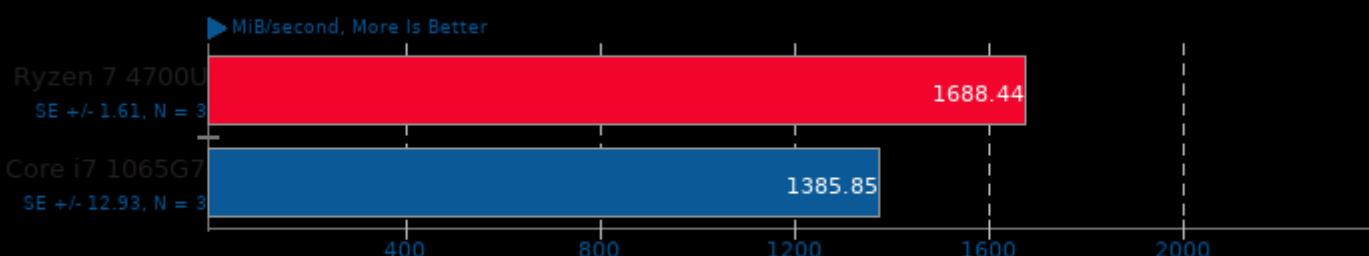
Compressor: blosclz



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

Crypto++ 8.2

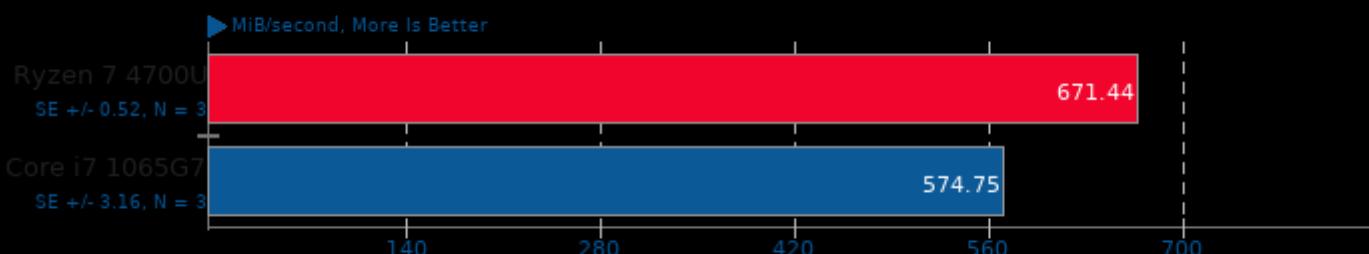
Test: All Algorithms



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

Crypto++ 8.2

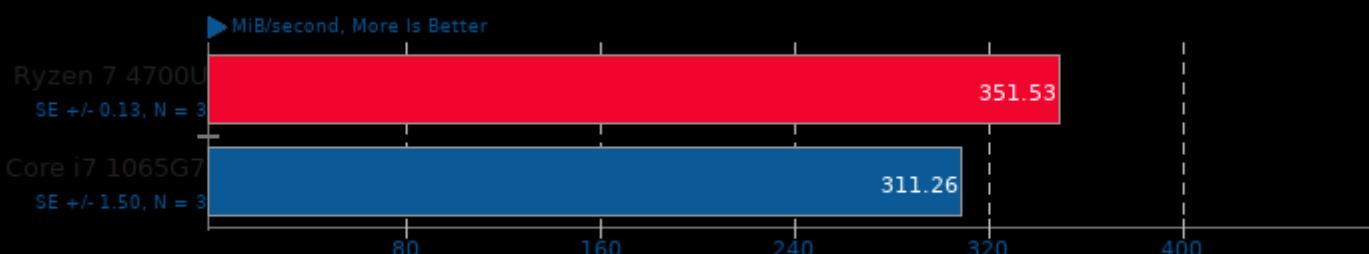
Test: Keyed Algorithms



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

Crypto++ 8.2

Test: Unkeyed Algorithms

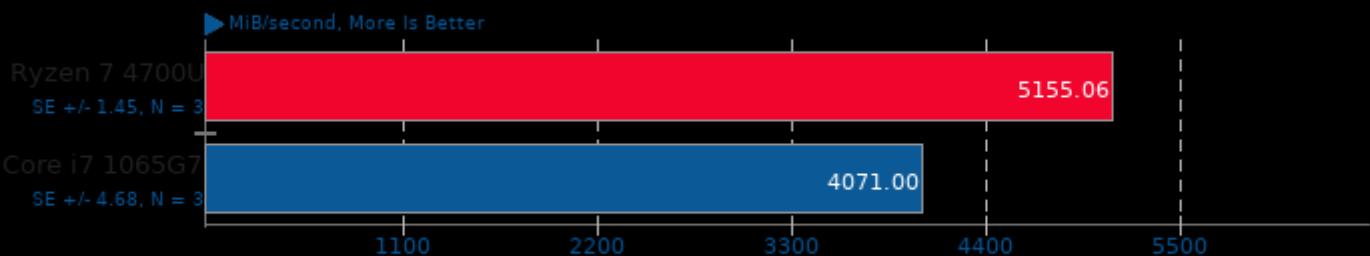


1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Crypto++ 8.2

Test: Integer + Elliptic Curve Public Key Algorithms



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

NAS Parallel Benchmarks 3.4

Test / Class: BT.C

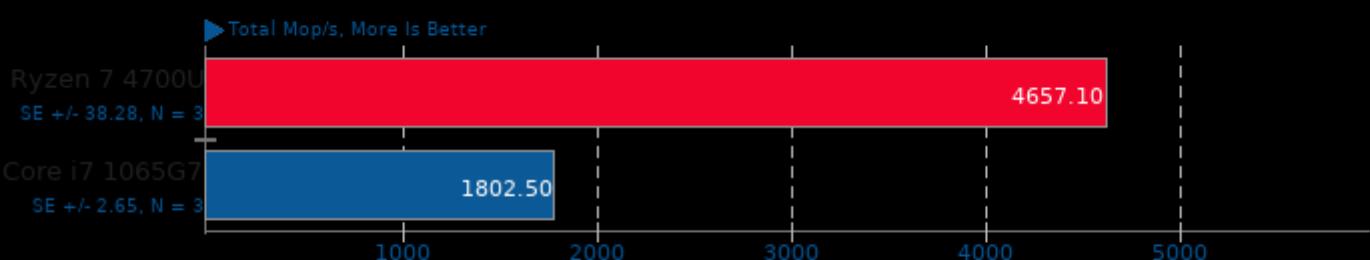


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

Test / Class: CG.C



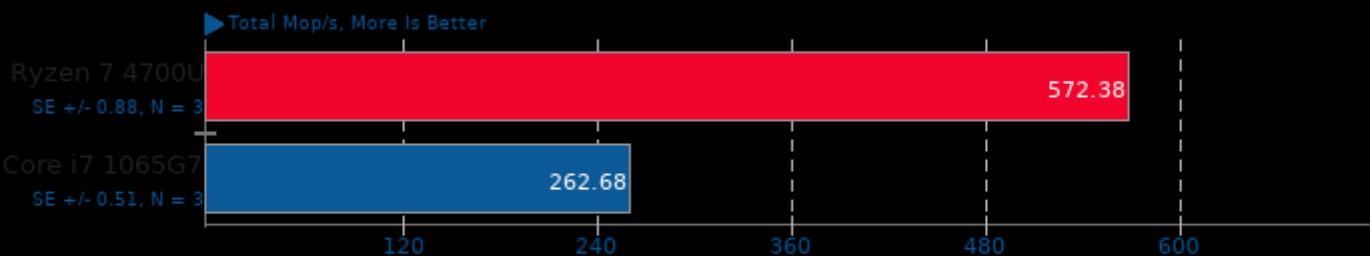
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.0.3

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

NAS Parallel Benchmarks 3.4

Test / Class: EP.C

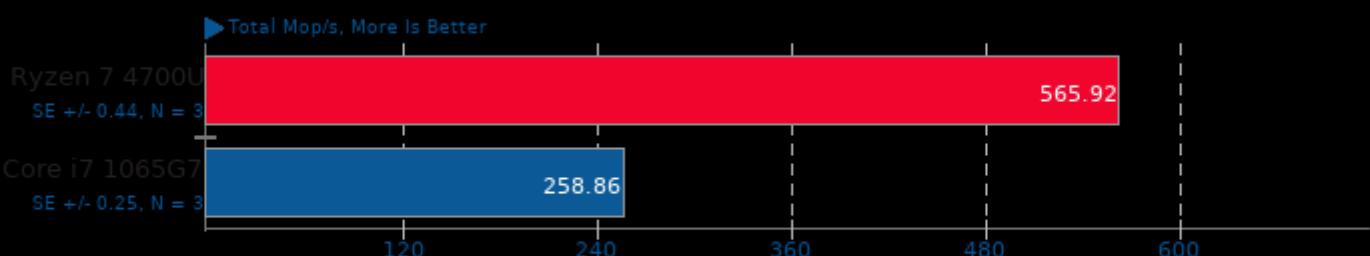


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

Test / Class: EP.D

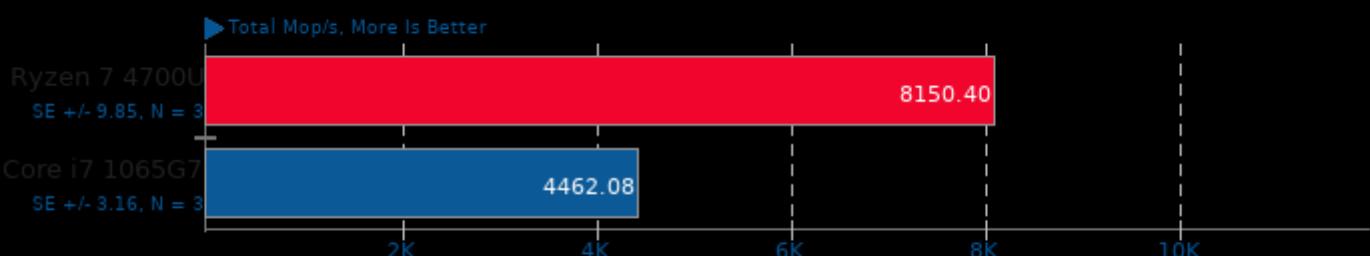


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

Test / Class: FT.C



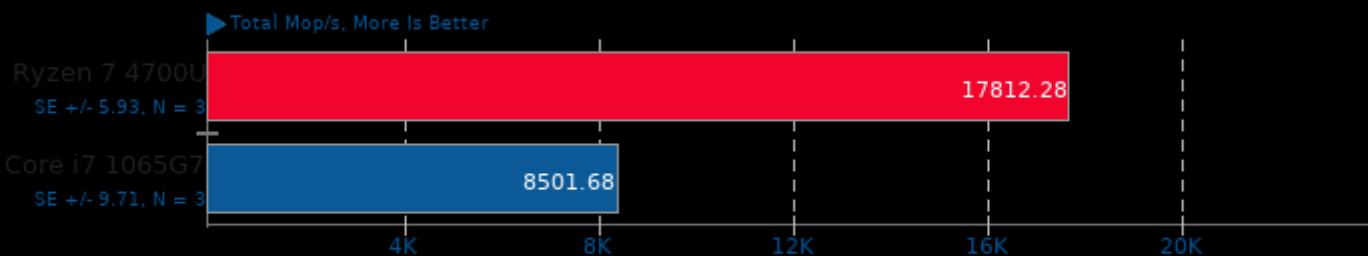
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.0.3

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

NAS Parallel Benchmarks 3.4

Test / Class: LU.C

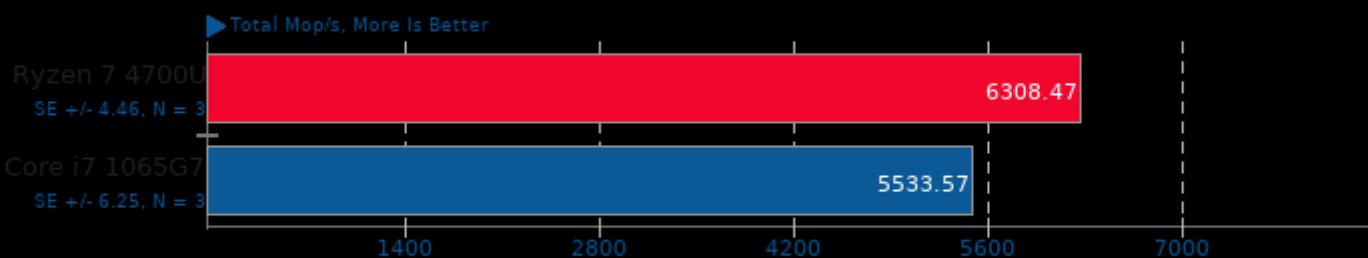


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

Test / Class: MG.C

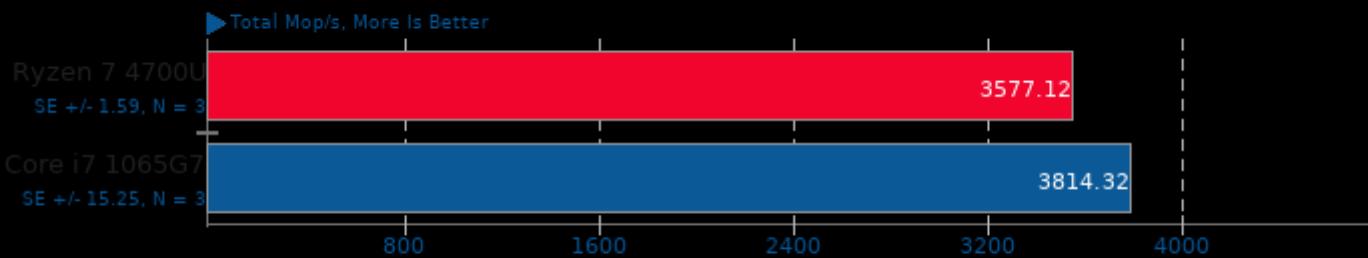


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

Test / Class: SP.B

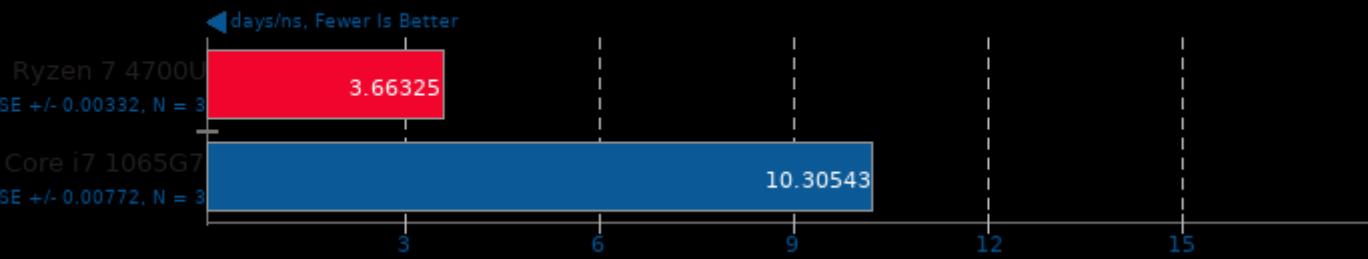


1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

2. Open MPI 4.0.3

NAMD 2.13

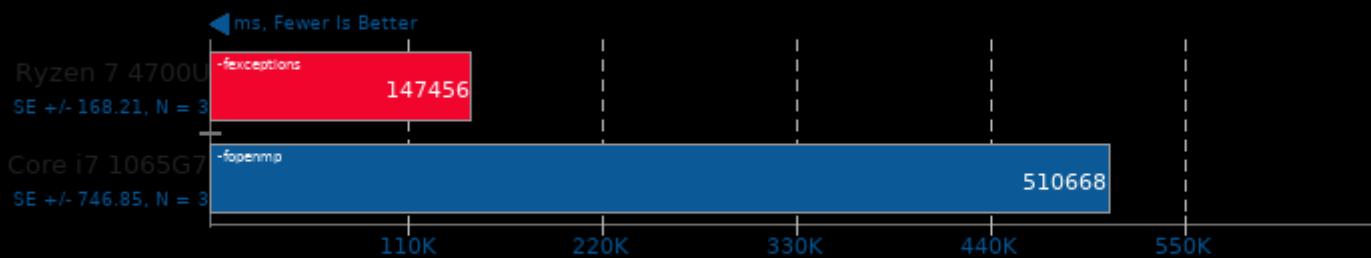
ATPase Simulation - 327,506 Atoms



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

toyBrot Fractal Generator

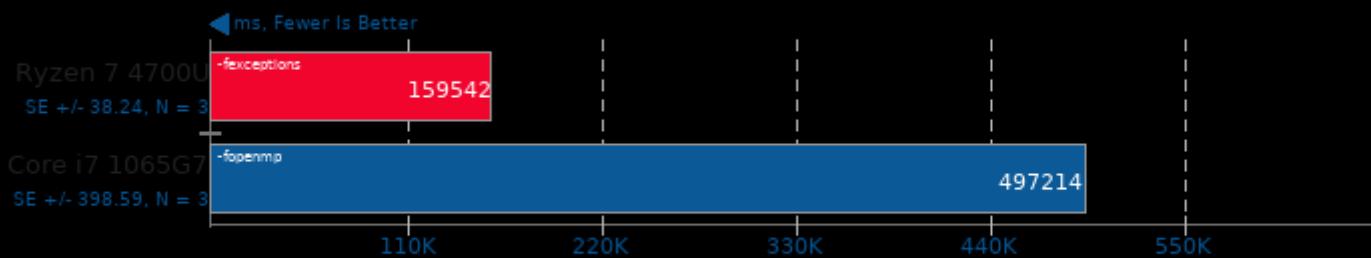
Implementation: TBB



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

toyBrot Fractal Generator

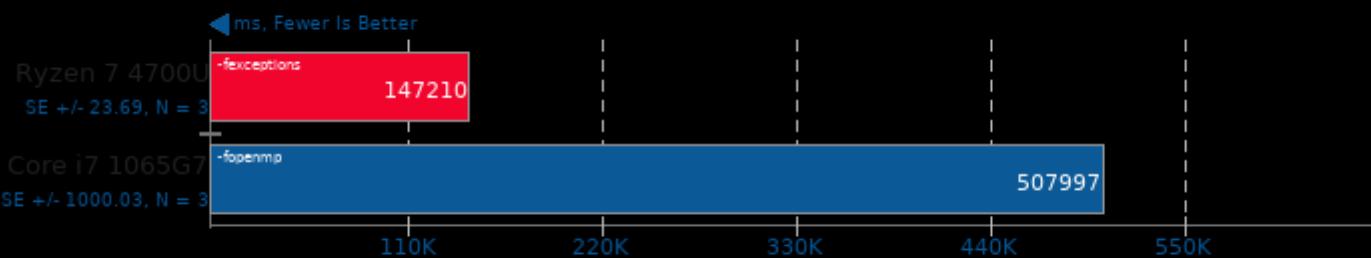
Implementation: OpenMP



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

toyBrot Fractal Generator

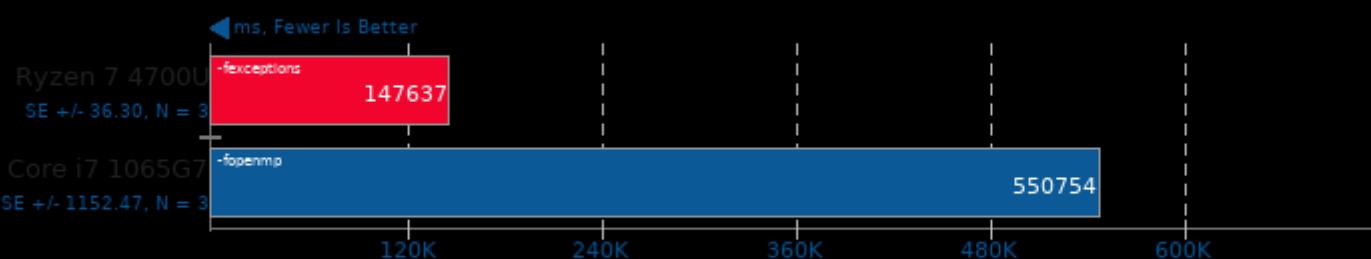
Implementation: C++ Tasks



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

toyBrot Fractal Generator

Implementation: C++ Threads

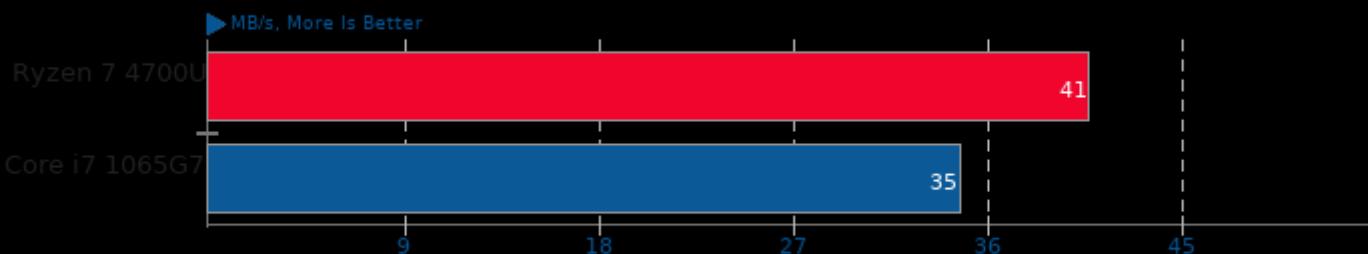


1. (CXX) g++ options: -lpthread -isystem -std=c++14

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Izbench 1.8

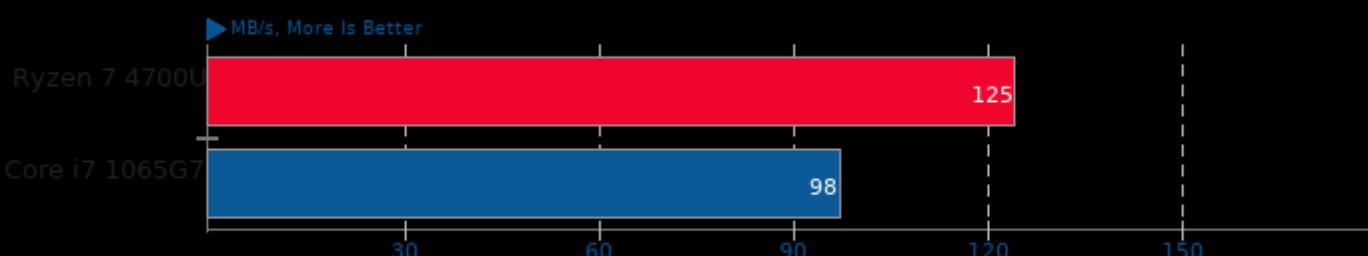
Test: XZ 0 - Process: Compression



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

Izbench 1.8

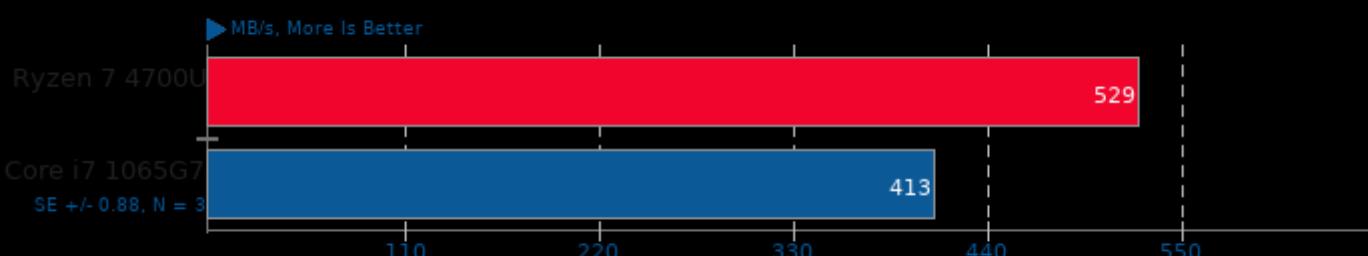
Test: XZ 0 - Process: Decompression



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

Izbench 1.8

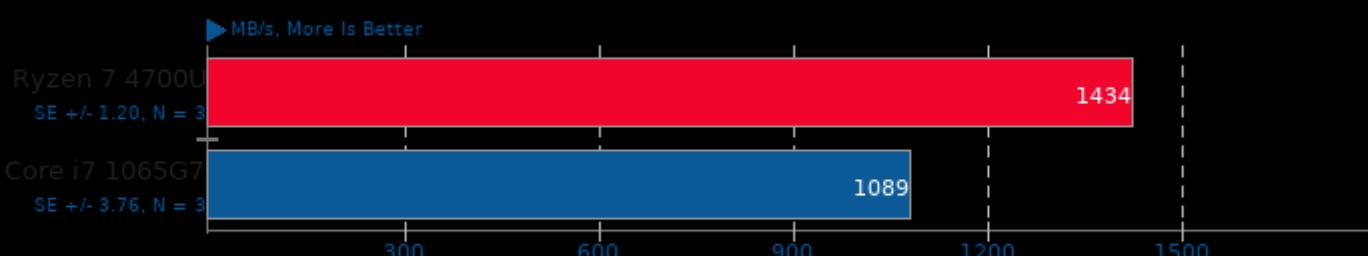
Test: Zstd 1 - Process: Compression



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

Izbench 1.8

Test: Zstd 1 - Process: Decompression

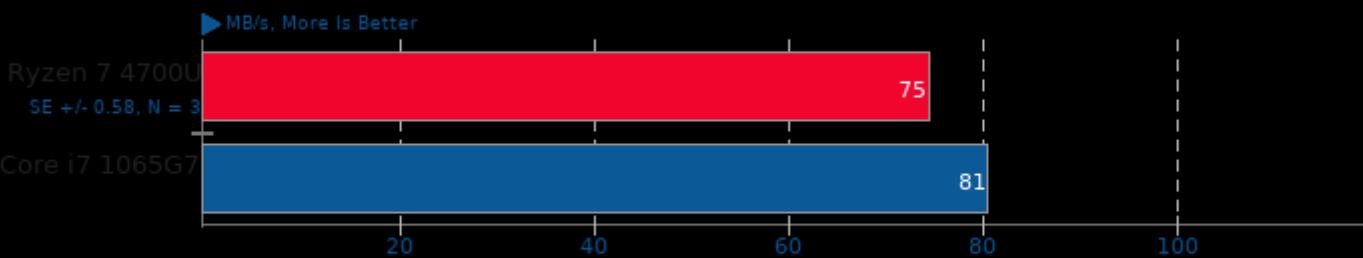


1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Izbench 1.8

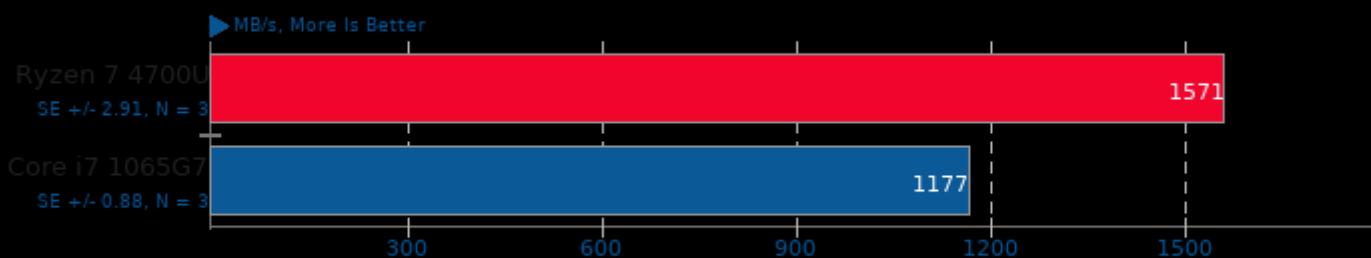
Test: Zstd 8 - Process: Compression



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

Izbench 1.8

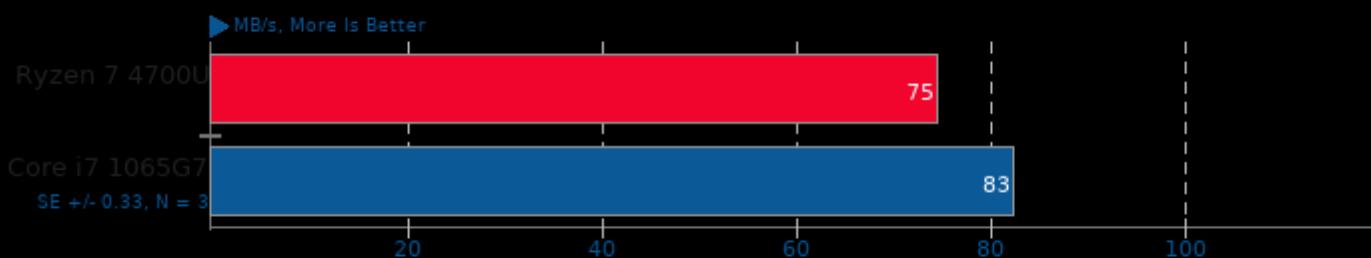
Test: Zstd 8 - Process: Decompression



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

Izbench 1.8

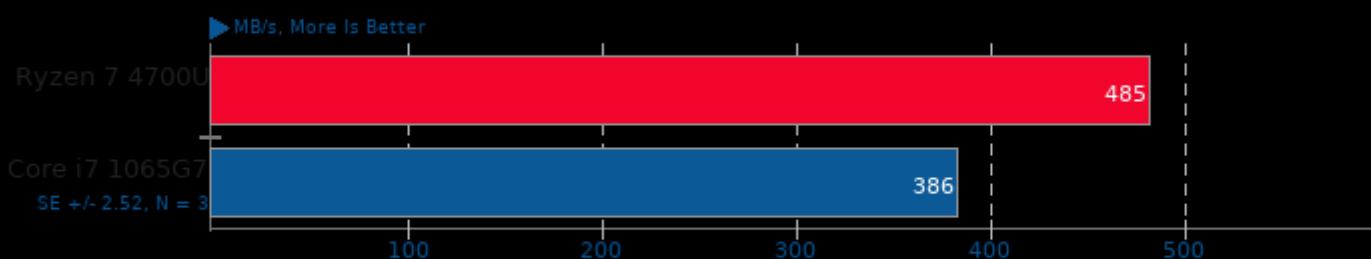
Test: Crush 0 - Process: Compression



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

Izbench 1.8

Test: Crush 0 - Process: Decompression

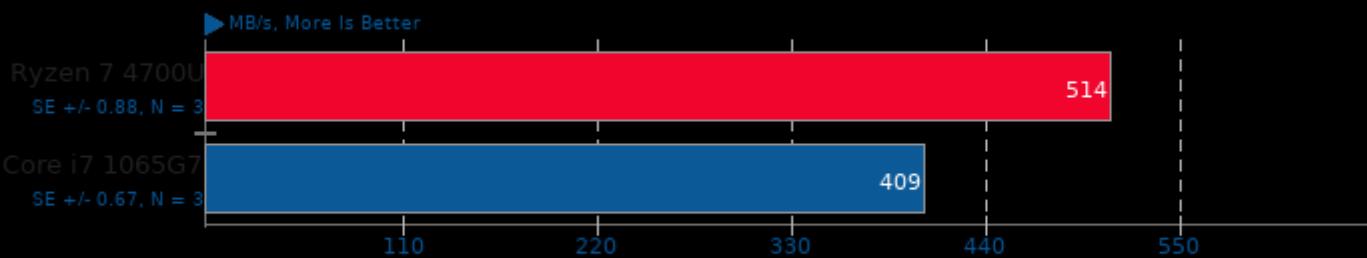


1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Izbench 1.8

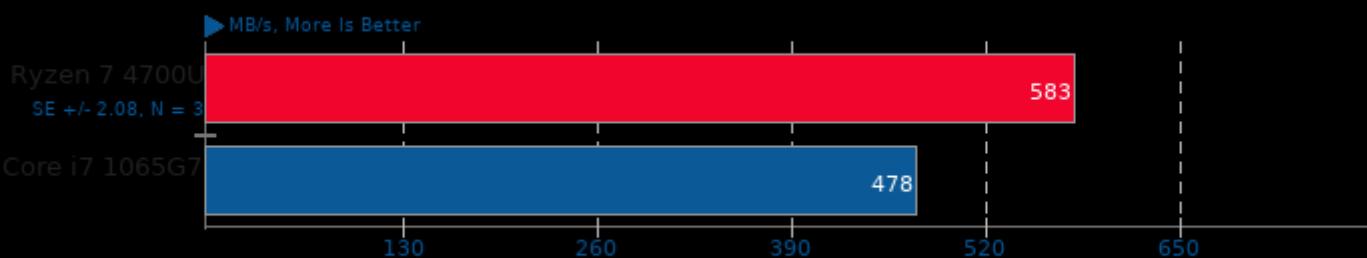
Test: Brotli 0 - Process: Compression



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

Izbench 1.8

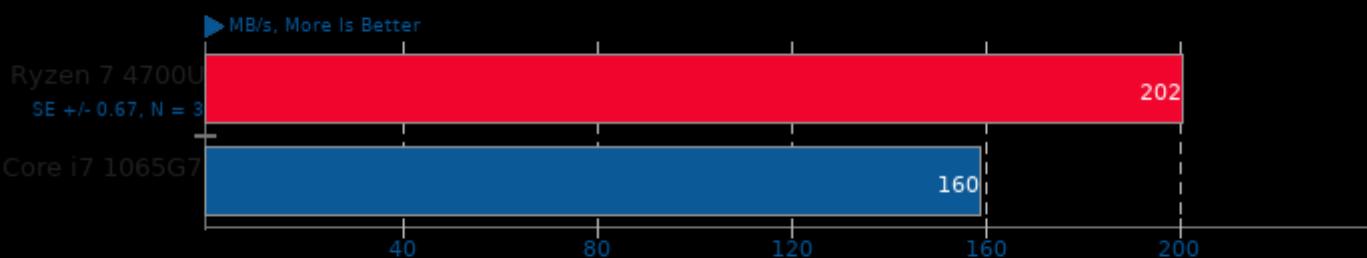
Test: Brotli 0 - Process: Decompression



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

Izbench 1.8

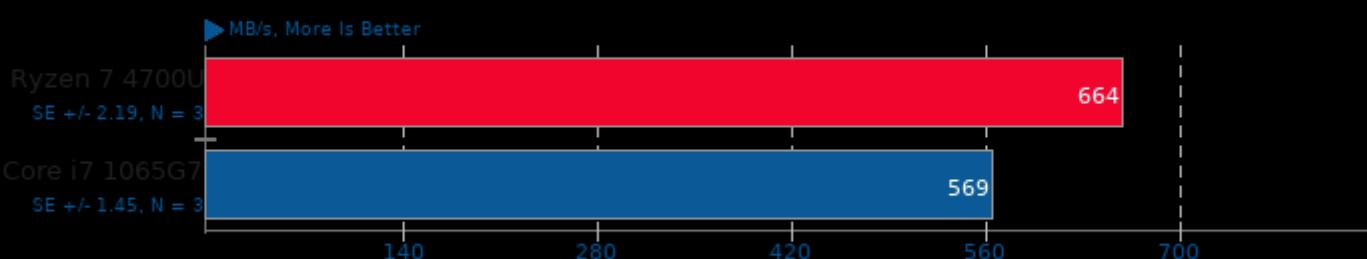
Test: Brotli 2 - Process: Compression



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

Izbench 1.8

Test: Brotli 2 - Process: Decompression

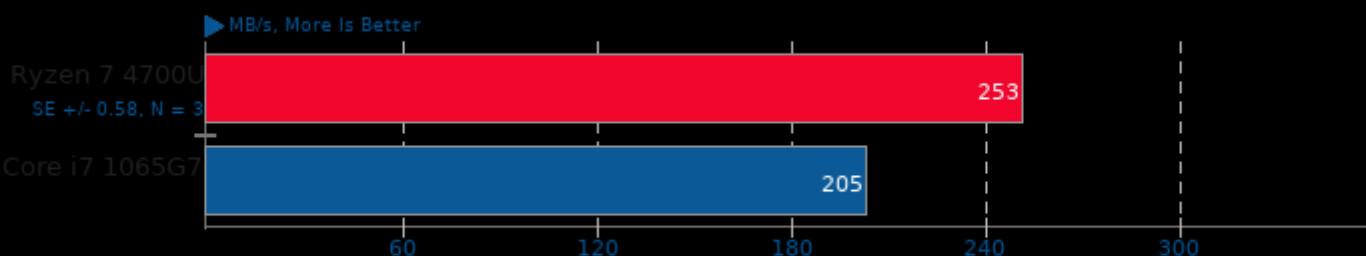


1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Izbench 1.8

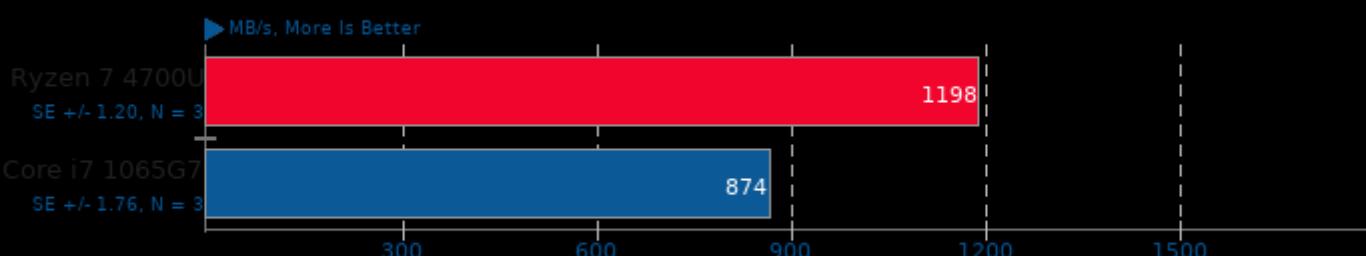
Test: Libdeflate 1 - Process: Compression



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

Izbench 1.8

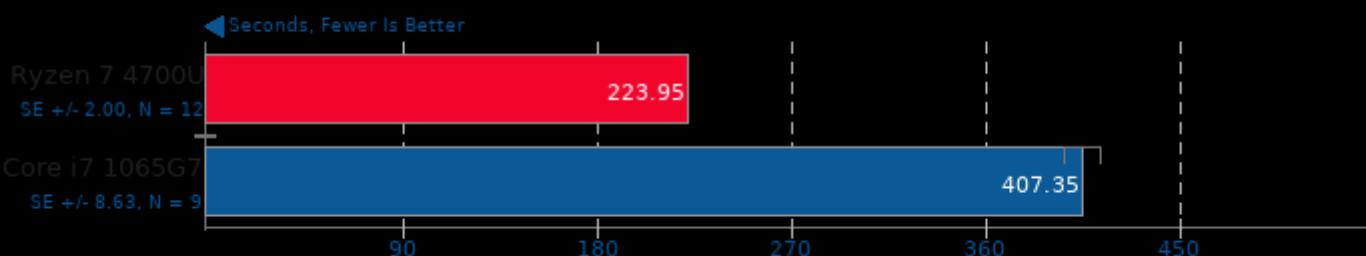
Test: Libdeflate 1 - Process: Decompression



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

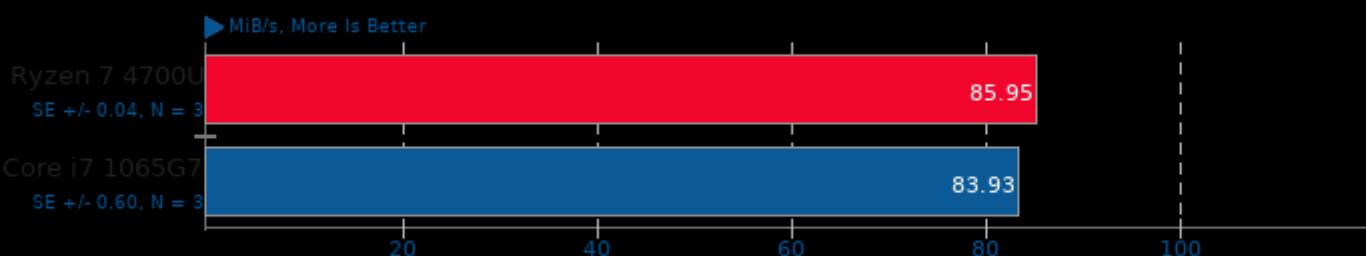
Java Gradle Build

Gradle Build: Reactor



Botan 2.13.0

Test: KASUMI

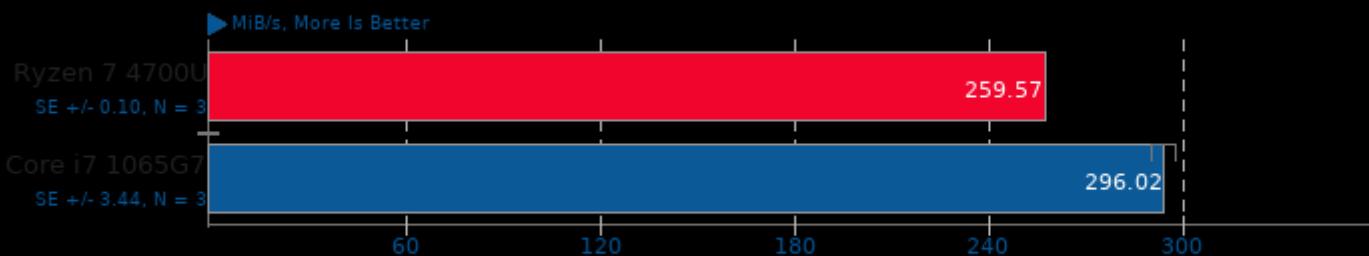


1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Botan 2.13.0

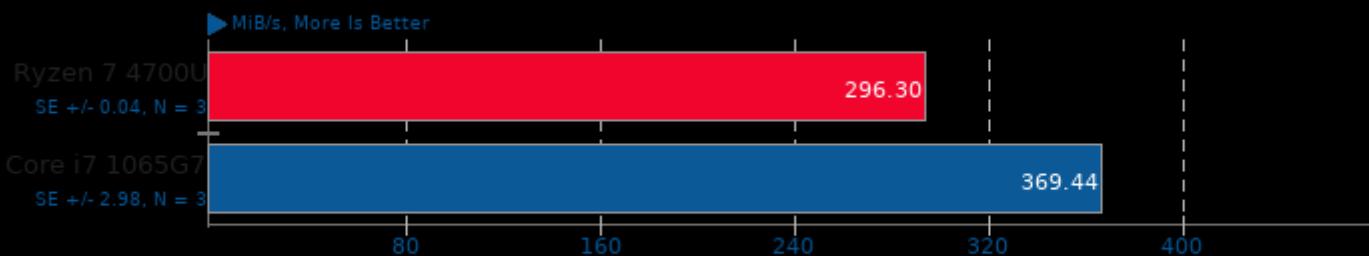
Test: Twofish



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

Botan 2.13.0

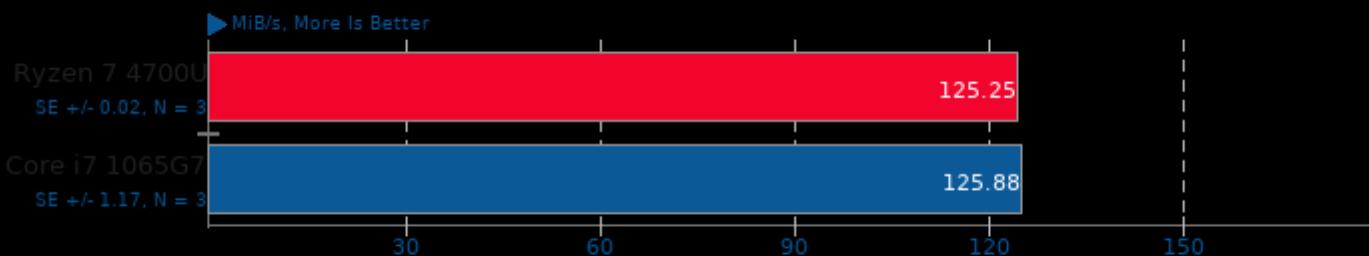
Test: Blowfish



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

Botan 2.13.0

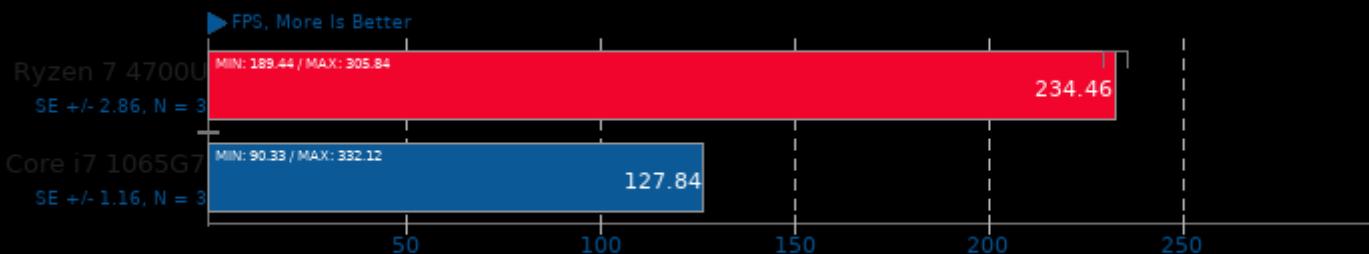
Test: CAST-256



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

dav1d 0.6.0

Video Input: Chimera 1080p

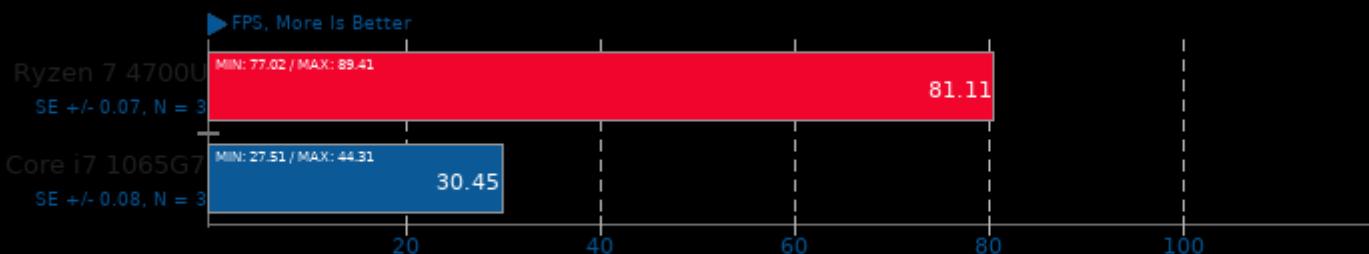


1. (CC) gcc options: -pthread

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

dav1d 0.6.0

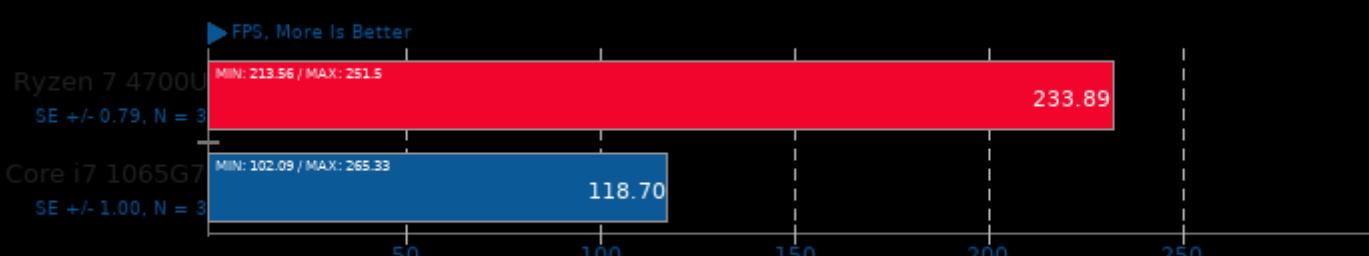
Video Input: Summer Nature 4K



1. (CC) gcc options: -pthread

dav1d 0.6.0

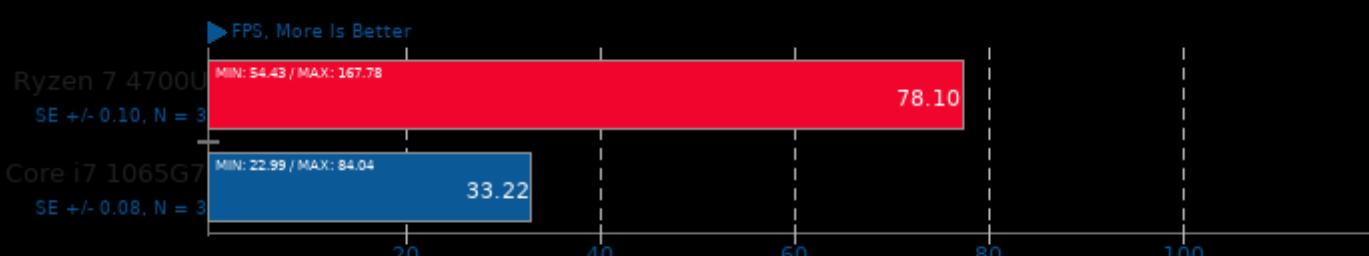
Video Input: Summer Nature 1080p



1. (CC) gcc options: -pthread

dav1d 0.6.0

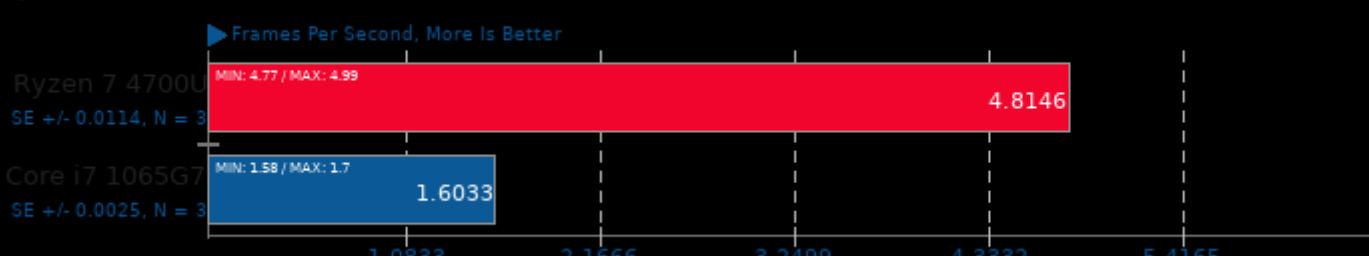
Video Input: Chimera 1080p 10-bit



1. (CC) gcc options: -pthread

Embree 3.9.0

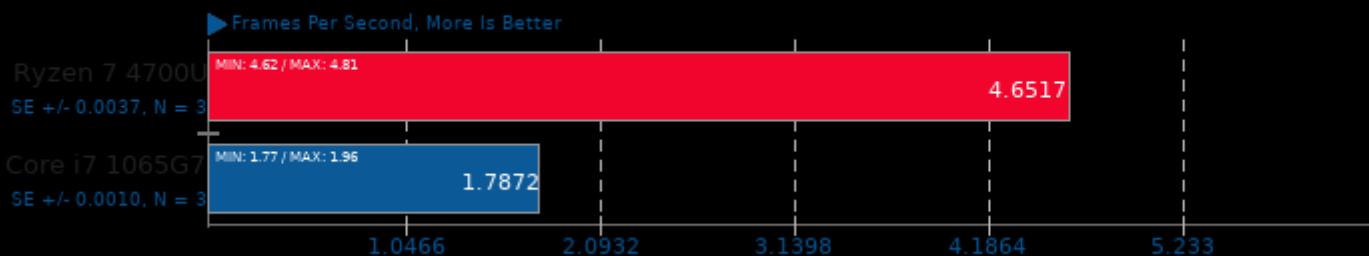
Binary: Pathtracer - Model: Crown



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

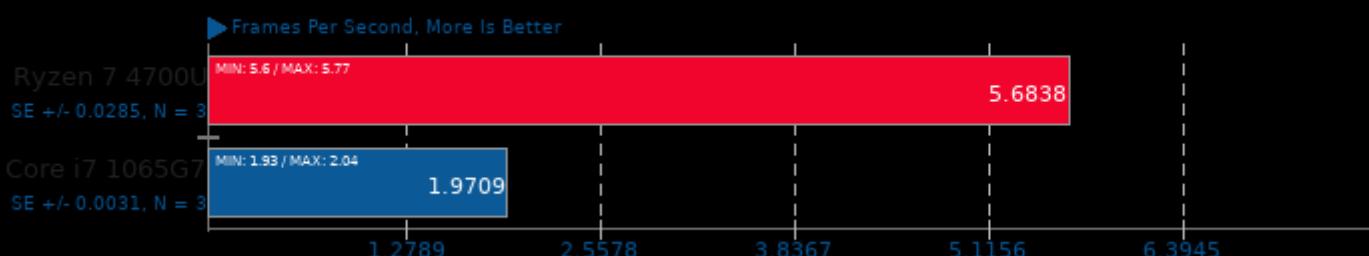
Embree 3.9.0

Binary: Pathtracer ISPC - Model: Crown



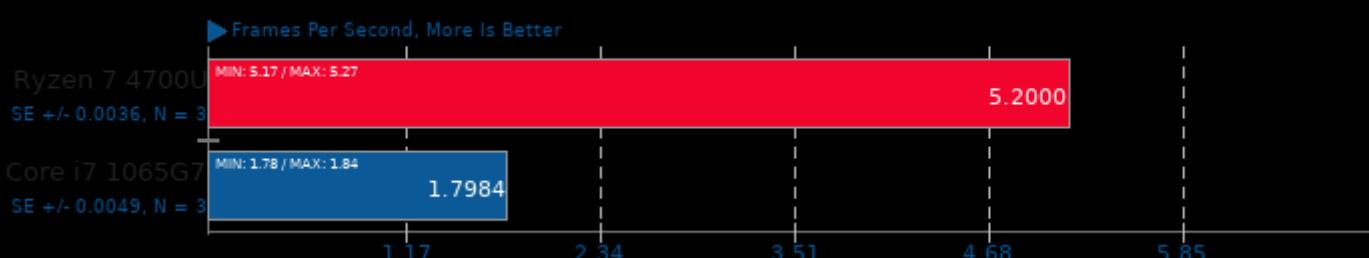
Embree 3.9.0

Binary: Pathtracer - Model: Asian Dragon



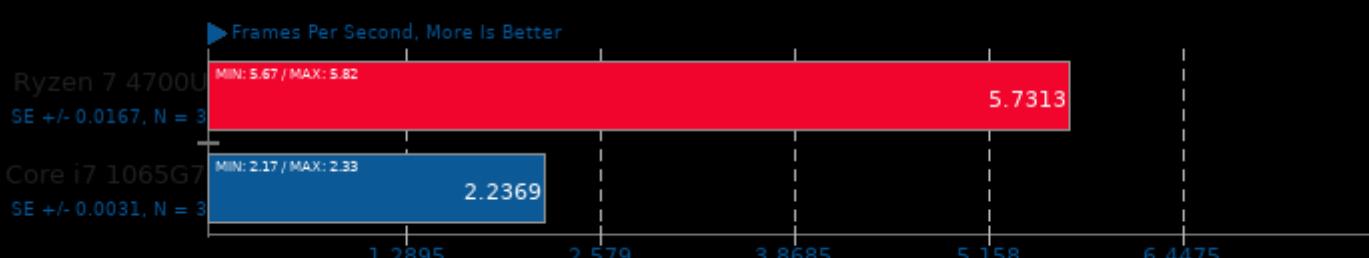
Embree 3.9.0

Binary: Pathtracer - Model: Asian Dragon Obj



Embree 3.9.0

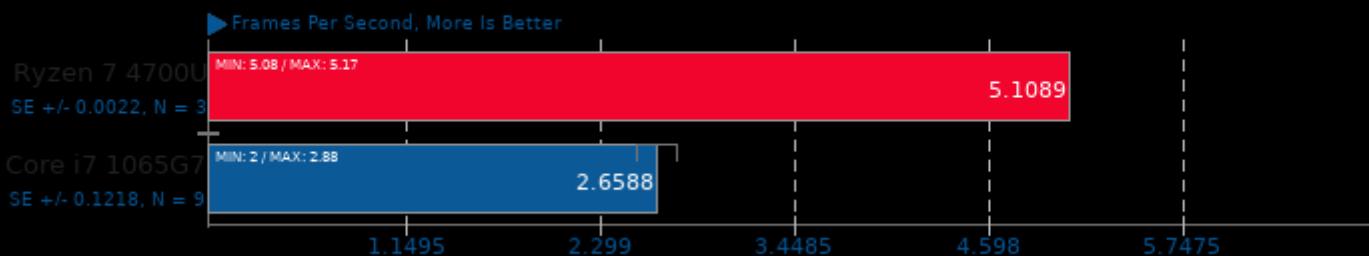
Binary: Pathtracer ISPC - Model: Asian Dragon



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

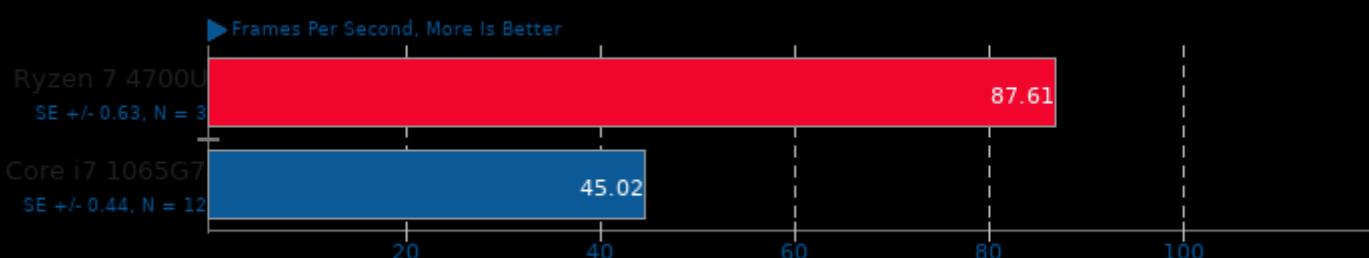
Embree 3.9.0

Binary: Pathtracer ISPC - Model: Asian Dragon Obj



SVT-VP9 0.1

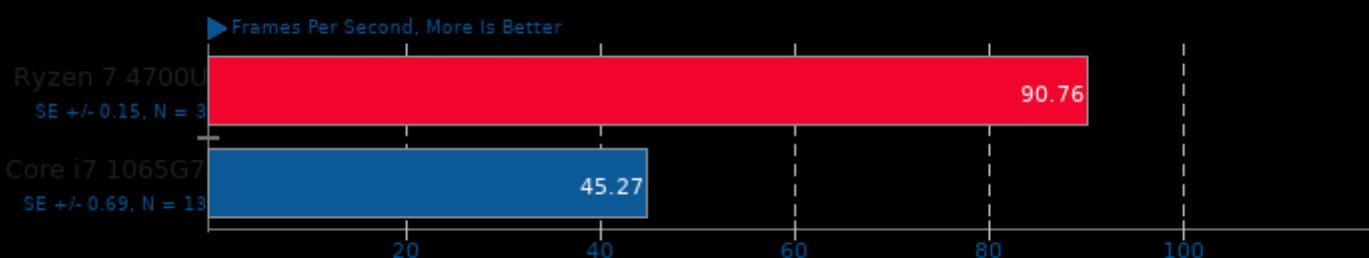
Tuning: VMAF Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-VP9 0.1

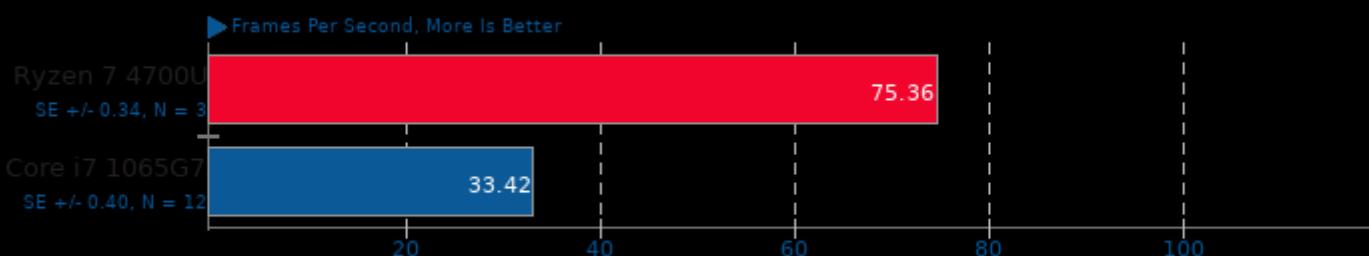
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-VP9 0.1

Tuning: Visual Quality Optimized - Input: Bosphorus 1080p

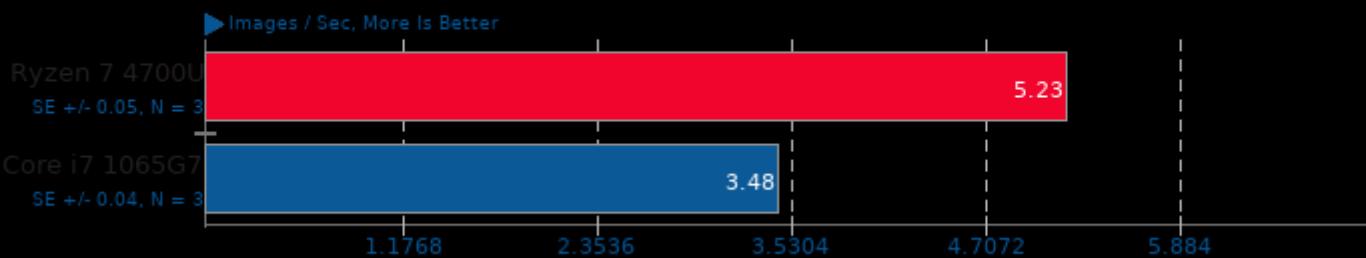


1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

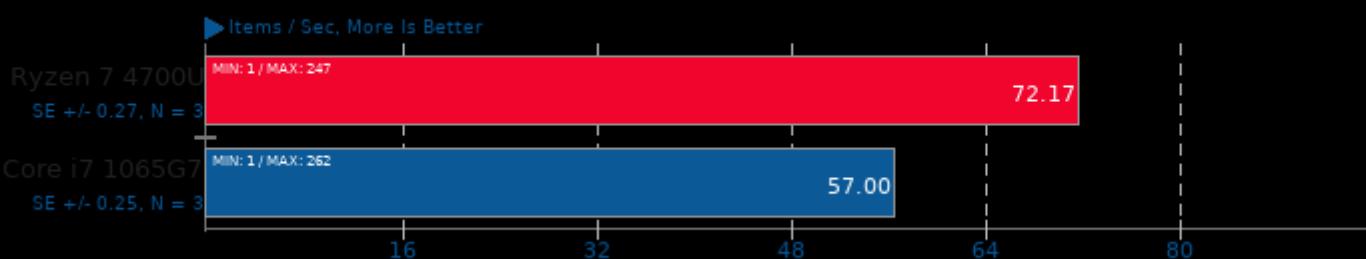
Intel Open Image Denoise 1.2.0

Scene: Memorial



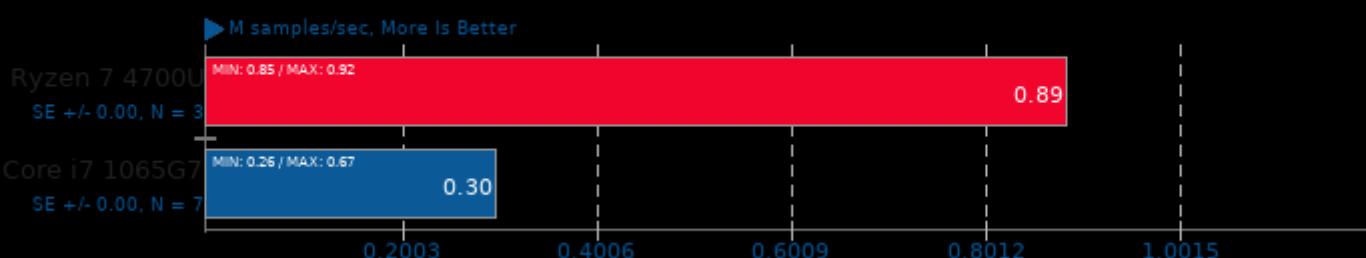
OpenVKL 0.9

Benchmark: vklBenchmark



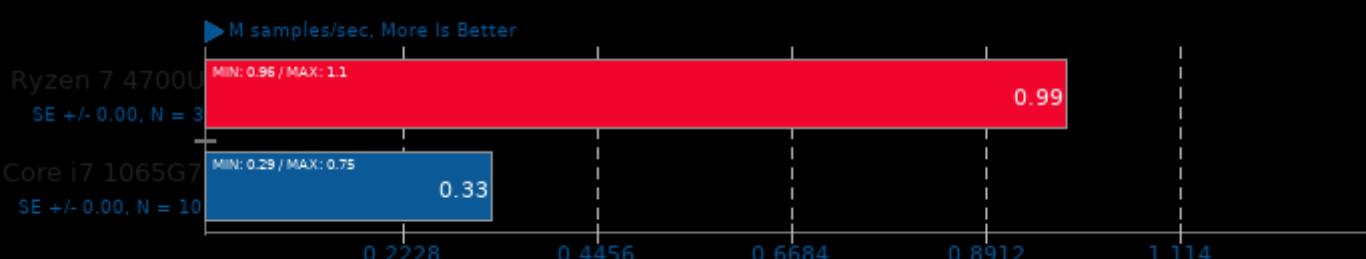
LuxCoreRender 2.3

Scene: DLSC



LuxCoreRender 2.3

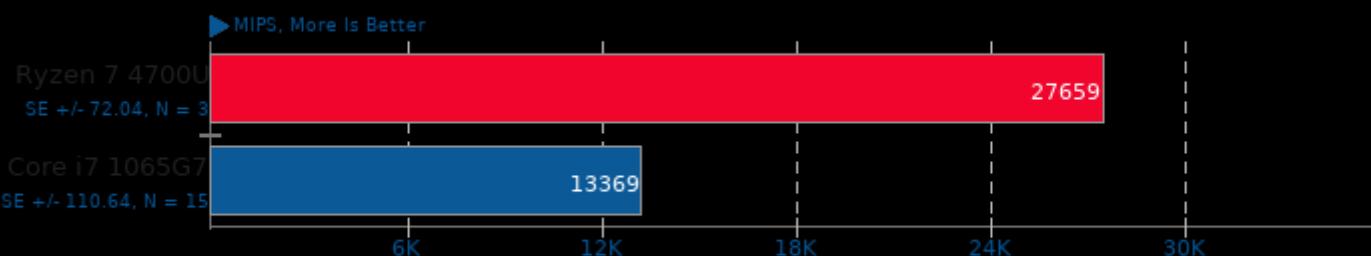
Scene: Rainbow Colors and Prism



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

7-Zip Compression 16.02

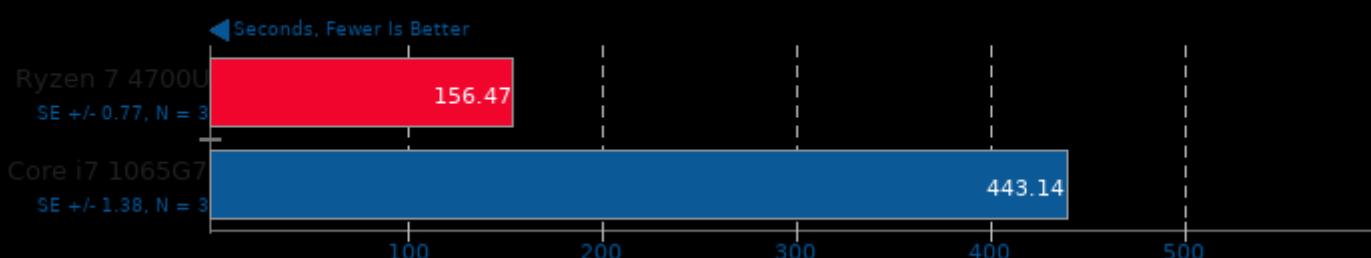
Compress Speed Test



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

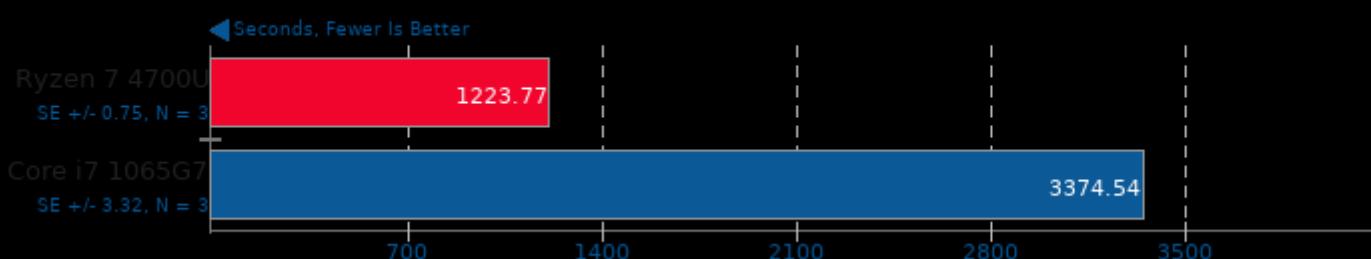
Timed Linux Kernel Compilation 5.4

Time To Compile



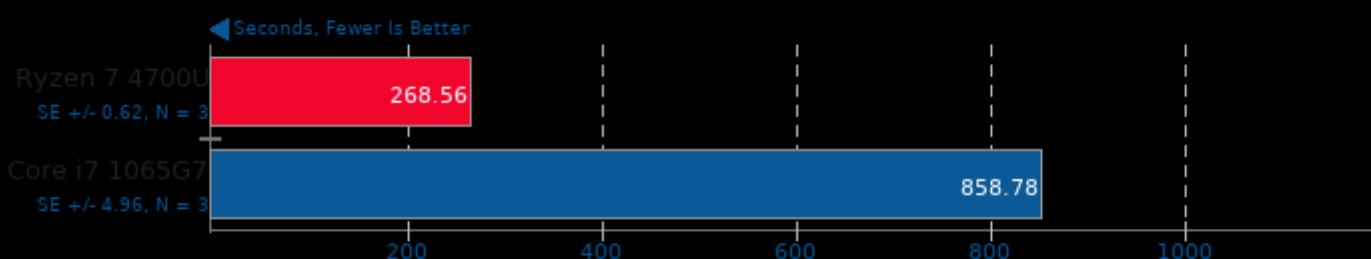
Timed LLVM Compilation 10.0

Time To Compile



YafaRay 3.4.1

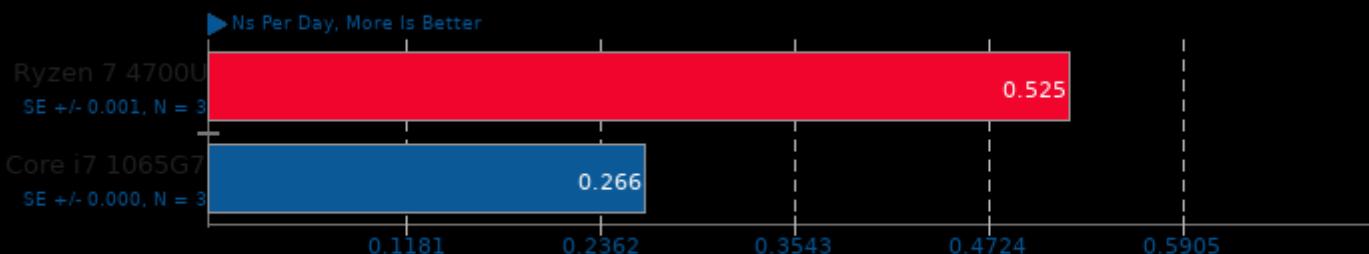
Total Time For Sample Scene



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

GROMACS 2020.1

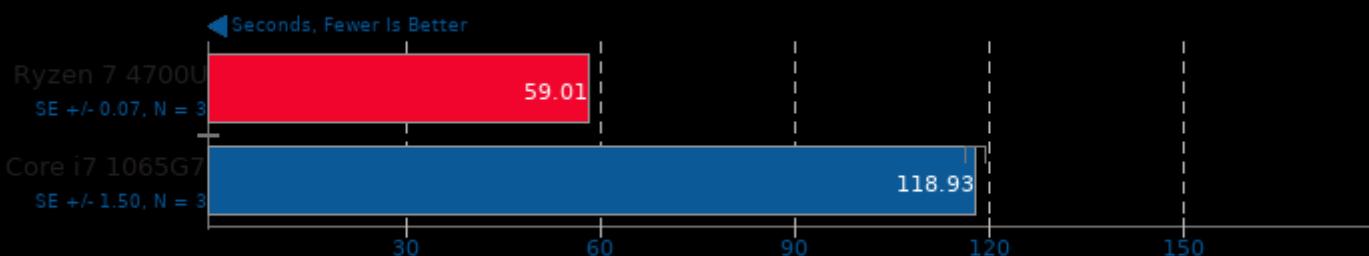
Water Benchmark



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

Basis Universal 1.12

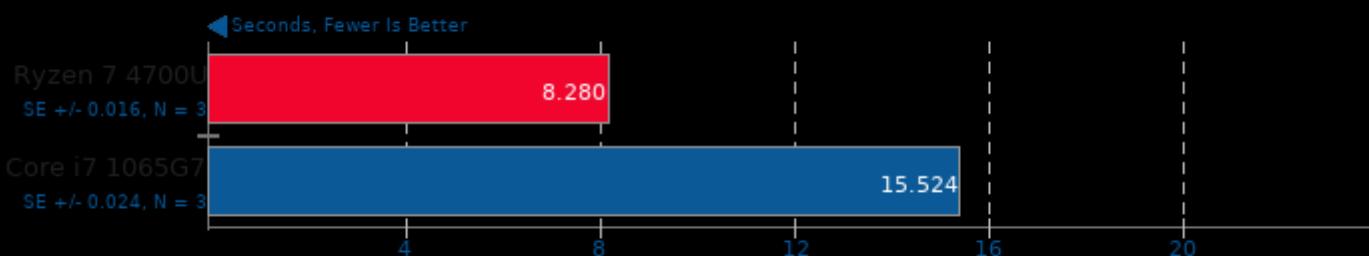
Settings: ETC1S



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

Basis Universal 1.12

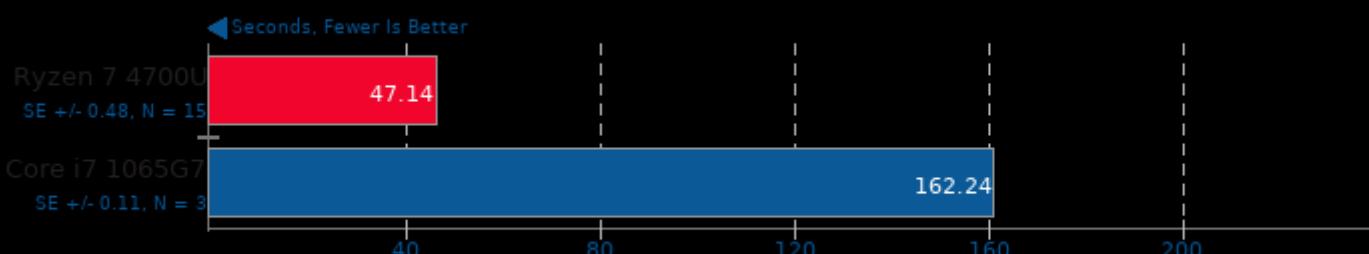
Settings: UASTC Level 0



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

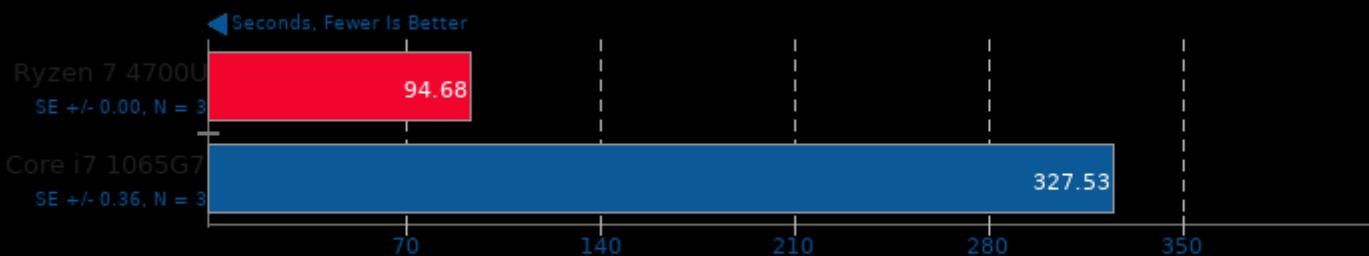


1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

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

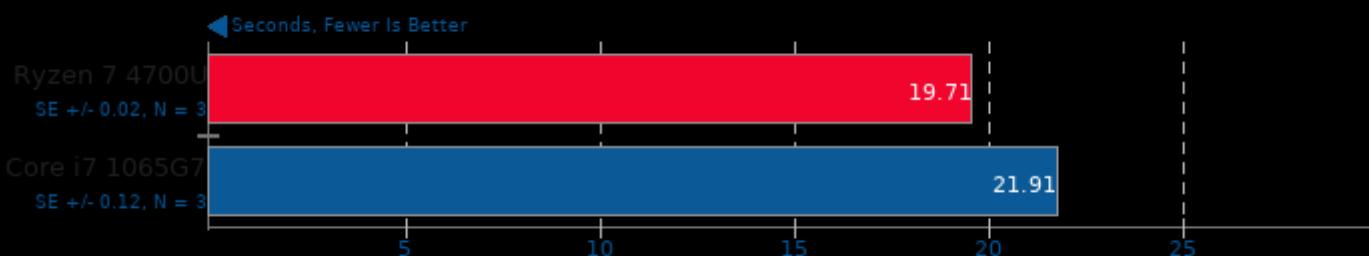
Settings: UASTC Level 2 + RDO Post-Processing



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

G'MIC

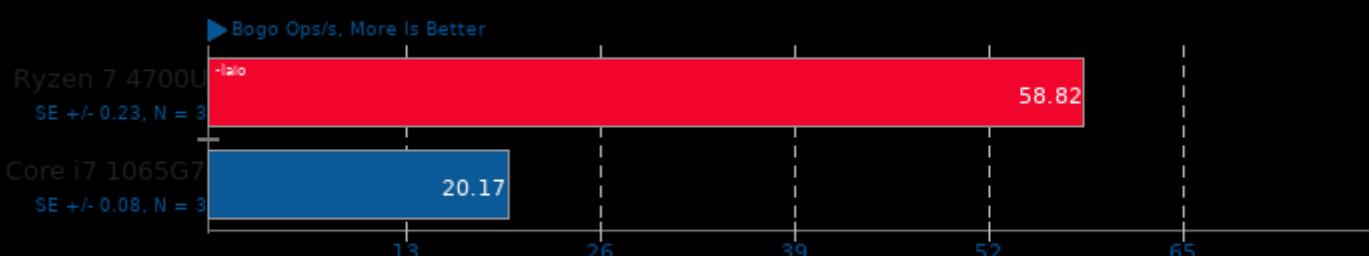
Test: Plotting Isosurface Of A 3D Volume, 1000 Times



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

Stress-NG 0.11.07

Test: MMAP

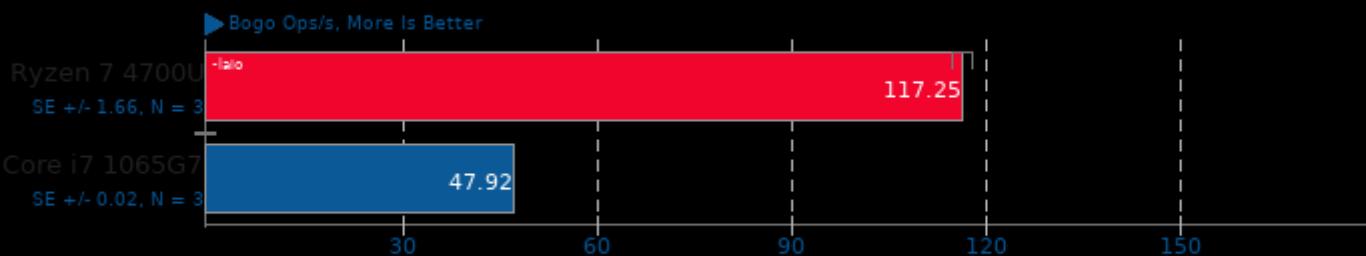


1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -lpthread -lc

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Stress-NG 0.11.07

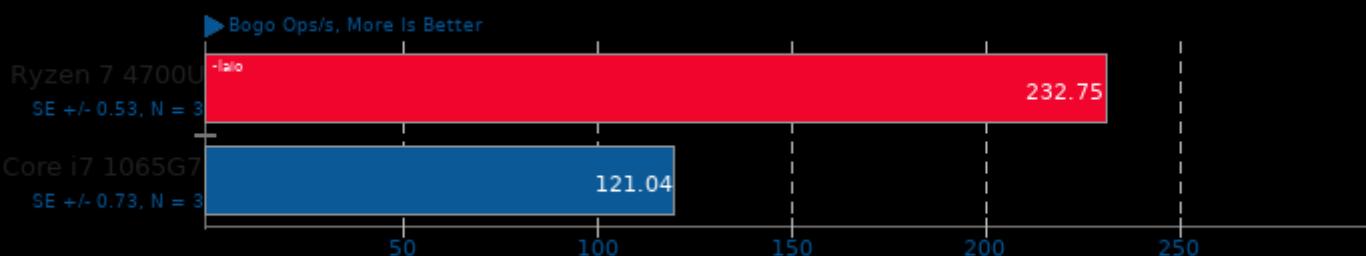
Test: NUMA



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

Stress-NG 0.11.07

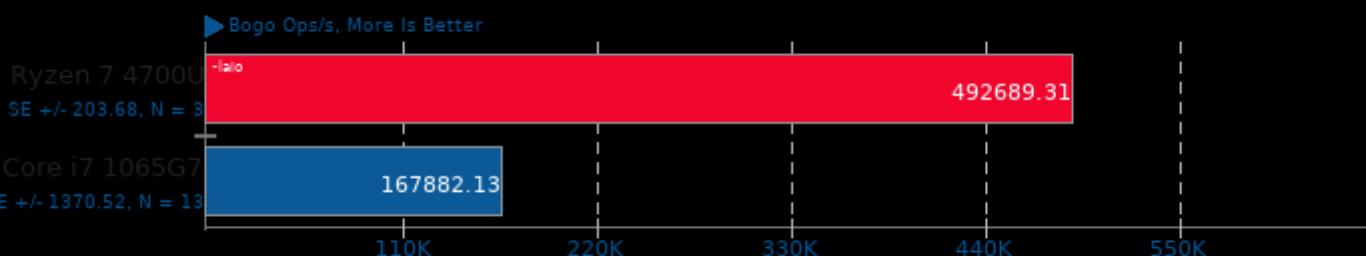
Test: MEMFD



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

Stress-NG 0.11.07

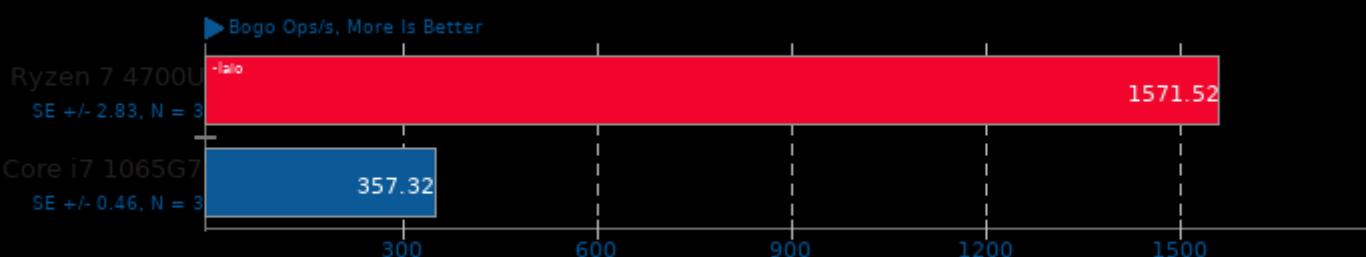
Test: Atomic



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

Stress-NG 0.11.07

Test: Crypto

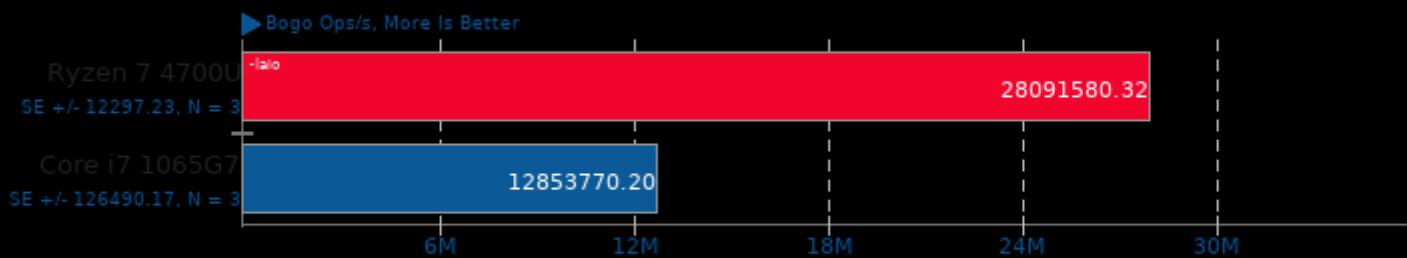


1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -lpthread -lc

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Stress-NG 0.11.07

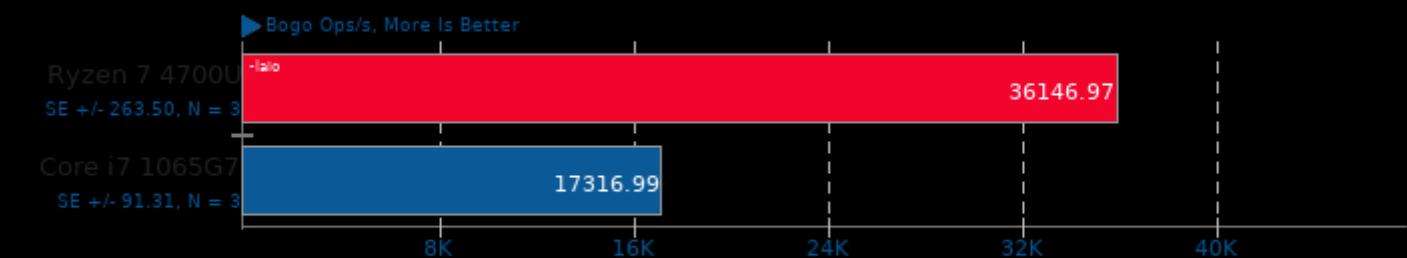
Test: Malloc



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

Stress-NG 0.11.07

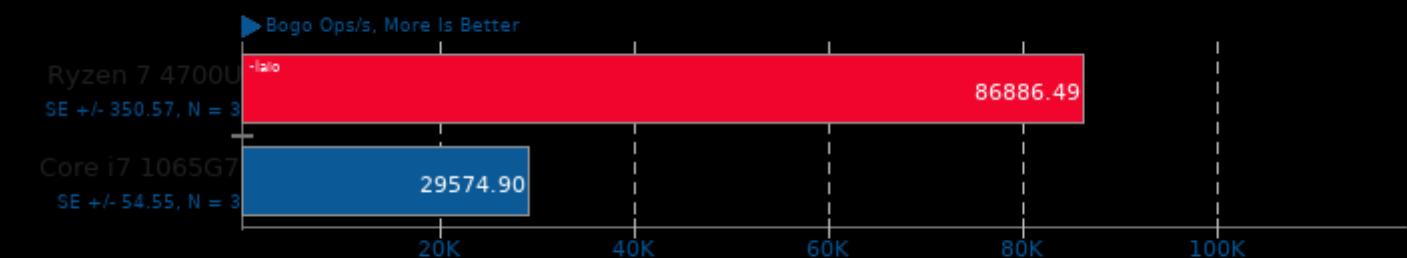
Test: Forking



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

Stress-NG 0.11.07

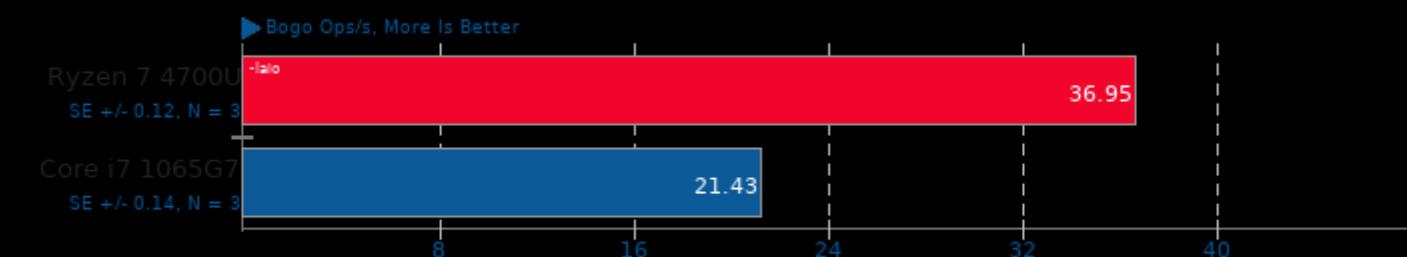
Test: SENDFILE



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

Stress-NG 0.11.07

Test: CPU Cache

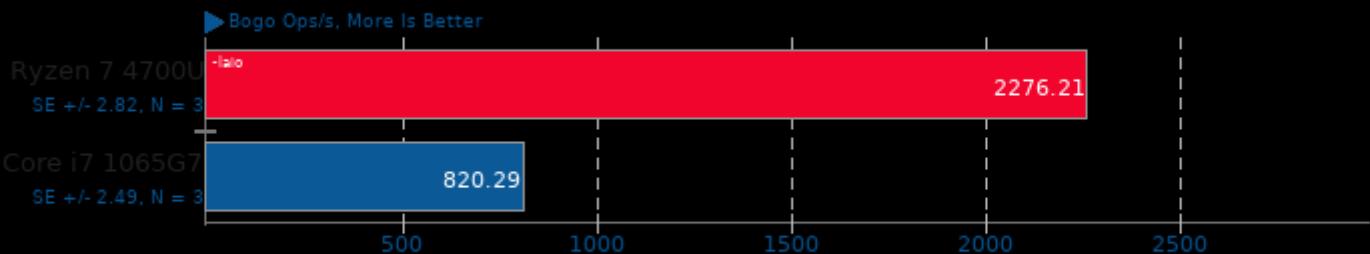


1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -lpthread -lc

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Stress-NG 0.11.07

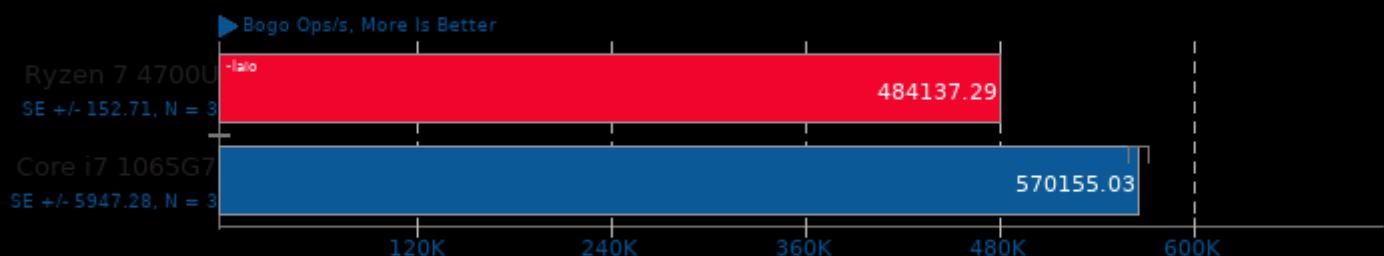
Test: CPU Stress



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

Stress-NG 0.11.07

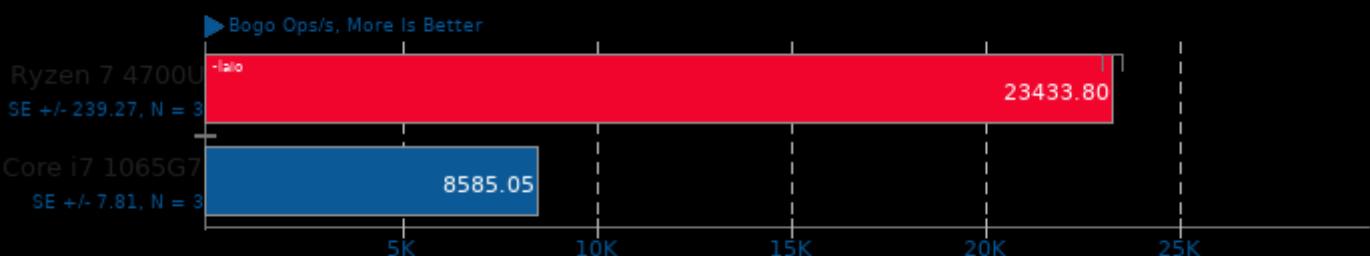
Test: Semaphores



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

Stress-NG 0.11.07

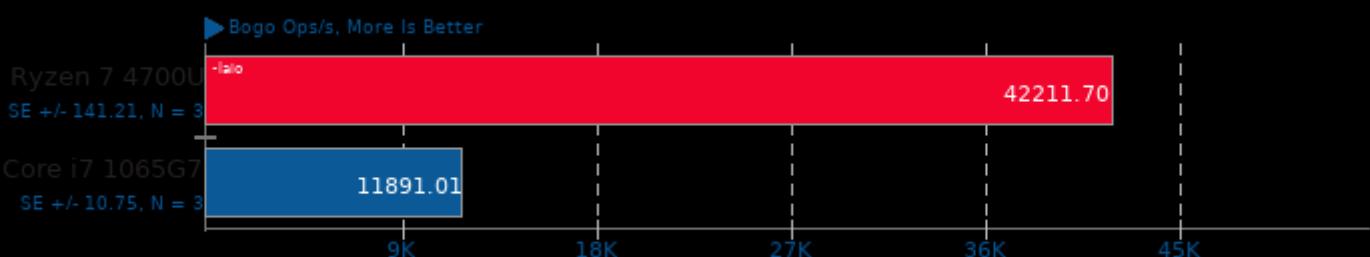
Test: Matrix Math



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

Stress-NG 0.11.07

Test: Vector Math

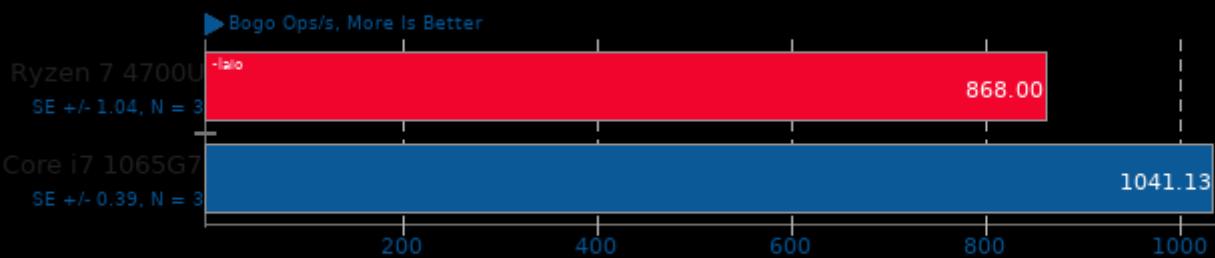


1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -lpthread -lc

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Stress-NG 0.11.07

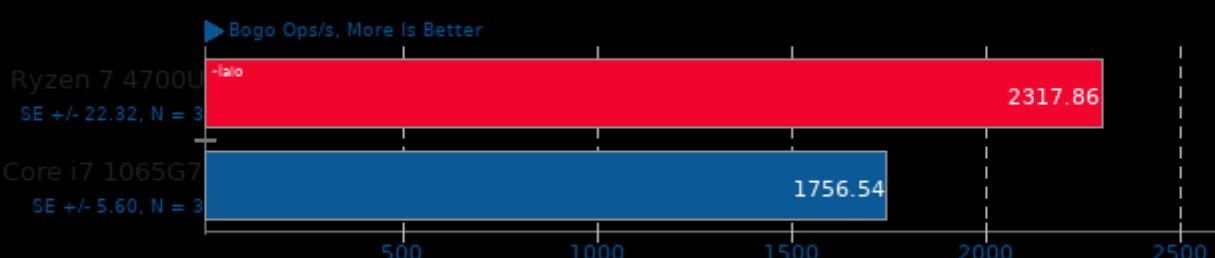
Test: Memory Copying



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

Stress-NG 0.11.07

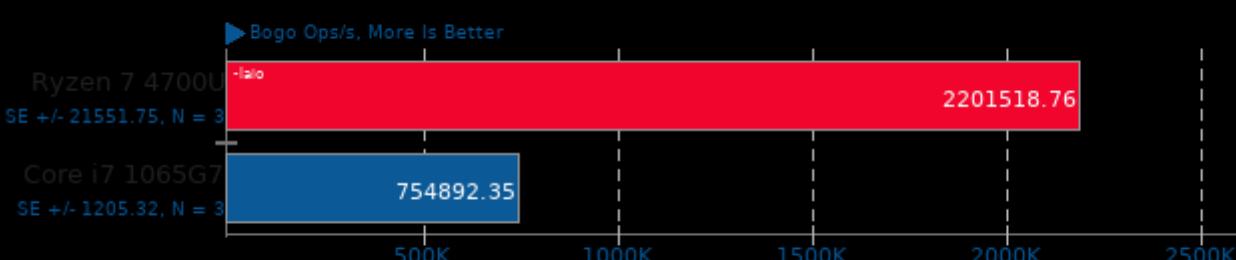
Test: Socket Activity



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

Stress-NG 0.11.07

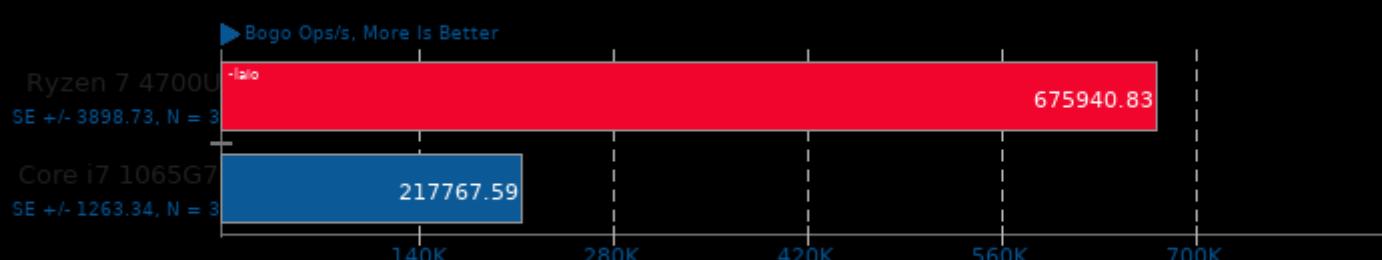
Test: Context Switching



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

Stress-NG 0.11.07

Test: Glibc C String Functions

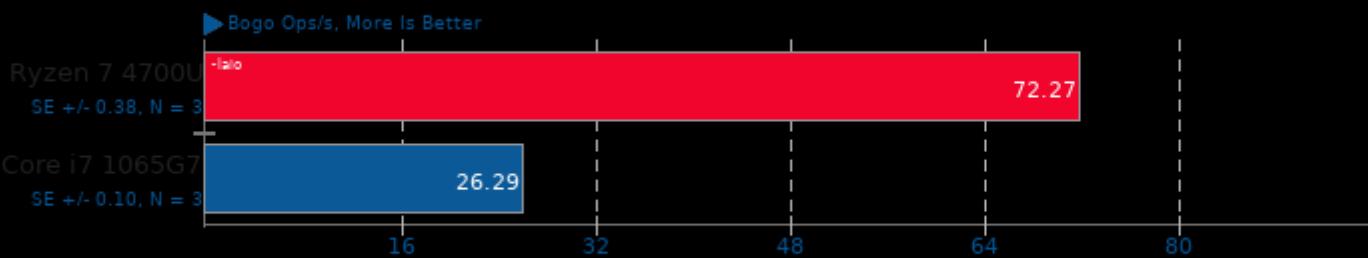


1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -lz -ldl -lpthread -lc

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

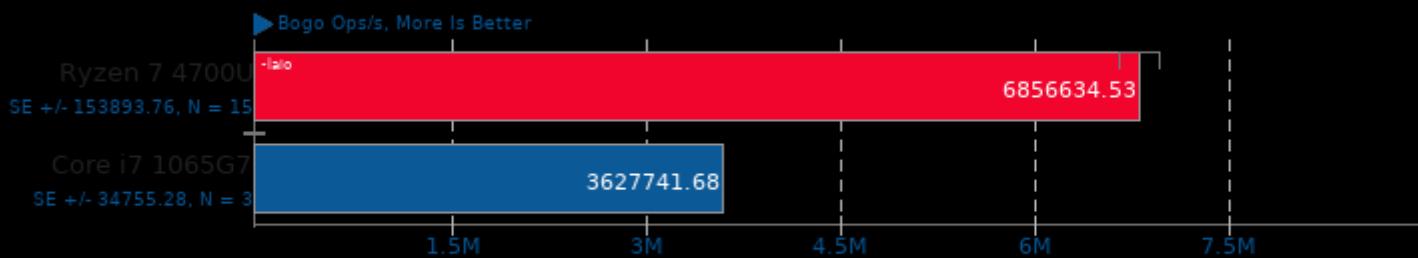
Stress-NG 0.11.07

Test: Glibc Qsort Data Sorting



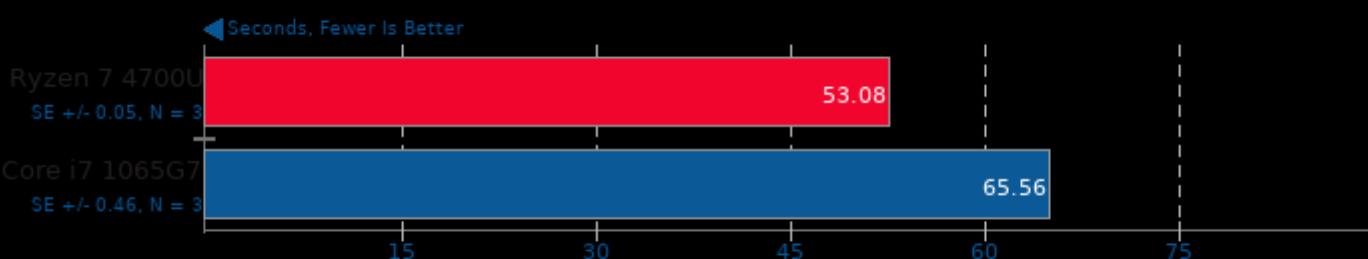
Stress-NG 0.11.07

Test: System V Message Passing



Git

Time To Complete Common Git Commands



Milpack Benchmark

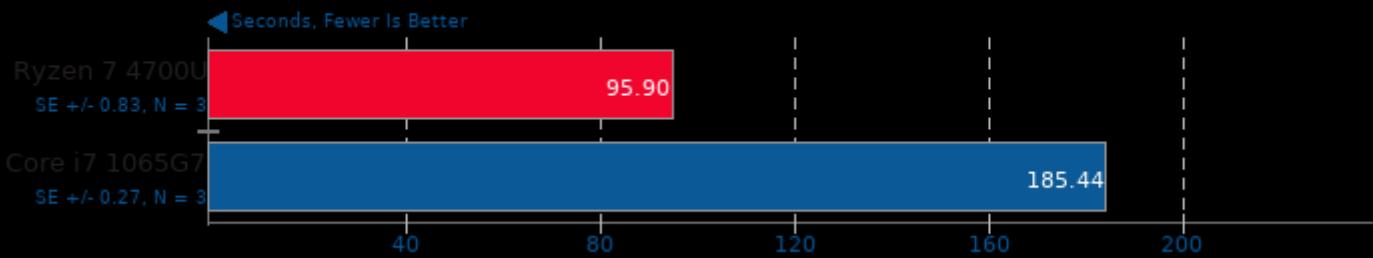
Benchmark: scikit_ica



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

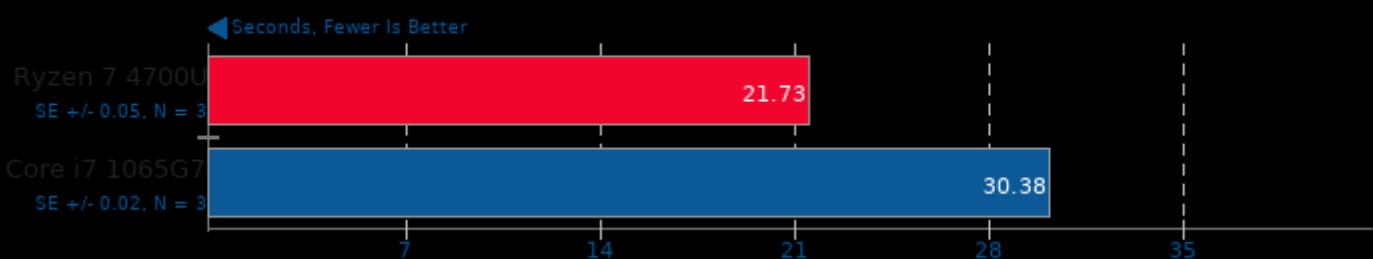
Milpack Benchmark

Benchmark: scikit_qda



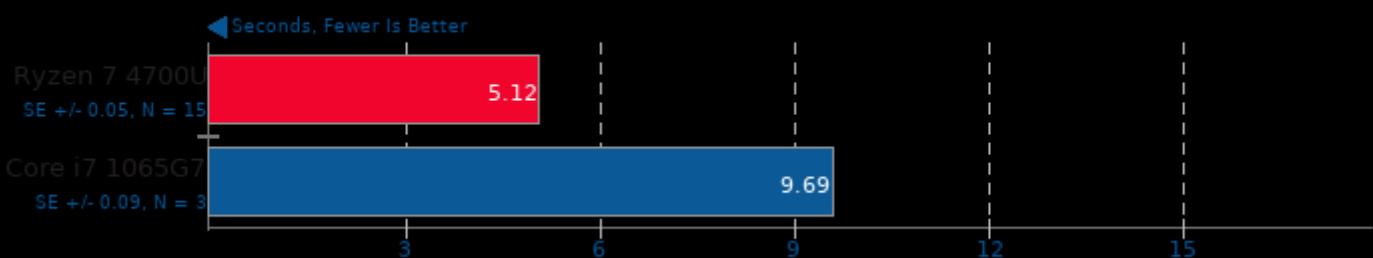
Milpack Benchmark

Benchmark: scikit_svm



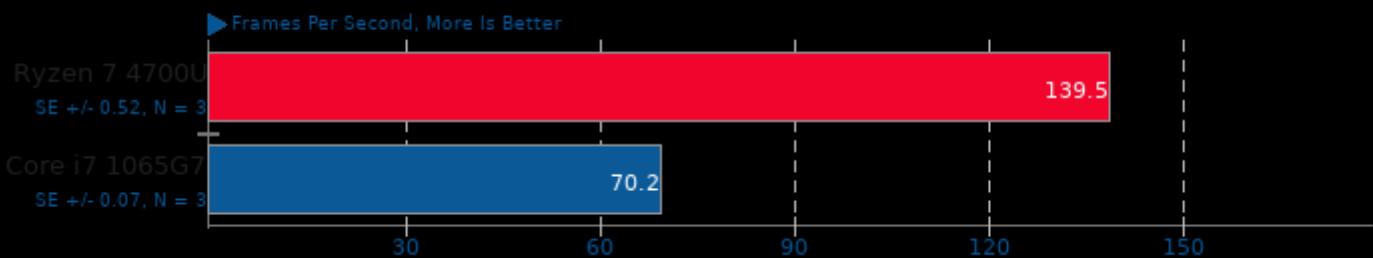
Milpack Benchmark

Benchmark: scikit_linearridge_regression



ET: Legacy 2.75

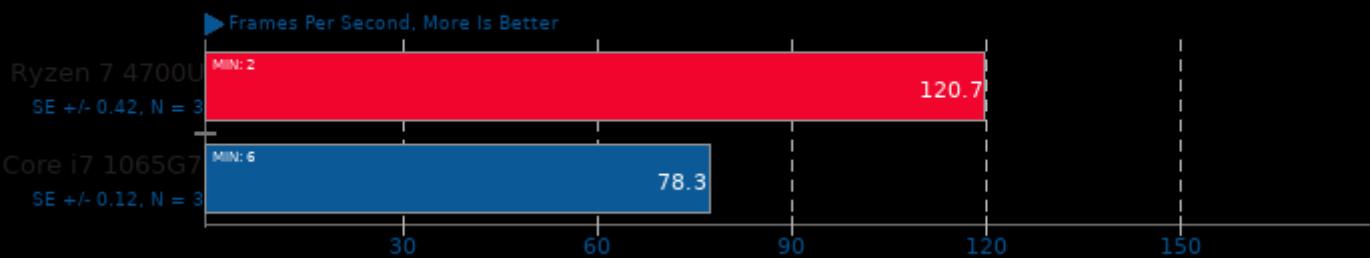
Renderer: Renderer2 - Resolution: 1920 x 1080



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

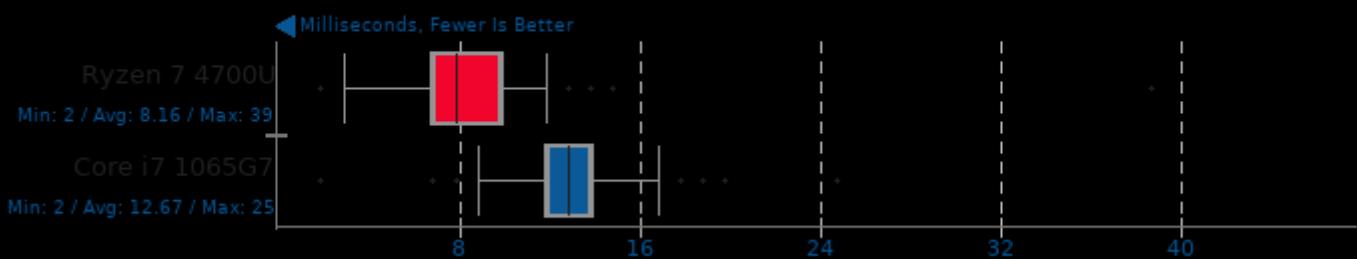
OpenArena 0.8.8

Resolution: 1920 x 1080



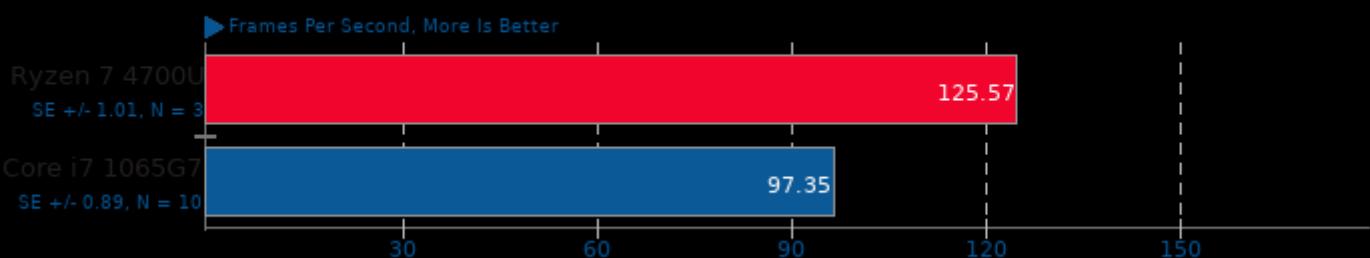
OpenArena 0.8.8

Resolution: 1920 x 1080 - Total Frame Time



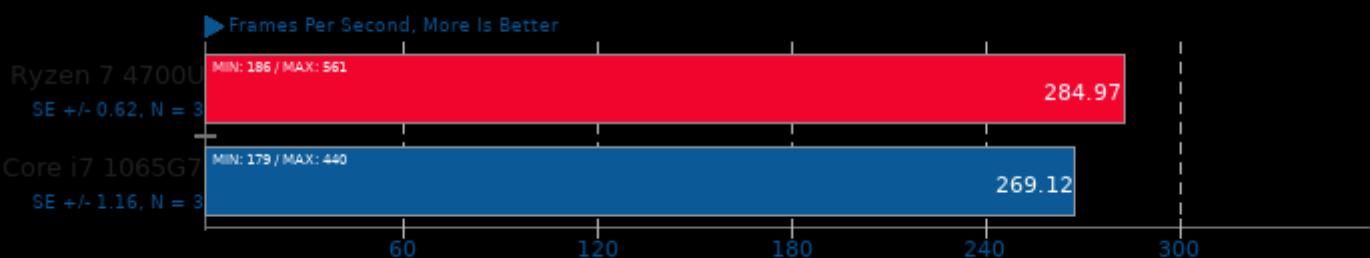
Tesseract 2014-05-12

Resolution: 1920 x 1080



Xonotic 0.8.2

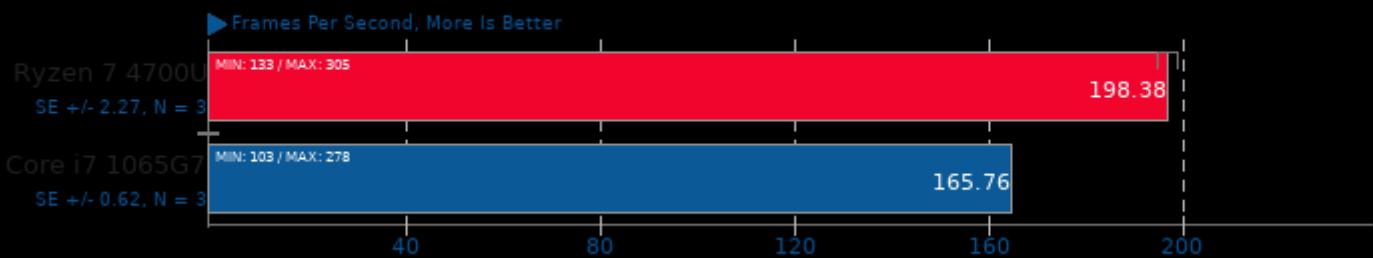
Resolution: 1920 x 1080 - Effects Quality: Low



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

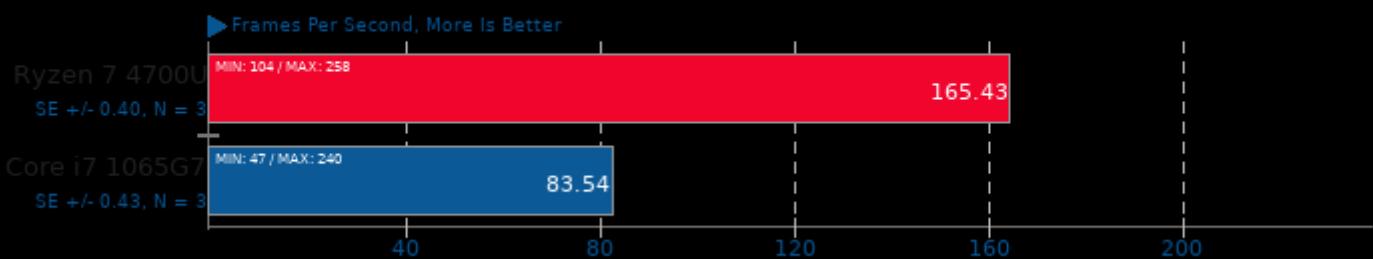
Xonotic 0.8.2

Resolution: 1920 x 1080 - Effects Quality: High



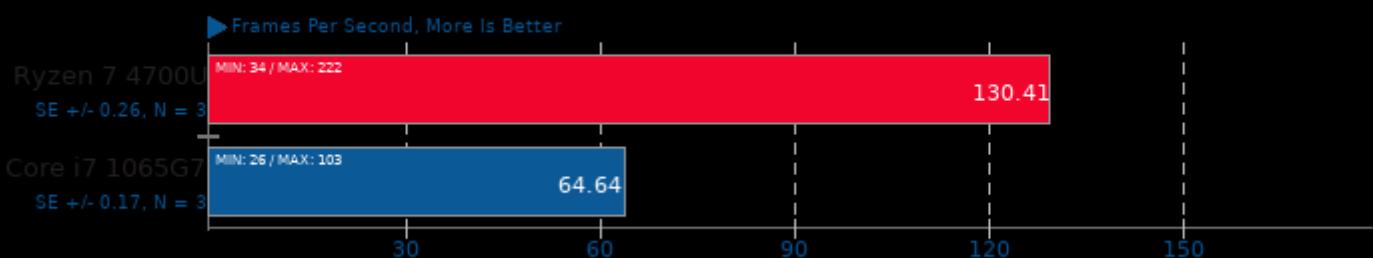
Xonotic 0.8.2

Resolution: 1920 x 1080 - Effects Quality: Ultra



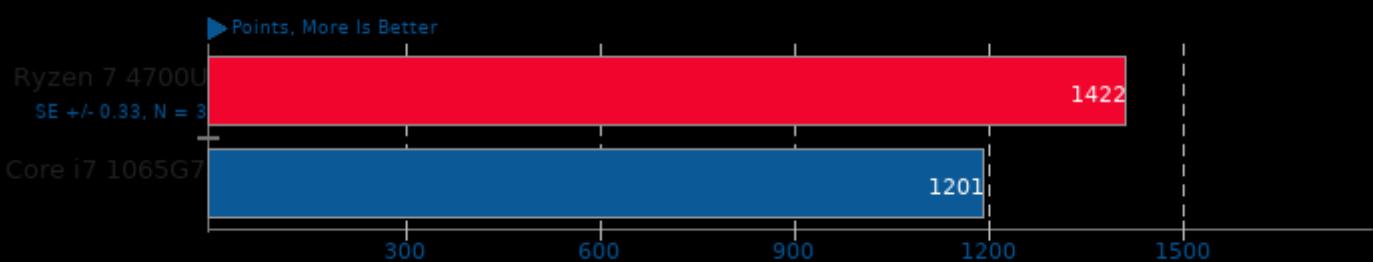
Xonotic 0.8.2

Resolution: 1920 x 1080 - Effects Quality: Ultimate



GpuTest 0.7.0

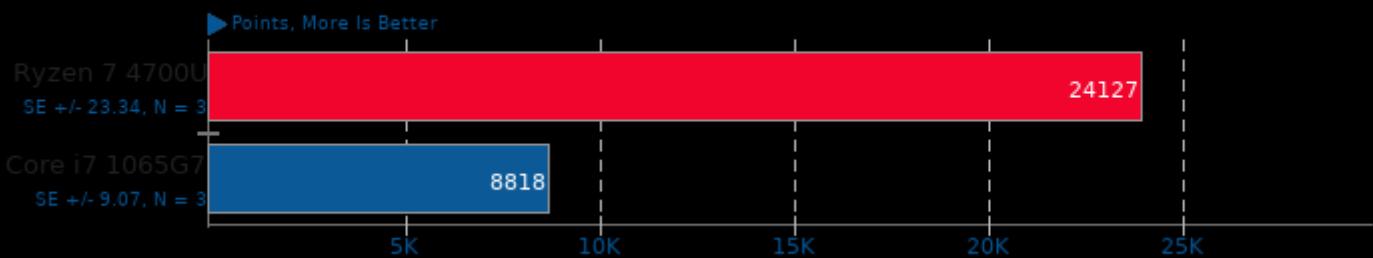
Test: GiMark - Resolution: 1920 x 1080 - Mode: Fullscreen



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

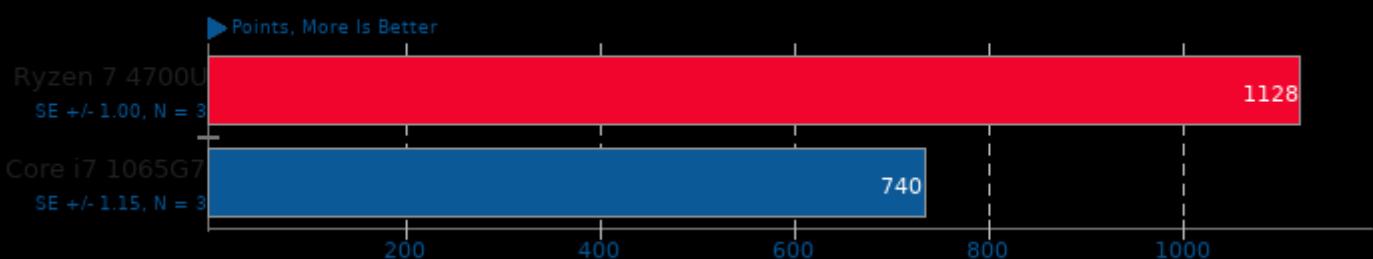
GpuTest 0.7.0

Test: Plot3D - Resolution: 1920 x 1080 - Mode: Fullscreen



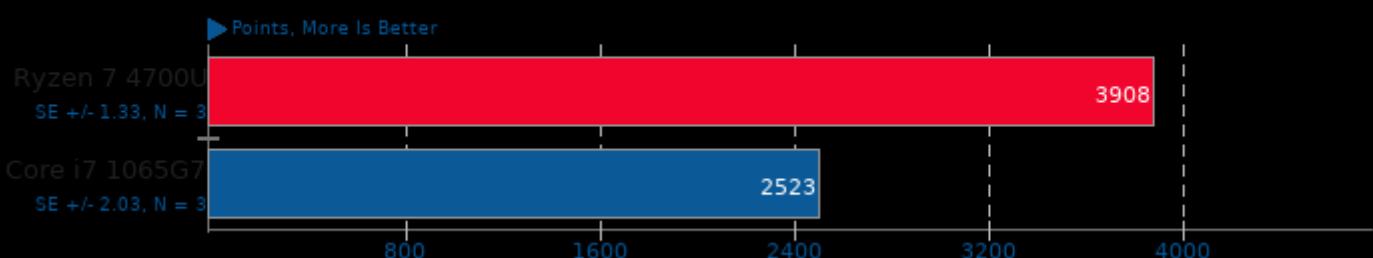
GpuTest 0.7.0

Test: Furmark - Resolution: 1920 x 1080 - Mode: Fullscreen



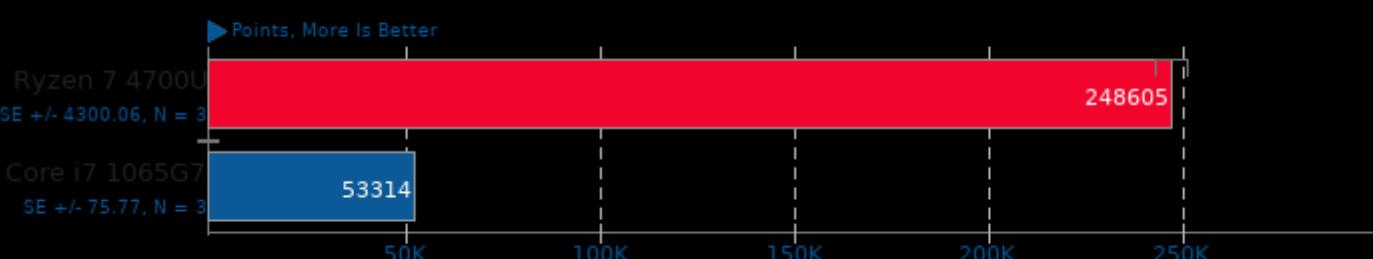
GpuTest 0.7.0

Test: TessMark - Resolution: 1920 x 1080 - Mode: Fullscreen



GpuTest 0.7.0

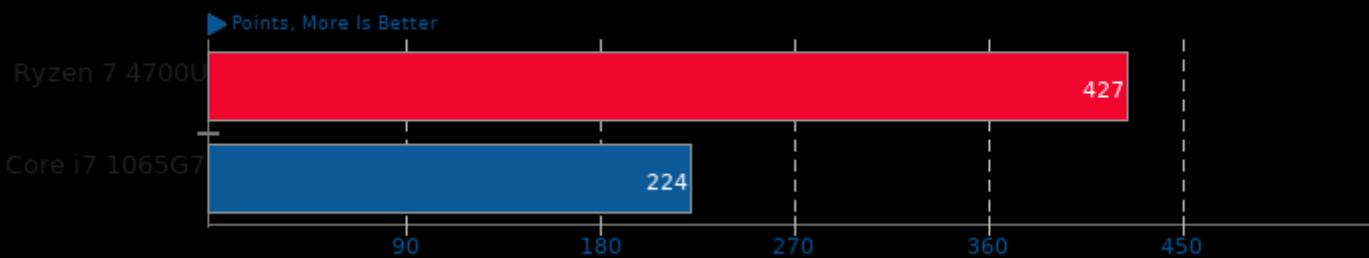
Test: Triangle - Resolution: 1920 x 1080 - Mode: Fullscreen



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

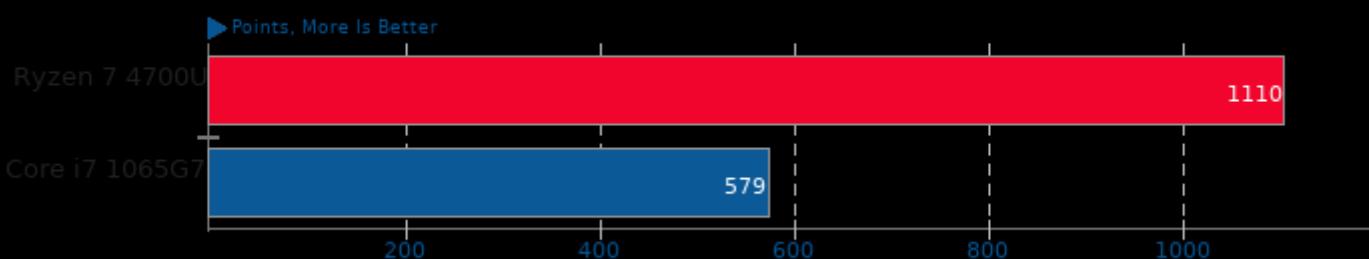
GpuTest 0.7.0

Test: Pixmark Piano - Resolution: 1920 x 1080 - Mode: Fullscreen



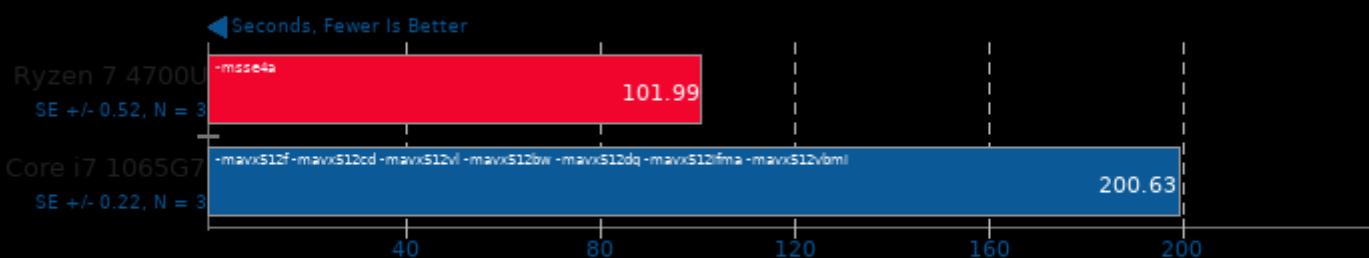
GpuTest 0.7.0

Test: Pixmark Volplosion - Resolution: 1920 x 1080 - Mode: Fullscreen



Timed MrBayes Analysis 3.2.7

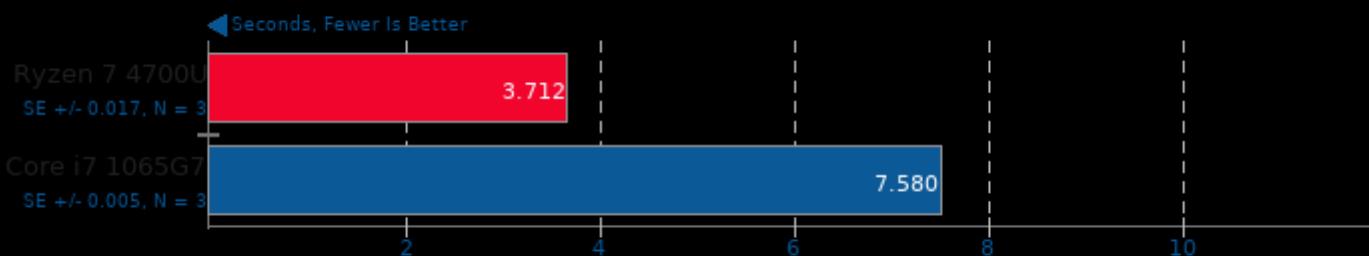
Primate Phylogeny Analysis



1. (CC) gcc options: -mmmx -msse -msse2 -msse3 -msse3 -msse4.1 -msse4.2 -msha -maes -mavx -mfma -mavx2 -mrdrnd -mbmi -mbmi2 -madx -mabm -

Timed MAFFT Alignment 7.392

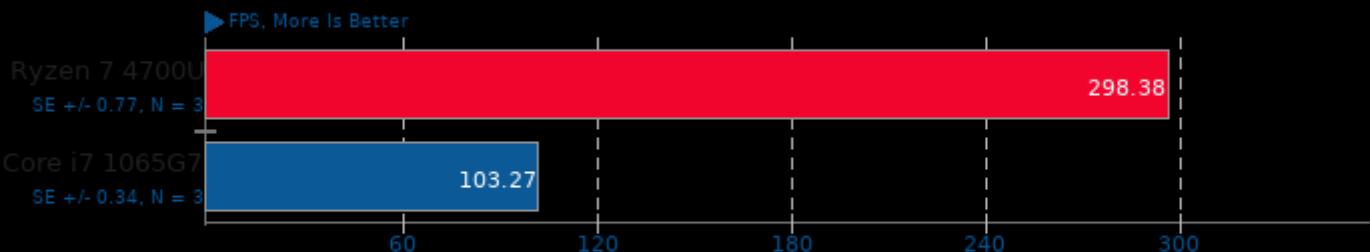
Multiple Sequence Alignment



1. (CC) gcc options: -std=c99 -O3 -lm -lpthread

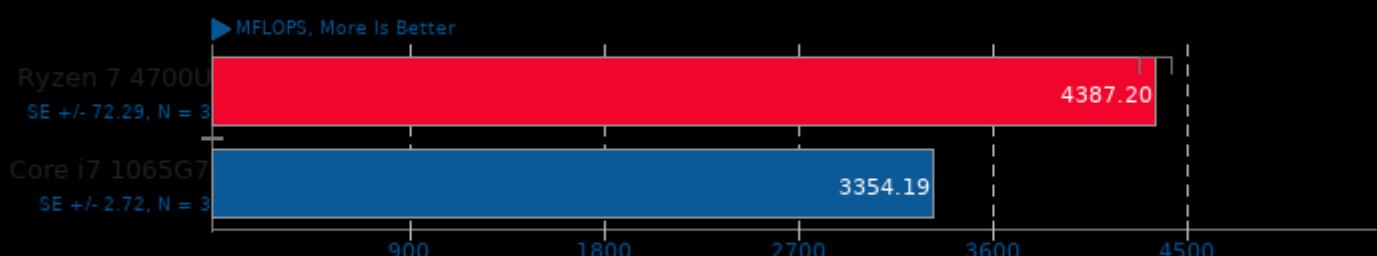
Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

TTSIOD 3D Renderer 2.3b Phong Rendering With Soft-Shadow Mapping



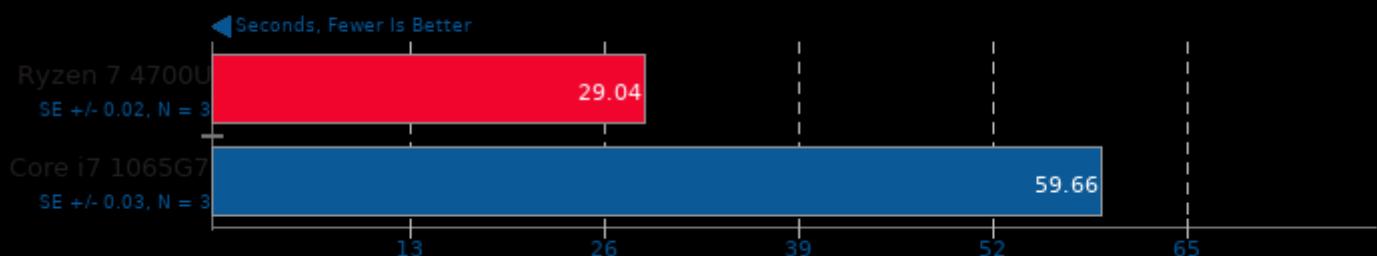
1. (CXX) g++ options: -O3 -fomit-frame-pointer -ffast-math -mtune=native -fno -msse -mrecip -mfpmath=sse -msse2 -msse3 -fopenmp -fwhole-pr

Himeno Benchmark 3.0 Poisson Pressure Solver

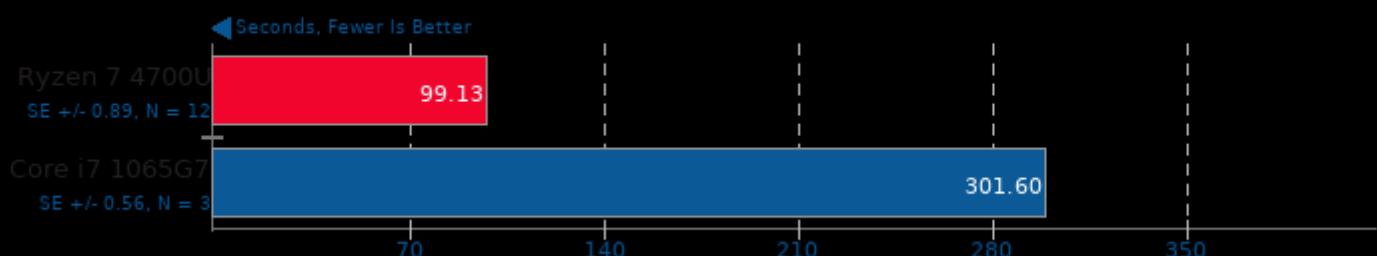


1. (CC) gcc options: -O3 -mavx2

Timed Apache Compilation 2.4.41 Time To Compile



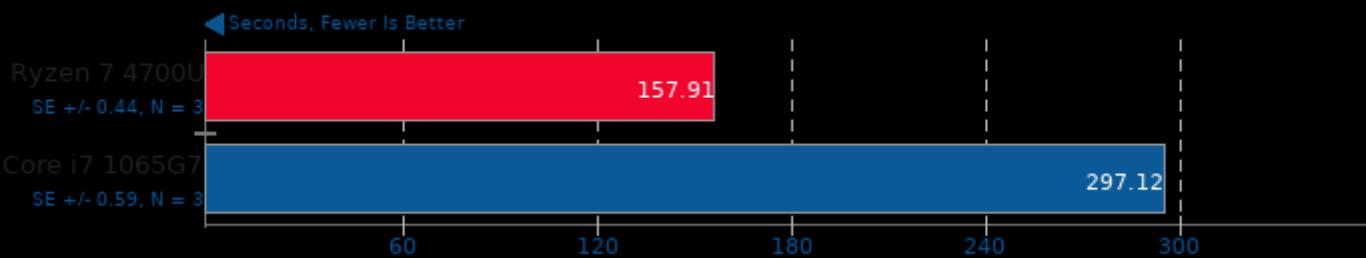
Timed FFmpeg Compilation 4.2.2 Time To Compile



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

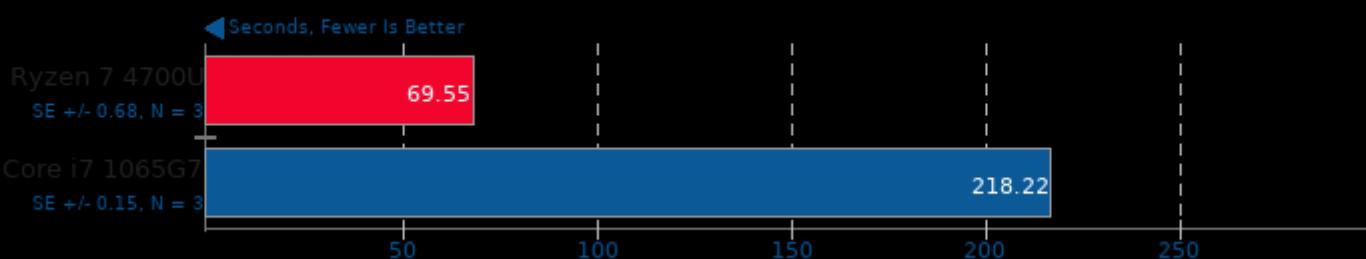
Timed GDB GNU Debugger Compilation 9.1

Time To Compile



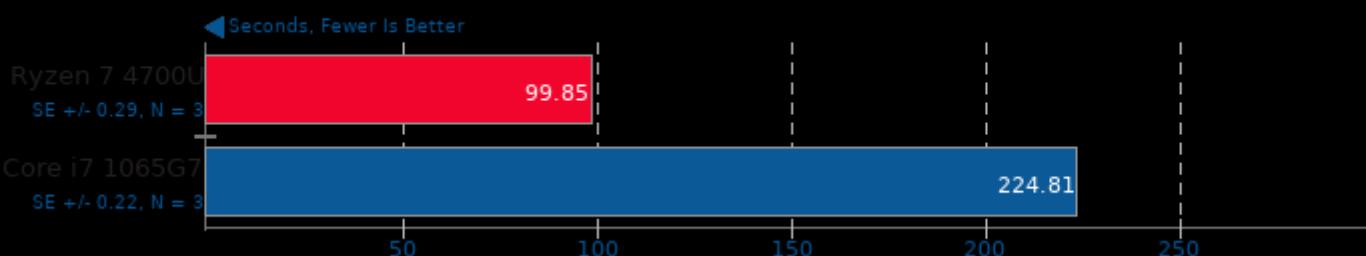
Timed MPlayer Compilation 1.4

Time To Compile



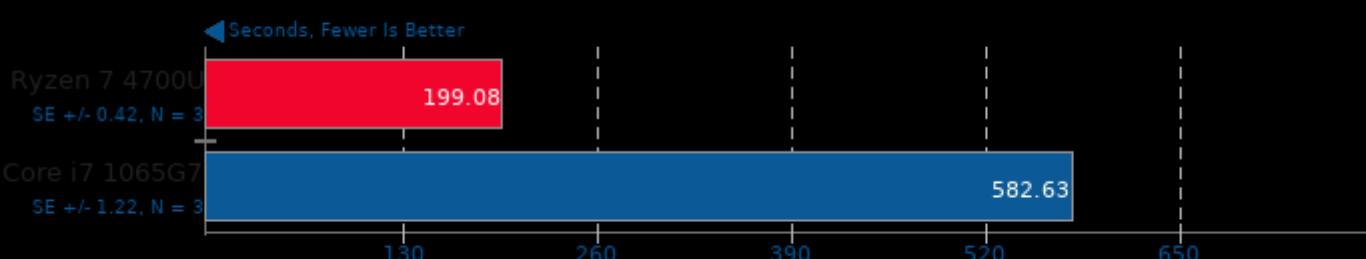
Timed PHP Compilation 7.4.2

Time To Compile



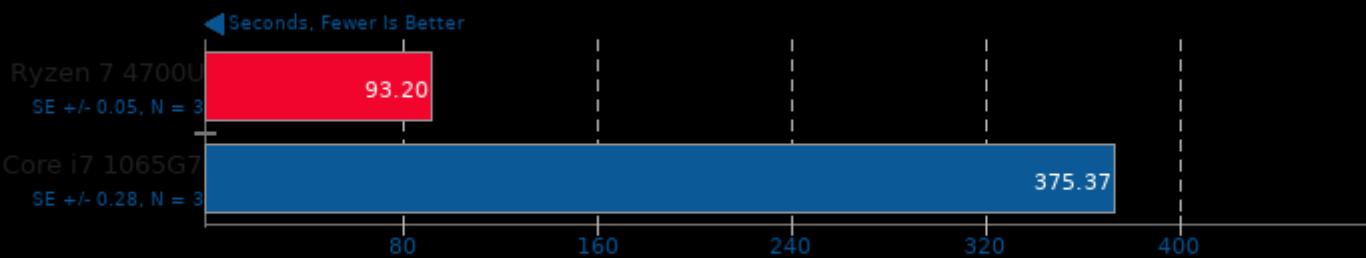
Build2 0.12

Time To Compile



C-Ray 1.1

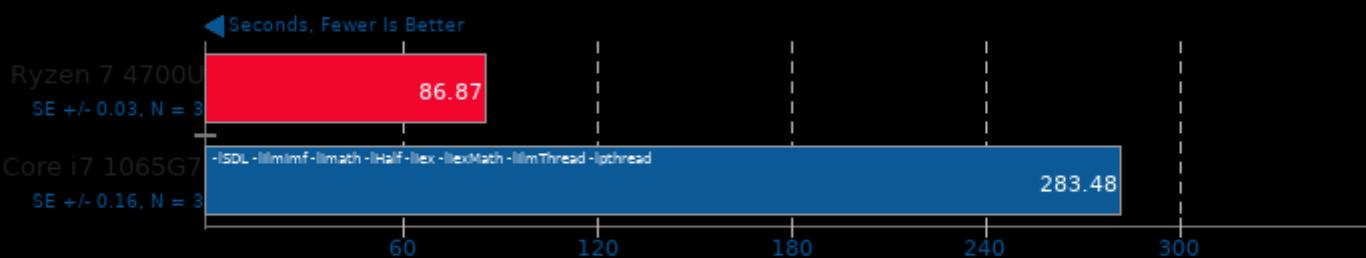
Total Time - 4K, 16 Rays Per Pixel



1. (CC) gcc options: -lm -lpthread -O3

POV-Ray 3.7.0.7

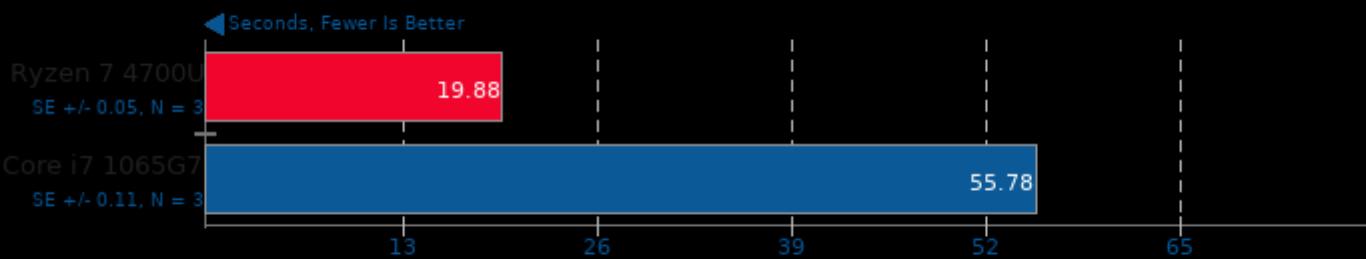
Trace Time



1. (CXX) g++ options: -pipe -O3 -ffast-math -march=native -pthread -lSM -ICE -X11 -ltiff -ljpeg -lpng -lz -lrt -lm -lboost_thread -lboost_system

Smallpt 1.0

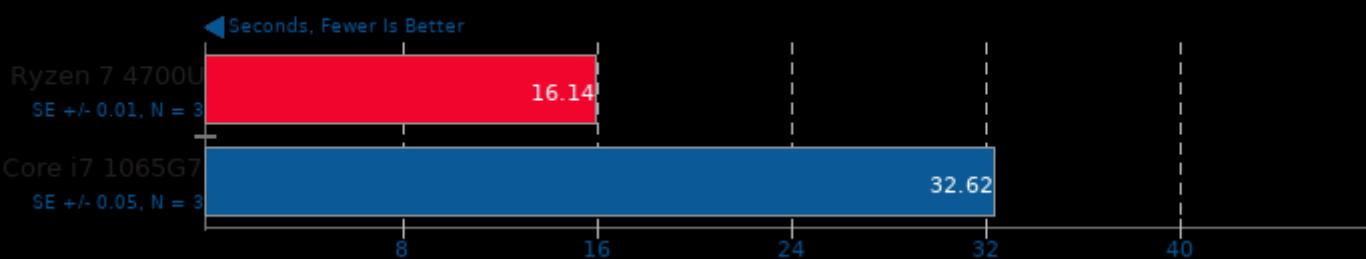
Global Illumination Renderer; 128 Samples



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

Darktable 3.0.1

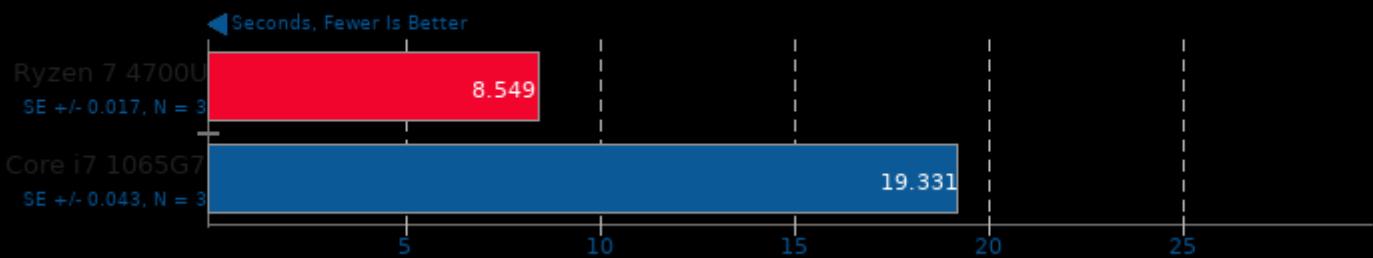
Test: Boat - Acceleration: CPU-only



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

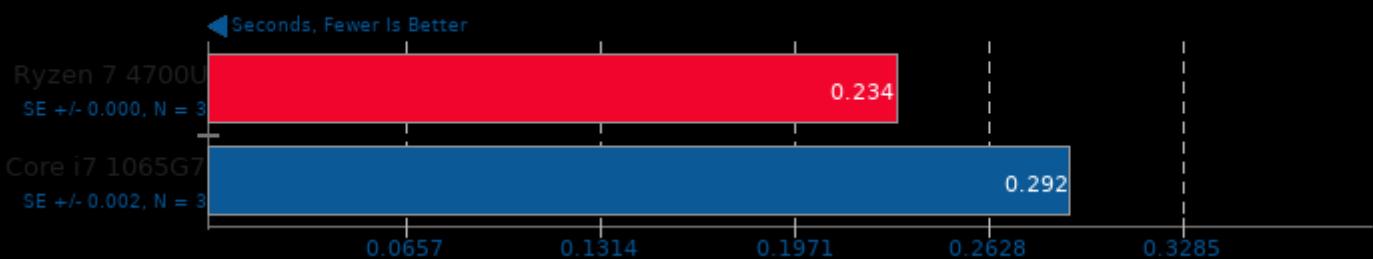
Darktable 3.0.1

Test: Masskrug - Acceleration: CPU-only



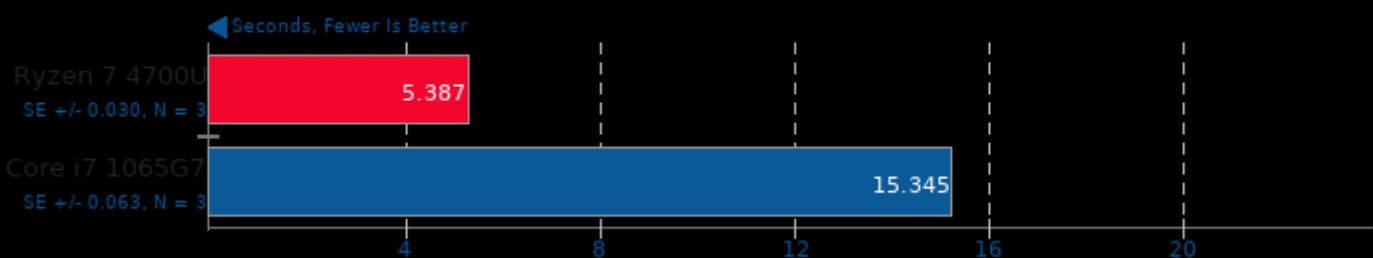
Darktable 3.0.1

Test: Server Rack - Acceleration: CPU-only



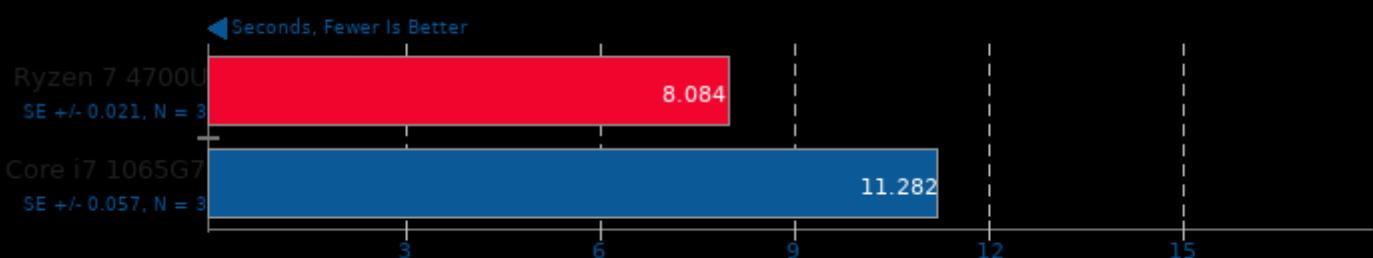
Darktable 3.0.1

Test: Server Room - Acceleration: CPU-only



GEGL

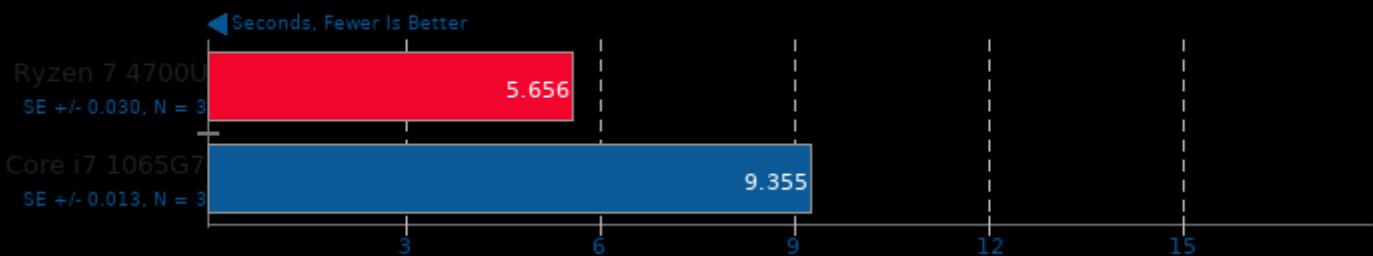
Operation: Crop



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

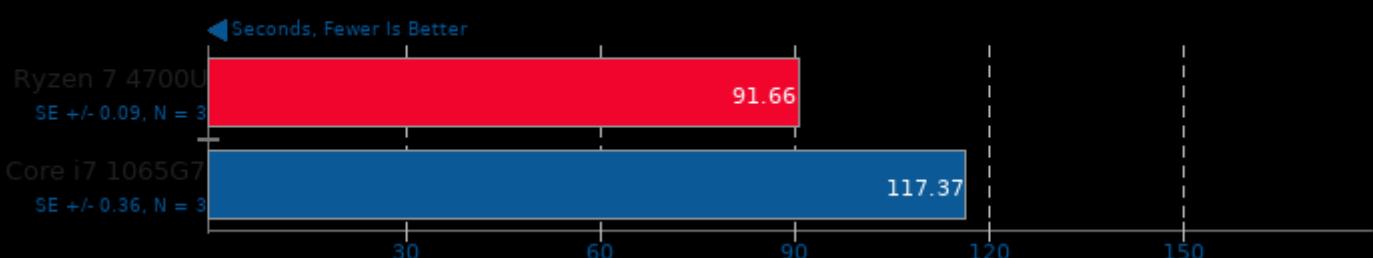
GEGL

Operation: Scale



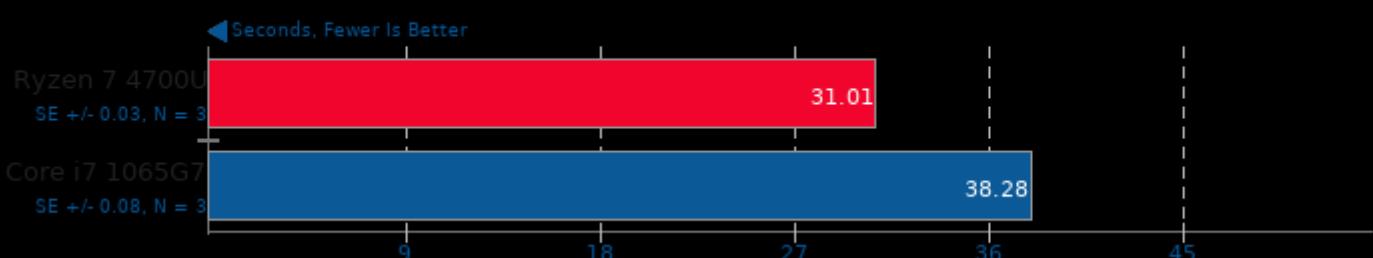
GEGL

Operation: Cartoon



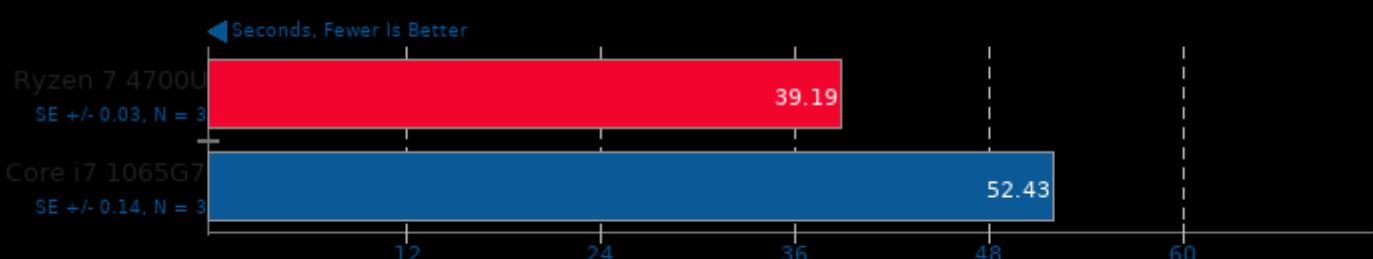
GEGL

Operation: Reflect



GEGL

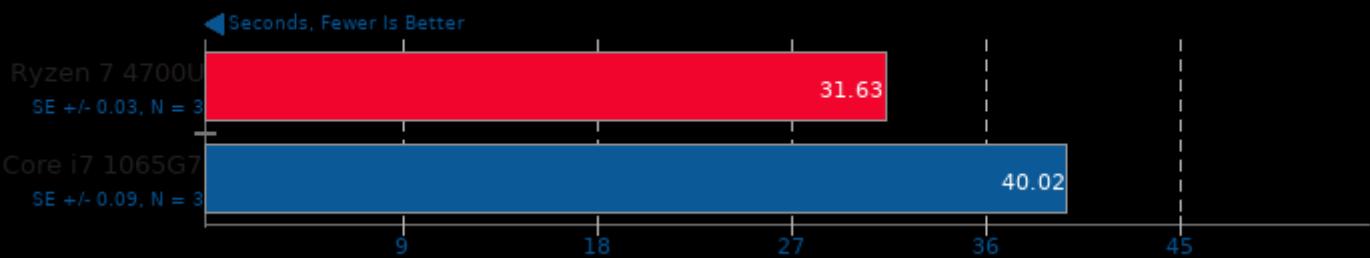
Operation: Antialias



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

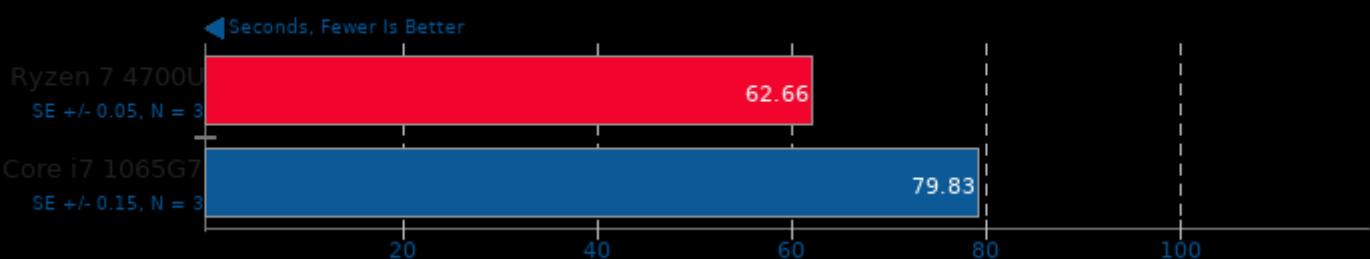
GEGL

Operation: Tile Glass



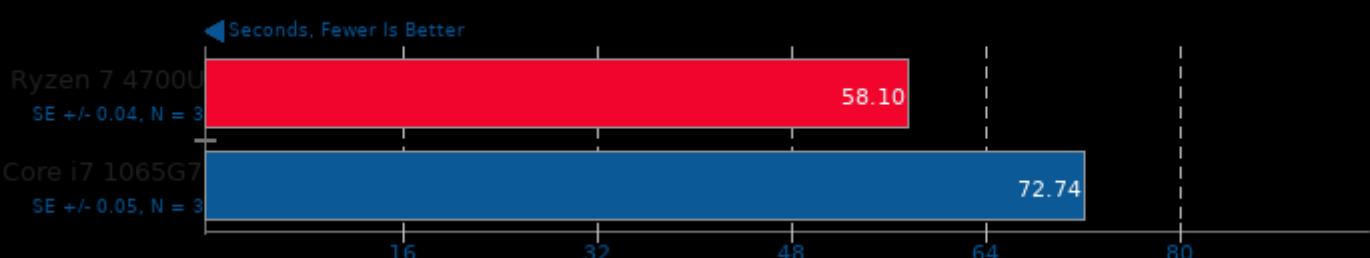
GEGL

Operation: Wavelet Blur



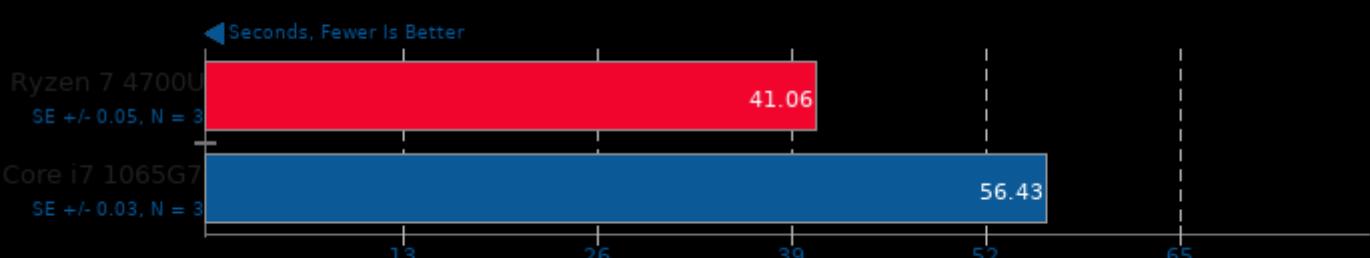
GEGL

Operation: Color Enhance



GEGL

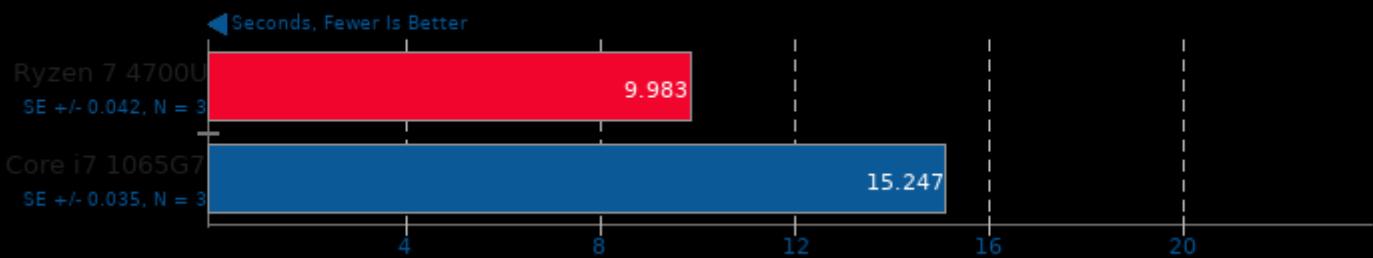
Operation: Rotate 90 Degrees



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

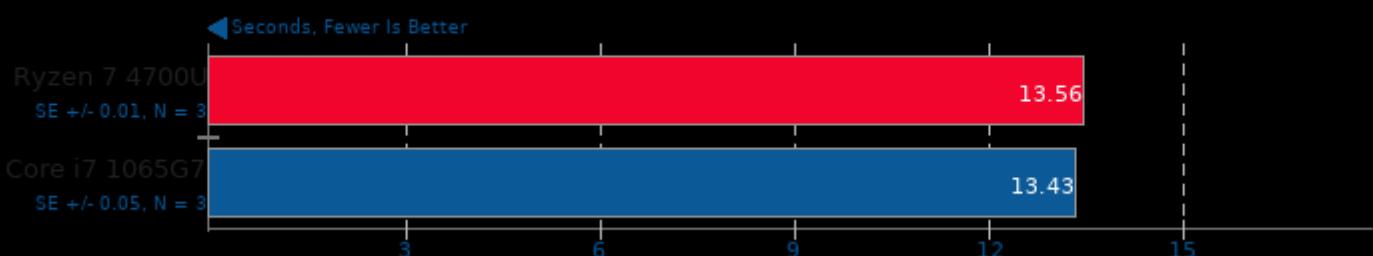
GIMP 2.10.18

Test: resize



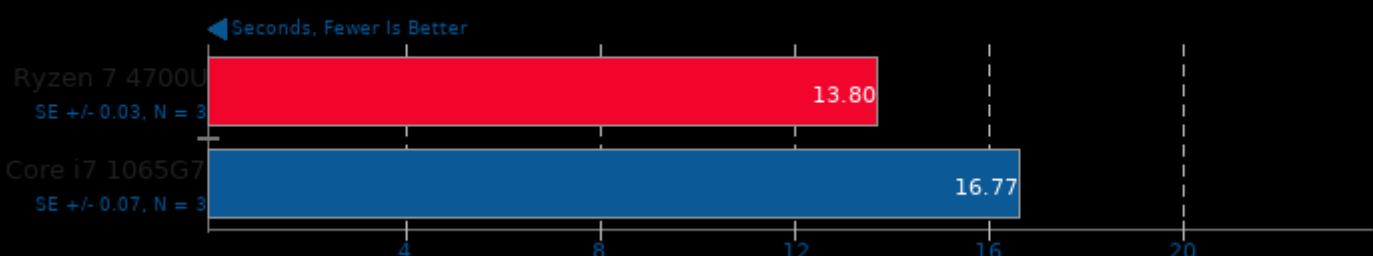
GIMP 2.10.18

Test: rotate



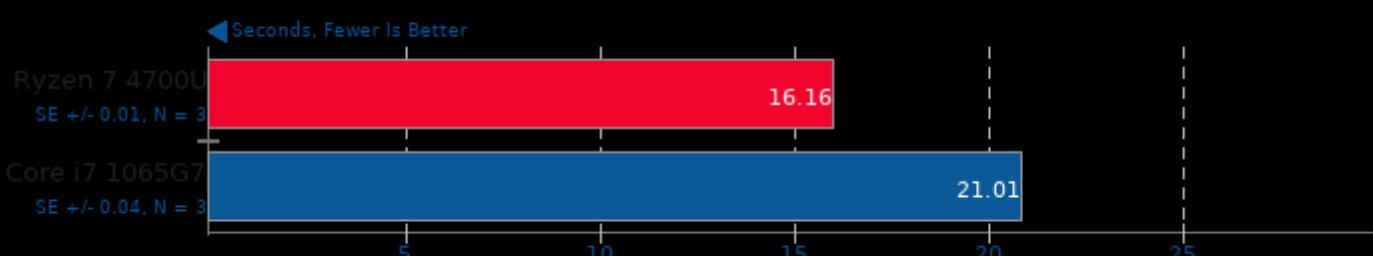
GIMP 2.10.18

Test: auto-levels



GIMP 2.10.18

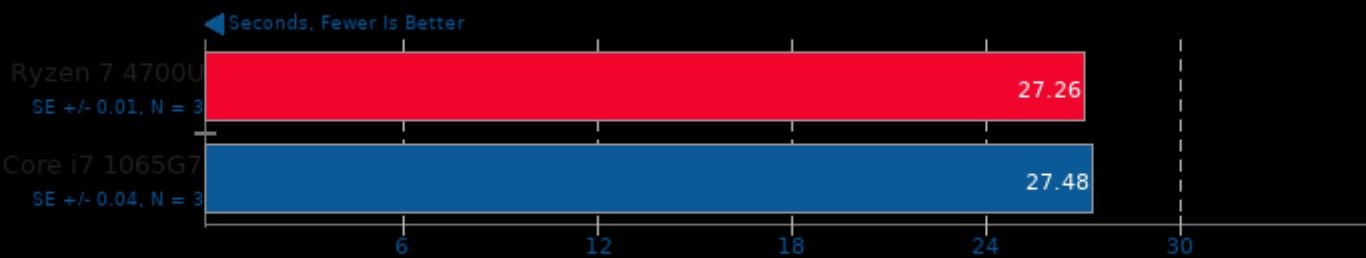
Test: unsharp-mask



Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Inkscape

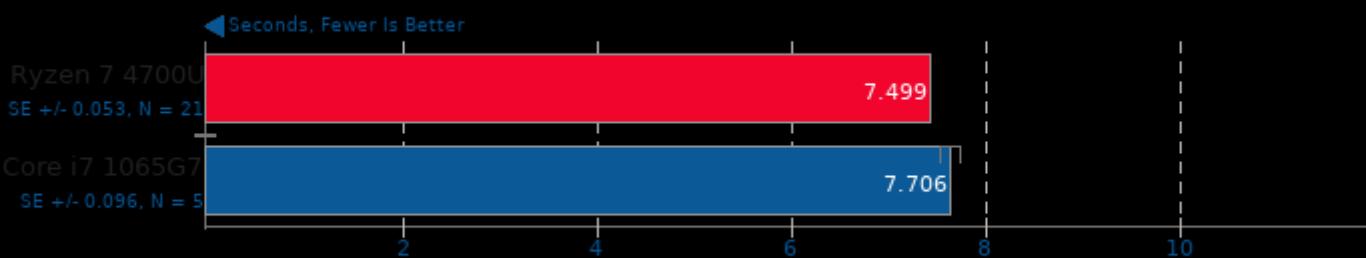
Operation: SVG Files To PNG



1. Inkscape 0.92.5 (2060ec1f9f, 2020-04-08)

LibreOffice

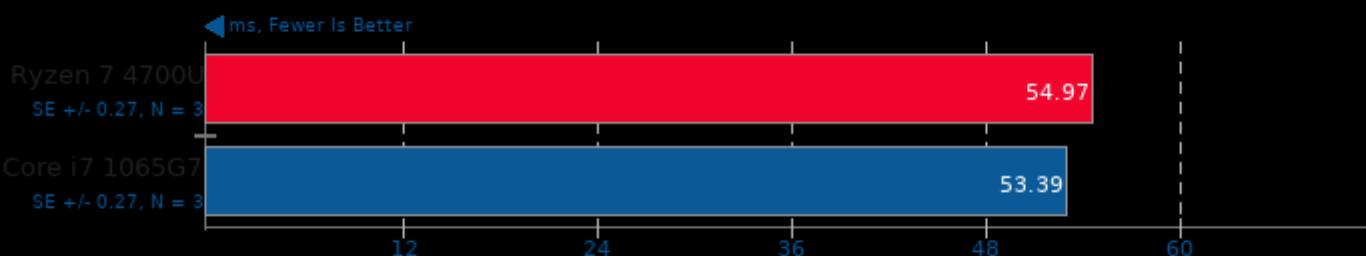
Test: 20 Documents To PDF



1. LibreOffice 6.4.3.2 40(Build:2)

Selenium

Benchmark: ARES-6 - Browser: Firefox



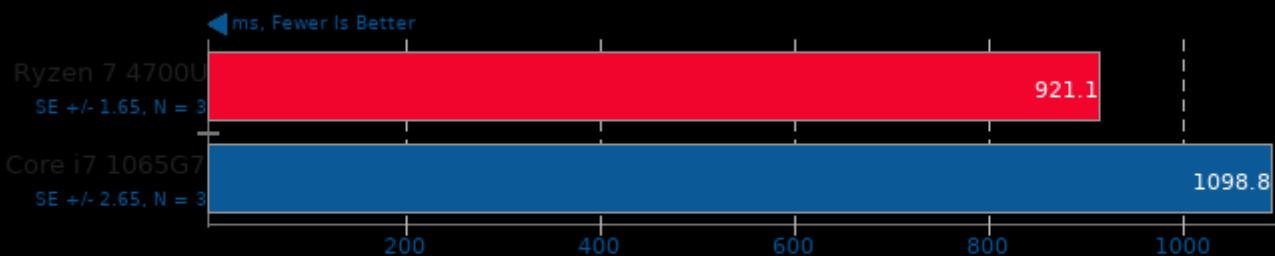
1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Selenium

Benchmark: Kraken - Browser: Firefox

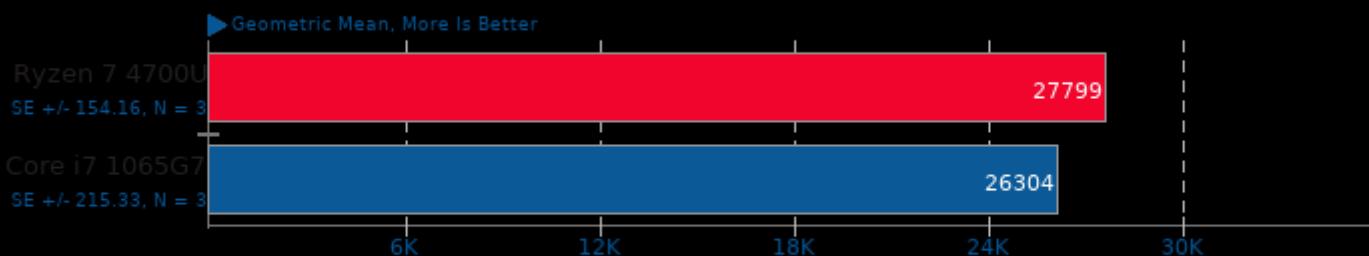


1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Selenium

Benchmark: Octane - Browser: Firefox

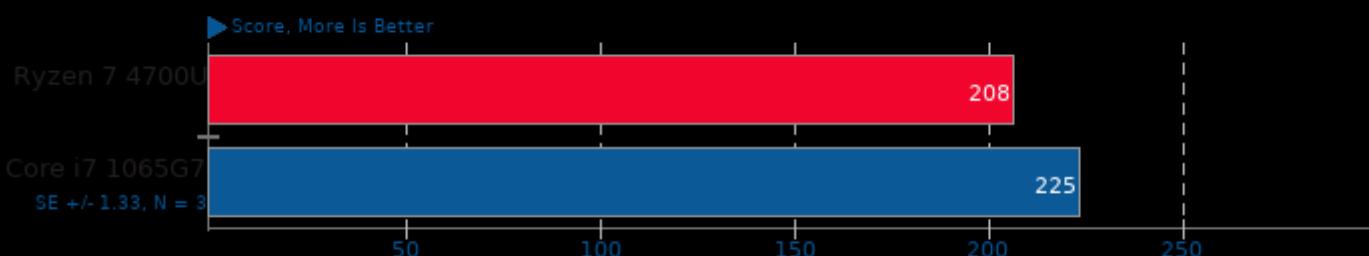


1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Selenium

Benchmark: WebXPRT - Browser: Firefox



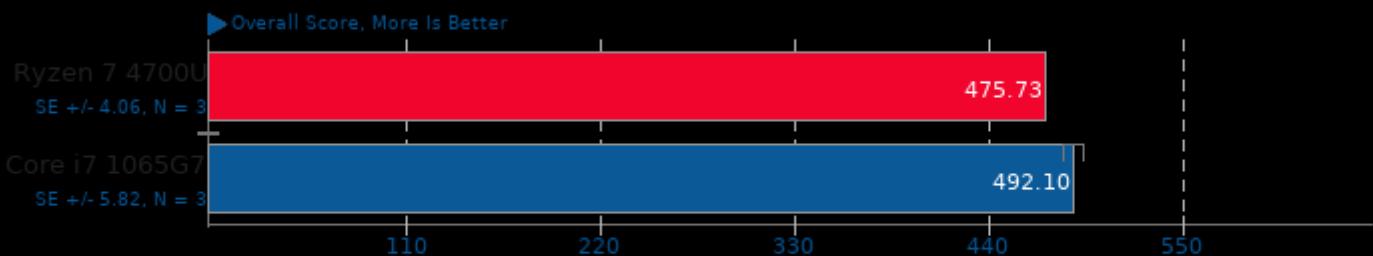
1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Selenium

Benchmark: Basemark - Browser: Firefox

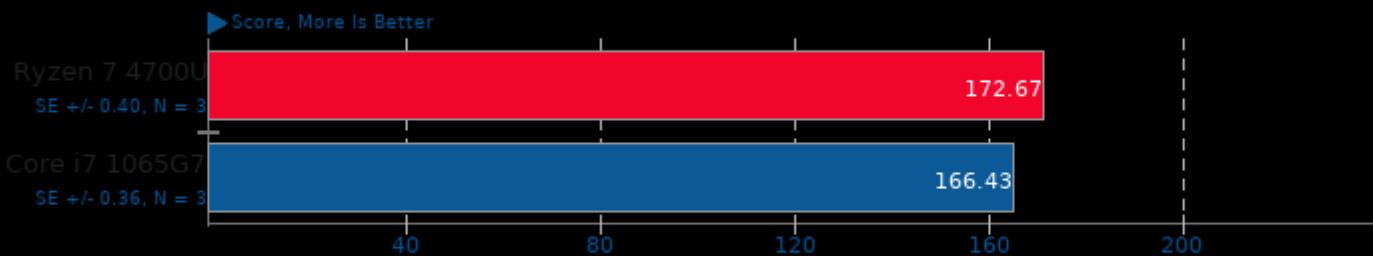


1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Selenium

Benchmark: Jetstream - Browser: Firefox

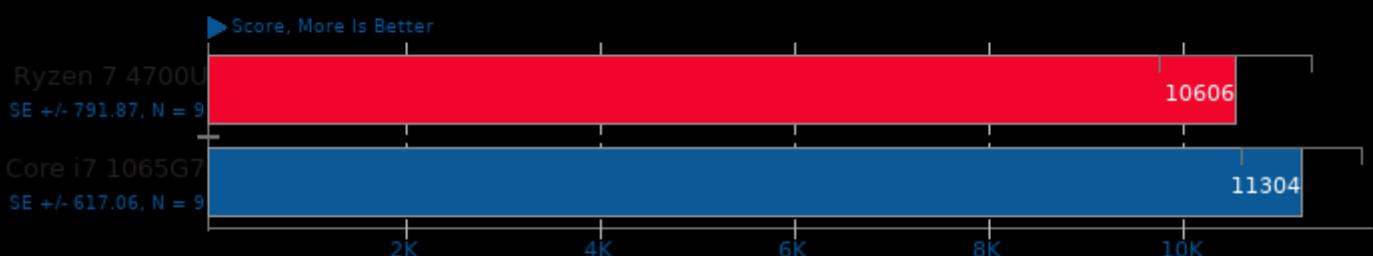


1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Selenium

Benchmark: CanvasMark - Browser: Firefox



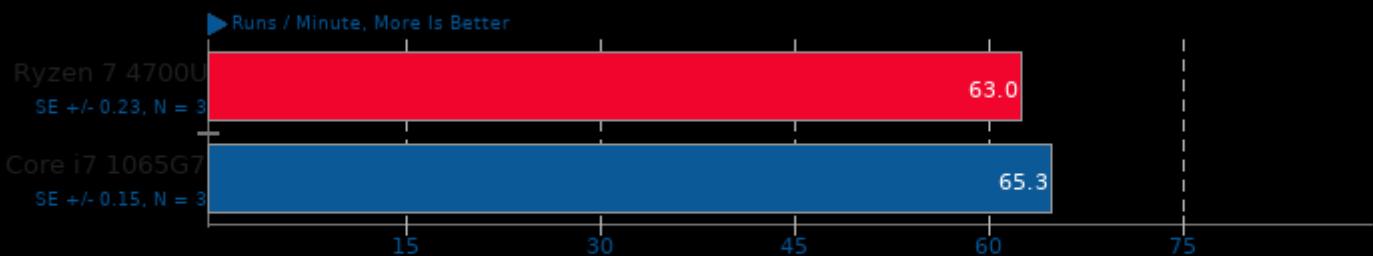
1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Selenium

Benchmark: StyleBench - Browser: Firefox

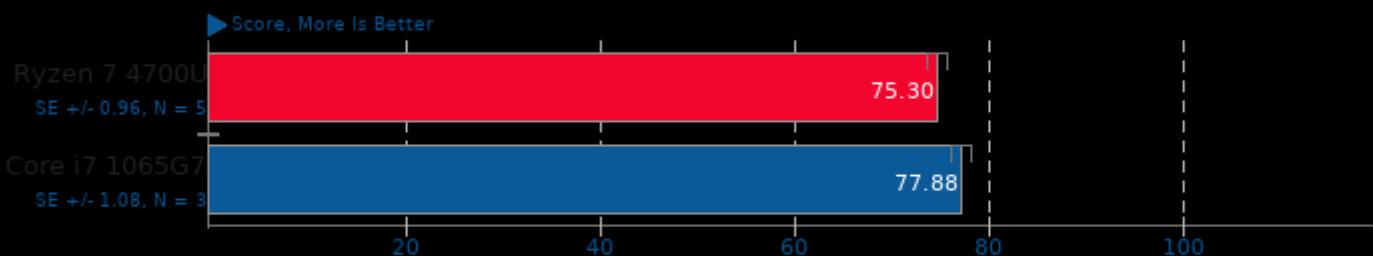


1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Selenium

Benchmark: Jetstream 2 - Browser: Firefox



1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Selenium

Benchmark: Maze Solver - Browser: Firefox



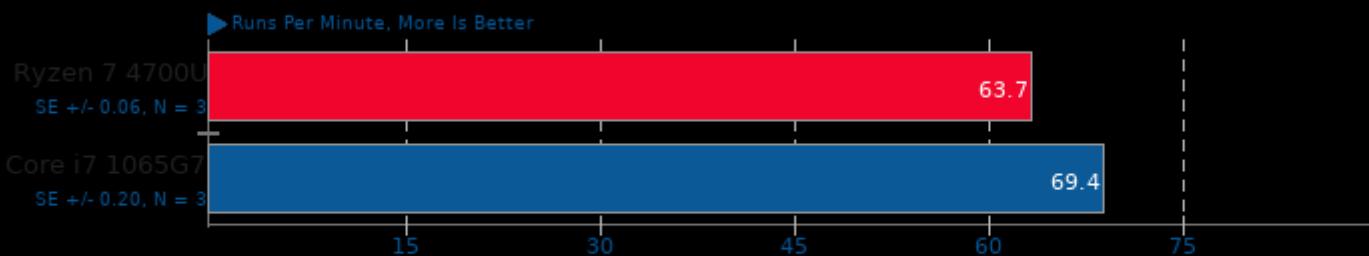
1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Selenium

Benchmark: Speedometer - Browser: Firefox

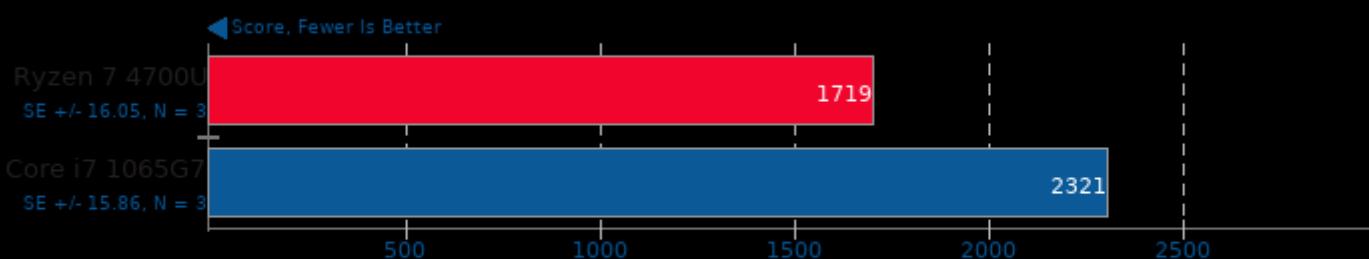


1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Selenium

Benchmark: PSPDFKit WASM - Browser: Firefox

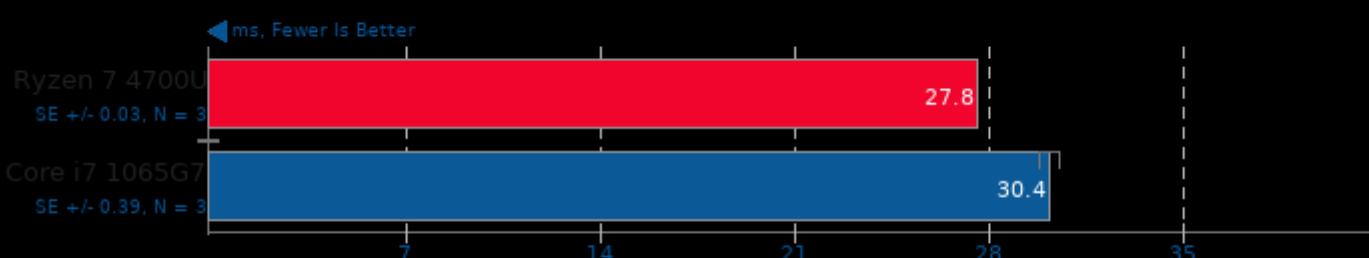


1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Selenium

Benchmark: WASM imageConvolute - Browser: Firefox

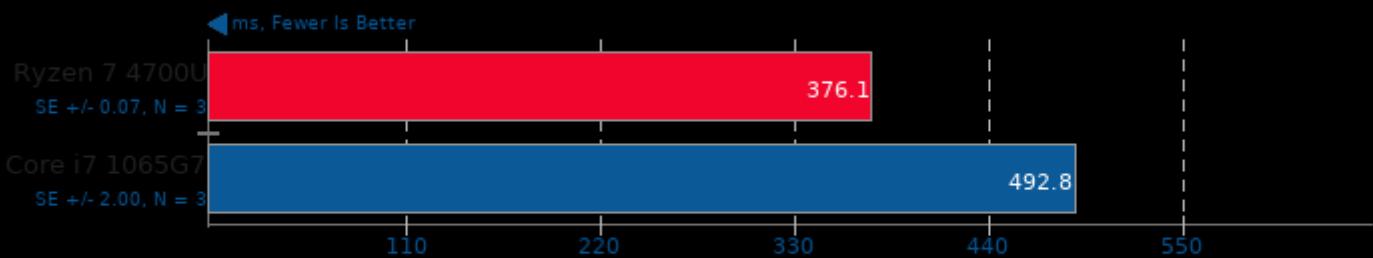


1. Ryzen 7 4700U: firefox 76.0

2. Core i7 1065G7: firefox 76.0.1

Selenium

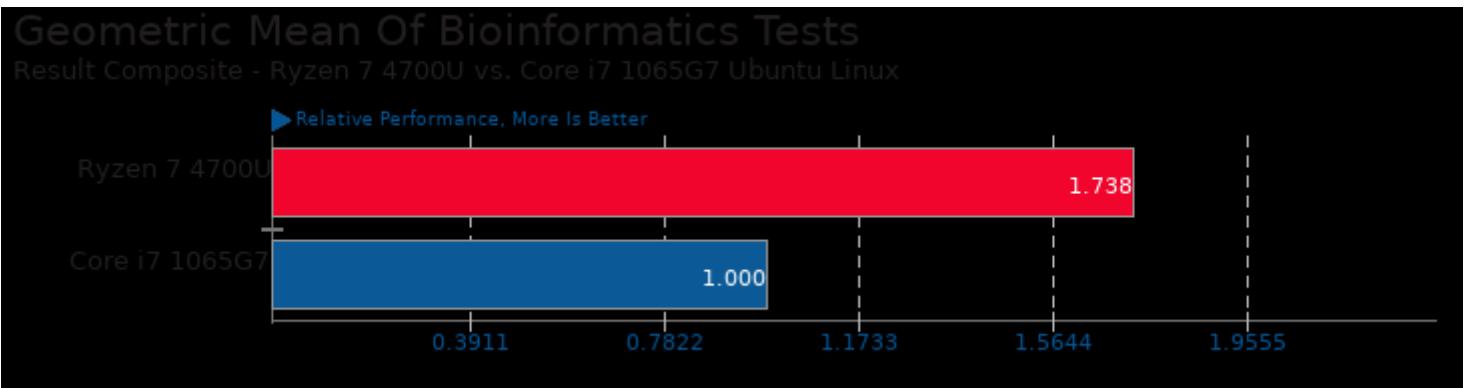
Benchmark: WASM collisionDetection - Browser: Firefox



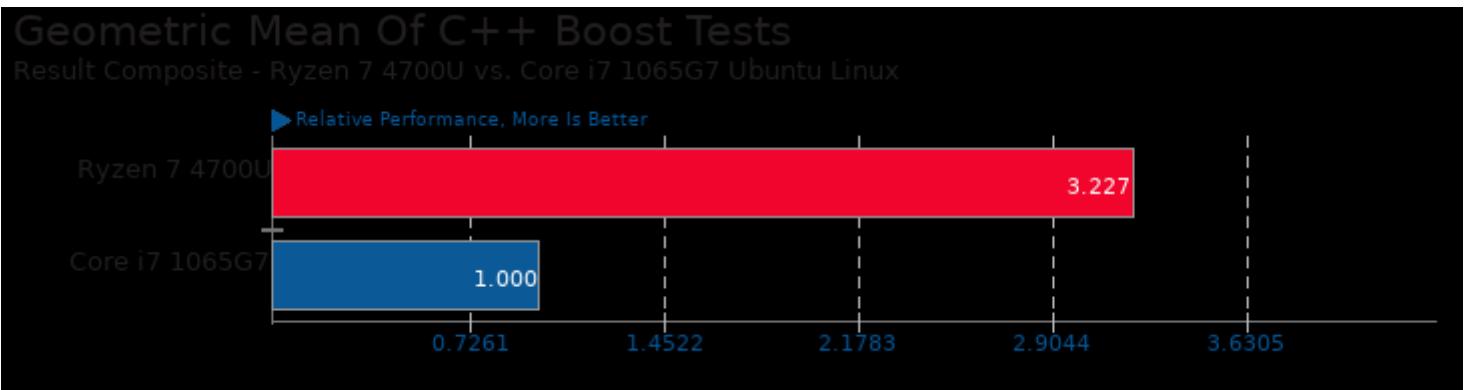
1. Ryzen 7 4700U: firefox 76.0
2. Core i7 1065G7: firefox 76.0.1

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

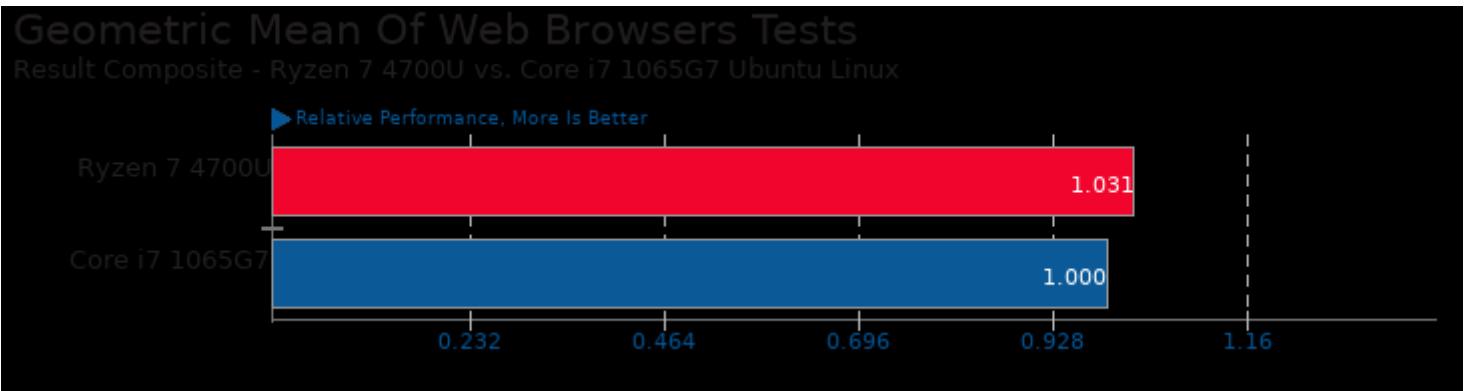
These geometric means are based upon test groupings / test suites for this result file.



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



Geometric mean based upon tests: pts/yafaray and pts/povray

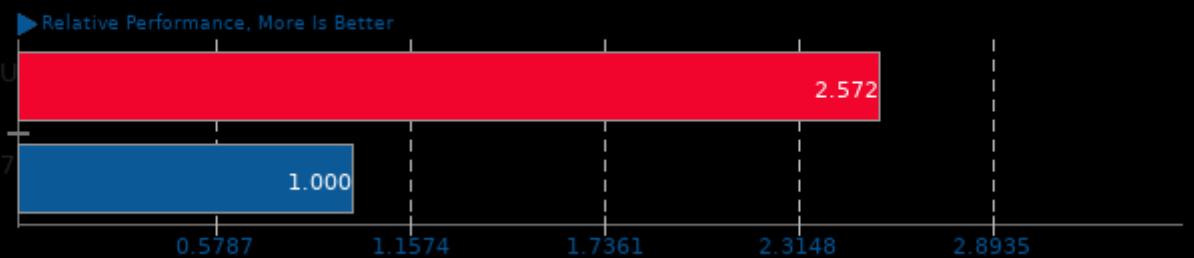


Geometric mean based upon tests: system/selenium

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Geometric Mean Of Timed Code Compilation Tests

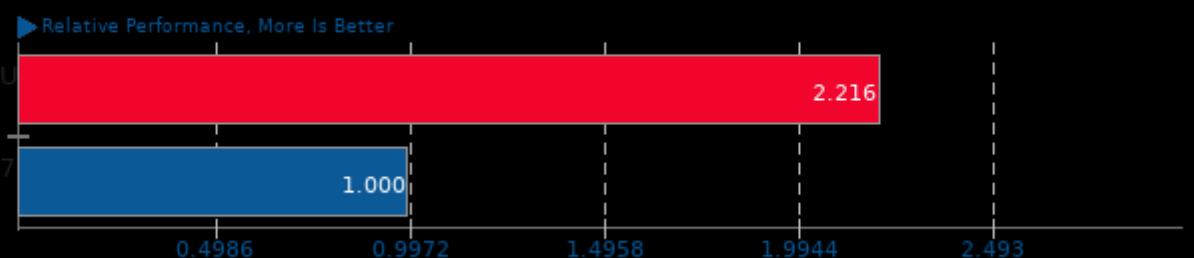
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



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

Geometric Mean Of C/C++ Compiler Tests

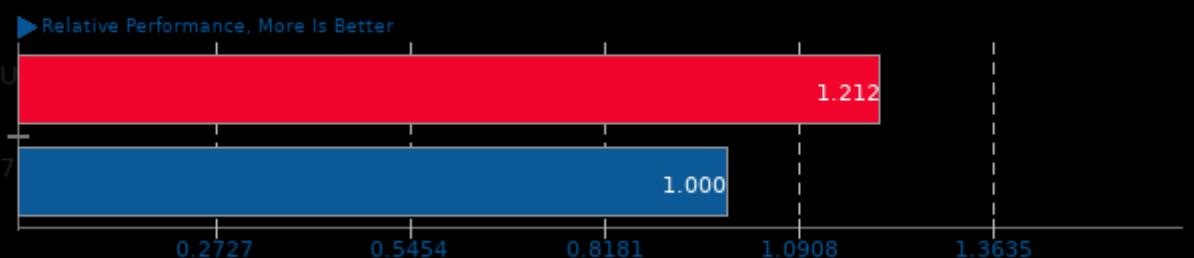
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/mafft, pts/himeno, pts/build-php, pts/build-llvm, pts/c-ray, pts/compress-7zip, pts/mrbayes, pts/dav1d, pts/svt-vp9, pts/gromacs, pts/build-gdb, pts/build-ffmpeg, pts/build-apache, pts/build-mplayer, pts/cryptopp, pts/toybrot and pts/basis

Geometric Mean Of Compression Tests

Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



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

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Geometric Mean Of Creator Workloads Tests

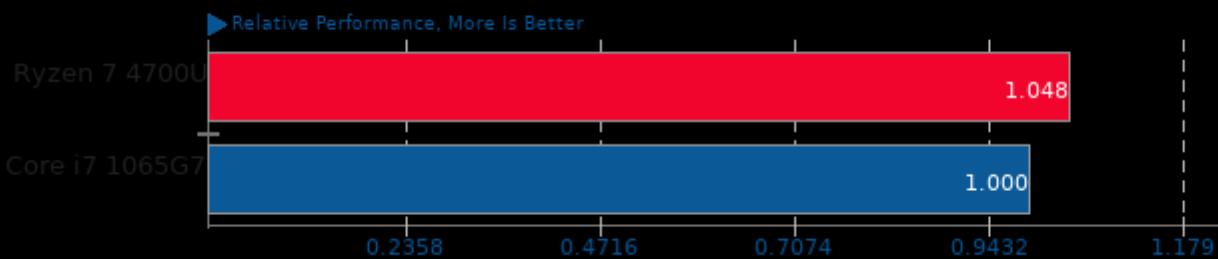
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/c-ray, pts/povray, pts/yafaray, pts/luxcorerender, pts/smallpt, pts/ttsiod-renderer, pts/svt-vp9, pts/dav1d, system/inkscape, system/gmic, system/gimp, system/darktable, system/gegl, pts/embree, pts/oidn, pts/openvkl and pts/basis

Geometric Mean Of Cryptography Tests

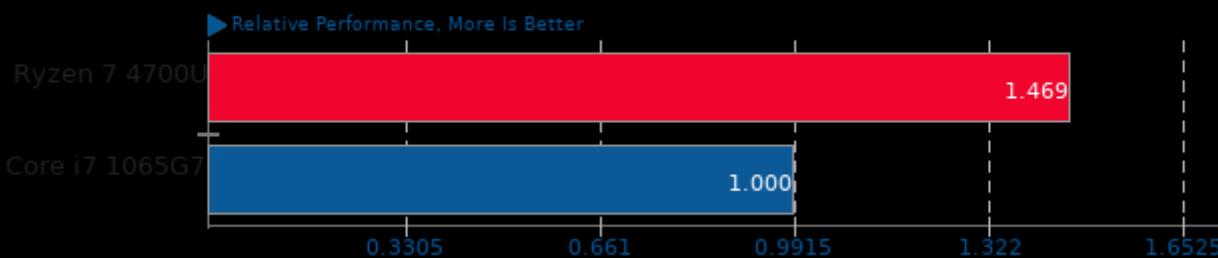
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/botan and pts/cryptopp

Geometric Mean Of Desktop Graphics Tests

Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

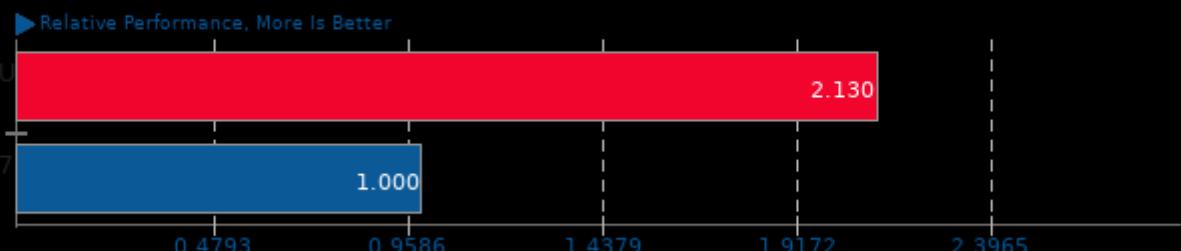


Geometric mean based upon tests: pts/xonotic, pts/openarena and pts/tesseract

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Geometric Mean Of Encoding Tests

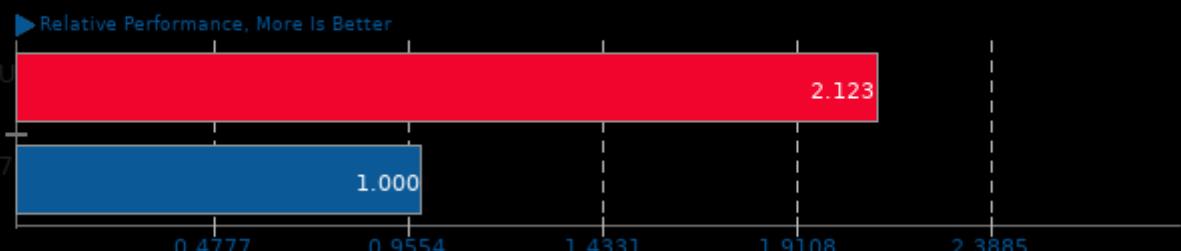
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/svt-vp9 and pts/dav1d

Geometric Mean Of Game Development Tests

Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



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

Geometric Mean Of HPC - High Performance Computing Tests

Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/npb, pts/namd, pts/gromacs, pts/himeno, pts/mrbayes, pts/mafft and pts/mlpack

Geometric Mean Of Imaging Tests

Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

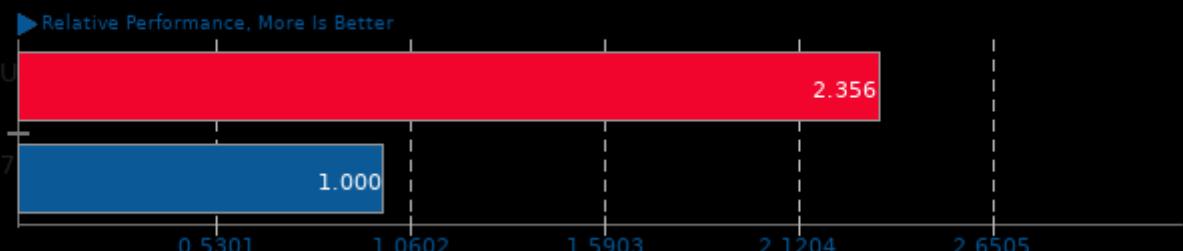


Geometric mean based upon tests: system/inkscape, system/gmic, system/gimp, system/darktable and system/gegl

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Geometric Mean Of Molecular Dynamics Tests

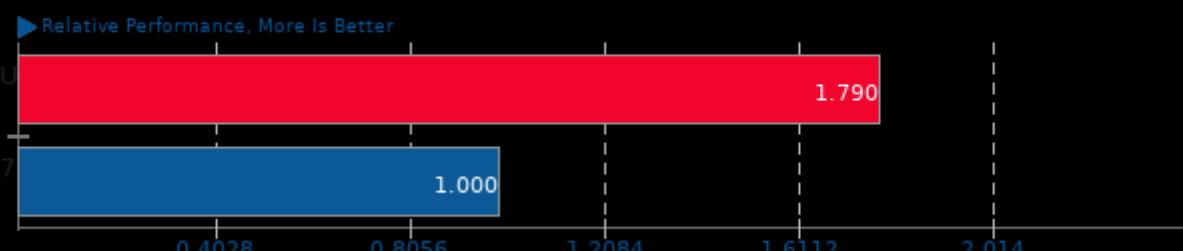
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/namd and pts/gromacs

Geometric Mean Of MPI Benchmarks Tests

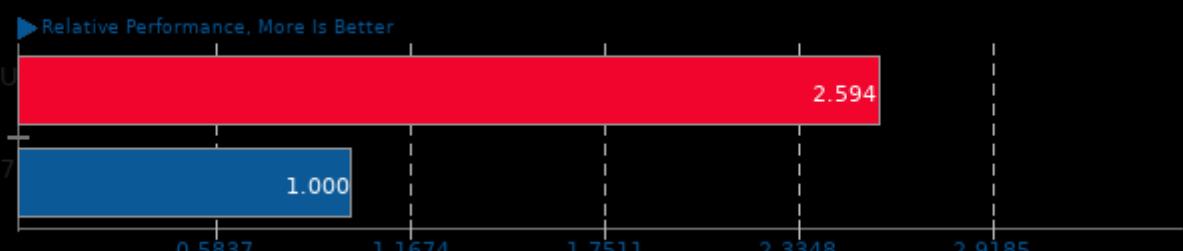
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/gromacs, pts/mrbayes and pts/npb

Geometric Mean Of NVIDIA GPU Compute Tests

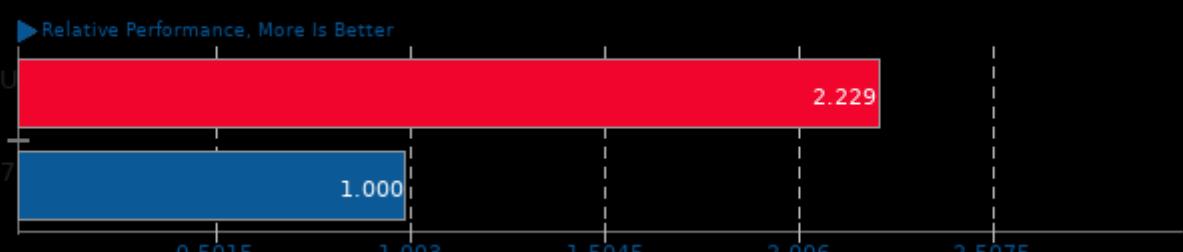
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/gromacs and pts/luxcorerender

Geometric Mean Of Intel oneAPI Tests

Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

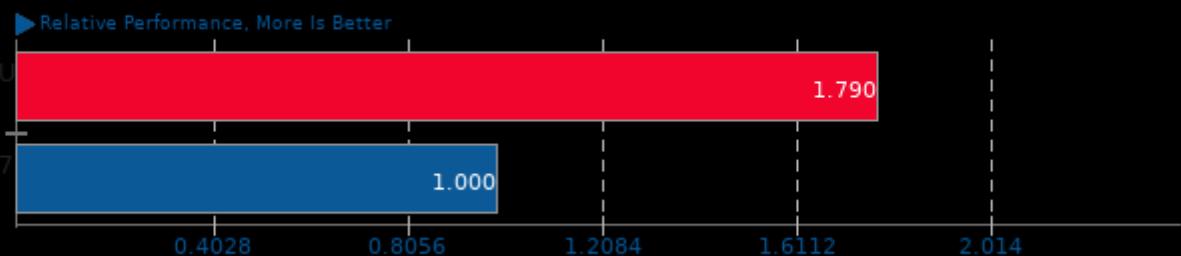


Geometric mean based upon tests: pts/embree, pts/oidn and pts/openvkl

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Geometric Mean Of OpenMPI Tests

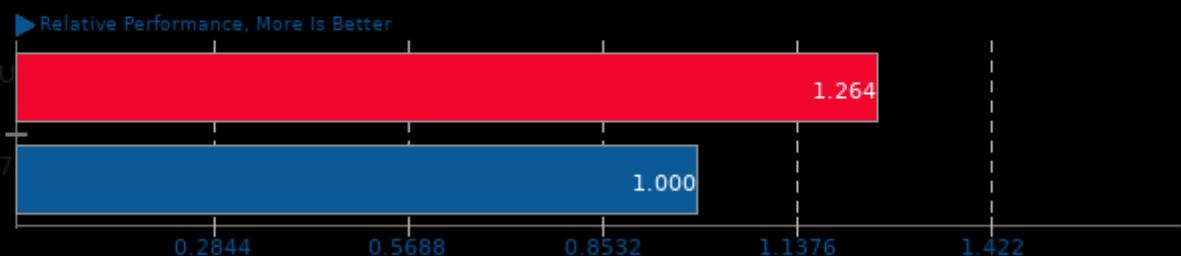
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/npb, pts/gromacs and pts/mrbayes

Geometric Mean Of Productivity Tests

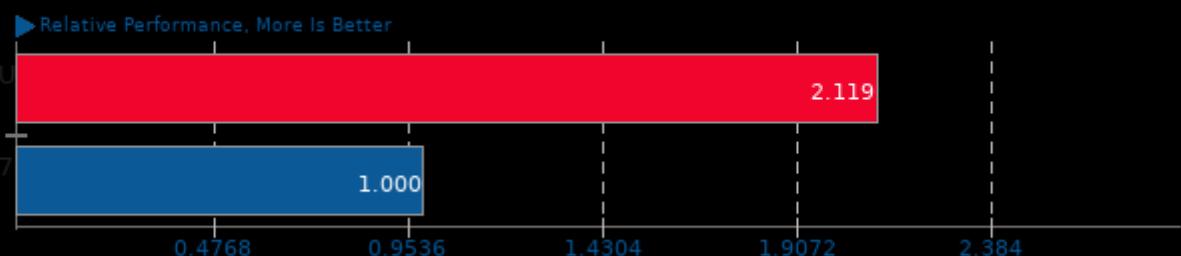
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



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

Geometric Mean Of Programmer / Developer System Benchmarks Tests

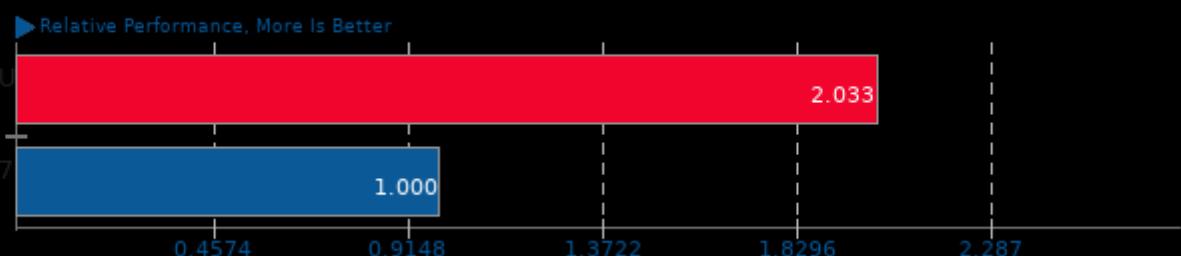
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



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

Geometric Mean Of Python Tests

Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

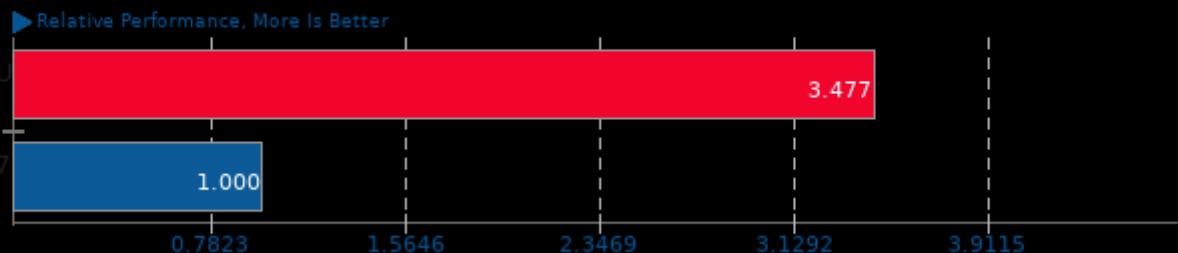


Geometric mean based upon tests: pts/build-llvm, pts/yafaray and pts/mlpack

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

Geometric Mean Of Raytracing Tests

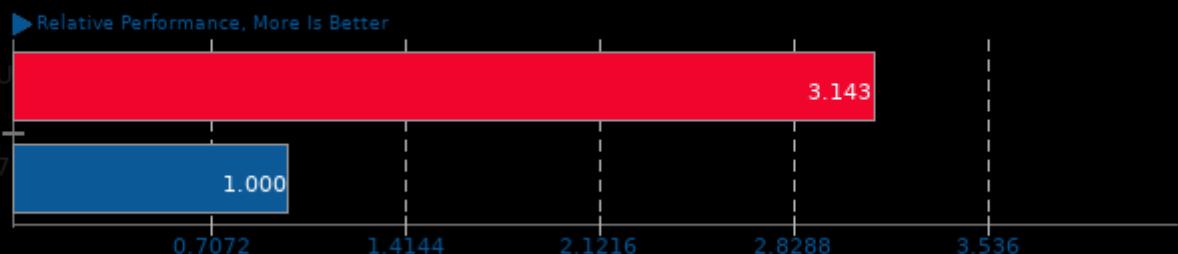
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



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

Geometric Mean Of Renderers Tests

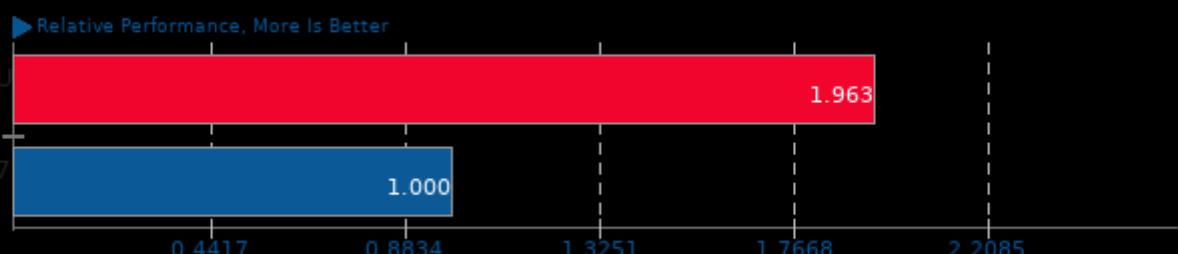
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/c-ray, pts/povray, pts/yafaray, pts/luxcorerender, pts/smallpt and pts/ttsiod-renderer

Geometric Mean Of Scientific Computing Tests

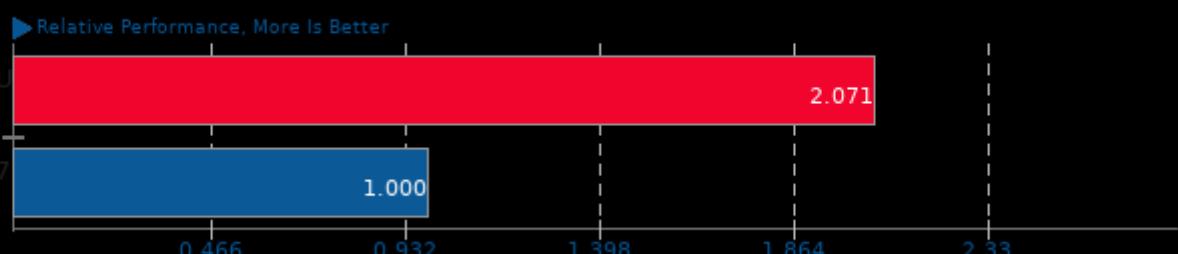
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



Geometric mean based upon tests: pts/namd, pts/gromacs, pts/himeno, pts/mrbayes and pts/mafft

Geometric Mean Of Server CPU Tests

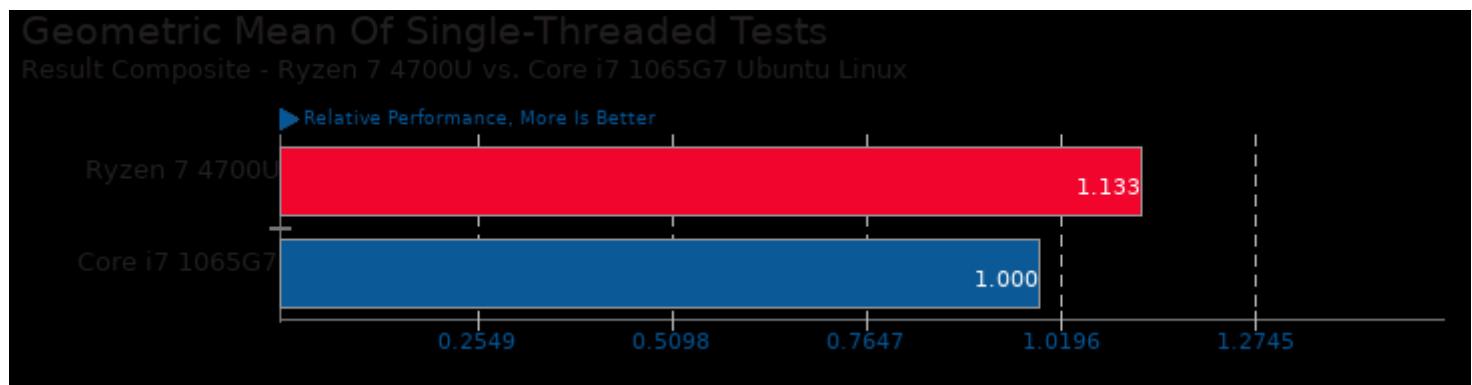
Result Composite - Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux



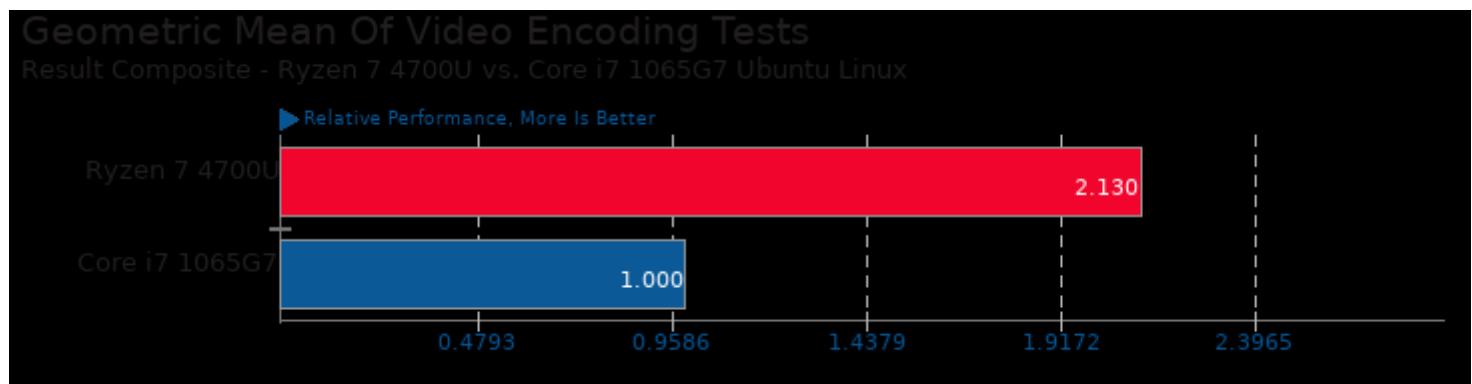
Geometric mean based upon tests: pts/npb, pts/namd, pts/svt-vp9, pts/dav1d, pts/himeno, pts/compress-7zip,

Ryzen 7 4700U vs. Core i7 1065G7 Ubuntu Linux

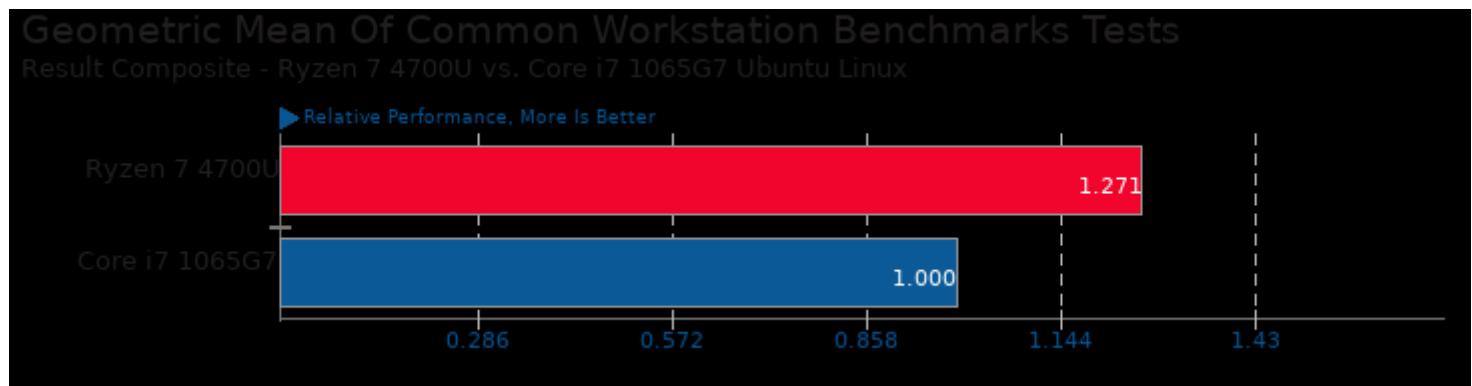
pts/build-linux-kernel, pts/build-php, pts/build-llvm, pts/c-ray, pts/povray, system/gimp and pts/stress-ng



Geometric mean based upon tests: pts/lzbench, pts/botan, system/inkscape and pts/git



Geometric mean based upon tests: pts/svt-vp9 and pts/dav1d



Geometric mean based upon tests: pts/himeno and pts/git

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 10:30.