www.phoronix-test-suite.com

Benchmarks

Tests for a future article.

Automated Executive Summary

EPYC 7763 2P had the most wins, coming in first place for 55% of the tests.

Based on the geometric mean of all complete results, the fastest (EPYC 7763 2P) was 1.165x the speed of the slowest (EPYC 75F3 2P).

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

OSPRay (Benchmark: gravity_spheres_volume/dim_512/ao/real_time) at 1.575x
OSPRay (Benchmark: gravity_spheres_volume/dim_512/pathtracer/real_time) at 1.572x
Stockfish (Total Time) at 1.572x
OSPRay (Benchmark: gravity_spheres_volume/dim_512/scivis/real_time) at 1.571x
7-Zip Compression (Test: Decompression Rating) at 1.53x
Embree (Binary: Pathtracer - Model: Crown) at 1.528x
Embree (Binary: Pathtracer ISPC - Model: Crown) at 1.508x
OSPRay (Benchmark: particle_volume/scivis/real_time) at 1.496x
OSPRay (Benchmark: particle_volume/ao/real_time) at 1.492x
7-Zip Compression (Test: Compression Rating) at 1.398x.

Test Systems:

EPYC 75F3 2P

Processor: 2 x AMD EPYC 75F3 32-Core @ 2.95GHz (64 Cores / 128 Threads), Motherboard: AMD DAYTONA_X (RYM1009B BIOS), Chipset: AMD Starship/Matisse, Memory: 512GB, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: ASPEED, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 22.04, Kernel: 5.15.0-52-generic (x86_64), Desktop: GNOME Shell 42.4, Display Server: X Server 1.21.1.3, Vulkan: 1.2.204, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-gcn/usr --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-build-config=bootstrap-lto-lean --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 performance (Boost: Enabled) - CPU Microcode: 0xa001173
Python Notes: Python 3.10.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: 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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

EPYC 7763 2P

Processor: 2 x AMD EPYC 7763 64-Core @ 2.45GHz (128 Cores / 256 Threads), Motherboard: AMD DAYTONA_X (RYM1009B BIOS), Chipset: AMD Starship/Matisse, Memory: 512GB, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: ASPEED, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 22.04, Kernel: 5.15.0-52-generic (x86_64), Desktop: GNOME Shell 42.4, Display Server: X Server 1.21.1.3, Vulkan: 1.2.204, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-gcn/usr --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-build-config=bootstrap-lto-lean --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 performance (Boost: Enabled) - CPU Microcode: 0xa001173
Python Notes: Python 3.10.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: 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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	EPYC 75F3 2P	EPYC 7763 2P
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	**0.30627**	**0.22563**
Normalized	73.67%	100%
Standard Deviation	0%	2.6%
LAMMPS Molecular Dynamics Simulator - 20k Atoms (ns/day)	**28.311**	**34.965**
Normalized	80.97%	100%
Standard Deviation	0.3%	0.6%

Benchmarks

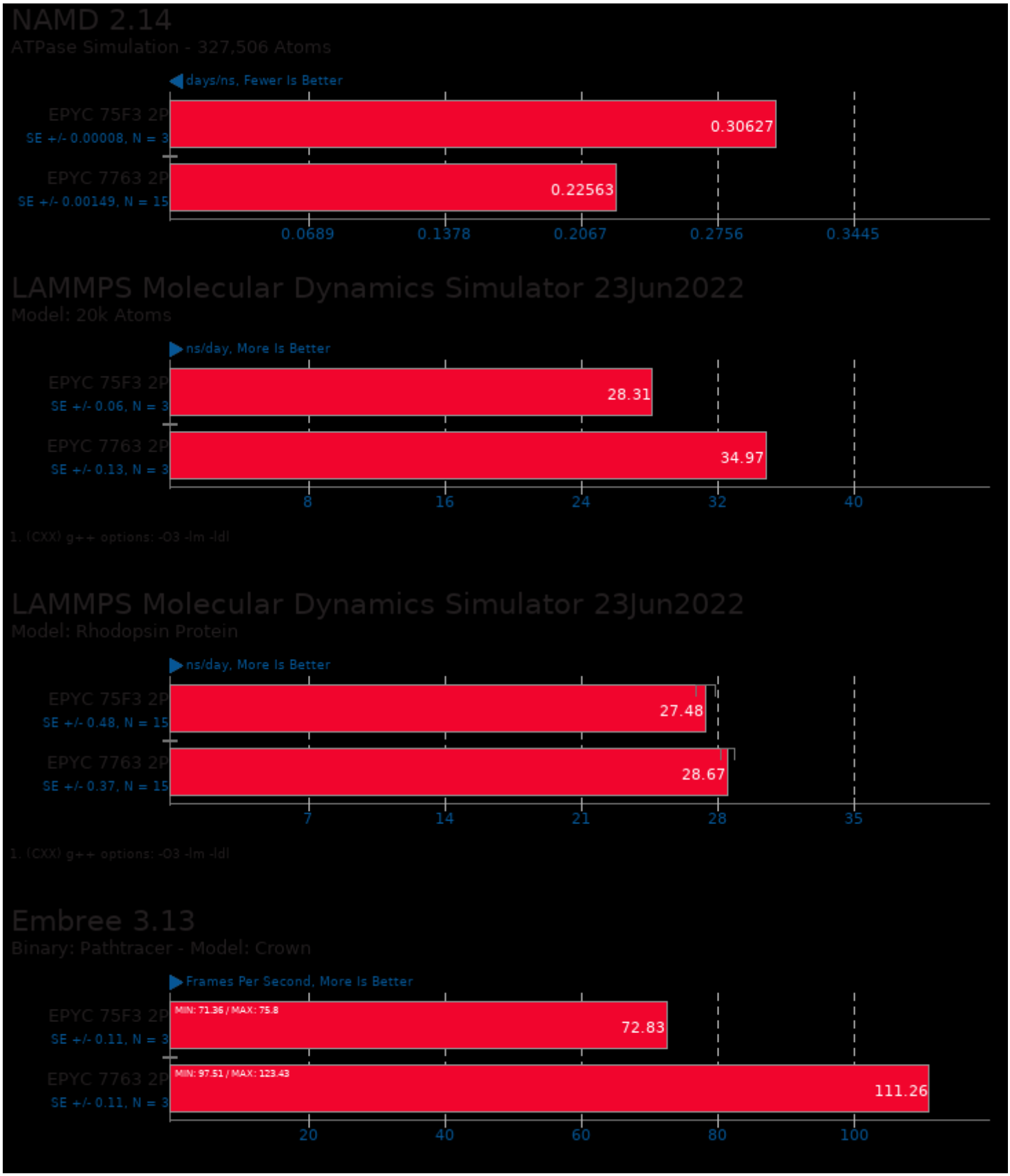
LAMMPS Molecular Dynamics Simulator - Rhodopsin Protein (ns/day)	**27.480**	**28.668**
Normalized	95.86%	100%
Standard Deviation	6.7%	5%
Embree - Pathtracer - Crown (FPS)	**72.8302**	**111.2638**
Normalized	65.46%	100%
Standard Deviation	0.3%	0.2%
Embree - Pathtracer ISPC - Crown (FPS)	**67.2624**	**101.4467**
Normalized	66.3%	100%
Standard Deviation	0.2%	0.3%
Embree - Pathtracer - Asian Dragon (FPS)	**67.7920**	**70.5228**
Normalized	96.13%	100%
Standard Deviation	0.2%	2.9%
Embree - Pathtracer - Asian Dragon Obj (FPS)	**59.3232**	**58.7954**
Normalized	100%	99.11%
Standard Deviation	0.6%	1.2%
Embree - Pathtracer ISPC - Asian Dragon (FPS)	**65.4884**	**69.2322**
Normalized	94.59%	100%
Standard Deviation	0%	3.8%
Embree - Pathtracer ISPC - Asian Dragon Obj (FPS)	**57.1351**	**60.7204**
Normalized	94.1%	100%
Standard Deviation	0.2%	1.9%
SVT-AV1 - Preset 4 - Bosphorus 4K (FPS)	**2.605**	**2.285**
Normalized	100%	87.72%
Standard Deviation	0.7%	0.5%
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)	**76.232**	**69.424**
Normalized	100%	91.07%
Standard Deviation	2.5%	2.3%
SVT-AV1 - Preset 10 - Bosphorus 4K (FPS)	**134.266**	**128.835**
Normalized	100%	95.96%
Standard Deviation	1.8%	0.6%
SVT-AV1 - Preset 12 - Bosphorus 4K (FPS)	**190.996**	**183.733**
Normalized	100%	96.2%
Standard Deviation	2.3%	2.6%
SVT-VP9 - VMAF Optimized - Bosphorus 4K (FPS)	148.66	
Standard Deviation	18.5%	
SVT-VP9 - P.S.O - Bosphorus 4K (FPS)	157.45	
Standard Deviation	2.4%	
SVT-VP9 - V.Q.O - Bosphorus 4K (FPS)	143.40	
Standard Deviation	2.4%	
VP9 libvpx Encoding - Speed 0 - Bosphorus 4K (FPS)	**6.31**	**5.68**
Normalized	100%	90.02%
Standard Deviation	1.3%	1.5%
VP9 libvpx Encoding - Speed 5 - Bosphorus 4K (FPS)	**15.98**	**14.44**
Normalized	100%	90.36%
Standard Deviation	6.4%	4.8%
x265 - Bosphorus 4K (FPS)	**22.43**	**21.73**
Normalized	100%	96.88%
Standard Deviation	1.5%	3.6%
x265 - Bosphorus 1080p (FPS)	**71.01**	**70.05**
Normalized	100%	98.65%
Standard Deviation	3.4%	3.8%
OSPRay - particle_volume/ao/real_time (Items/sec)	**21.9814**	**32.7892**
Normalized	67.04%	100%
Standard Deviation	0.2%	0.2%

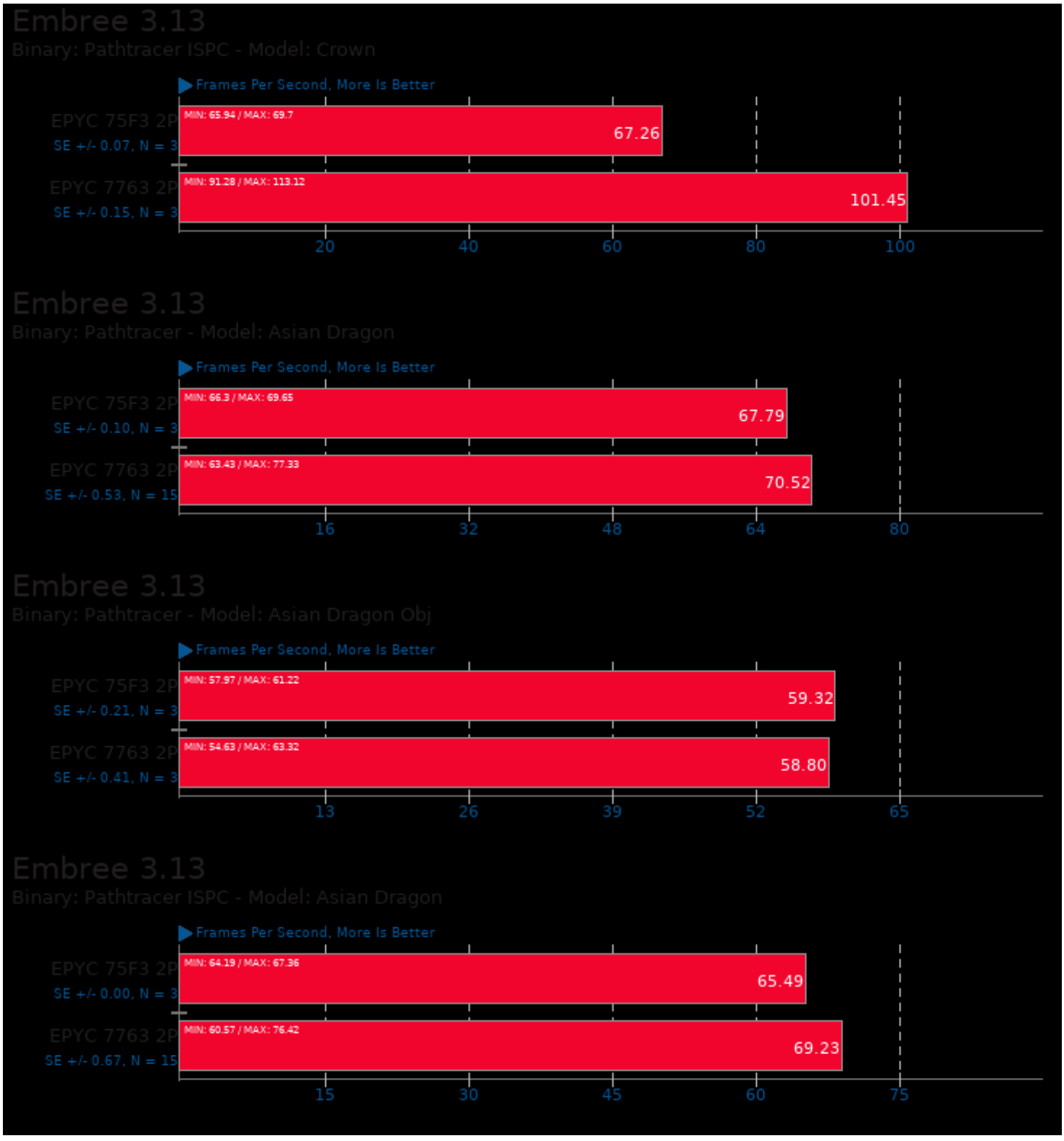
Benchmarks

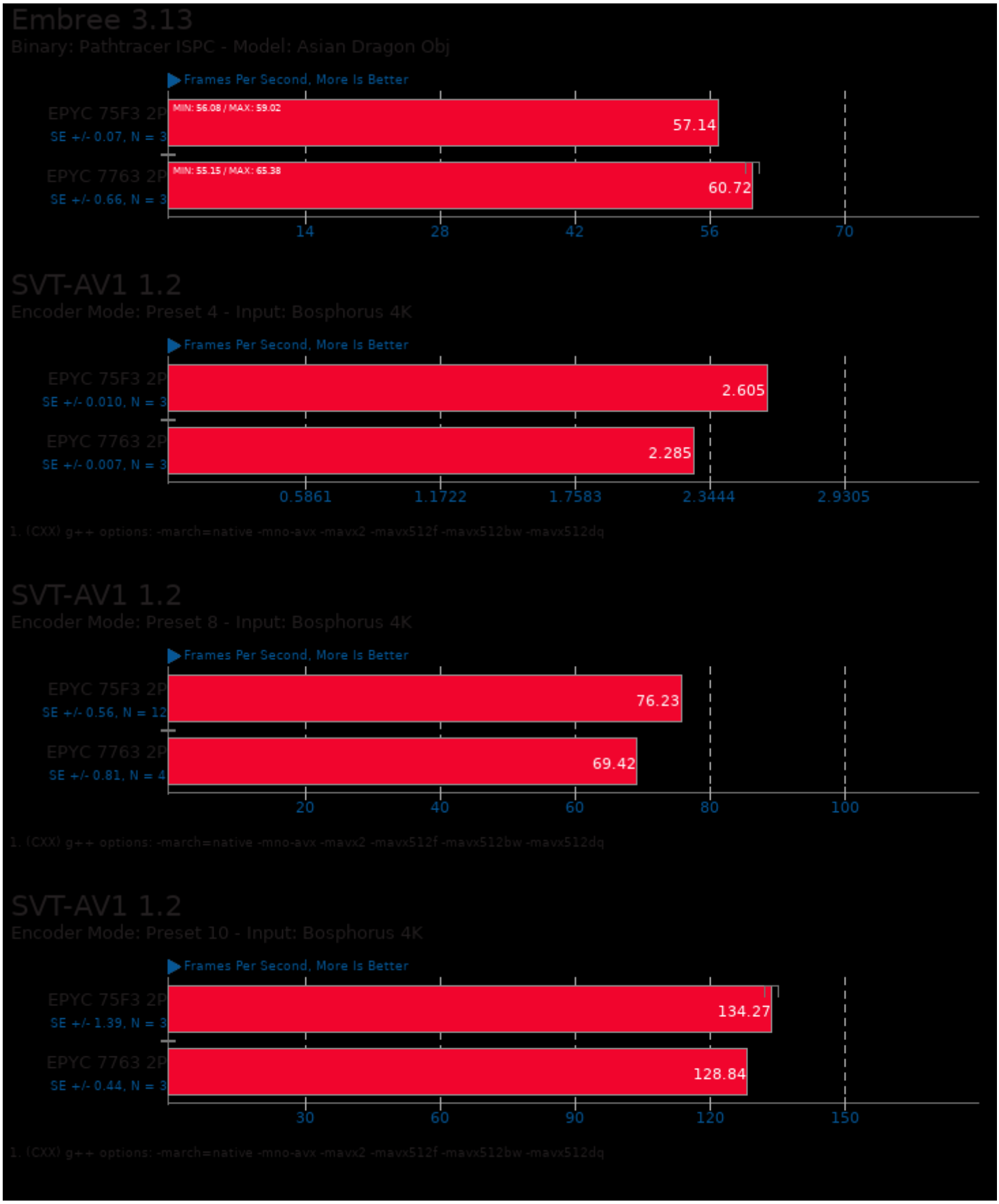
OSPRay - particle_volume/scivis/real_time (Items/sec)	**21.6436**	**32.3871**
Normalized	66.83%	100%
Standard Deviation	0.1%	0.1%
OSPRay - particle_volume/pathtracer/real_time (Items/sec)	**197.189**	**183.394**
Normalized	100%	93%
Standard Deviation	1.5%	1.6%
OSPRay - gravity_spheres_volume/dim_512/ao/real_time	**10.3336**	**16.2729**
Normalized	63.5%	100%
Standard Deviation	0.3%	0.1%
OSPRay - gravity_spheres_volume/dim_512/scivis/real_time (Items/sec)	**9.91474**	**15.5723**
Normalized	63.67%	100%
Standard Deviation	0.1%	0.5%
OSPRay - gravity_spheres_volume/dim_512/pathtracer/real_time (Items/sec)	**16.4909**	**25.9302**
Normalized	63.6%	100%
Standard Deviation	0.1%	0%
7-Zip Compression - Compression Rating (MIPS)	**423221**	**591687**
Normalized	71.53%	100%
Standard Deviation	0.8%	1.2%
7-Zip Compression - D.R (MIPS)	**469574**	**718513**
Normalized	65.35%	100%
Standard Deviation	1.1%	0.5%
Stockfish - Total Time (Nodes/s)	**192961159**	**303281622**
Normalized	63.62%	100%
Standard Deviation	5.2%	6%
Timed Godot Game Engine Compilation - Time To Compile (sec)	**37.956**	**40.528**
Normalized	100%	93.65%
Standard Deviation	0.7%	0.8%
Timed Linux Kernel Compilation - defconfig (sec)	**22.490**	**20.253**
Normalized	90.05%	100%
Standard Deviation	2.3%	2.4%
Timed Linux Kernel Compilation - allmodconfig (sec)	**186.938**	**141.056**
Normalized	75.46%	100%
Standard Deviation	0.6%	0.7%
Timed LLVM Compilation - Ninja (sec)	**114.006**	**96.223**
Normalized	84.4%	100%
Standard Deviation	0.8%	0.2%
Timed LLVM Compilation - Unix Makefiles (sec)	**168.972**	**178.304**
Normalized	100%	94.77%
Standard Deviation	0.6%	0.4%
Timed PHP Compilation - Time To Compile (sec)	35.733	
Standard Deviation	1.6%	
C-Ray - Total Time - 4.1.R.P.P (sec)	8.736	
Standard Deviation	0.4%	
Numpy Benchmark (Score)	506.96	
Standard Deviation	0.9%	
Gzip Compression - L.S.T.A.T.t.g (sec)	35.753	
Standard Deviation	0.3%	

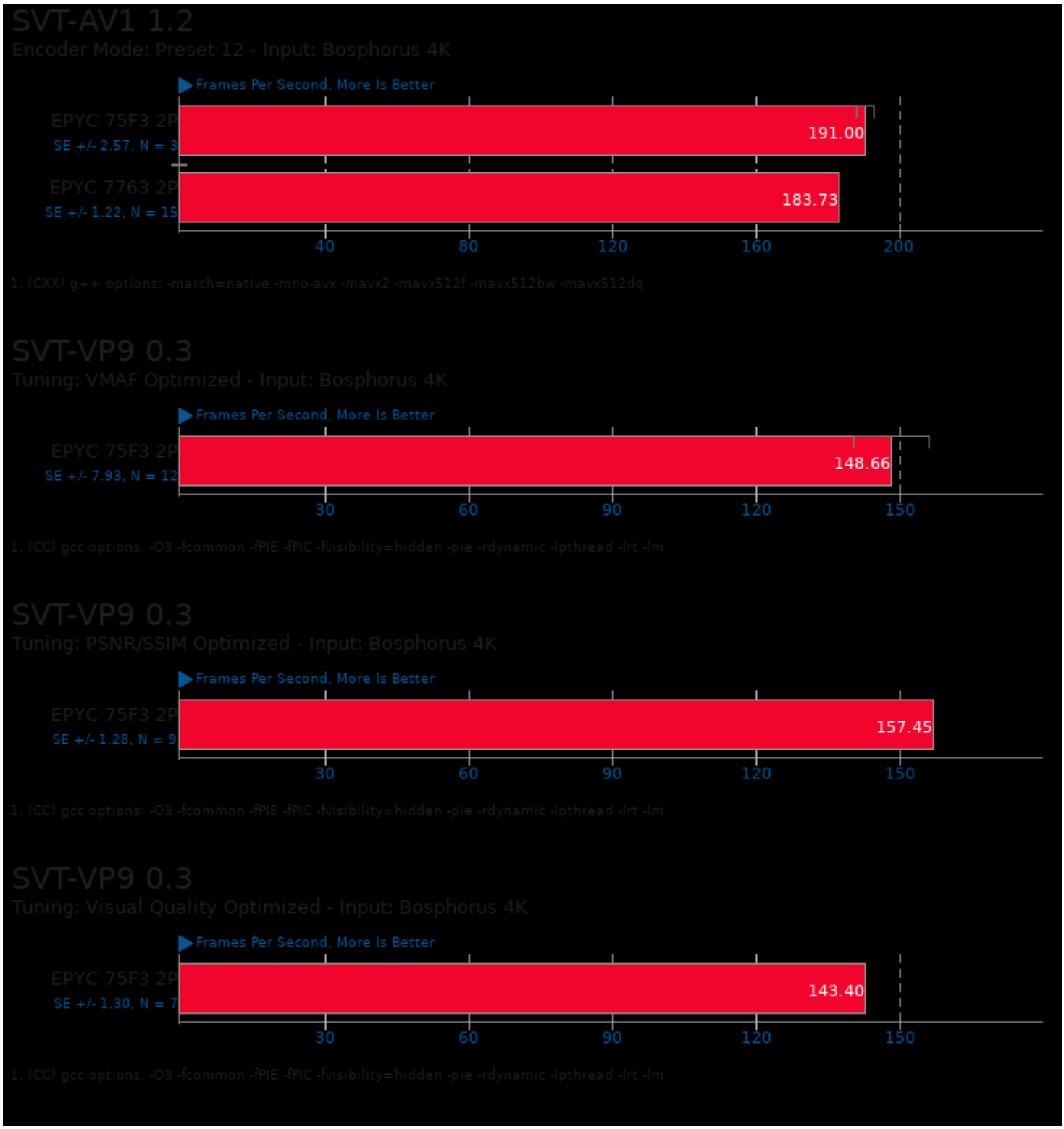
Benchmarks

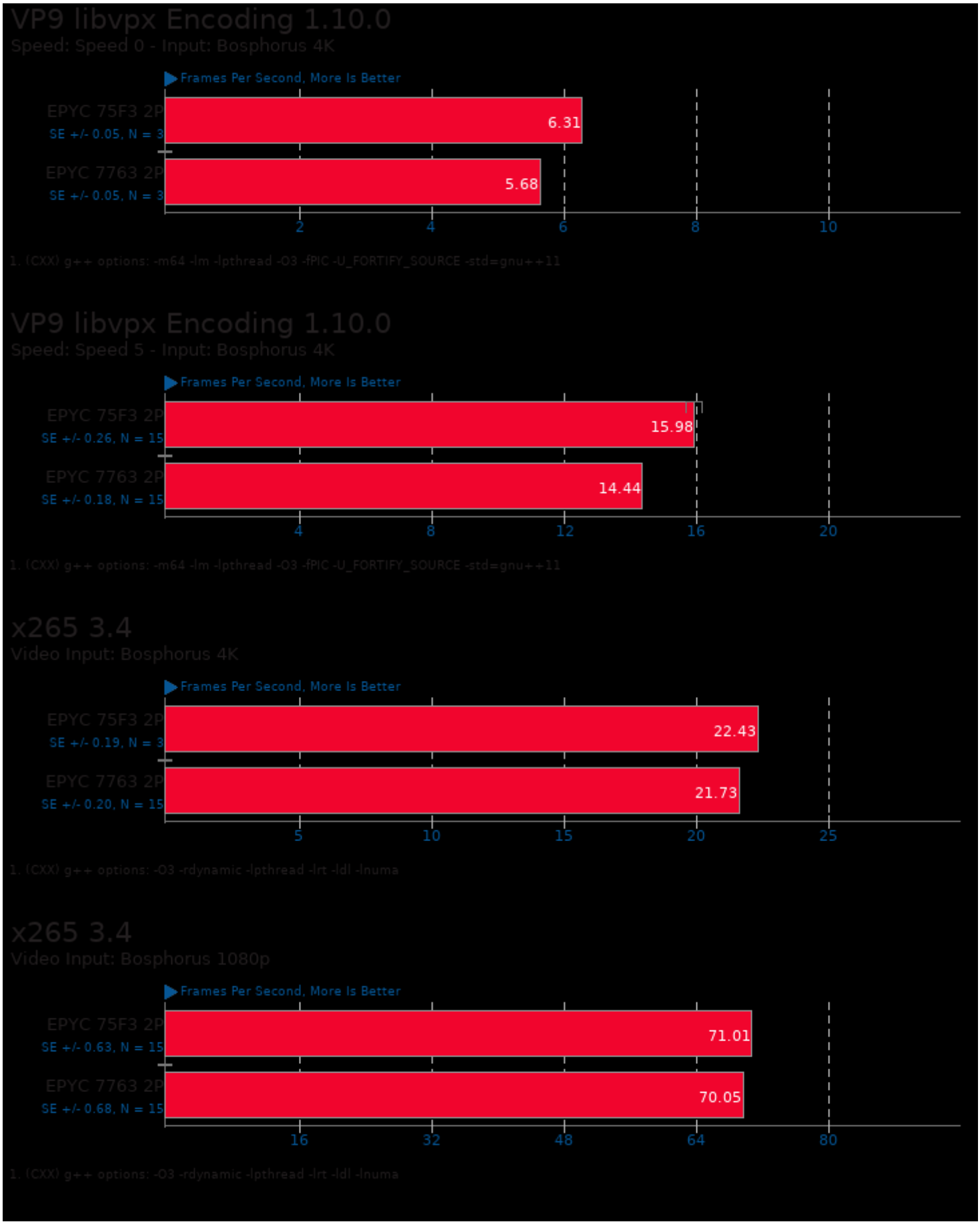
FLAC Audio Encoding - WAV To FLAC (sec)	16.667
Standard Deviation	0.2%
OpenSSL - SHA256 (byte/s)	96495041603
Standard Deviation	0%
OpenSSL - RSA4096 (sign/s)	16787
Standard Deviation	0.1%
OpenSSL - RSA4096 (verify/s)	1100391
Standard Deviation	0%
Blender - BMW27 - CPU-Only (sec)	22.06
Standard Deviation	0.3%
Blender - Classroom - CPU-Only (sec)	55.70
Standard Deviation	0.3%
Blender - Fishy Cat - CPU-Only (sec)	27.96
Standard Deviation	0.2%
Blender - Barbershop - CPU-Only (sec)	221.46
Standard Deviation	0.1%
Blender - Pabellon Barcelona - CPU-Only (sec)	69.45
Standard Deviation	0.1%
PyBench - T.F.A.T.T (Milliseconds)	893
Standard Deviation	1.4%


NAMD 2.14
ATPase Simulation - 327,506 Atoms
days/ns, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.00008, N = 3
0.30627
EPYC 7763 2P
SE +/- 0.00149, N = 15
0.22563
0.0689
0.1378
0.2067
0.2756
0.3445
LAMMPS Molecular Dynamics Simulator 23Jun2022
Model: 20k Atoms
ns/day, More Is Better
EPYC 75F3 2P
SE +/- 0.06, N = 3
28.31
EPYC 7763 2P
SE +/- 0.13, N = 3
34.97
8
16
24
32
40
1. (CXX) g++ options: -O3 -lm -ldl
LAMMPS Molecular Dynamics Simulator 23Jun2022
Model: Rhodopsin Protein
ns/day, More Is Better
EPYC 75F3 2P
SE +/- 0.48, N = 15
27.48
EPYC 7763 2P
SE +/- 0.37, N = 15
28.67
7
14
21
28
35
1. (CXX) g++ options: -O3 -lm -ldl
Embree 3.13
Binary: Pathtracer - Model: Crown
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.11, N = 3
MIN: 71.36 / MAX: 75.8
72.83
EPYC 7763 2P
SE +/- 0.11, N = 3
MIN: 97.51 / MAX: 123.43
111.26
20
40
60
80
100

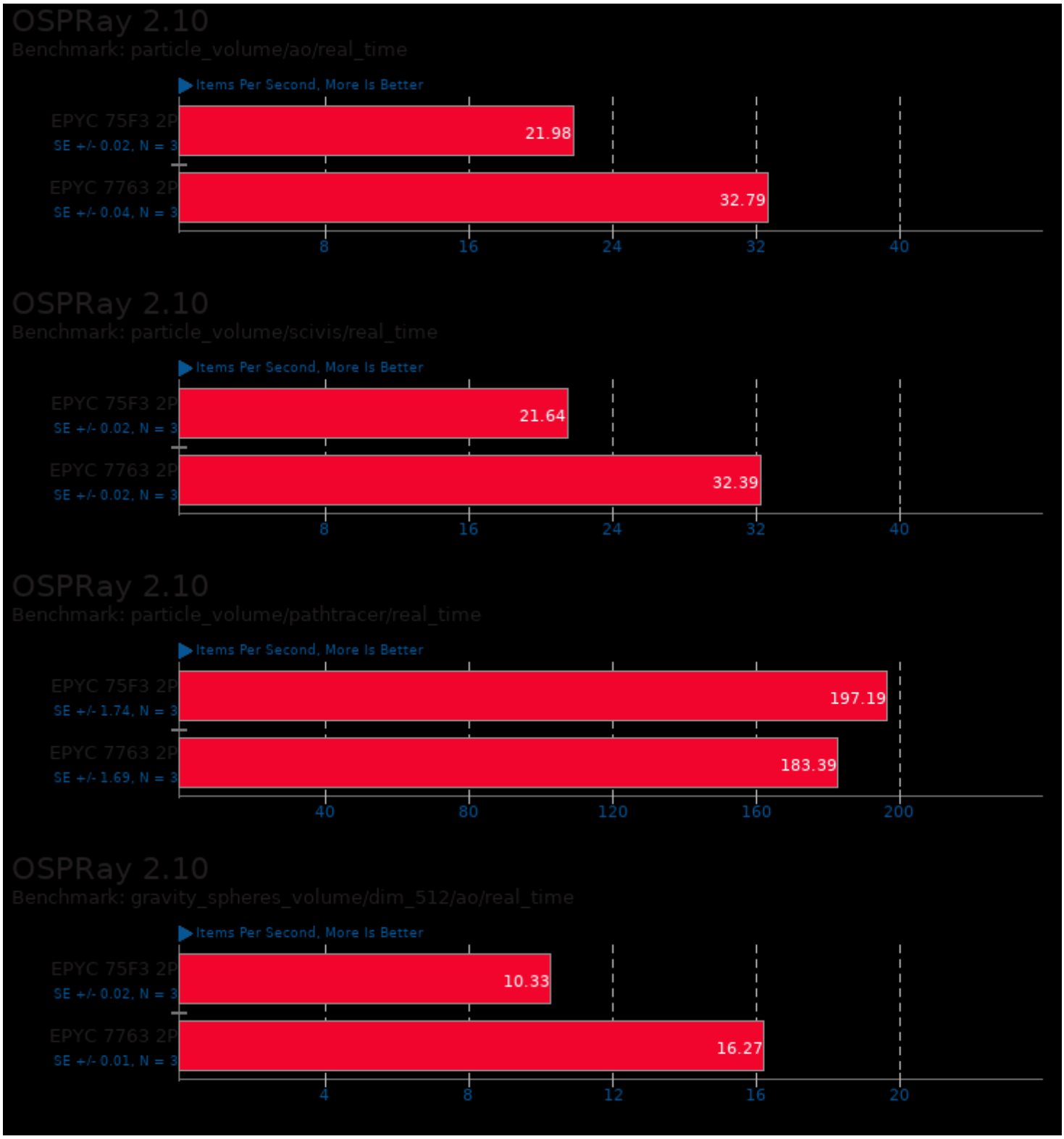

Embree 3.13
Binary: Pathtracer ISPC - Model: Crown
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.07, N = 3
MIN: 65.94 / MAX: 69.7
67.26
EPYC 7763 2P
SE +/- 0.15, N = 3
MIN: 91.28 / MAX: 113.12
101.45
20
40
60
80
100
Embree 3.13
Binary: Pathtracer - Model: Asian Dragon
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.10, N = 3
MIN: 66.3 / MAX: 69.65
67.79
EPYC 7763 2P
SE +/- 0.53, N = 15
MIN: 63.43 / MAX: 77.33
70.52
16
32
48
64
80
Embree 3.13
Binary: Pathtracer - Model: Asian Dragon Obj
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.21, N = 3
MIN: 57.97 / MAX: 61.22
59.32
EPYC 7763 2P
SE +/- 0.41, N = 3
MIN: 54.63 / MAX: 63.32
58.80
13
26
39
52
65
Embree 3.13
Binary: Pathtracer ISPC - Model: Asian Dragon
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.00, N = 3
MIN: 64.19 / MAX: 67.36
65.49
EPYC 7763 2P
SE +/- 0.67, N = 15
MIN: 60.57 / MAX: 76.42
69.23
15
30
45
60
75


Embree 3.13
Binary: Pathtracer ISPC - Model: Asian Dragon Obj
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.07, N = 3
MIN: 56.08 / MAX: 59.02
57.14
EPYC 7763 2P
SE +/- 0.66, N = 3
MIN: 55.15 / MAX: 65.38
60.72
14
28
42
56
70
SVT-AV1 1.2
Encoder Mode: Preset 4 - Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.010, N = 3
2.605
EPYC 7763 2P
SE +/- 0.007, N = 3
2.285
0.5861
1.1722
1.7583
2.3444
2.9305
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq
SVT-AV1 1.2
Encoder Mode: Preset 8 - Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.56, N = 12
76.23
EPYC 7763 2P
SE +/- 0.81, N = 4
69.42
20
40
60
80
100
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq
SVT-AV1 1.2
Encoder Mode: Preset 10 - Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 1.39, N = 3
134.27
EPYC 7763 2P
SE +/- 0.44, N = 3
128.84
30
60
90
120
150
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq


SVT-AV1 1.2
Encoder Mode: Preset 12 - Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 2.57, N = 3
191.00
EPYC 7763 2P
SE +/- 1.22, N = 15
183.73
40
80
120
160
200
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq
SVT-VP9 0.3
Tuning: VMAF Optimized - Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 7.93, N = 12
148.66
30
60
90
120
150
1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm
SVT-VP9 0.3
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 1.28, N = 9
157.45
30
60
90
120
150
1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm
SVT-VP9 0.3
Tuning: Visual Quality Optimized - Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 1.30, N = 7
143.40
30
60
90
120
150
1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

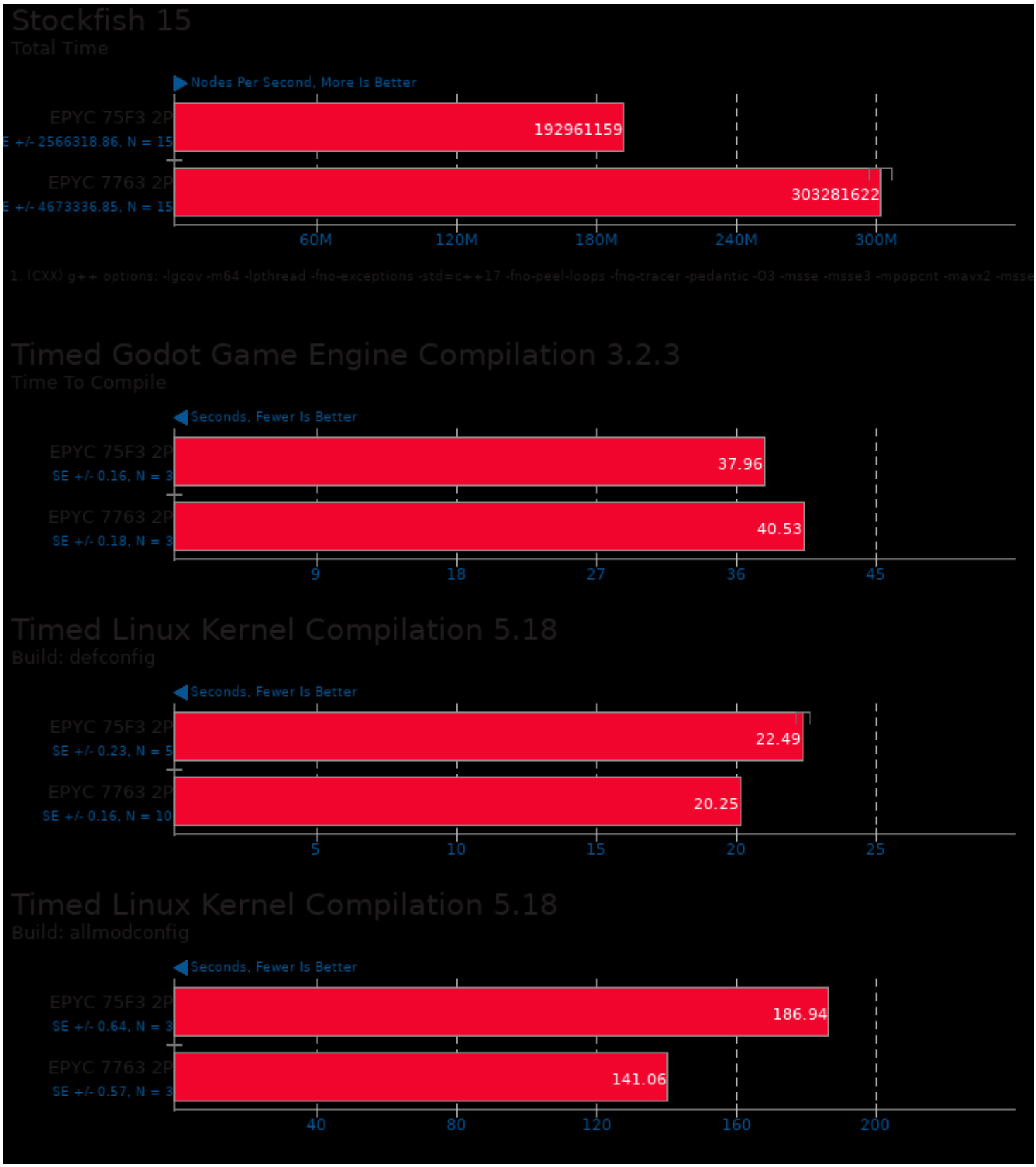

VP9 libvpx Encoding 1.10.0
Speed: Speed 0 - Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.05, N = 3
6.31
EPYC 7763 2P
SE +/- 0.05, N = 3
5.68
2
4
6
8
10
1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11
VP9 libvpx Encoding 1.10.0
Speed: Speed 5 - Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.26, N = 15
15.98
EPYC 7763 2P
SE +/- 0.18, N = 15
14.44
4
8
12
16
20
1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11
x265 3.4
Video Input: Bosphorus 4K
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.19, N = 3
22.43
EPYC 7763 2P
SE +/- 0.20, N = 15
21.73
5
10
15
20
25
1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma
x265 3.4
Video Input: Bosphorus 1080p
Frames Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.63, N = 15
71.01
EPYC 7763 2P
SE +/- 0.68, N = 15
70.05
16
32
48
64
80
1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

Benchmarks

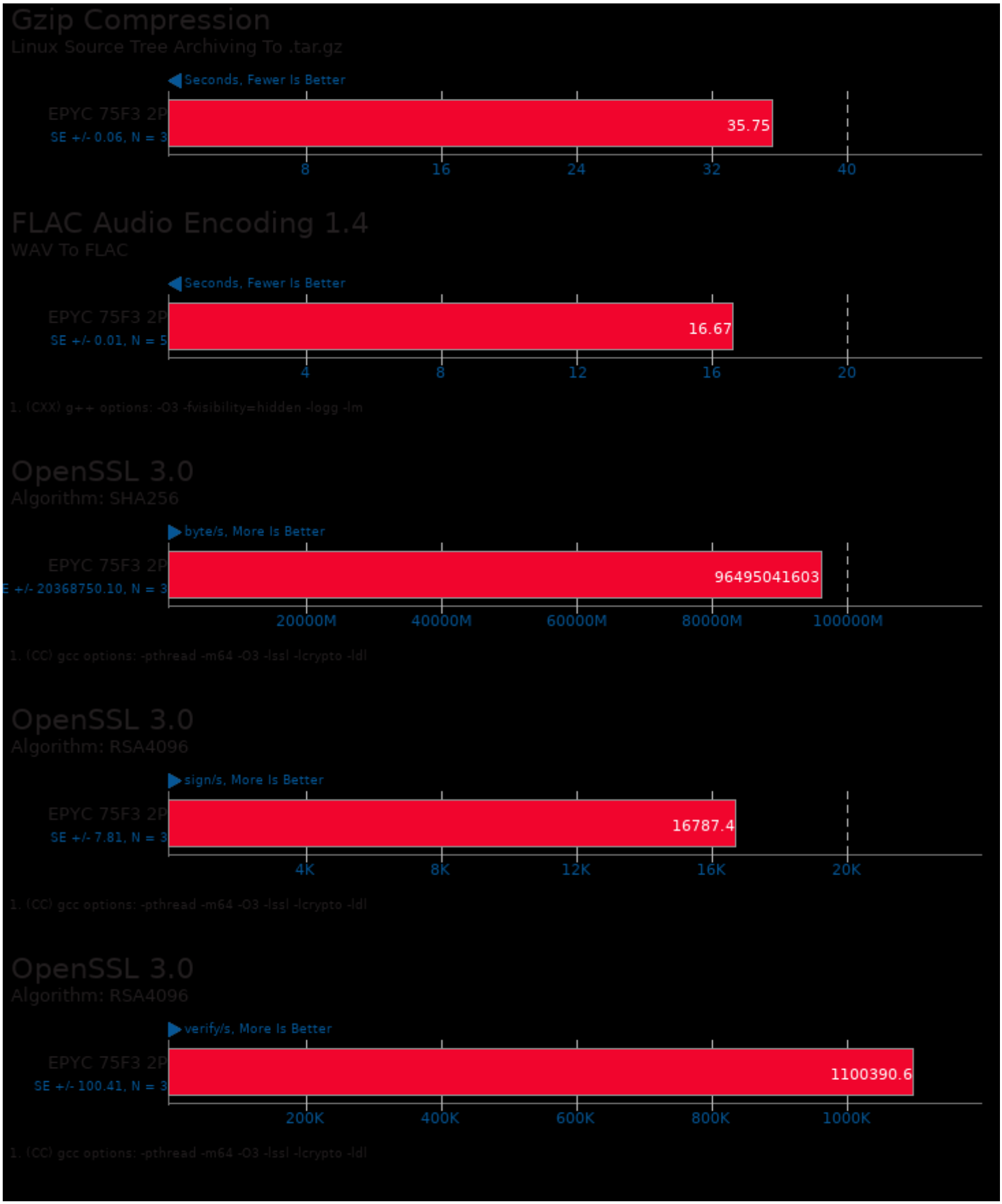

OSPRay 2.10
Benchmark: particle_volume/ao/real_time
Items Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.02, N = 3
21.98
EPYC 7763 2P
SE +/- 0.04, N = 3
32.79
8
16
24
32
40
OSPRay 2.10
Benchmark: particle_volume/scivis/real_time
Items Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.02, N = 3
21.64
EPYC 7763 2P
SE +/- 0.02, N = 3
32.39
8
16
24
32
40
OSPRay 2.10
Benchmark: particle_volume/pathtracer/real_time
Items Per Second, More Is Better
EPYC 75F3 2P
SE +/- 1.74, N = 3
197.19
EPYC 7763 2P
SE +/- 1.69, N = 3
183.39
40
80
120
160
200
OSPRay 2.10
Benchmark: gravity_spheres_volume/dim_512/ao/real_time
Items Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.02, N = 3
10.33
EPYC 7763 2P
SE +/- 0.01, N = 3
16.27
4
8
12
16
20

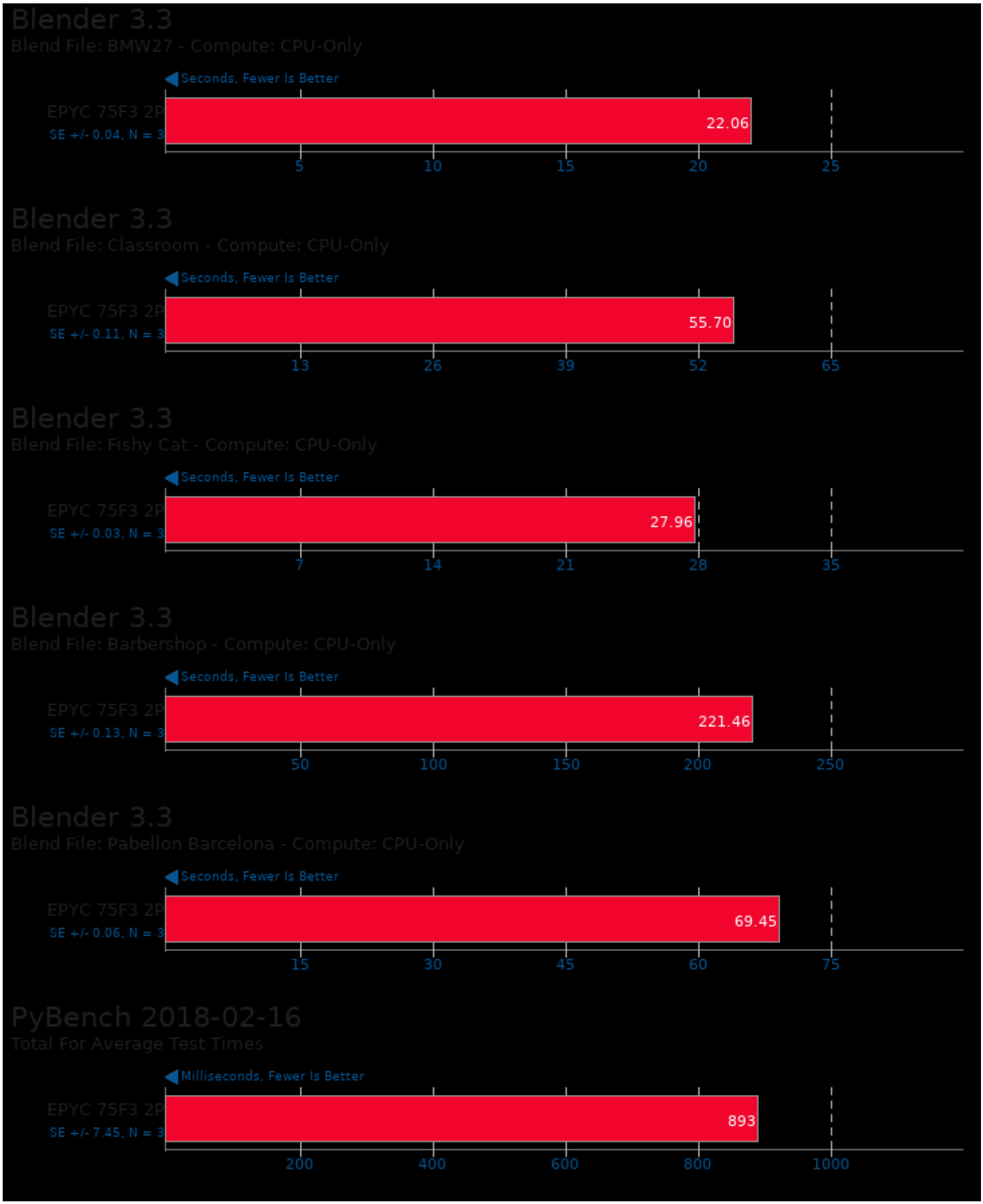
Benchmarks


OSPRay 2.10
Benchmark: gravity_spheres_volume/dim_512/scivis/real_time
Items Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.00733, N = 3
9.91474
EPYC 7763 2P
SE +/- 0.04894, N = 3
15.57230
4
8
12
16
20
OSPRay 2.10
Benchmark: gravity_spheres_volume/dim_512/pathtracer/real_time
Items Per Second, More Is Better
EPYC 75F3 2P
SE +/- 0.01, N = 3
16.49
EPYC 7763 2P
SE +/- 0.00, N = 3
25.93
6
12
18
24
30
7-Zip Compression 22.01
Test: Compression Rating
MIPS, More Is Better
EPYC 75F3 2P
SE +/- 1855.85, N = 3
423221
EPYC 7763 2P
SE +/- 4223.64, N = 3
591687
130K
260K
390K
520K
650K
1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC
7-Zip Compression 22.01
Test: Decompression Rating
MIPS, More Is Better
EPYC 75F3 2P
SE +/- 3017.61, N = 3
469574
EPYC 7763 2P
SE +/- 2067.43, N = 3
718513
150K
300K
450K
600K
750K
1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC


Stockfish 15
Total Time
Nodes Per Second, More Is Better
EPYC 75F3 2P
E +/- 2566318.86, N = 15
192961159
EPYC 7763 2P
E +/- 4673336.85, N = 15
303281622
60M
120M
180M
240M
300M
1. (CXX) g++ options: -lgcov -m64 -lpthread -fno-exceptions -std=c++17 -fno-peel-loops -fno-tracer -pedantic -O3 -msse -msse3 -mpopcnt -mavx2 -msse
Timed Godot Game Engine Compilation 3.2.3
Time To Compile
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.16, N = 3
37.96
EPYC 7763 2P
SE +/- 0.18, N = 3
40.53
9
18
27
36
45
Timed Linux Kernel Compilation 5.18
Build: defconfig
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.23, N = 5
22.49
EPYC 7763 2P
SE +/- 0.16, N = 10
20.25
5
10
15
20
25
Timed Linux Kernel Compilation 5.18
Build: allmodconfig
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.64, N = 3
186.94
EPYC 7763 2P
SE +/- 0.57, N = 3
141.06
40
80
120
160
200

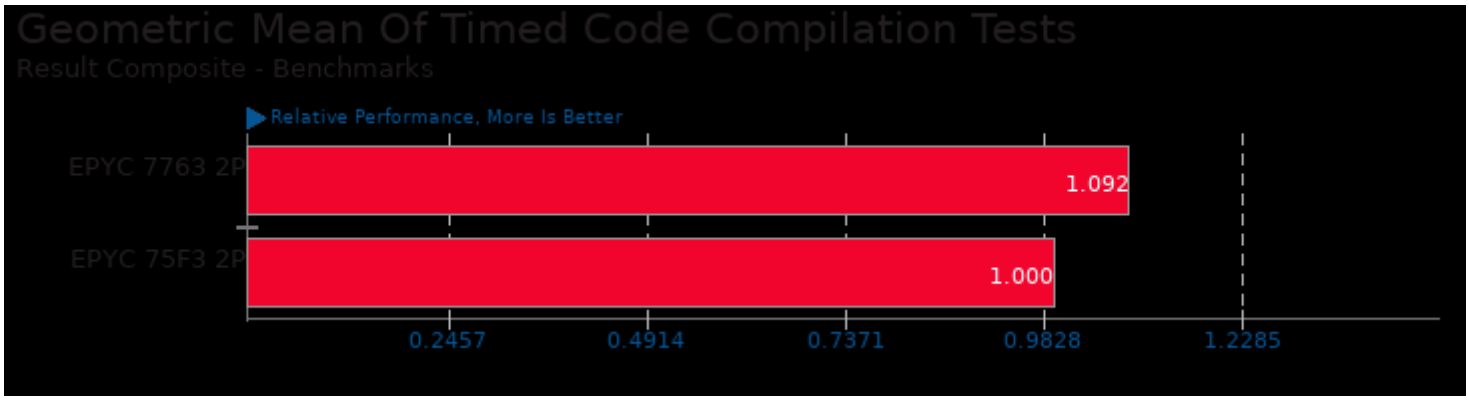

Timed LLVM Compilation 13.0
Build System: Ninja
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.52, N = 3
114.01
EPYC 7763 2P
SE +/- 0.14, N = 3
96.22
30
60
90
120
150
Timed LLVM Compilation 13.0
Build System: Unix Makefiles
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.57, N = 3
168.97
EPYC 7763 2P
SE +/- 0.38, N = 3
178.30
40
80
120
160
200
Timed PHP Compilation 8.1.9
Time To Compile
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.33, N = 3
35.73
8
16
24
32
40
C-Ray 1.1
Total Time - 4K, 16 Rays Per Pixel
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.023, N = 3
8.736
2
4
6
8
10
1. (CC) gcc options: -lm -lpthread -O3
Numpy Benchmark
Score, More Is Better
EPYC 75F3 2P
SE +/- 2.71, N = 3
506.96
110
220
330
440
550


Gzip Compression
Linux Source Tree Archiving To .tar.gz
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.06, N = 3
35.75
8
16
24
32
40
FLAC Audio Encoding 1.4
WAV To FLAC
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.01, N = 5
16.67
4
8
12
16
20
1. (CXX) g++ options: -O3 -fvisibility=hidden -logg -lm
OpenSSL 3.0
Algorithm: SHA256
byte/s, More Is Better
EPYC 75F3 2P
E +/- 20368750.10, N = 3
96495041603
20000M
40000M
60000M
80000M
100000M
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl
OpenSSL 3.0
Algorithm: RSA4096
sign/s, More Is Better
EPYC 75F3 2P
SE +/- 7.81, N = 3
16787.4
4K
8K
12K
16K
20K
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl
OpenSSL 3.0
Algorithm: RSA4096
verify/s, More Is Better
EPYC 75F3 2P
SE +/- 100.41, N = 3
1100390.6
200K
400K
600K
800K
1000K
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

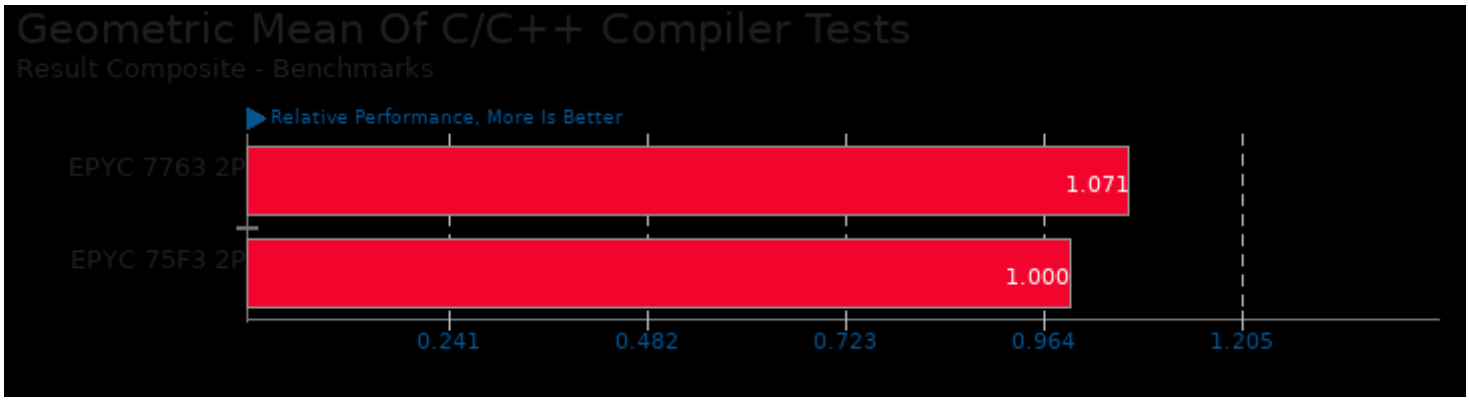

Blender 3.3
Blend File: BMW27 - Compute: CPU-Only
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.04, N = 3
22.06
5
10
15
20
25
Blender 3.3
Blend File: Classroom - Compute: CPU-Only
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.11, N = 3
55.70
13
26
39
52
65
Blender 3.3
Blend File: Fishy Cat - Compute: CPU-Only
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.03, N = 3
27.96
7
14
21
28
35
Blender 3.3
Blend File: Barbershop - Compute: CPU-Only
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.13, N = 3
221.46
50
100
150
200
250
Blender 3.3
Blend File: Pabellon Barcelona - Compute: CPU-Only
Seconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 0.06, N = 3
69.45
15
30
45
60
75
PyBench 2018-02-16
Total For Average Test Times
Milliseconds, Fewer Is Better
EPYC 75F3 2P
SE +/- 7.45, N = 3
893
200
400
600
800
1000

Benchmarks

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

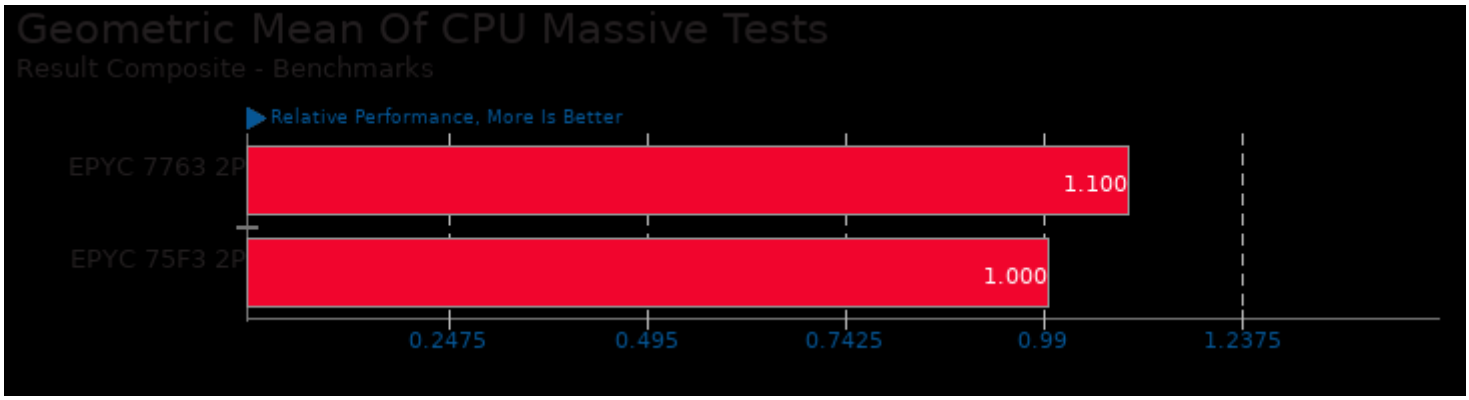


Geometric mean based upon tests: pts/build-php, pts/build-linux-kernel, pts/build-llvm and pts/build-godot

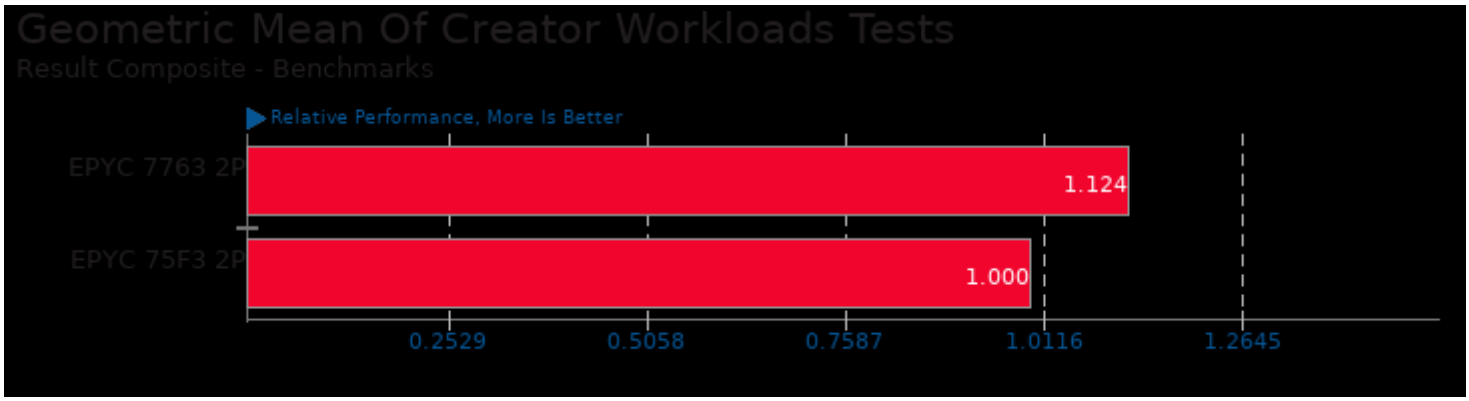


Geometric mean based upon tests: pts/vpxenc, pts/stockfish, pts/build-php, pts/build-llvm, pts/c-ray, pts/compress-7zip, pts/encode-flac, pts/x265, pts/openssl, pts/lammps, pts/svt-av1, pts/svt-vp9 and pts/gromacs

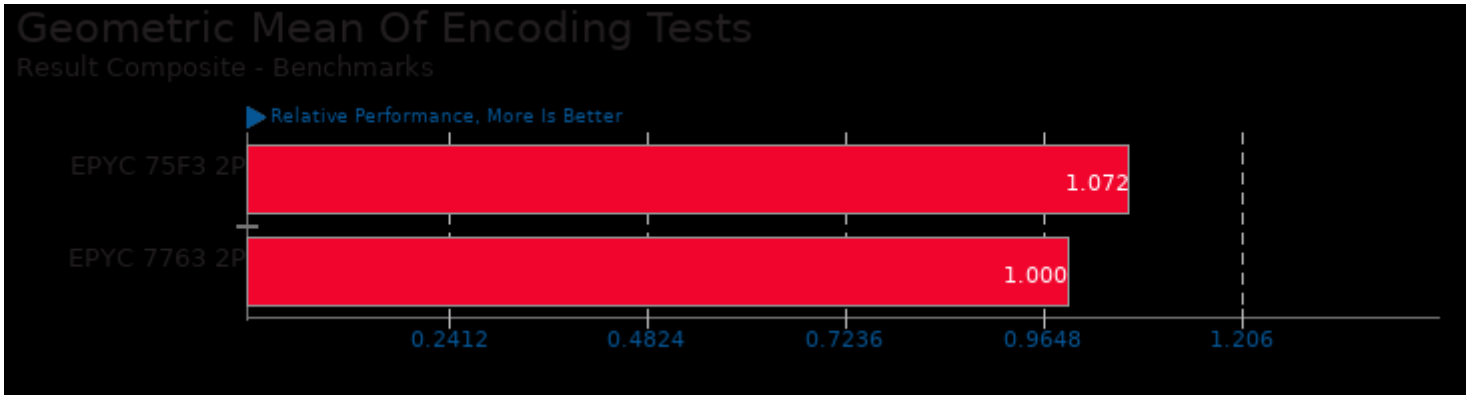
Geometric mean based upon tests: pts/compress-7zip and pts/compress-gzip



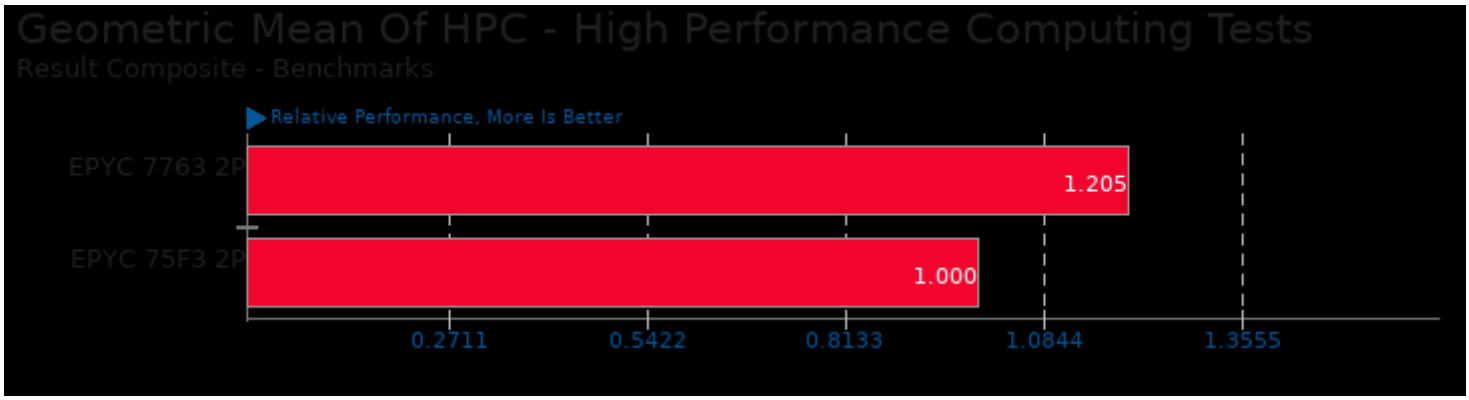
Geometric mean based upon tests: pts/build-llvm, pts/build-linux-kernel, pts/build-php, pts/c-ray, pts/compress-7zip, pts/svt-av1, pts/svt-vp9, pts/vpxenc, pts/x265, pts/encode-flac, pts/openssl, pts/lammps, pts/namd, pts/numpy, pts/stockfish and pts/blender



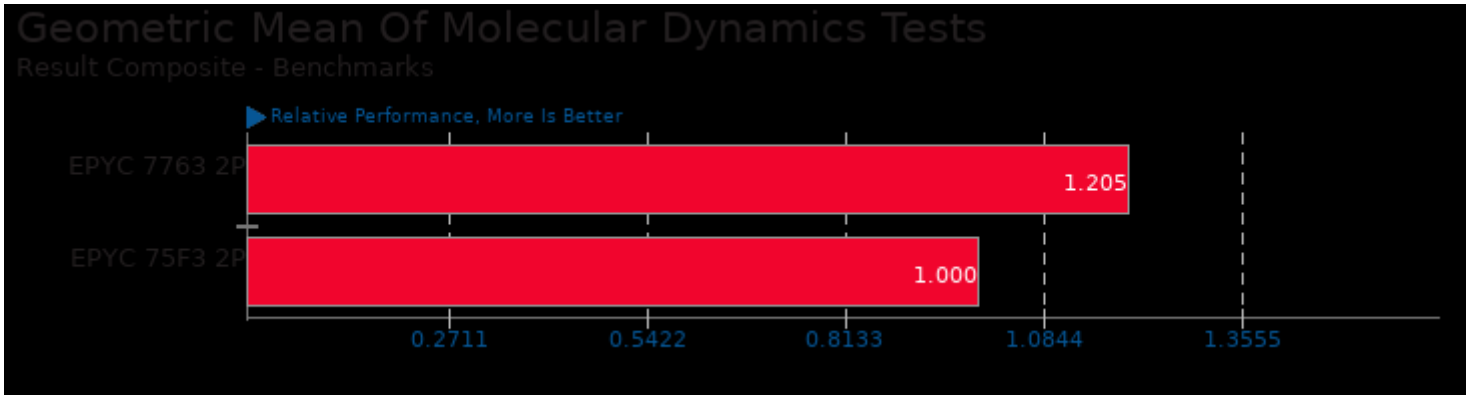
Geometric mean based upon tests: pts/ospray, pts/c-ray, pts/blender, pts/svt-vp9, pts/x265, pts/vpxenc, pts/svt-av1, pts/encode-flac, pts/embree and pts/build-godot



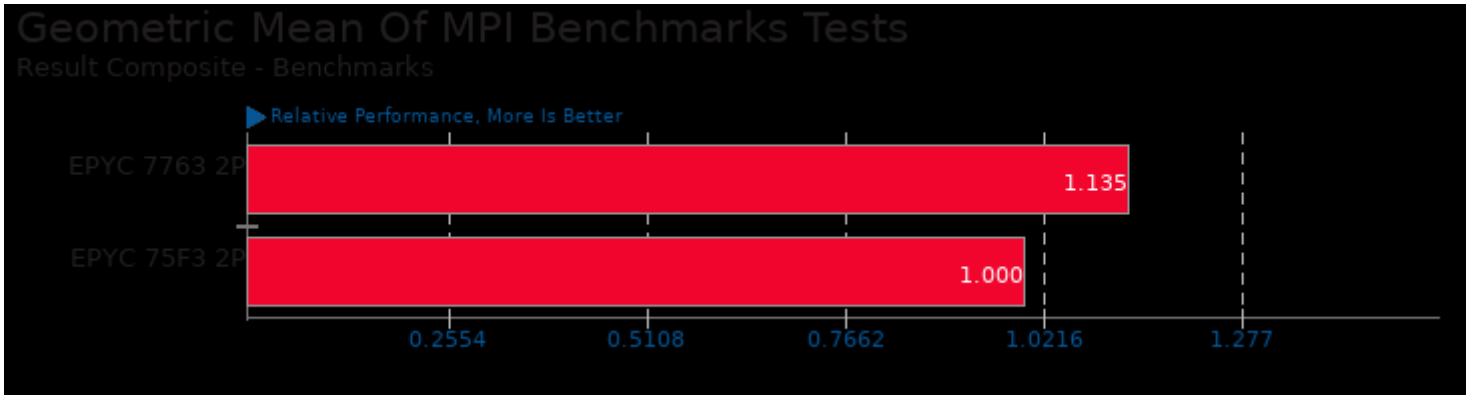
Geometric mean based upon tests: pts/encode-flac, pts/svt-vp9, pts/x265, pts/vpxenc and pts/svt-av1



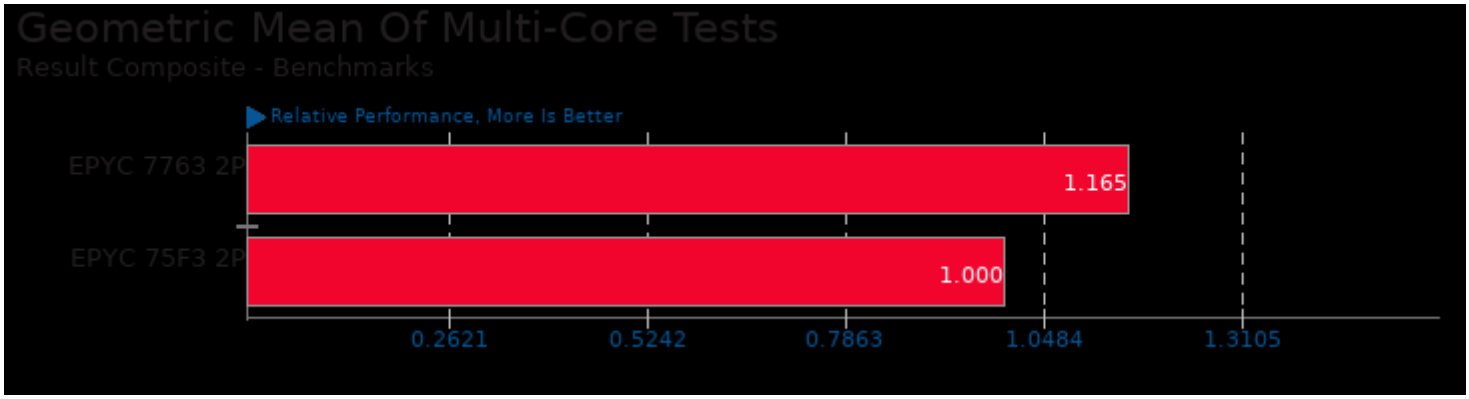
Geometric mean based upon tests: pts/namd, pts/gromacs, pts/lammps and pts/numpy



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

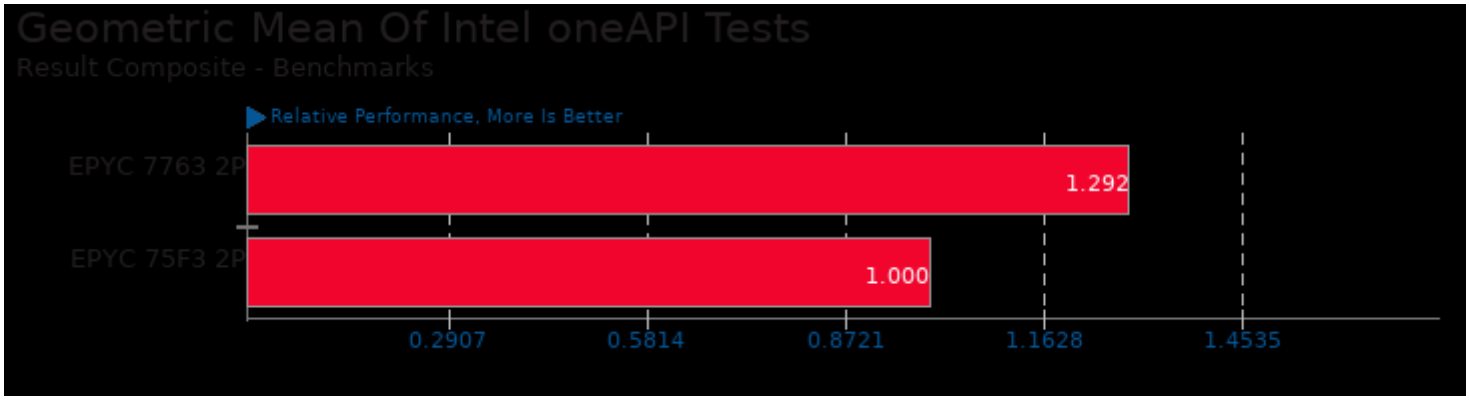


Geometric mean based upon tests: pts/lammps and pts/gromacs

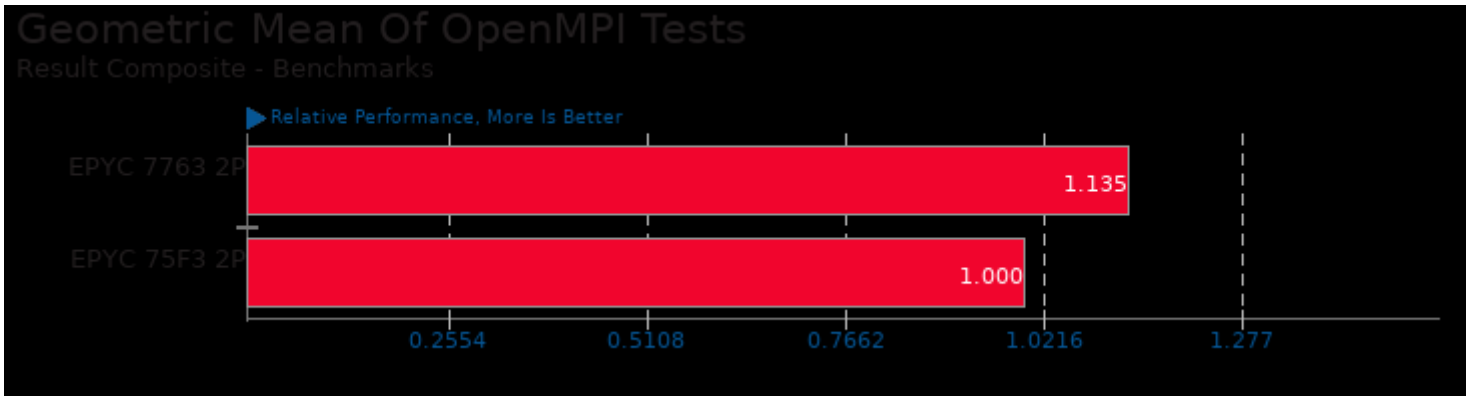


Geometric mean based upon tests: pts/blender, pts/ospray, pts/c-ray, pts/stockfish, pts/svt-vp9, pts/x265, pts/vpxenc,

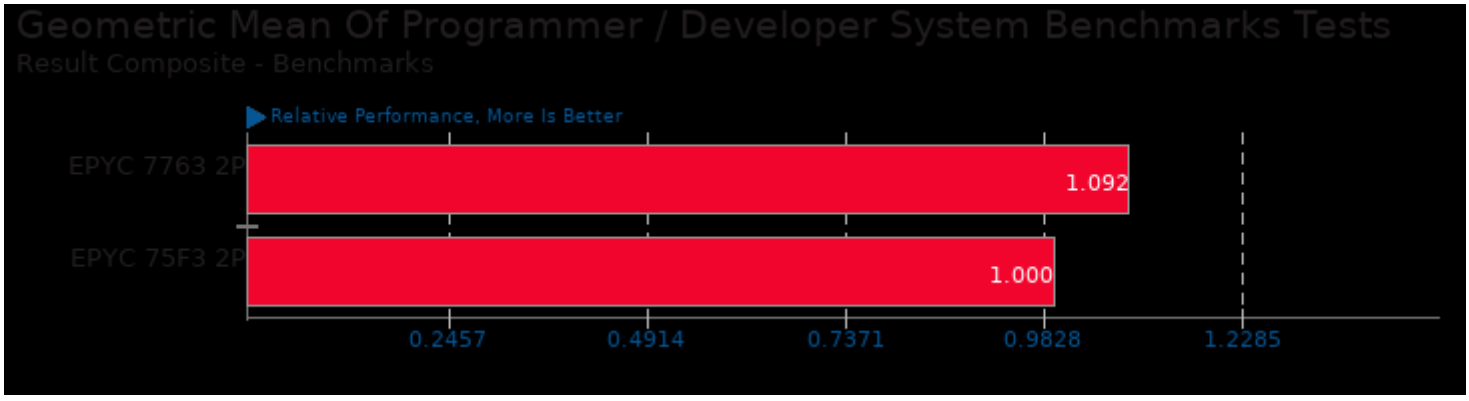
pts/svt-av1, pts/namd, pts/lammps, pts/gromacs, pts/compress-7zip, pts/build-php, pts/build-linux-kernel, pts/build-llvm, pts/build-godot and pts/embree



Geometric mean based upon tests: pts/embree and pts/ospray



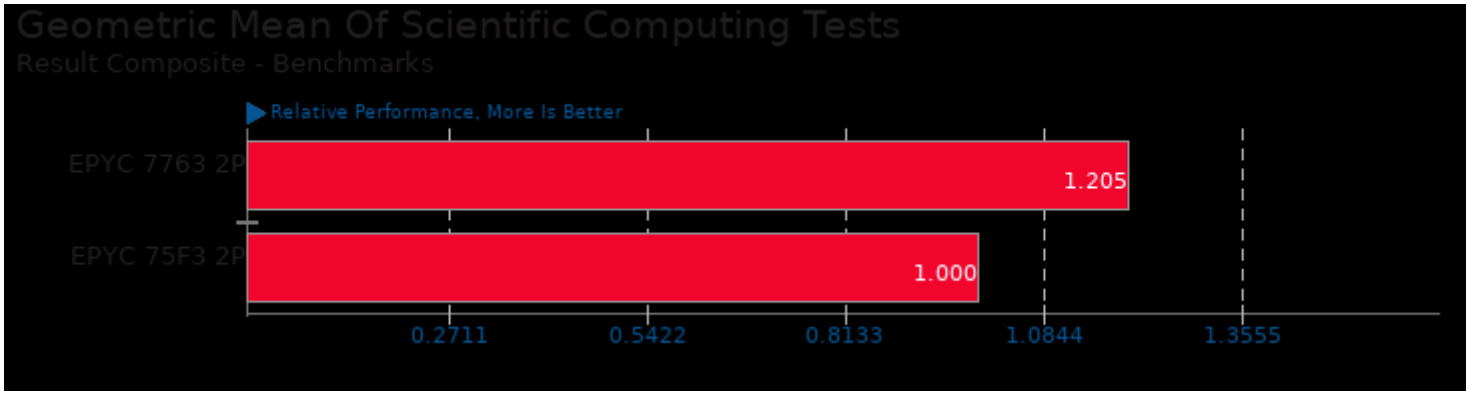
Geometric mean based upon tests: pts/lammps and pts/gromacs



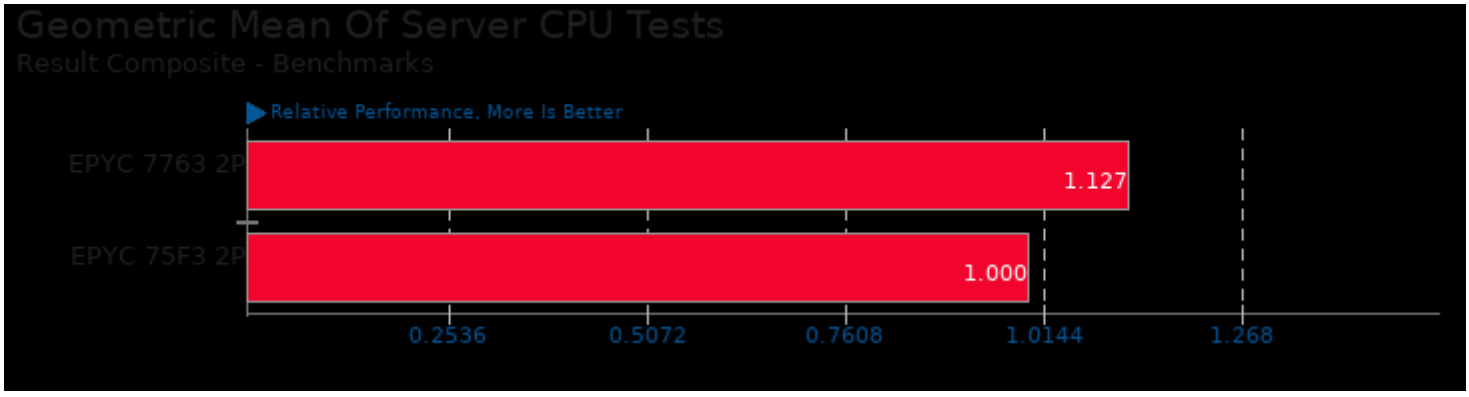
Geometric mean based upon tests: pts/pybench, pts/build-php, pts/build-linux-kernel, pts/build-llvm and pts/build-godot

Geometric mean based upon tests: pts/ospray and pts/c-ray

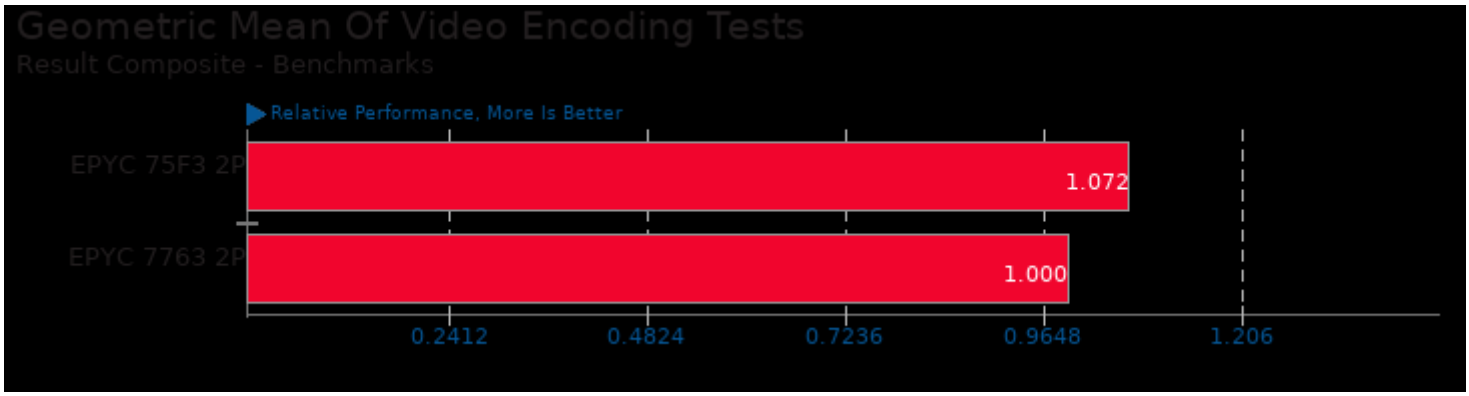
Geometric mean based upon tests: pts/ospray, pts/c-ray and pts/blender



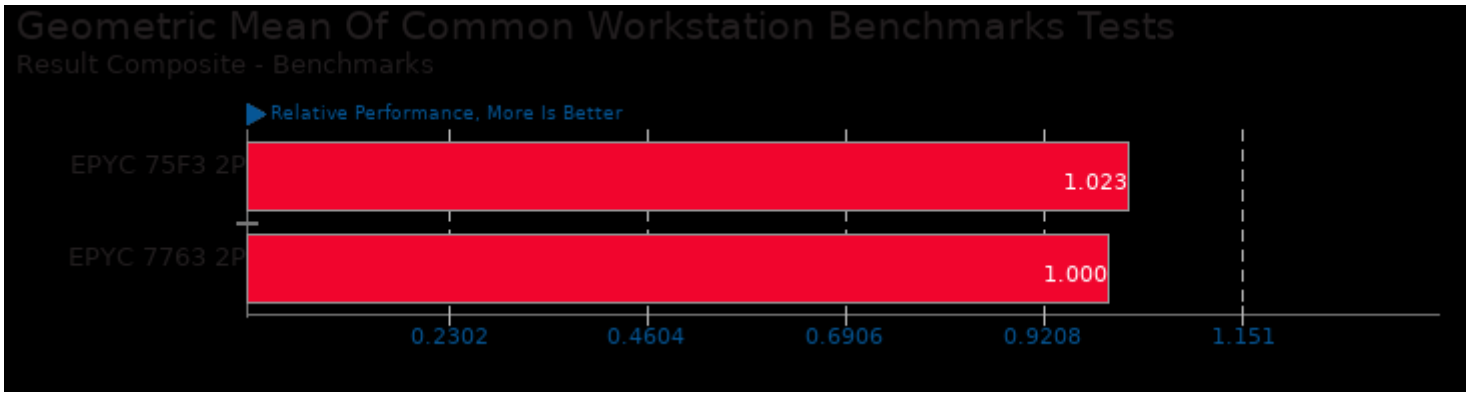
Geometric mean based upon tests: pts/namd, pts/gromacs and pts/lammps



Geometric mean based upon tests: pts/namd, pts/svt-av1, pts/svt-vp9, pts/x265, pts/compress-7zip, pts/stockfish, pts/build-linux-kernel, pts/build-php, pts/build-llvm, pts/c-ray, pts/openssl, pts/blender, pts/pybench and pts/numpy



Geometric mean based upon tests: pts/svt-vp9, pts/x265, pts/vpxenc and pts/svt-av1



Geometric mean based upon tests: pts/blender and pts/x265

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 14:02.