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EPYC 7601 1P

AMD EPYC 7601 32-Core testing with a TYAN B8026T70AE24HR (V1.02.B10 BIOS) and llvmpipe on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

2 had the most wins, coming in first place for 42% of the tests.

Based on the geometric mean of all complete results, the fastest (1) was 1.01x the speed of the slowest (3). 2 was 0.998x the speed of 1 and 3 was 0.992x the speed of 2.

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

Redis (Test: LPOP) at 1.6x
LULESH at 1.068x
Redis (Test: GET) at 1.057x
lzbench (Test: Crush 0 - Process: Compression) at 1.056x
ONNX Runtime (Model: bertsquad-10 - Device: OpenMP CPU) at 1.047x
Cpuminer-Opt (Algorithm: Quad SHA-256, Pyrite) at 1.04x
Redis (Test: SET) at 1.038x
Cpuminer-Opt (Algorithm: Triple SHA-256, Onecoin) at 1.037x
CloverLeaf (Lagrangian-Eulerian Hydrodynamics) at 1.034x

ONNX Runtime (Model: super-resolution-10 - Device: OpenMP CPU) at 1.028x.

Test Systems:

1

2

3

Processor: AMD EPYC 7601 32-Core @ 2.20GHz (32 Cores / 64 Threads), Motherboard: TYAN B8026T70AE24HR (V1.02.B10 BIOS), Chipset: AMD 17h, Memory: 126GB, Disk: 280GB INTEL SSDPE21D280GA, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Broadcom NetXtreme BCM5720 2-port PCIe

OS: Ubuntu 20.04, Kernel: 5.4.0-58-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 3.3 Mesa 20.0.8 (LLVM 10.0.0 128 bits), Compiler: GCC 9.3.0, 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-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=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,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 (Boost: Enabled) - CPU Microcode: 0x8001250
Python Notes: Python 3.8.5
Security Notes: itlb_multihit: Not affected + l1tf: 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 retpoline IBPB: conditional STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	1	2	3
QuantLib (MFLOPS)	**1782**	**1785**	1785
Normalized	99.83%	100%	99.99%
Standard Deviation	0.2%	0.1%	0.1%
Etcpak - DXT1 (Mpx/s)	**1325**	**1323**	1324
Normalized	100%	99.83%	99.91%
Standard Deviation	0.2%	0.2%	0.2%
Etcpak - ETC1 (Mpx/s)	184.756	**184.780**	**184.741**
Normalized	99.99%	100%	99.98%
Standard Deviation	0%	0%	0%
Etcpak - ETC2 (Mpx/s)	**118.009**	**118.053**	118.012
Normalized	99.96%	100%	99.97%
Standard Deviation	0%	0.1%	0%
Etcpak - ETC1 + Dithering (Mpx/s)	**174.312**	174.285	**174.270**
Normalized	100%	99.98%	99.98%
Standard Deviation	0%	0%	0%

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NAS Parallel Benchmarks - CG.C (Mop/s)	**16966**	**16878**	16879
Normalized	100%	99.48%	99.49%
Standard Deviation	1%	0.5%	0.4%
NAS Parallel Benchmarks - EP.C (Mop/s)	1372	**1374**	**1371**
Normalized	99.91%	100%	99.82%
Standard Deviation	0.1%	0.1%	0.1%
NAS Parallel Benchmarks - EP.D (Mop/s)	1372	**1372**	**1370**
Normalized	99.98%	100%	99.84%
Standard Deviation	0%	0.1%	0.4%
NAS Parallel Benchmarks - FT.C (Mop/s)	**41171**	**41776**	41561
Normalized	98.55%	100%	99.48%
Standard Deviation	1.6%	0.4%	0.3%
NAS Parallel Benchmarks - IS.D (Mop/s)	**1288**	1284	**1283**
Normalized	100%	99.65%	99.56%
Standard Deviation	0.1%	0.1%	0.2%
NAS Parallel Benchmarks - LU.C (Mop/s)	**73405**	**73256**	73360
Normalized	100%	99.8%	99.94%
Standard Deviation	0.2%	0.1%	0.1%
NAS Parallel Benchmarks - MG.C (Mop/s)	**41104**	41407	**41726**
Normalized	98.51%	99.24%	100%
Standard Deviation	1.2%	1.4%	0.2%
CloverLeaf - L.E.H (sec)	32.92	**32.00**	**33.08**
Normalized	97.21%	100%	96.74%
Standard Deviation	4.4%	2.1%	2.6%
lzbench - XZ 0 - Compression (MB/s)	27	27	27
lzbench - XZ 0 - Decompression (MB/s)	**83**	**84**	**84**
Normalized	98.81%	100%	100%
Standard Deviation			0.7%
lzbench - Zstd 1 - Compression (MB/s)	405	**403**	**406**
Normalized	99.75%	99.26%	100%
Standard Deviation	0.7%	0.7%	
lzbench - Zstd 1 - Decompression (MB/s)	**1203**	**1203**	**1205**
Normalized	99.83%	99.83%	100%
Standard Deviation			0.3%
lzbench - Zstd 8 - Compression (MB/s)	**74**	**74**	**73**
Normalized	100%	100%	98.65%
Standard Deviation	1.6%	1.6%	0.8%
lzbench - Zstd 8 - Decompression (MB/s)	**1344**	**1354**	1346
Normalized	99.26%	100%	99.41%
Standard Deviation	0.3%	0.9%	0.2%
lzbench - Crush 0 - Compression (MB/s)	**71**	**75**	73
Normalized	94.67%	100%	97.33%
Standard Deviation	1.6%		
lzbench - Crush 0 - Decompression (MB/s)	**347**	348	**349**
Normalized	99.43%	99.71%	100%
Standard Deviation	0.2%		
lzbench - Brotli 0 - Compression (MB/s)	**368**	**368**	**371**
Normalized	99.19%	99.19%	100%
Standard Deviation	0.5%	0.3%	0.3%
lzbench - Brotli 0 - Decompression (MB/s)	432	432	432
Standard Deviation			0.1%
lzbench - Brotli 2 - Compression (MB/s)	**150**	**151**	**151**
Normalized	99.34%	100%	100%
Standard Deviation	0.8%	0.4%	0.8%
lzbench - Brotli 2 - Decompression (MB/s)	504	**505**	**503**

Normalized	99.8%	100%	99.6%
Standard Deviation	0.2%		0.3%
lzbench - Libdeflate 1 - Compression (MB/s)	183	**184**	**181**
Normalized	99.46%	100%	98.37%
Standard Deviation	0.6%	1.4%	0.6%
lzbench - Libdeflate 1 - Decompression	**894**	**902**	**894**
Normalized	99.11%	100%	99.11%
Standard Deviation		0.1%	0.4%
Algebraic Multi-Grid Benchmark (Figure Of Merit)	**849591100**	847575733	**828037633**
Normalized	100%	99.76%	97.46%
Standard Deviation	0.3%	0%	0.7%
QMCPACK - simple-H2O (Execution Time - sec)	43.733	**43.689**	**49.375**
Normalized	99.9%	100%	88.48%
Standard Deviation	0.3%	0.7%	17.2%
OpenFOAM - Motorbike 30M (sec)	**42.20**	**42.59**	42.52
Normalized	100%	99.08%	99.25%
Standard Deviation	0.7%	1.3%	1%
OpenFOAM - Motorbike 60M (sec)	**330.57**	330.78	**331.04**
Normalized	100%	99.94%	99.86%
Standard Deviation	0.1%	0%	0%
Quantum ESPRESSO - AUSURF112 (sec)	1983	**1979**	**2003**
Normalized	99.77%	100%	98.81%
Standard Deviation	0.6%	0.1%	1.9%
LULESH (z/s)	**13537**	14446	**14461**
Normalized	93.61%	99.9%	100%
Standard Deviation	1.4%	0.3%	0.1%
dav1d - Chimera 1080p (FPS)	**382.43**	385.23	**385.43**
Normalized	99.22%	99.95%	100%
Standard Deviation	0.8%	0.5%	0.3%
dav1d - Summer Nature 4K (FPS)	177.53	**178.42**	**177.44**
Normalized	99.5%	100%	99.45%
Standard Deviation	0.8%	0.9%	2.1%
dav1d - S.N.1 (FPS)	**402.86**	**407.74**	404.38
Normalized	98.8%	100%	99.18%
Standard Deviation	0.3%	0.3%	1.2%
dav1d - C.1.1.b (FPS)	**90.90**	**91.06**	90.99
Normalized	99.82%	100%	99.92%
Standard Deviation	0.2%	0.4%	0.4%
rav1e - 1 (FPS)	**0.264**	0.262	**0.261**
Normalized	100%	99.24%	98.86%
Standard Deviation	0.6%	0.4%	0.6%
rav1e - 5 (FPS)	**0.784**	0.782	**0.780**
Normalized	100%	99.74%	99.49%
Standard Deviation	0.7%	0.4%	0.4%
rav1e - 6 (FPS)	**1.031**	**1.023**	1.026
Normalized	100%	99.22%	99.52%
Standard Deviation	0.4%	0.3%	0.4%
rav1e - 10 (FPS)	**2.306**	2.305	**2.291**
Normalized	100%	99.96%	99.35%
Standard Deviation	1.9%	0.4%	0.3%

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Timed Godot Game Engine Compilation - Time To Compile (sec)	**94.315**	**94.889**	94.457
Normalized	100%	99.4%	99.85%
Standard Deviation	0.5%	0.5%	0.4%
Gcrypt Library (sec)	287.991	**287.019**	**290.017**
Normalized	99.66%	100%	98.97%
Standard Deviation	0.5%	0.2%	0.5%
Google SynthMark - VoiceMark_100 (Voices)	**512.067**	**512.075**	512.071
Normalized	100%	100%	100%
Standard Deviation	0%	0%	0%
Cpuminer-Opt - Magi (kH/s)	**885.86**	**884.41**	885.83
Normalized	100%	99.84%	100%
Standard Deviation	0.7%	0.1%	5.5%
Cpuminer-Opt - x25x (kH/s)	**611.10**	**622.78**	614.97
Normalized	98.12%	100%	98.75%
Standard Deviation	0.4%	2.8%	1.1%
Cpuminer-Opt - Deepcoin (kH/s)	**13656**	**13676**	13675
Normalized	99.85%	100%	99.99%
Standard Deviation	4.8%	5.3%	6.1%
Cpuminer-Opt - Ringcoin (kH/s)	**2943**	2940	**2896**
Normalized	100%	99.92%	98.4%
Standard Deviation	2.2%	3%	0.6%
Cpuminer-Opt - Blake-2 S (kH/s)	300977	**297184**	**301550**
Normalized	99.81%	98.55%	100%
Standard Deviation	0.4%	2.8%	1.1%
Cpuminer-Opt - Garlicoin (kH/s)	3569	**3571**	**3566**
Normalized	99.94%	100%	99.87%
Standard Deviation	0.1%	0.1%	0.1%
Cpuminer-Opt - Skeincoin (kH/s)	**87560**	**86710**	87403
Normalized	100%	99.03%	99.82%
Standard Deviation	2.7%	1.5%	3%
Cpuminer-Opt - Myriad-Groestl (kH/s)	8255	**8260**	**8233**
Normalized	99.94%	100%	99.68%
Standard Deviation	0.1%	0.8%	0.4%
Cpuminer-Opt - LBC, LBRY Credits (kH/s)	34050	**33653**	**34318**
Normalized	99.22%	98.06%	100%
Standard Deviation	1.5%	1.6%	2.9%
Cpuminer-Opt - Q.S.2.P (kH/s)	102275	**99320**	**103261**
Normalized	99.05%	96.18%	100%
Standard Deviation	3.3%	2.9%	4.3%
Cpuminer-Opt - T.S.2.O (kH/s)	128363	**131067**	**126447**
Normalized	97.94%	100%	96.48%
Standard Deviation	1.3%	2%	2.1%
FinanceBench - Repo OpenMP (ms)	**67977**	68278	**68716**
Normalized	100%	99.56%	98.92%
Standard Deviation	1%	1.5%	1.4%
FinanceBench - Bonds OpenMP (ms)	**121717**	**123559**	122119
Normalized	100%	98.51%	99.67%
Standard Deviation	0.3%	1.6%	0.1%
Cryptsetup - PBKDF2-sha512 (Iterations/sec)	**1178623**	1182662	**1183981**
Normalized	99.55%	99.89%	100%
Standard Deviation	0.3%	0.9%	0.7%
Cryptsetup - PBKDF2-whirlpool	**514008**	**512334**	512336
Normalized	100%	99.67%	99.67%
Standard Deviation	0.2%	0.1%	0.3%

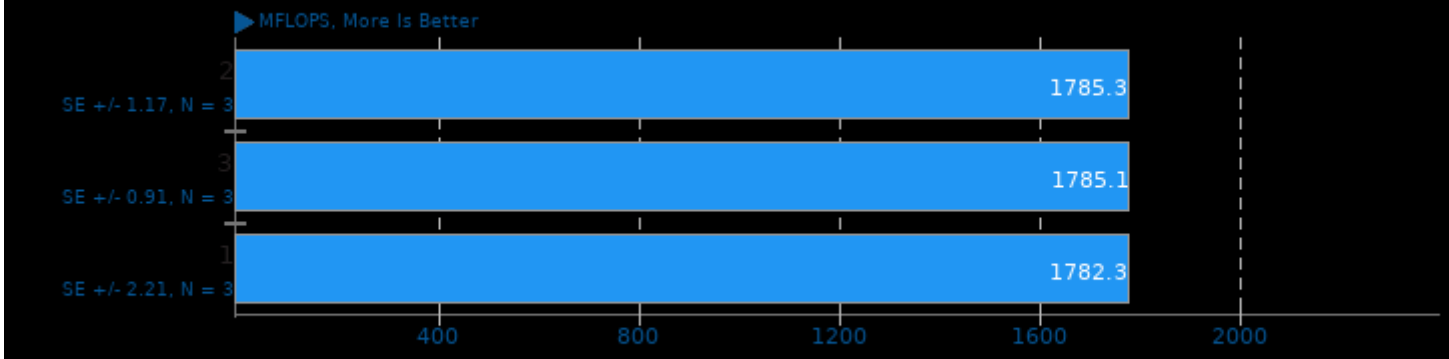
Cryptsetup - A.X.2.E (MiB/s)	**1450**	1454	**1457**
Normalized	99.53%	99.78%	100%
Standard Deviation	0.1%	0.3%	0.3%
Cryptsetup - A.X.2.D (MiB/s)	1458	**1457**	**1460**
Normalized	99.9%	99.81%	100%
Standard Deviation	0.5%	0.3%	0.4%
Cryptsetup - S.X.2.E (MiB/s)	**308.5**	309.6	**309.7**
Normalized	99.61%	99.97%	100%
Standard Deviation	0.6%	0%	0%
Cryptsetup - S.X.2.D (MiB/s)	307.1	**306.0**	**307.2**
Normalized	99.97%	99.61%	100%
Standard Deviation	0%	0.6%	0%
Cryptsetup - T.X.2.E (MiB/s)	**317.4**	**318.8**	**318.6**
Normalized	99.56%	100%	99.94%
Standard Deviation	0.5%	0%	0.2%
Cryptsetup - T.X.2.D (MiB/s)	317.8	**318.1**	**317.7**
Normalized	99.91%	100%	99.87%
Standard Deviation	0.2%	0%	0.2%
Cryptsetup - A.X.5.E (MiB/s)	1290	**1287**	**1292**
Normalized	99.89%	99.67%	100%
Standard Deviation	0.4%	0.2%	0.3%
Cryptsetup - A.X.5.D (MiB/s)	1289	**1286**	**1290**
Normalized	99.93%	99.71%	100%
Standard Deviation	0.4%	0.2%	0.3%
Cryptsetup - S.X.5.E (MiB/s)	**309.6**	**309.7**	
Normalized	99.97%	100%	
Standard Deviation	0%		
Cryptsetup - T.X.5.E (MiB/s)	318.6	**318.8**	**318.4**
Normalized	99.94%	100%	99.87%
Standard Deviation	0.1%	0%	0.2%
Cryptsetup - T.X.5.D (MiB/s)	317.6	**317.9**	**317.5**
Normalized	99.91%	100%	99.87%
Standard Deviation	0.2%	0%	0.2%
Cryptsetup - S.X.5.D (MiB/s)	307.2	**307.3**	**307.1**
Normalized	99.97%	100%	99.93%
Standard Deviation	0%		0%
Redis - LPOP (Reqs/sec)	**1388191**	873606	**867491**
Normalized	100%	62.93%	62.49%
Standard Deviation	3.1%	0.9%	1.8%
Redis - SADD (Reqs/sec)	1135678	**1139687**	**1131243**
Normalized	99.65%	100%	99.26%
Standard Deviation	3%	2.9%	2.5%
Redis - LPUSH (Reqs/sec)	**832369**	824142	**824028**
Normalized	100%	99.01%	99%
Standard Deviation	0.8%	1.3%	2.5%
Redis - GET (Reqs/sec)	**1335123**	**1263657**	1267016
Normalized	100%	94.65%	94.9%
Standard Deviation	2.6%	2.4%	1.6%
Redis - SET (Reqs/sec)	**980471**	**1017686**	988832
Normalized	96.34%	100%	97.16%
Standard Deviation	1.8%	2.7%	0.7%
Mobile Neural Network - SqueezeNetV1.0	**10.238**	10.157	**10.103**
Normalized	98.68%	99.47%	100%
Standard Deviation	1.7%	2.2%	2.4%
Mobile Neural Network - resnet-v2-50 (ms)	41.206	**41.666**	**41.129**

Normalized	99.81%	98.71%	100%
Standard Deviation	1.1%	1.4%	2.1%
Mobile Neural Network - MobileNetV2_224	**6.705**	**6.832**	6.716
Normalized	100%	98.14%	99.84%
Standard Deviation	1.2%	3.7%	2.1%
Mobile Neural Network - mobilenet-v1-1.0	**4.512**	**4.696**	4.636
Normalized	100%	96.08%	97.33%
Standard Deviation	2.6%	8.1%	5%
Mobile Neural Network - inception-v3 (ms)	**52.622**	**53.273**	52.656
Normalized	100%	98.78%	99.94%
Standard Deviation	1.9%	2.9%	0.7%
TNN - CPU - MobileNet v2 (ms)	368.144	**367.921**	**369.936**
Normalized	99.94%	100%	99.46%
Standard Deviation	0.2%	0.2%	0.5%
TNN - CPU - SqueezeNet v1.1 (ms)	**339.009**	**340.009**	339.898
Normalized	100%	99.71%	99.74%
Standard Deviation	0.1%	0.6%	0.3%
ONNX Runtime - yolov4 - OpenMP CPU (Inferences/min)	**164**	**166**	**164**
Normalized	98.8%	100%	98.8%
Standard Deviation	1.4%	2.7%	1.9%
ONNX Runtime - bertsquad-10 - OpenMP CPU (Inferences/min)	**192**	199	**201**
Normalized	95.52%	99%	100%
Standard Deviation	4.4%	1.8%	2.1%
ONNX Runtime - fcn-resnet101-11 - OpenMP CPU (Inferences/min)	**50**	**50**	**49**
Normalized	100%	100%	98%
Standard Deviation	1%		1.5%
ONNX Runtime - shufflenet-v2-10 - OpenMP CPU (Inferences/min)	**4972**	**5075**	4991
Normalized	97.97%	100%	98.34%
Standard Deviation	3%	1.3%	1.9%
ONNX Runtime - super-resolution-10 - OpenMP CPU (Inferences/min)	**1735**	**1687**	1689
Normalized	100%	97.23%	97.35%
Standard Deviation	0.4%	2.1%	1.2%
GnuPG - 2.7.S.F.E (sec)	94.069	**93.765**	**94.920**
Normalized	99.68%	100%	98.78%
Standard Deviation	0.5%	0.3%	2.5%
Unpacking Firefox - firefox-84.0.source.tar.xz (sec)	26.885	**26.843**	**26.986**
Normalized	99.84%	100%	99.47%
Standard Deviation	0.2%	0.2%	0.3%
Kripke (Throughput FoM)	**40533015**	39914088	**37632138**
Normalized	100%	98.47%	92.84%
Standard Deviation	14.3%	11.8%	18.3%
ASKAP - tConvolve MT - Gridding (Million Grid Points/sec)	**2001**	1926	**1806**
Normalized	100%	96.26%	90.25%
Standard Deviation	24.8%	14.5%	2.7%
ASKAP - tConvolve MT - Degridding (Million Grid Points/sec)	**4536**	4606	**4700**
Normalized	96.51%	97.99%	100%

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Standard Deviation	8.7%	6.6%	1.7%
ASKAP - tConvolve MPI - Degridding	**7306**	7340	**7340**
Normalized	99.54%	100%	100%
Standard Deviation	1.1%	0%	0.7%
ASKAP - tConvolve MPI - Gridding	**6400**	6400	**6387**
Normalized	100%	100%	99.8%
Standard Deviation	0.6%	0%	0.4%
ASKAP - tConvolve OpenMP - Gridding (Million Grid Points/sec)	**869.198**	**931.910**	886.616
Normalized	93.27%	100%	95.14%
Standard Deviation	0.7%	7.8%	1.2%
ASKAP - tConvolve OpenMP - Degridding (Million Grid Points/sec)	1917	**2158**	**1575**
Normalized	88.8%	100%	72.97%
Standard Deviation	8.9%	42.3%	4.9%
Cryptsetup - PBKDF2-sha512 (MiB/s)			1184446
Standard Deviation			0.9%
Cryptsetup - PBKDF2-whirlpool (MiB/s)			512001
Standard Deviation			0.2%

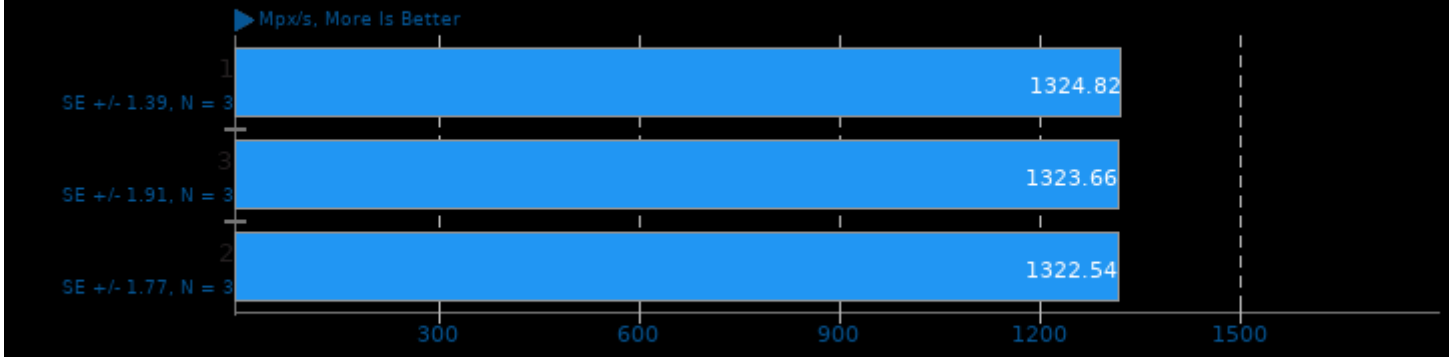
QuantLib 1.21



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

Etcpak 0.7

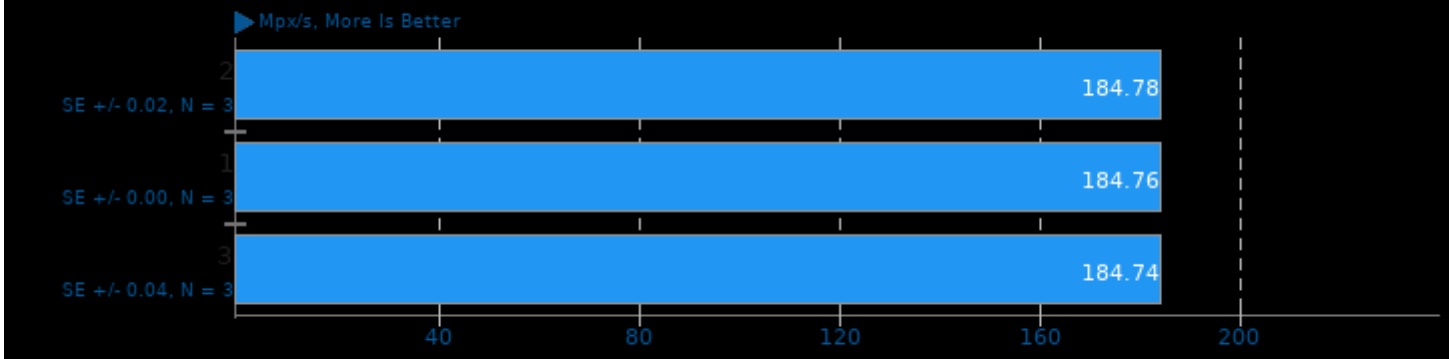
Configuration: DXT1



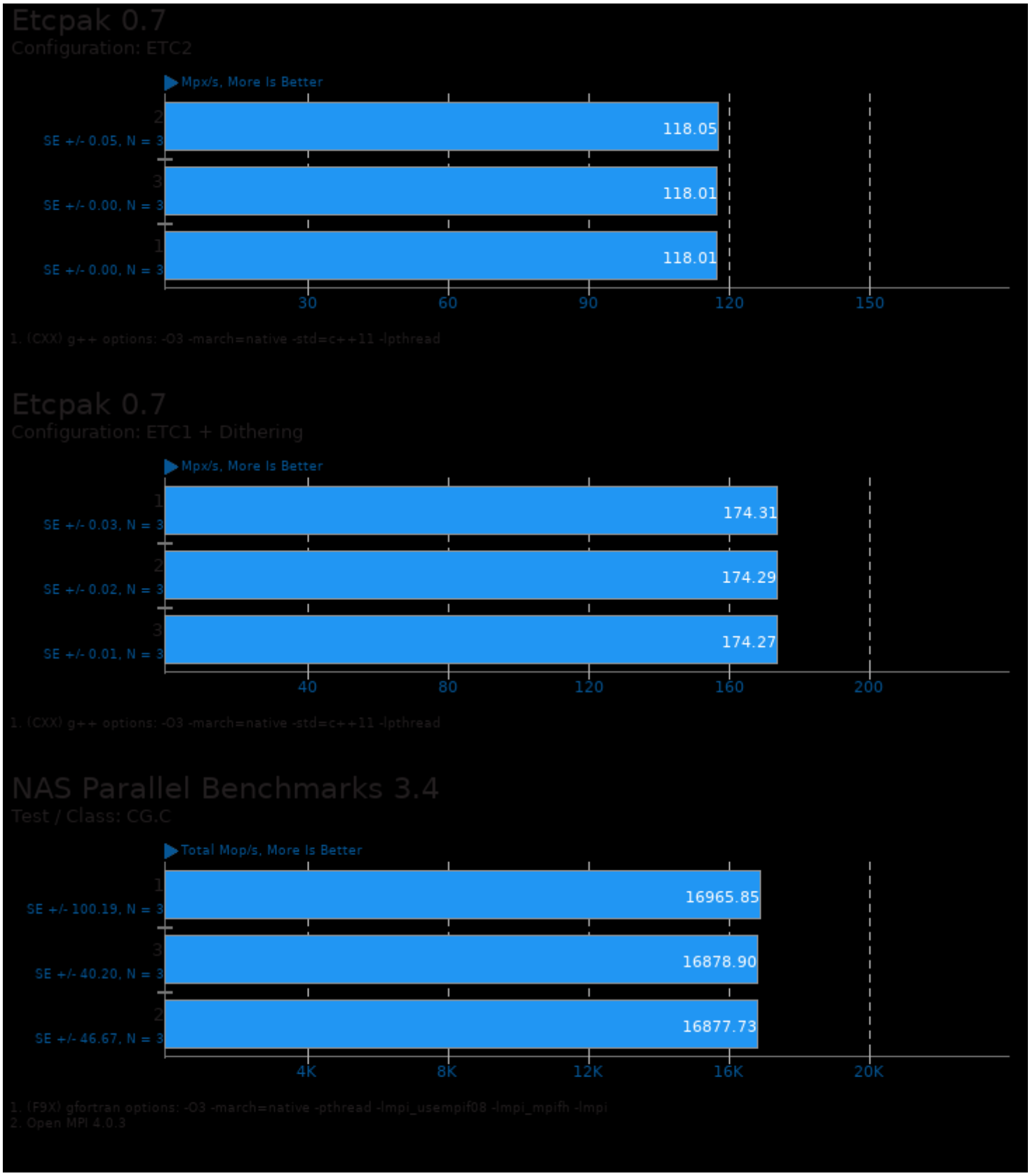
1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

Etcpak 0.7

Configuration: ETC1

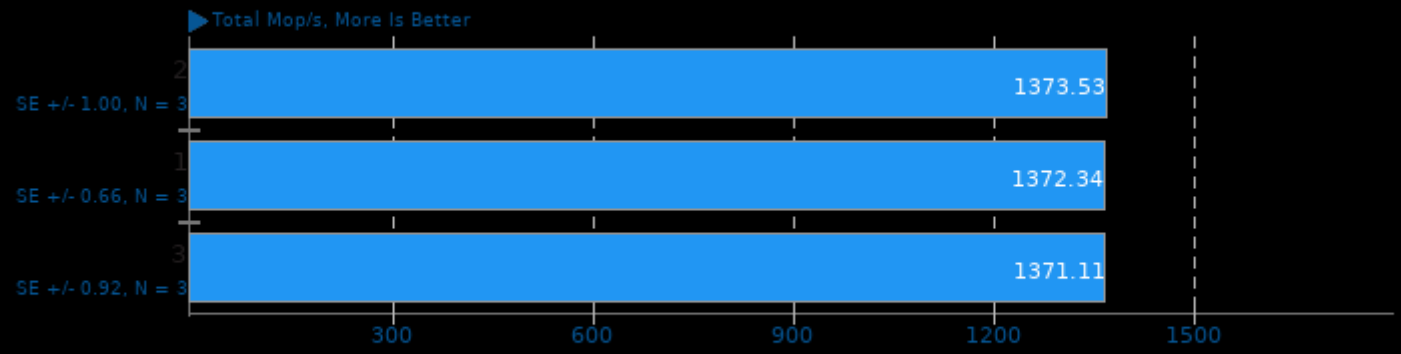


1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread


Etcpak 0.7
Configuration: ETC2
Mpx/s, More Is Better
2
SE +/- 0.05, N = 3
118.05
3
SE +/- 0.00, N = 3
118.01
1
SE +/- 0.00, N = 3
118.01
30
60
90
120
150
1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread
Etcpak 0.7
Configuration: ETC1 + Dithering
Mpx/s, More Is Better
1
SE +/- 0.03, N = 3
174.31
2
SE +/- 0.02, N = 3
174.29
3
SE +/- 0.01, N = 3
174.27
40
80
120
160
200
1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread
NAS Parallel Benchmarks 3.4
Test / Class: CG.C
Total Mop/s, More Is Better
1
SE +/- 100.19, N = 3
16965.85
3
SE +/- 40.20, N = 3
16878.90
2
SE +/- 46.67, N = 3
16877.73
4K
8K
12K
16K
20K
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

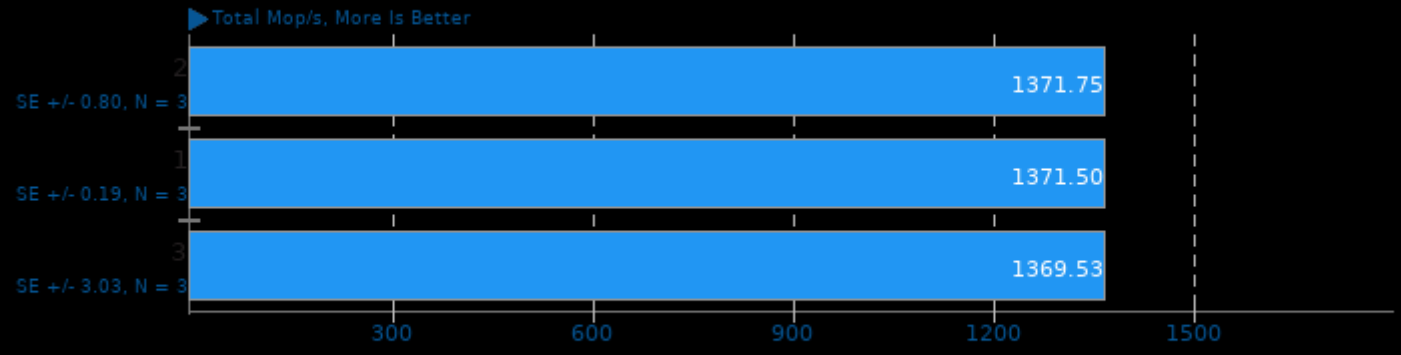
Test / Class: EP.C



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

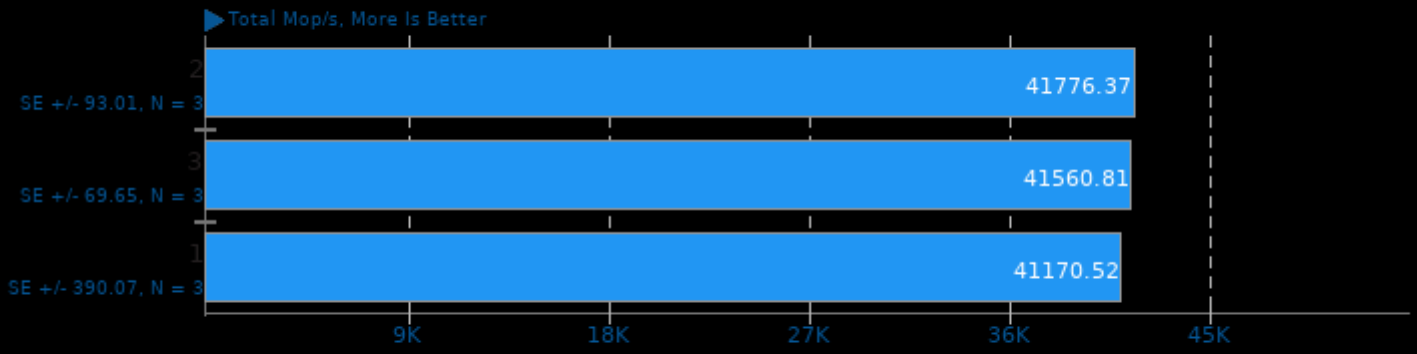
Test / Class: EP.D



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

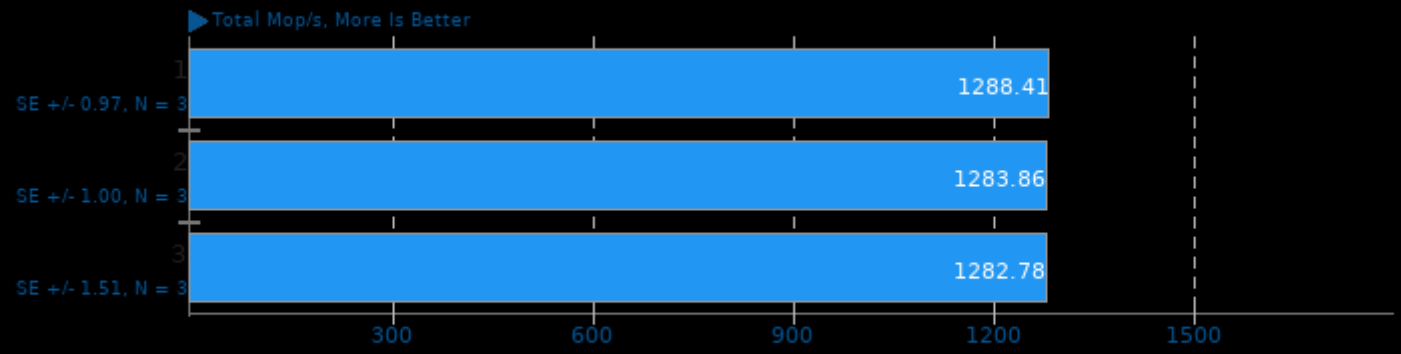
Test / Class: FT.C



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

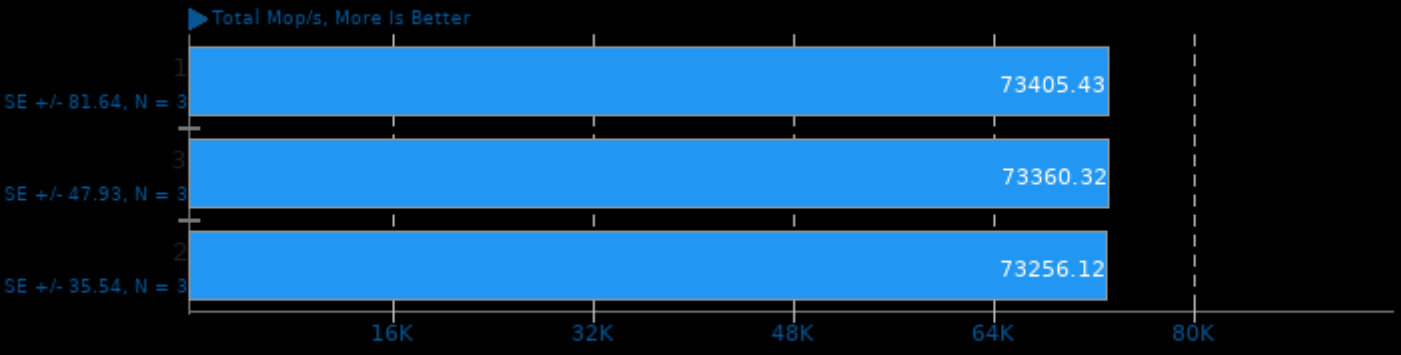
Test / Class: IS.D



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

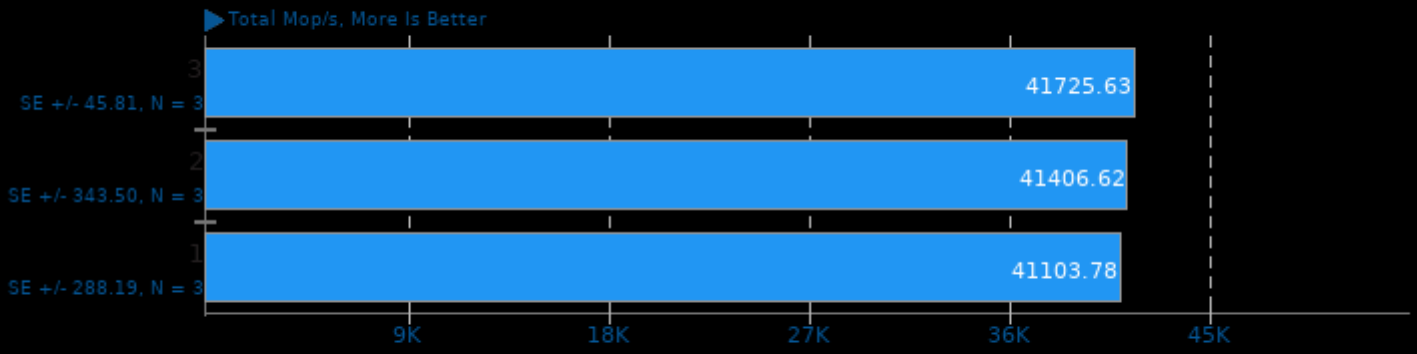
Test / Class: LU.C



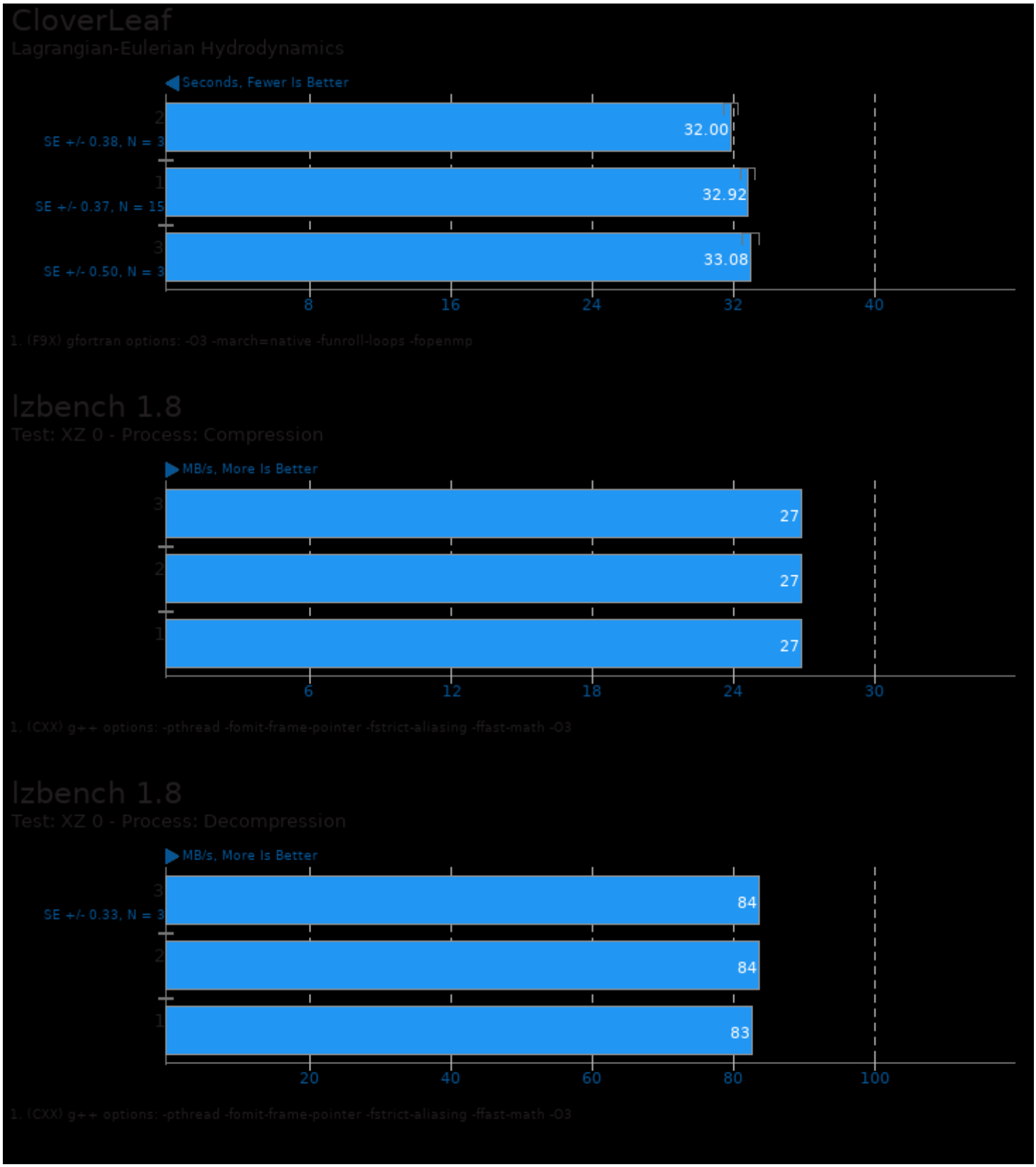
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 4.0.3

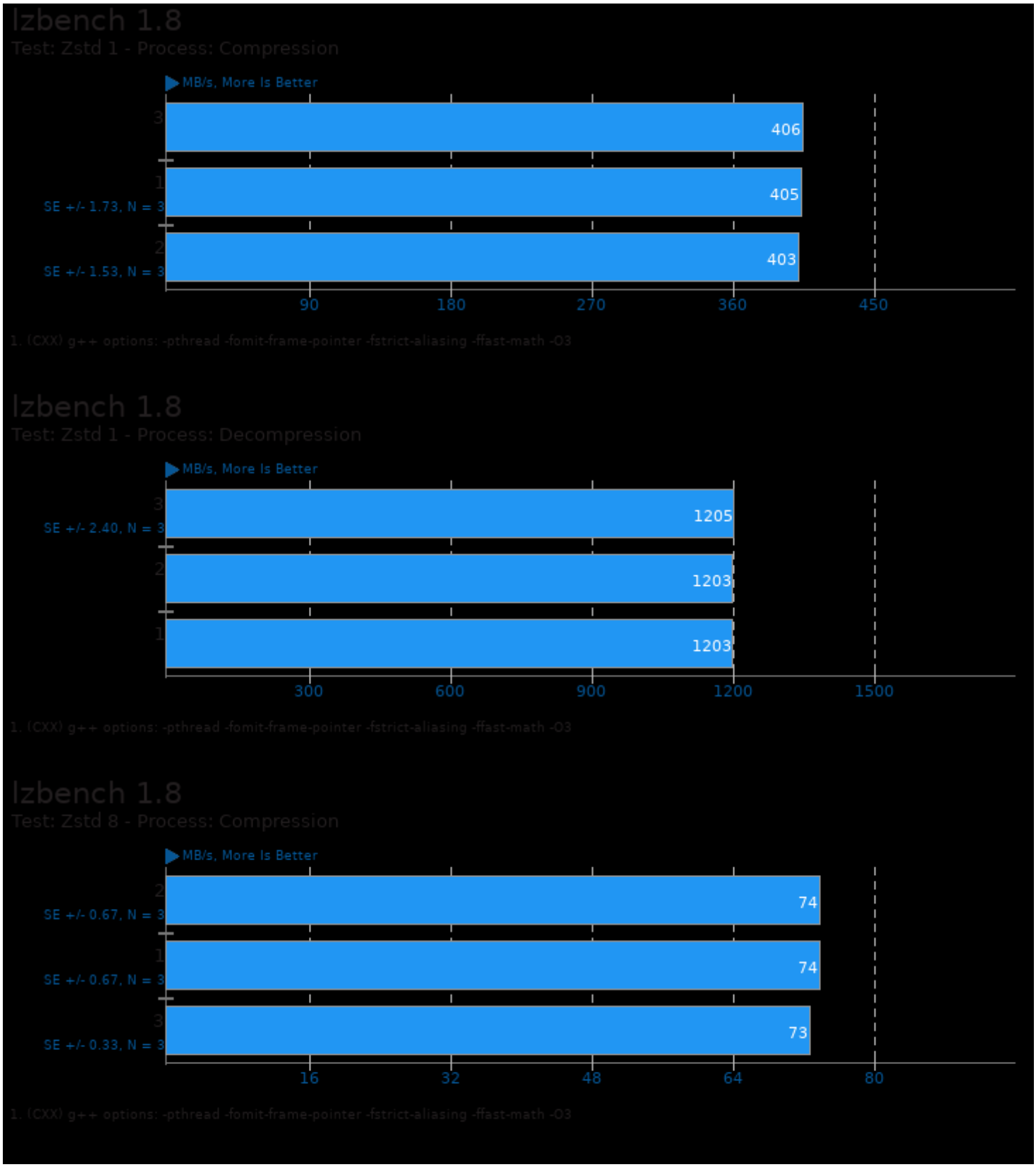
NAS Parallel Benchmarks 3.4

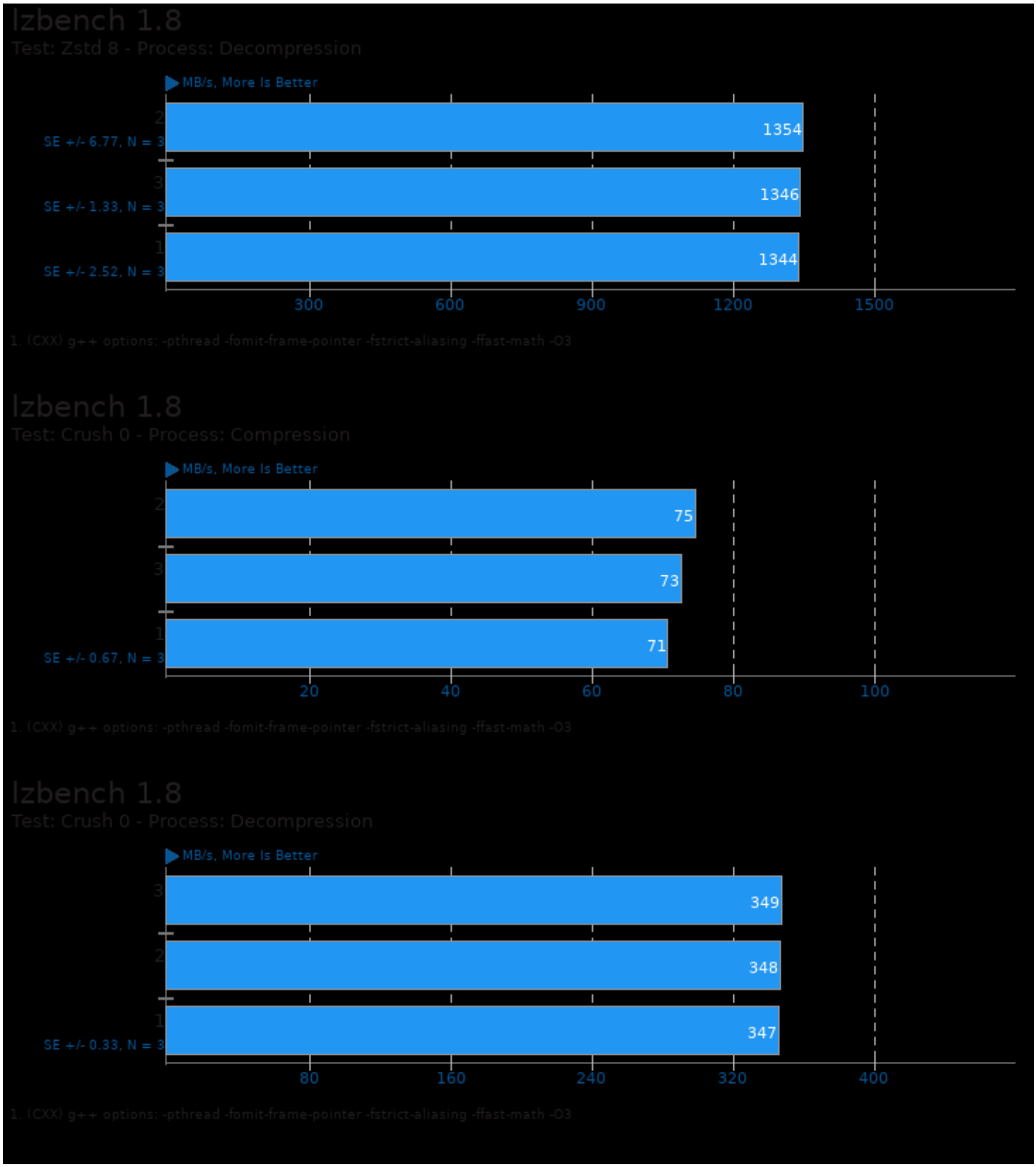
Test / Class: MG.C

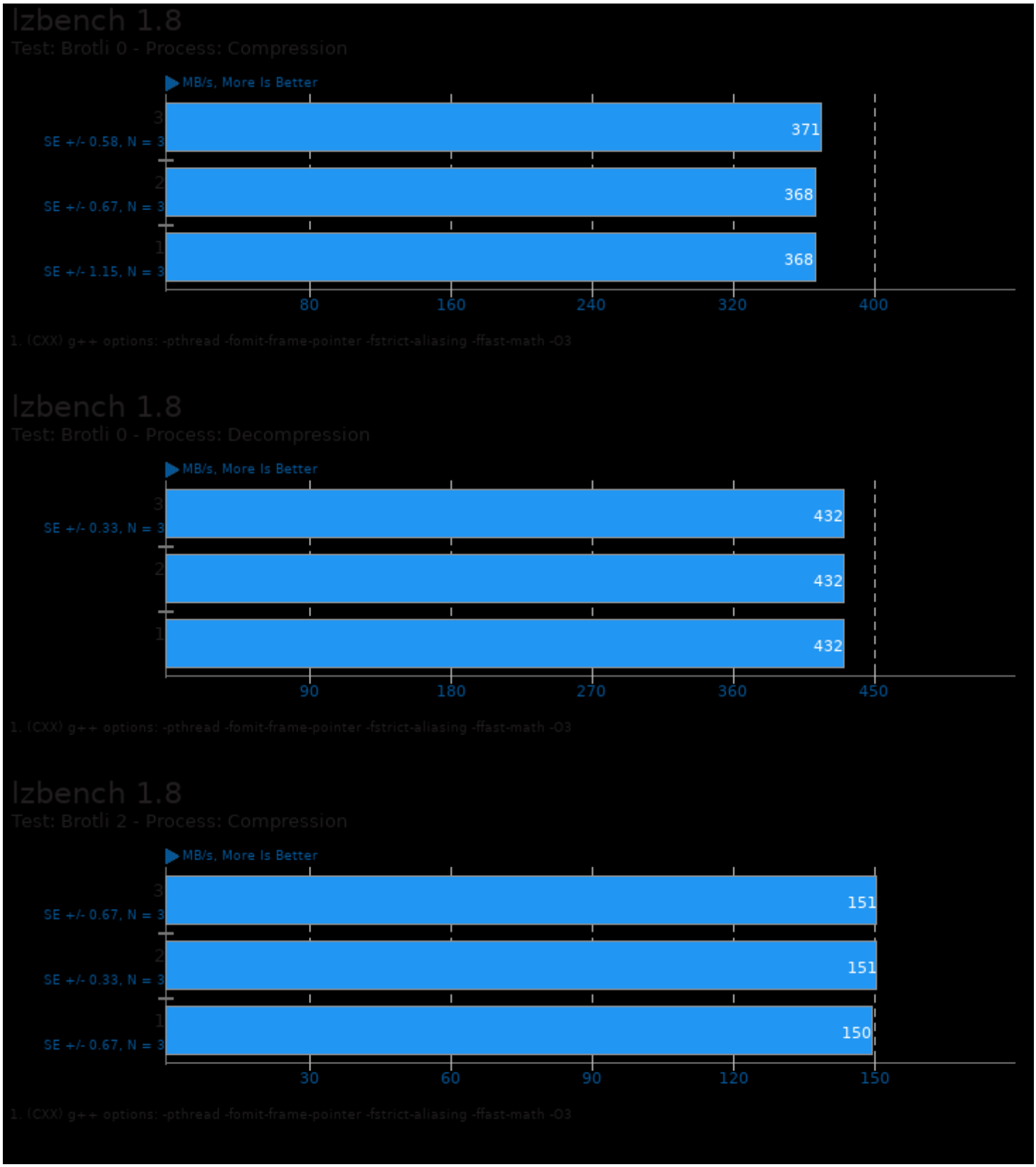


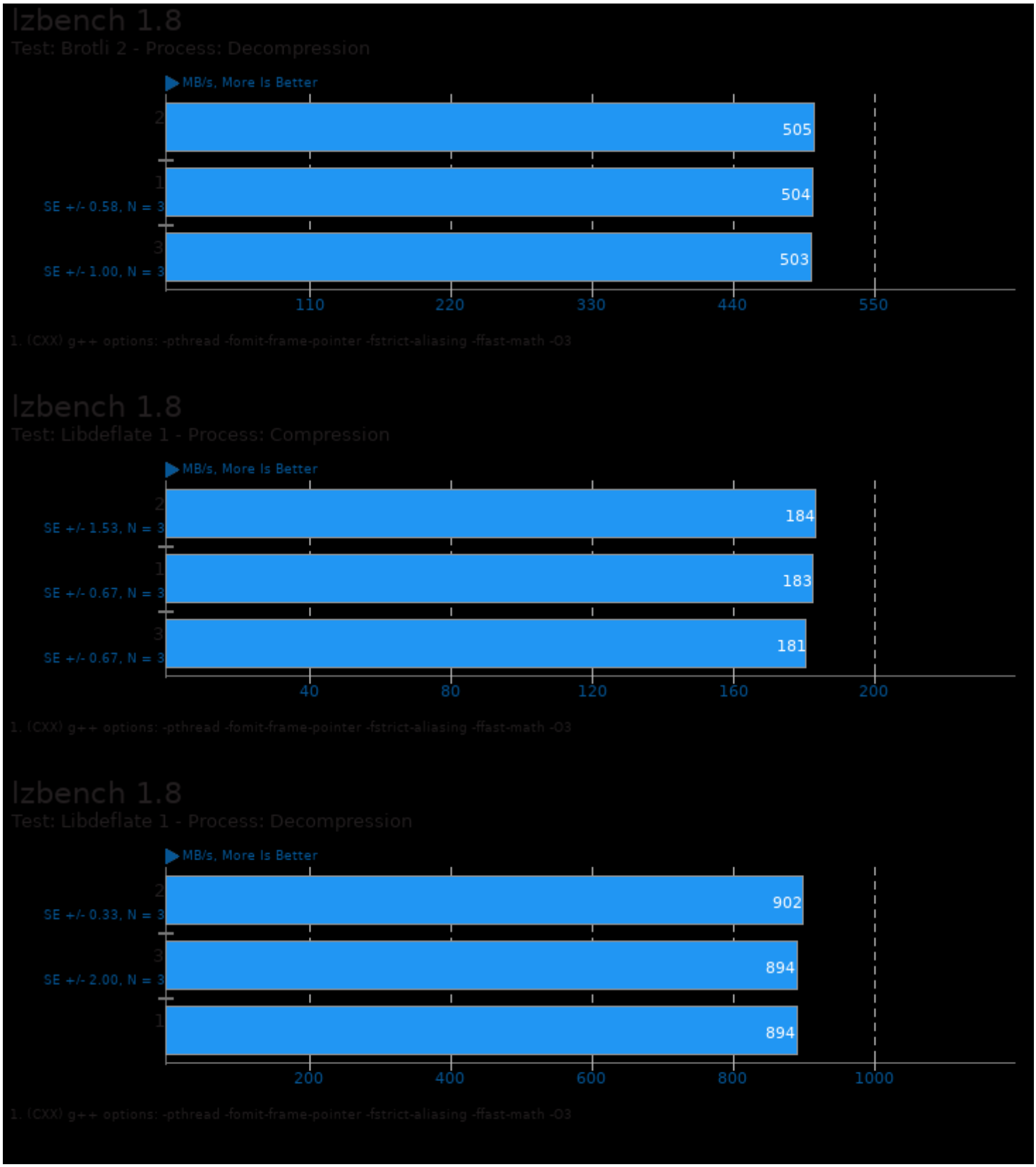
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 4.0.3


CloverLeaf
Lagrangian-Eulerian Hydrodynamics
Seconds, Fewer Is Better
2
SE +/- 0.38, N = 3
32.00
1
SE +/- 0.37, N = 15
32.92
3
SE +/- 0.50, N = 3
33.08
8
16
24
32
40
1. (F9X) gfortran options: -O3 -march=native -funroll-loops -fopenmp
lzbench 1.8
Test: XZ 0 - Process: Compression
MB/s, More Is Better
3
27
2
27
1
27
6
12
18
24
30
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: XZ 0 - Process: Decompression
MB/s, More Is Better
3
SE +/- 0.33, N = 3
84
2
84
1
83
20
40
60
80
100
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

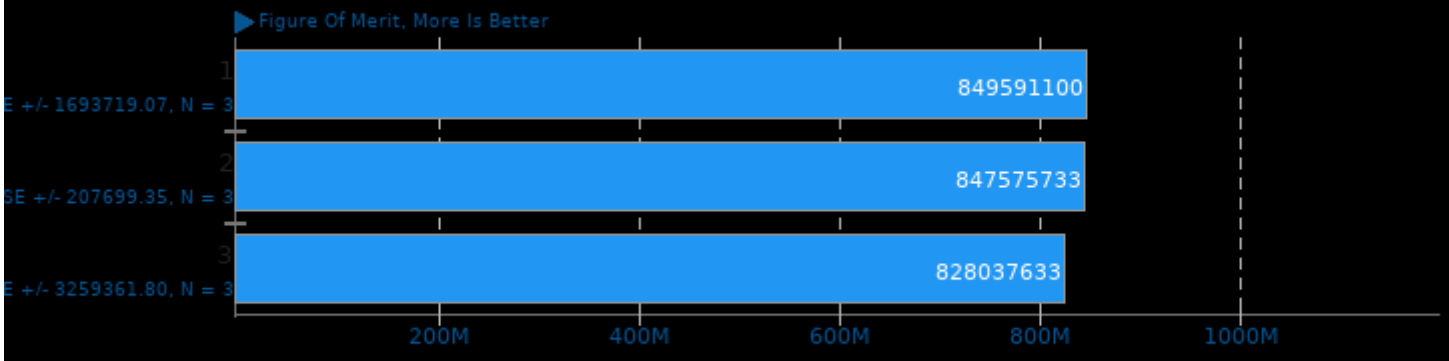

lzbench 1.8
Test: Zstd 1 - Process: Compression
MB/s, More Is Better
3
406
1
405
SE +/- 1.73, N = 3
2
403
SE +/- 1.53, N = 3
90
180
270
360
450
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Zstd 1 - Process: Decompression
MB/s, More Is Better
3
1205
SE +/- 2.40, N = 3
2
1203
1
1203
300
600
900
1200
1500
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Zstd 8 - Process: Compression
MB/s, More Is Better
2
74
SE +/- 0.67, N = 3
1
74
SE +/- 0.67, N = 3
3
73
SE +/- 0.33, N = 3
16
32
48
64
80
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3


lzbench 1.8
Test: Zstd 8 - Process: Decompression
MB/s, More Is Better
2
SE +/- 6.77, N = 3
1354
3
SE +/- 1.33, N = 3
1346
1
SE +/- 2.52, N = 3
1344
300
600
900
1200
1500
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Crush 0 - Process: Compression
MB/s, More Is Better
2
75
3
73
1
SE +/- 0.67, N = 3
71
20
40
60
80
100
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Crush 0 - Process: Decompression
MB/s, More Is Better
3
349
2
348
1
SE +/- 0.33, N = 3
347
80
160
240
320
400
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3


lzbench 1.8
Test: Brotli 0 - Process: Compression
MB/s, More Is Better
3
SE +/- 0.58, N = 3
371
2
SE +/- 0.67, N = 3
368
1
SE +/- 1.15, N = 3
368
80
160
240
320
400
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Brotli 0 - Process: Decompression
MB/s, More Is Better
3
SE +/- 0.33, N = 3
432
2
432
1
432
90
180
270
360
450
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Brotli 2 - Process: Compression
MB/s, More Is Better
3
SE +/- 0.67, N = 3
151
2
SE +/- 0.33, N = 3
151
1
SE +/- 0.67, N = 3
150
30
60
90
120
150
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3


lzbench 1.8
Test: Brotli 2 - Process: Decompression
MB/s, More Is Better
2
505
1
504
SE +/- 0.58, N = 3
3
503
SE +/- 1.00, N = 3
110
220
330
440
550
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Libdeflate 1 - Process: Compression
MB/s, More Is Better
2
184
SE +/- 1.53, N = 3
1
183
SE +/- 0.67, N = 3
3
181
SE +/- 0.67, N = 3
40
80
120
160
200
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Libdeflate 1 - Process: Decompression
MB/s, More Is Better
2
902
SE +/- 0.33, N = 3
3
894
SE +/- 2.00, N = 3
1
894
200
400
600
800
1000
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

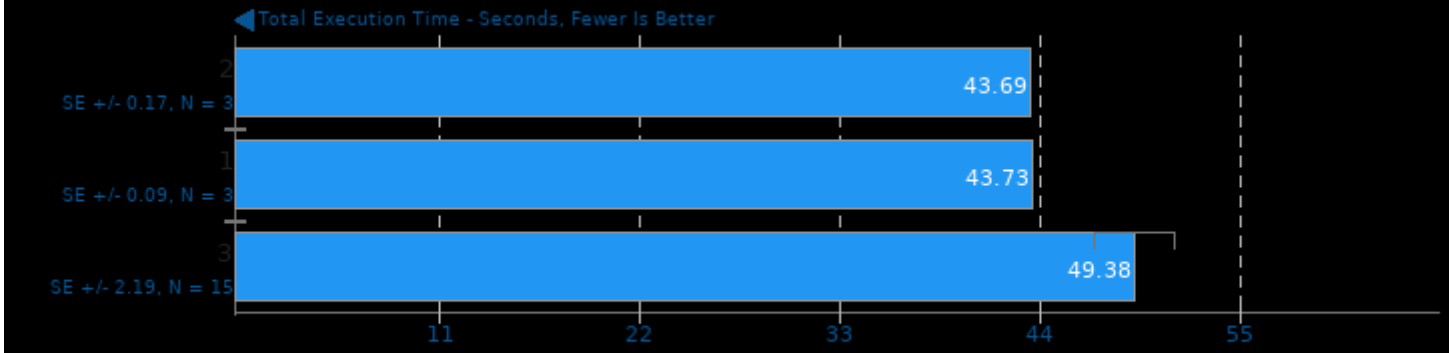
Algebraic Multi-Grid Benchmark 1.2



1. (CC) gcc options: -lparcsr_ls -lparcsr_mv -lseq_mv -lIJ_mv -lkrylov -lHYPRE_utilities -lm -fopenmp -pthread -lmpi

QMCPACK 3.10

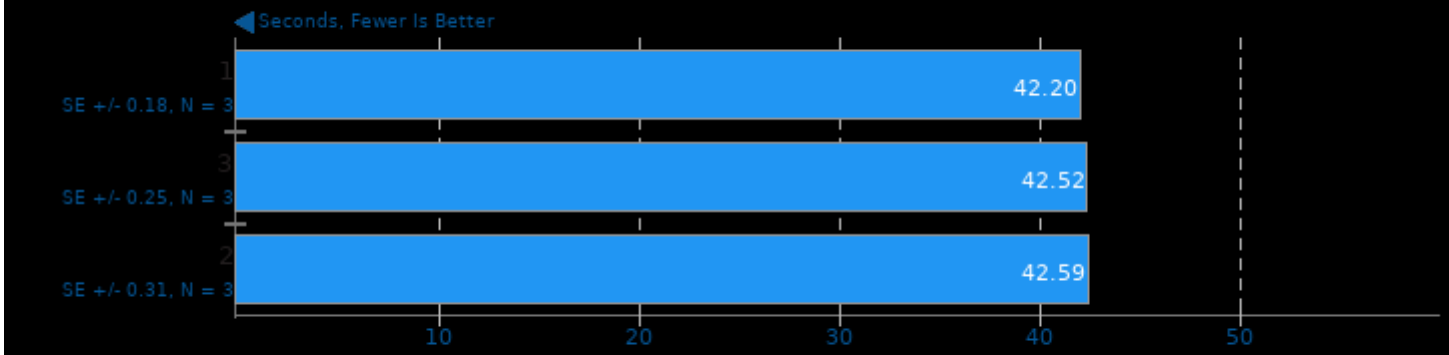
Input: simple-H2O



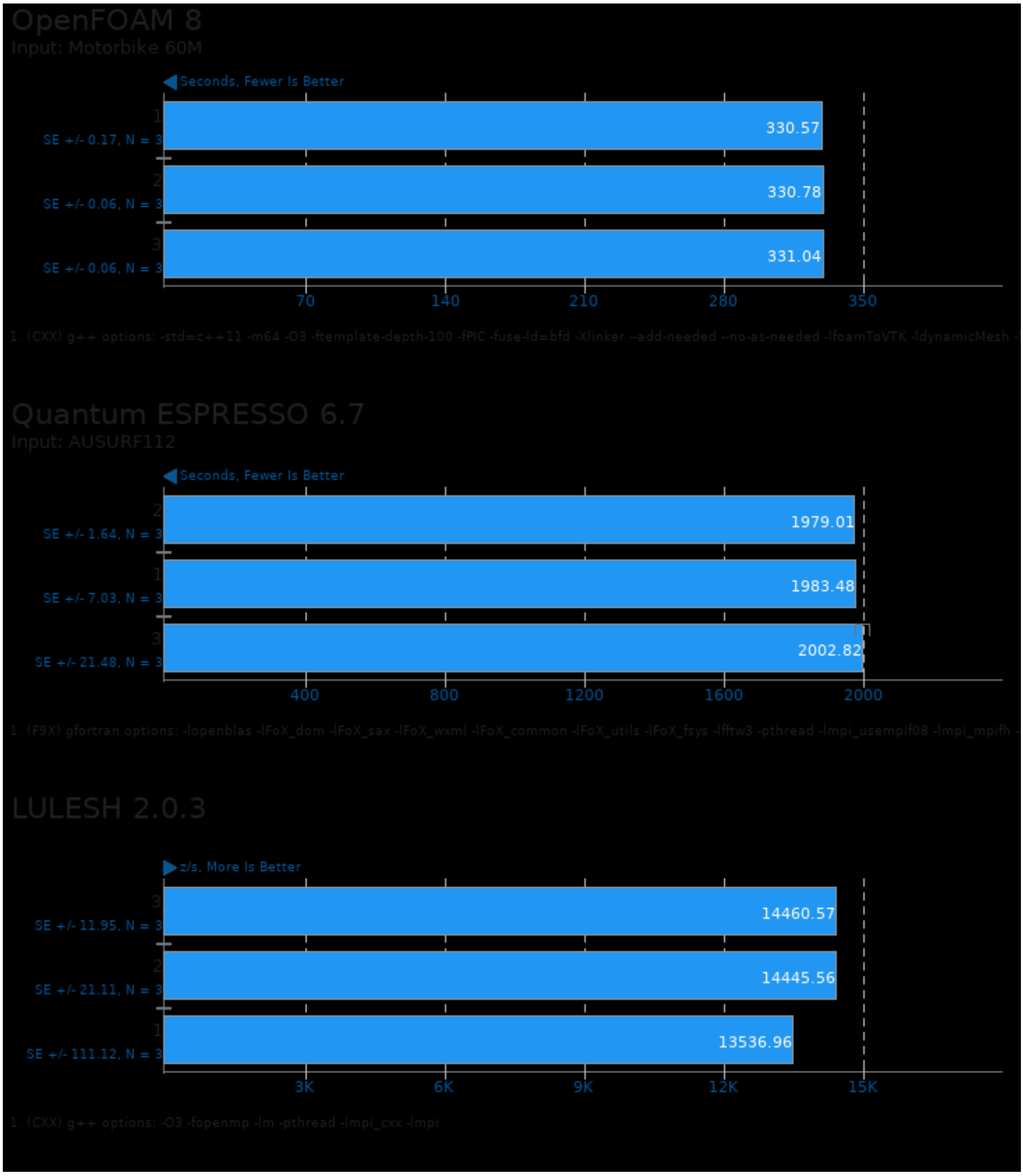
1. (CXX) g++ options: -fopenmp -finline-limit=1000 -fstrict-aliasing -funroll-all-loops -march=native -O3 -fomit-frame-pointer -ffast-math -pthread -lm

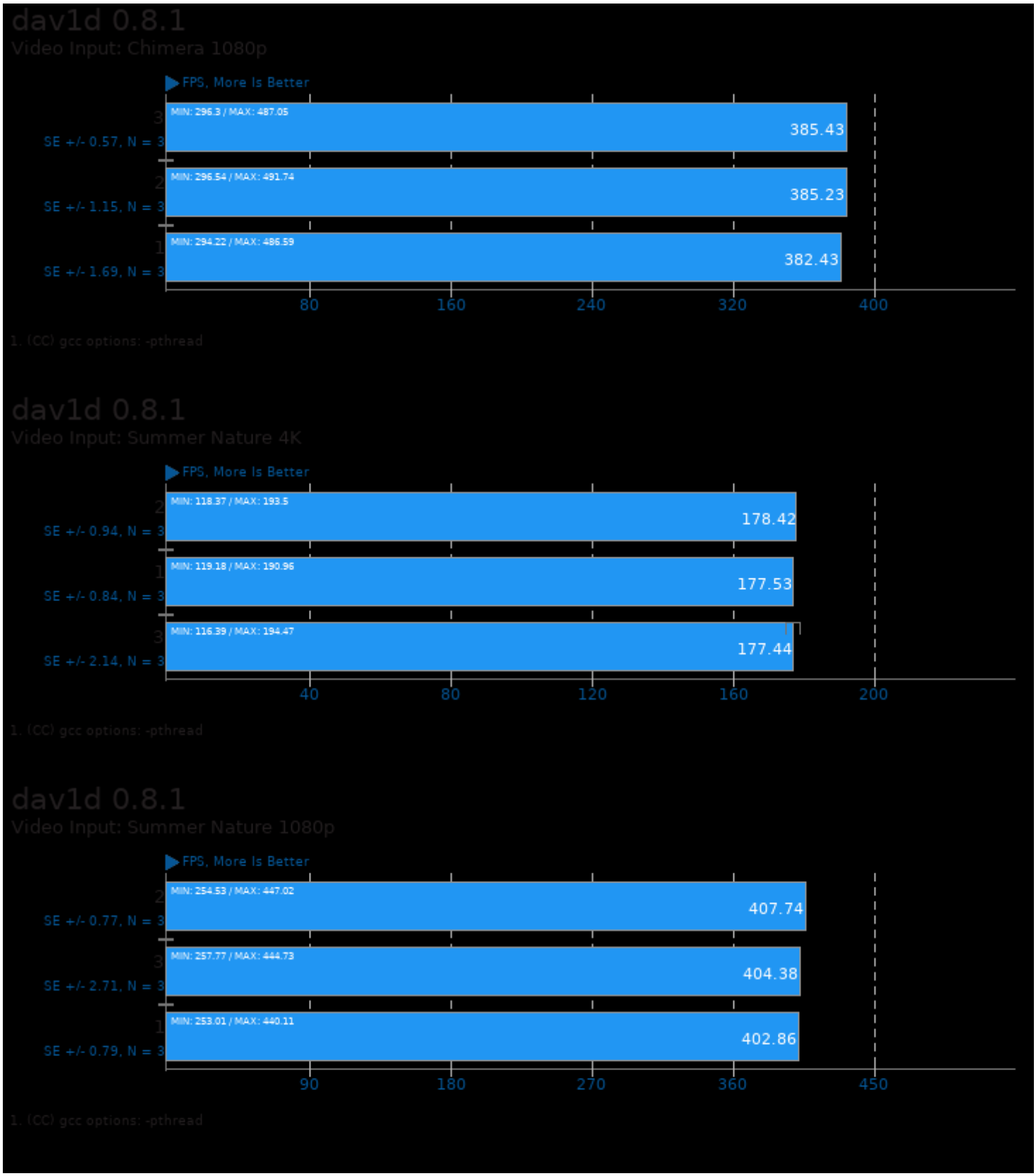
OpenFOAM 8

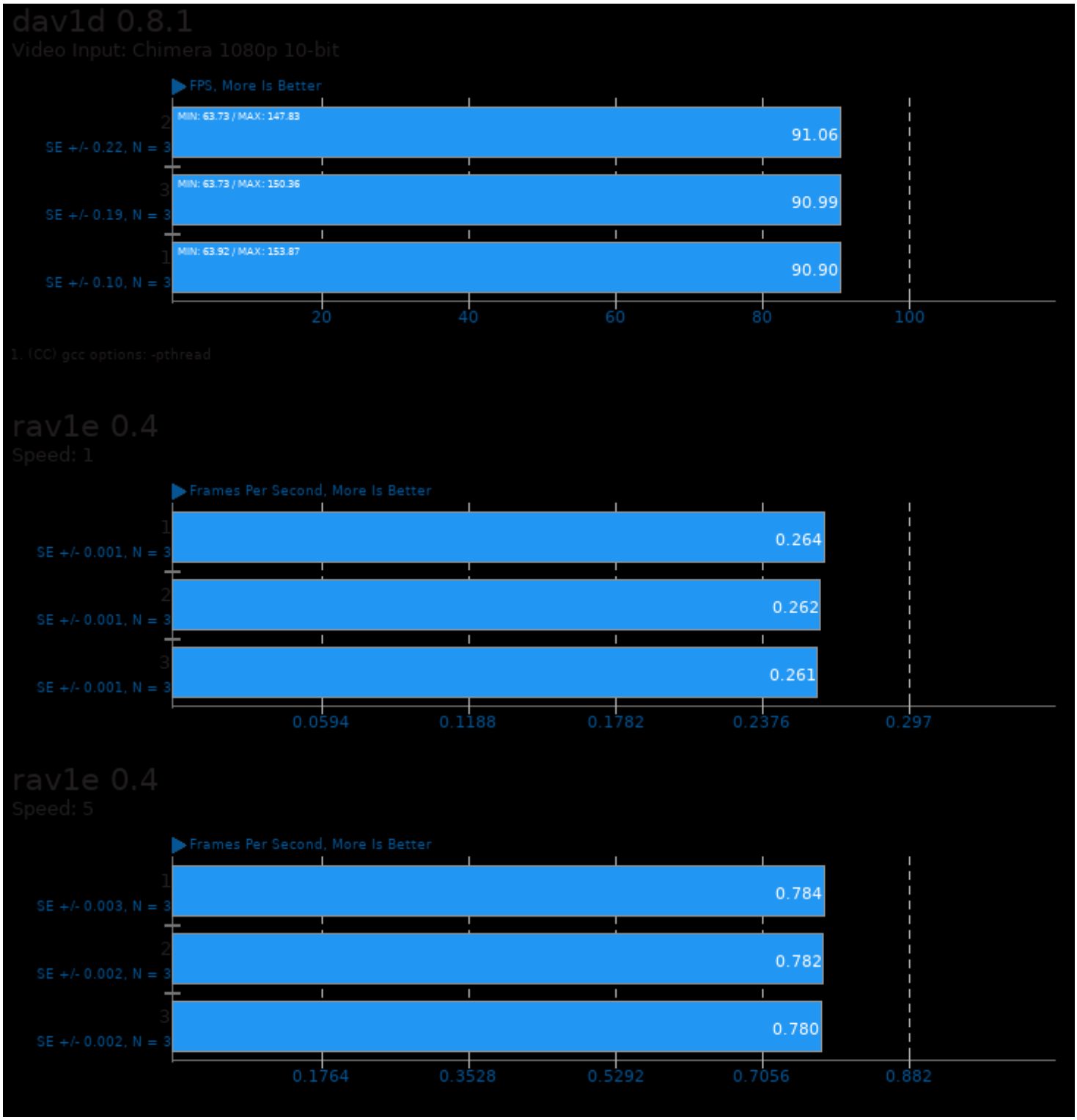
Input: Motorbike 30M

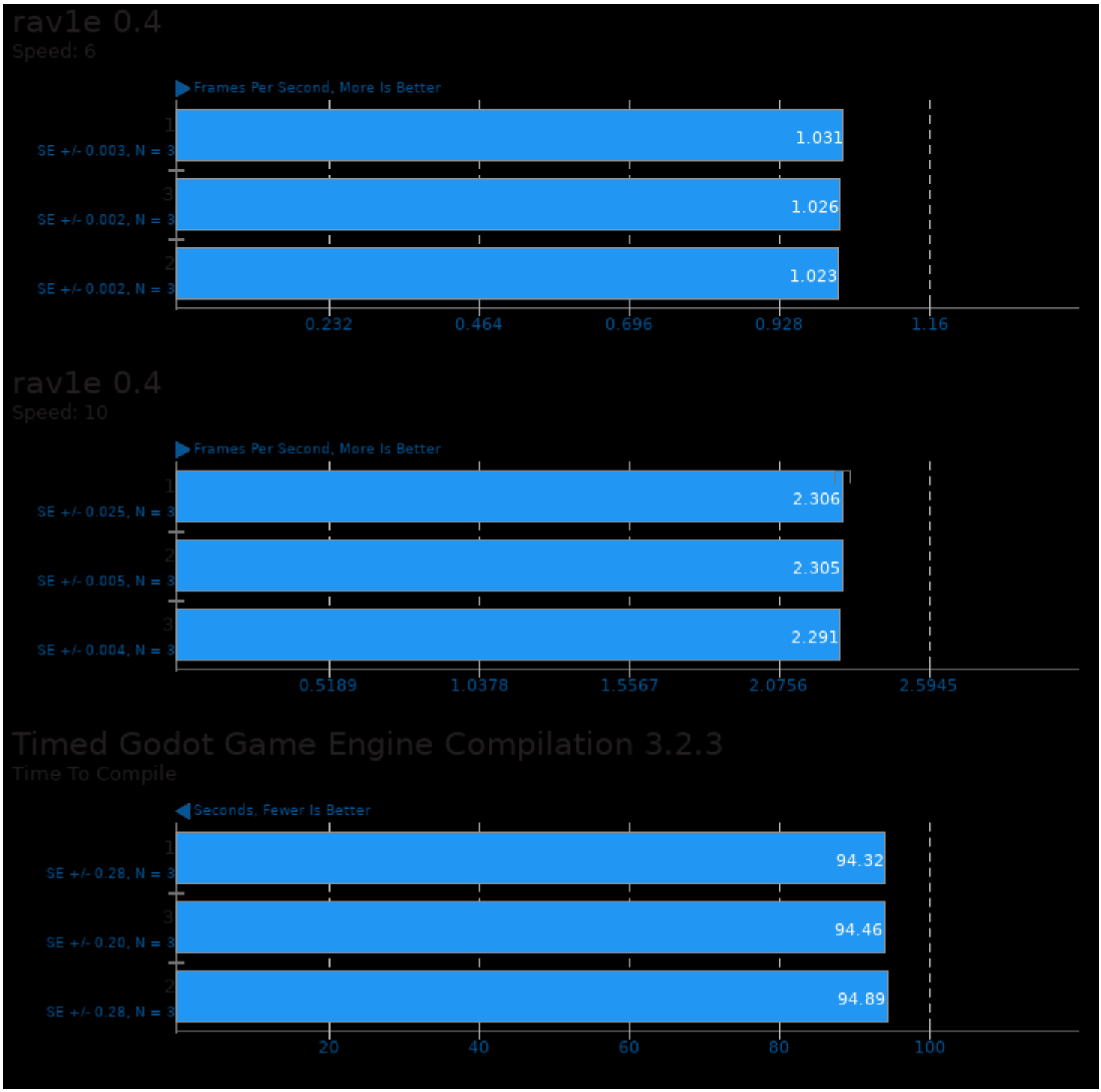


1. (CXX) g++ options: -std=c++11 -m64 -O3 -ftemplate-depth-100 -fPIC -fuse-ld=bfd -Xlinker --add-needed --no-as-needed -lfoamToVTK -ldynamicMesh -

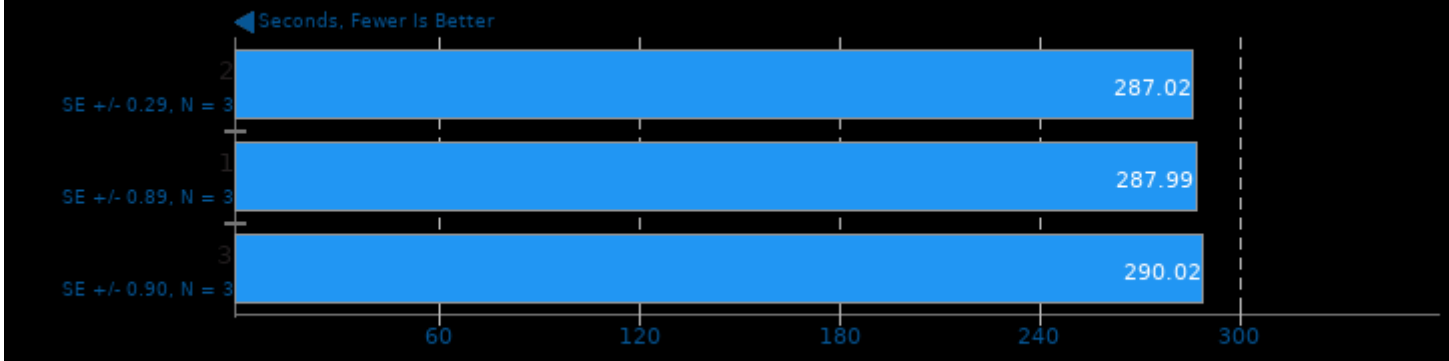

OpenFOAM 8
Input: Motorbike 60M
Seconds, Fewer Is Better
1
SE +/- 0.17, N = 3
330.57
2
SE +/- 0.06, N = 3
330.78
3
SE +/- 0.06, N = 3
331.04
70
140
210
280
350
1. (CXX) g++ options: -std=c++11 -m64 -O3 -ftemplate-depth-100 -fPIC -fuse-ld=bfd -Xlinker --add-needed --no-as-needed -lfoamToVTK -ldynamicMesh
Quantum ESPRESSO 6.7
Input: AUSURF112
Seconds, Fewer Is Better
2
SE +/- 1.64, N = 3
1979.01
1
SE +/- 7.03, N = 3
1983.48
3
SE +/- 21.48, N = 3
2002.82
400
800
1200
1600
2000
1. (F9X) gfortran options: -lopenblas -lFoX_dom -lFoX_sax -lFoX_wxml -lFoX_common -lFoX_utils -lFoX_fsys -lfftw3 -pthread -lmpi_usempif08 -lmpi_mpifh
LULESH 2.0.3
z/s, More Is Better
3
SE +/- 11.95, N = 3
14460.57
2
SE +/- 21.11, N = 3
14445.56
1
SE +/- 111.12, N = 3
13536.96
3K
6K
9K
12K
15K
1. (CXX) g++ options: -O3 -fopenmp -lm -pthread -lmpi_cxx -lmpi


dav1d 0.8.1
Video Input: Chimera 1080p
FPS, More Is Better
MIN: 296.3 / MAX: 487.05
385.43
SE +/- 0.57, N = 3
MIN: 296.54 / MAX: 491.74
385.23
SE +/- 1.15, N = 3
MIN: 294.22 / MAX: 486.59
382.43
SE +/- 1.69, N = 3
80
160
240
320
400
1. (CC) gcc options: -pthread
dav1d 0.8.1
Video Input: Summer Nature 4K
FPS, More Is Better
MIN: 118.37 / MAX: 193.5
178.42
SE +/- 0.94, N = 3
MIN: 119.18 / MAX: 190.96
177.53
SE +/- 0.84, N = 3
MIN: 116.39 / MAX: 194.47
177.44
SE +/- 2.14, N = 3
40
80
120
160
200
1. (CC) gcc options: -pthread
dav1d 0.8.1
Video Input: Summer Nature 1080p
FPS, More Is Better
MIN: 254.53 / MAX: 447.02
407.74
SE +/- 0.77, N = 3
MIN: 257.77 / MAX: 444.73
404.38
SE +/- 2.71, N = 3
MIN: 253.01 / MAX: 440.11
402.86
SE +/- 0.79, N = 3
90
180
270
360
450
1. (CC) gcc options: -pthread


dav1d 0.8.1
Video Input: Chimera 1080p 10-bit
FPS, More Is Better
2
MIN: 63.73 / MAX: 147.83
91.06
SE +/- 0.22, N = 3
3
MIN: 63.73 / MAX: 150.36
90.99
SE +/- 0.19, N = 3
1
MIN: 63.92 / MAX: 153.87
90.90
SE +/- 0.10, N = 3
20
40
60
80
100
1. (CC) gcc options: -pthread
rav1e 0.4
Speed: 1
Frames Per Second, More Is Better
1
0.264
SE +/- 0.001, N = 3
2
0.262
SE +/- 0.001, N = 3
3
0.261
SE +/- 0.001, N = 3
0.0594
0.1188
0.1782
0.2376
0.297
rav1e 0.4
Speed: 5
Frames Per Second, More Is Better
1
0.784
SE +/- 0.003, N = 3
2
0.782
SE +/- 0.002, N = 3
3
0.780
SE +/- 0.002, N = 3
0.1764
0.3528
0.5292
0.7056
0.882


rav1e 0.4
Speed: 6
Frames Per Second, More Is Better
1
SE +/- 0.003, N = 3
1.031
3
SE +/- 0.002, N = 3
1.026
2
SE +/- 0.002, N = 3
1.023
0.232
0.464
0.696
0.928
1.16
rav1e 0.4
Speed: 10
Frames Per Second, More Is Better
1
SE +/- 0.025, N = 3
2.306
2
SE +/- 0.005, N = 3
2.305
3
SE +/- 0.004, N = 3
2.291
0.5189
1.0378
1.5567
2.0756
2.5945
Timed Godot Game Engine Compilation 3.2.3
Time To Compile
Seconds, Fewer Is Better
1
SE +/- 0.28, N = 3
94.32
3
SE +/- 0.20, N = 3
94.46
2
SE +/- 0.28, N = 3
94.89
20
40
60
80
100

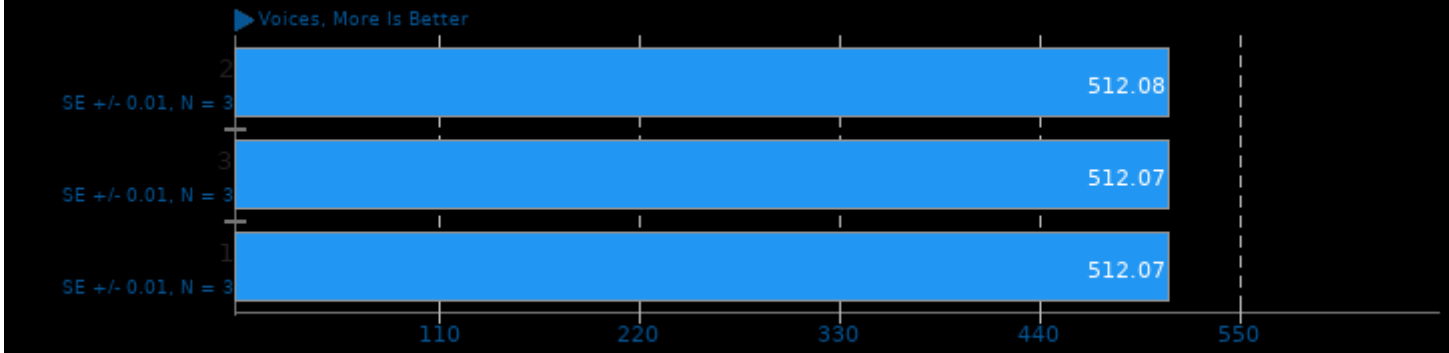
Gcrypt Library 1.9



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

Google SynthMark 20201109

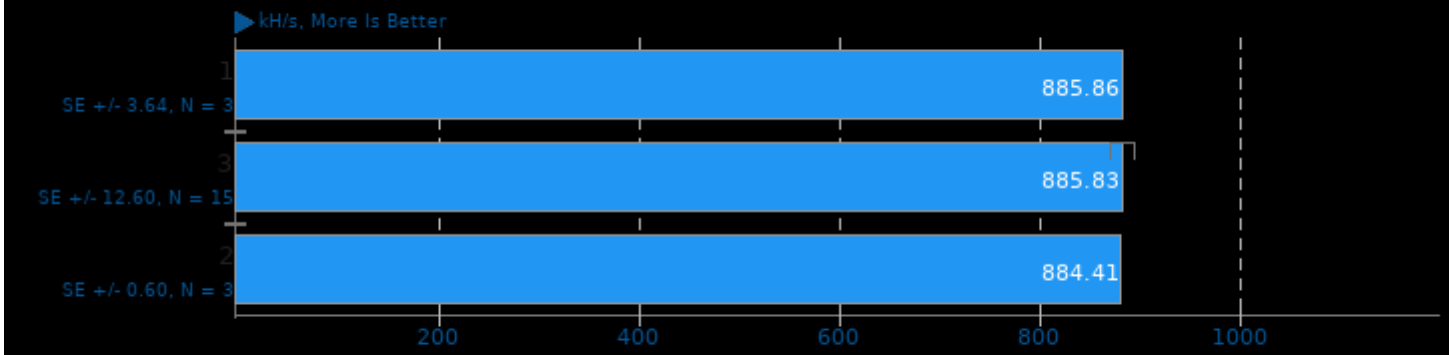
Test: VoiceMark_100



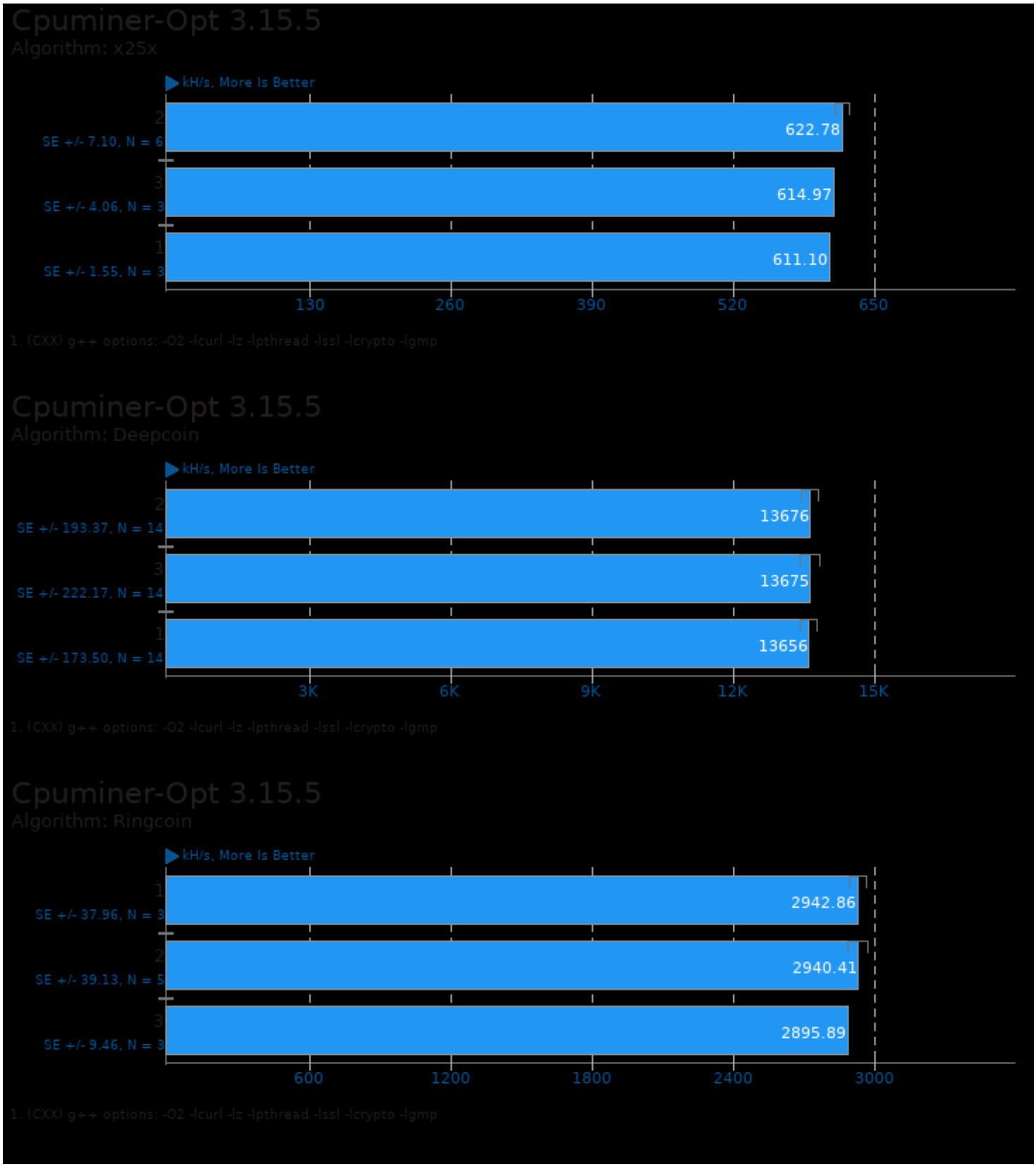
1. (CXX) g++ options: -lm -lpthread -std=c++11 -Ofast

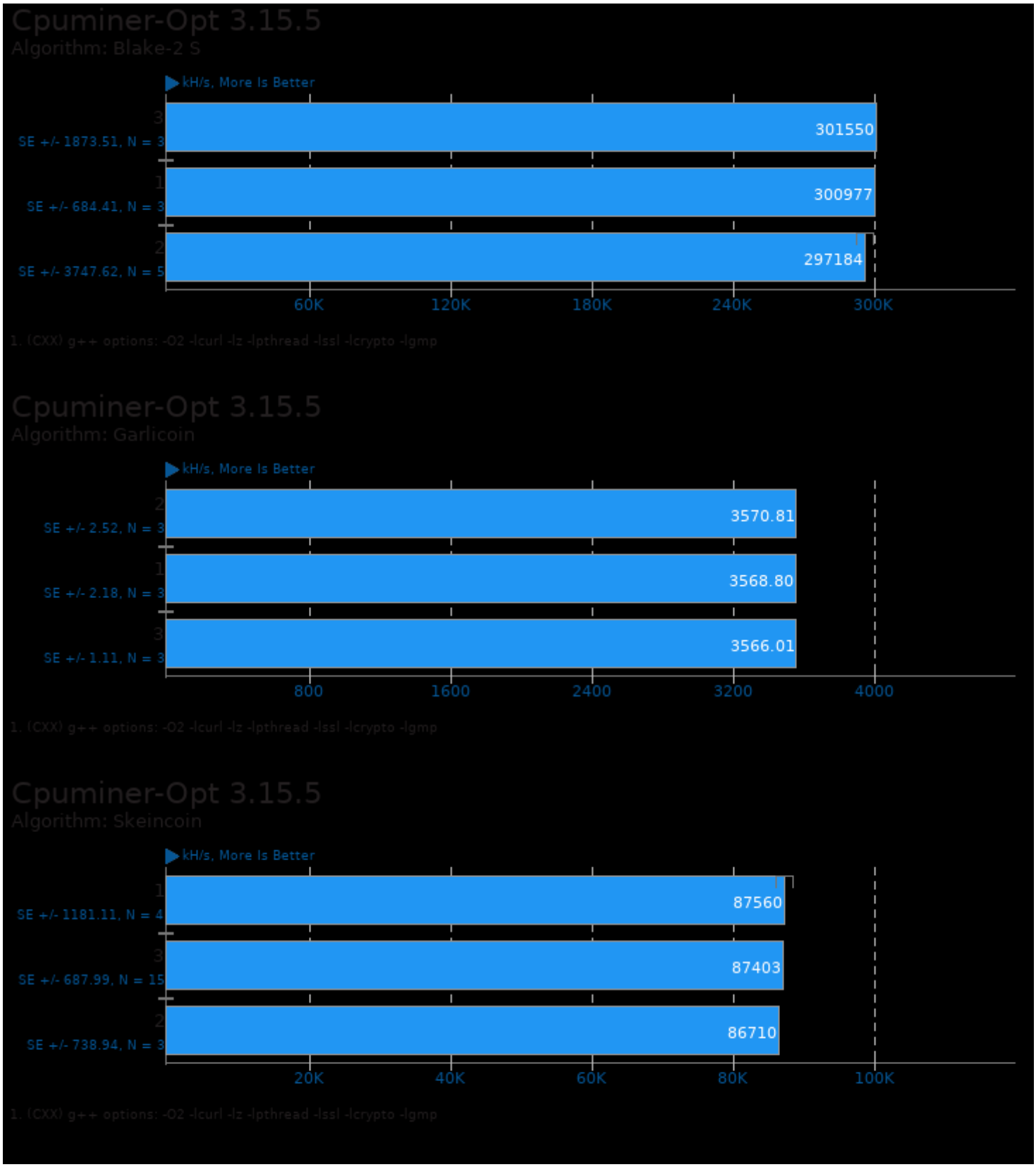
Cpuminer-Opt 3.15.5

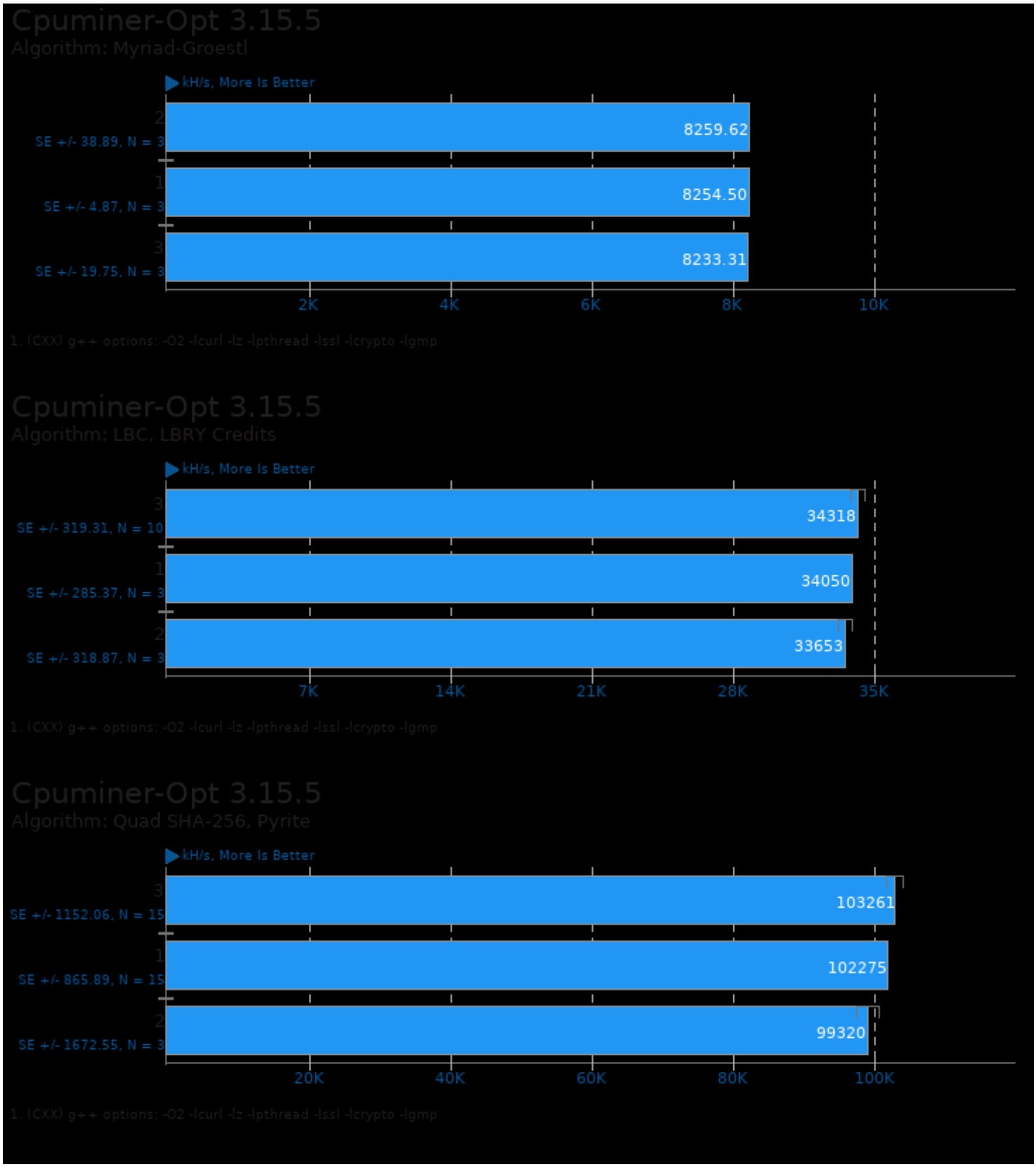
Algorithm: Magi

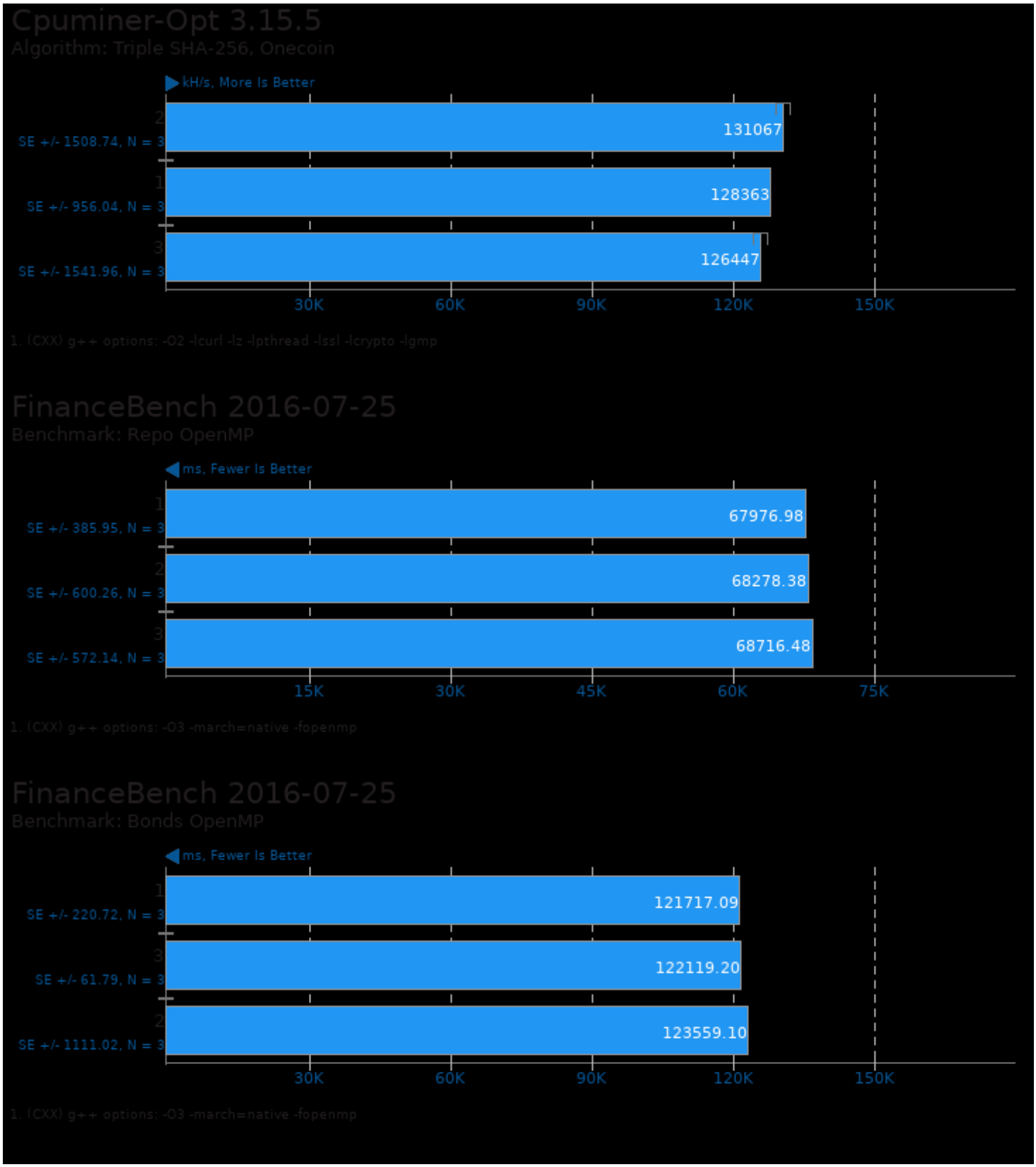


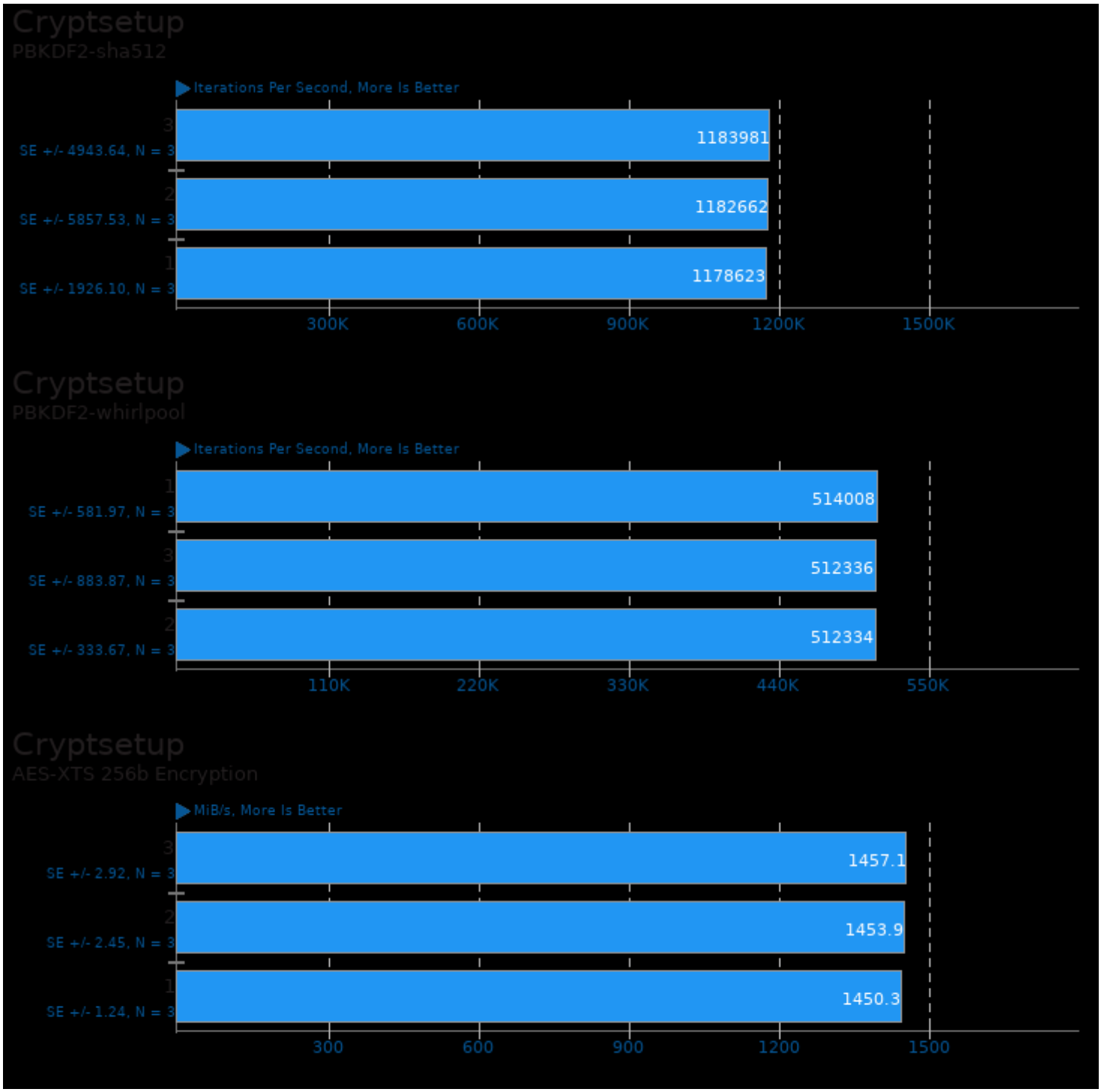
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

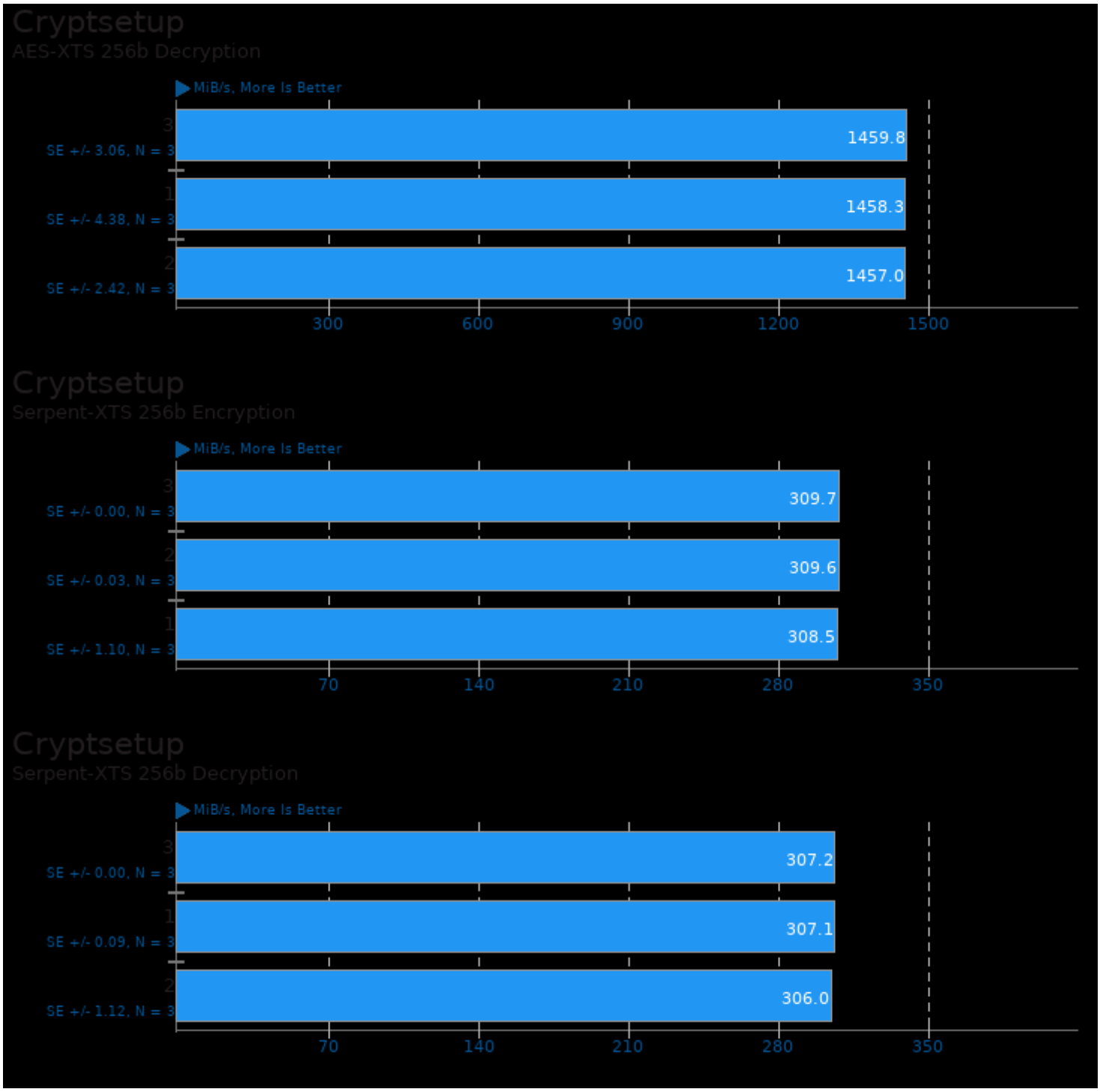

Cpuminer-Opt 3.15.5
Algorithm: x25x
kH/s, More Is Better
2
SE +/- 7.10, N = 6
622.78
3
SE +/- 4.06, N = 3
614.97
1
SE +/- 1.55, N = 3
611.10
130
260
390
520
650
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp
Cpuminer-Opt 3.15.5
Algorithm: Deepcoin
kH/s, More Is Better
2
SE +/- 193.37, N = 14
13676
3
SE +/- 222.17, N = 14
13675
1
SE +/- 173.50, N = 14
13656
3K
6K
9K
12K
15K
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp
Cpuminer-Opt 3.15.5
Algorithm: Ringcoin
kH/s, More Is Better
1
SE +/- 37.96, N = 3
2942.86
2
SE +/- 39.13, N = 5
2940.41
3
SE +/- 9.46, N = 3
2895.89
600
1200
1800
2400
3000
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

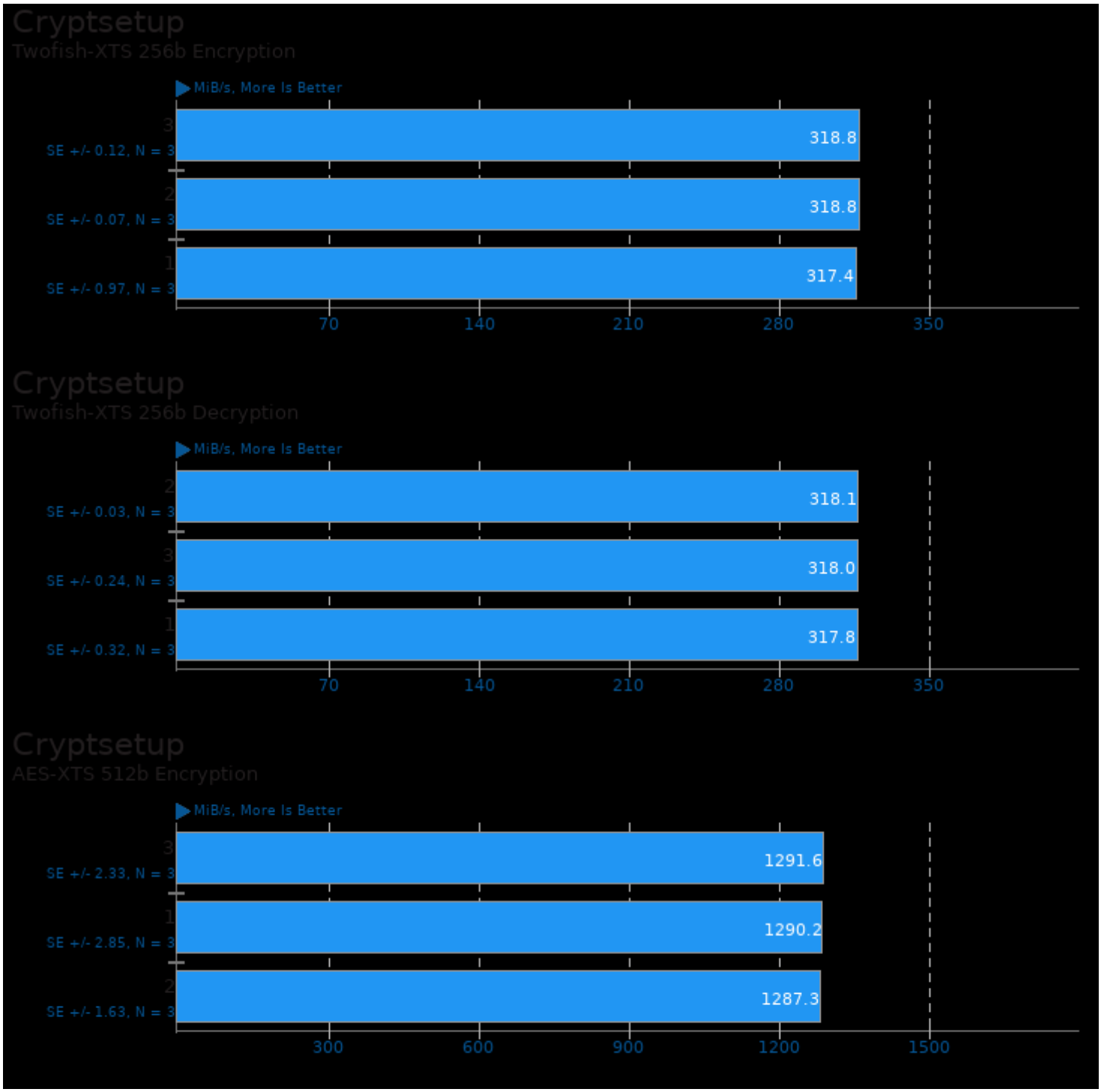

Cpuminer-Opt 3.15.5
Algorithm: Blake-2 S
kH/s, More Is Better
3
SE +/- 1873.51, N = 3
301550
1
SE +/- 684.41, N = 3
300977
2
SE +/- 3747.62, N = 5
297184
60K
120K
180K
240K
300K
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp
Cpuminer-Opt 3.15.5
Algorithm: Garlicoin
kH/s, More Is Better
2
SE +/- 2.52, N = 3
3570.81
1
SE +/- 2.18, N = 3
3568.80
3
SE +/- 1.11, N = 3
3566.01
800
1600
2400
3200
4000
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp
Cpuminer-Opt 3.15.5
Algorithm: Skeincoin
kH/s, More Is Better
1
SE +/- 1181.11, N = 4
87560
3
SE +/- 687.99, N = 15
87403
2
SE +/- 738.94, N = 3
86710
20K
40K
60K
80K
100K
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

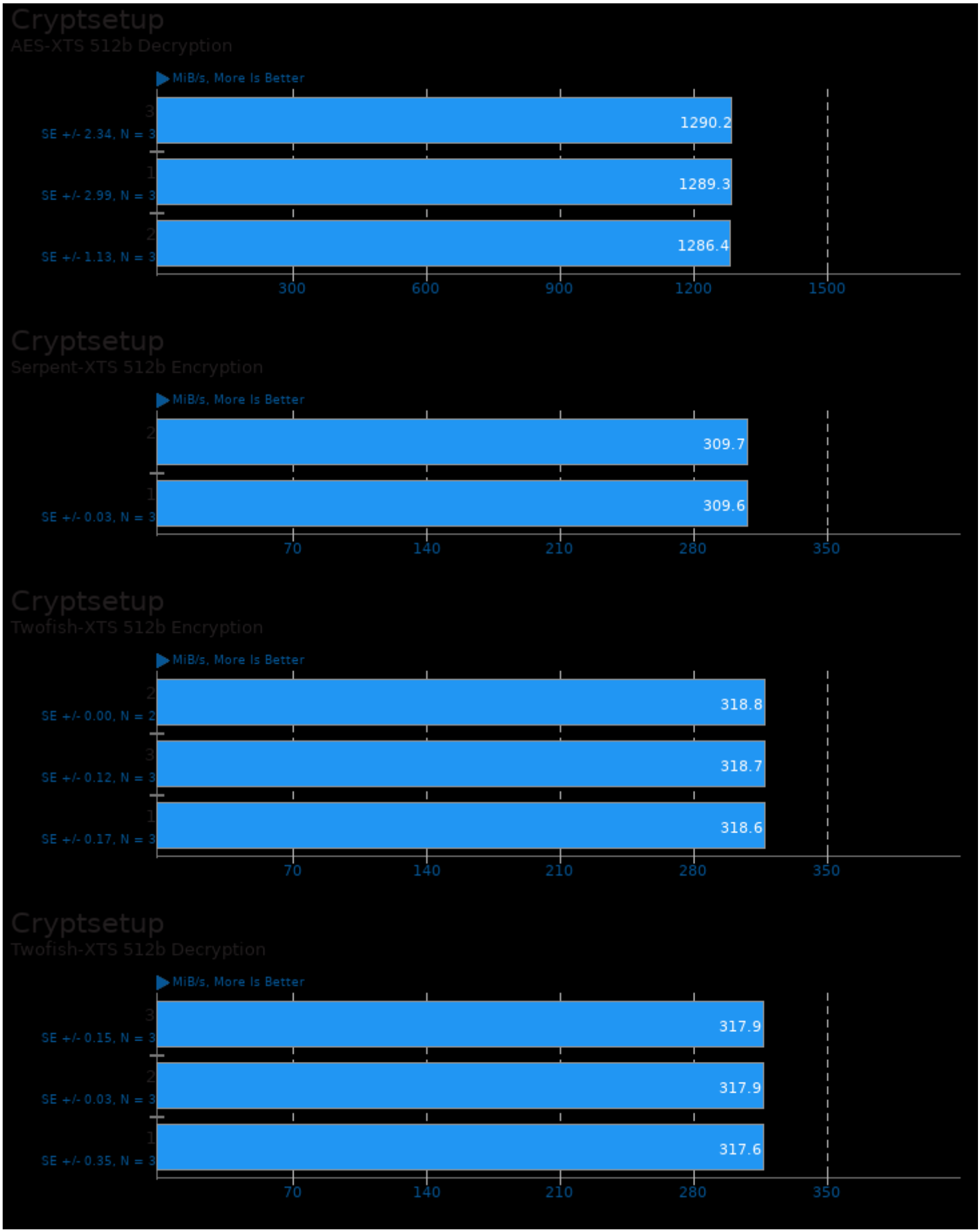

Cpuminer-Opt 3.15.5
Algorithm: Myriad-Groestl
kH/s, More Is Better
2
SE +/- 38.89, N = 3
8259.62
1
SE +/- 4.87, N = 3
8254.50
3
SE +/- 19.75, N = 3
8233.31
2K
4K
6K
8K
10K
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp
Cpuminer-Opt 3.15.5
Algorithm: LBC, LBRY Credits
kH/s, More Is Better
3
SE +/- 319.31, N = 10
34318
1
SE +/- 285.37, N = 3
34050
2
SE +/- 318.87, N = 3
33653
7K
14K
21K
28K
35K
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp
Cpuminer-Opt 3.15.5
Algorithm: Quad SHA-256, Pyrite
kH/s, More Is Better
3
SE +/- 1152.06, N = 15
103261
1
SE +/- 865.89, N = 15
102275
2
SE +/- 1672.55, N = 3
99320
20K
40K
60K
80K
100K
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

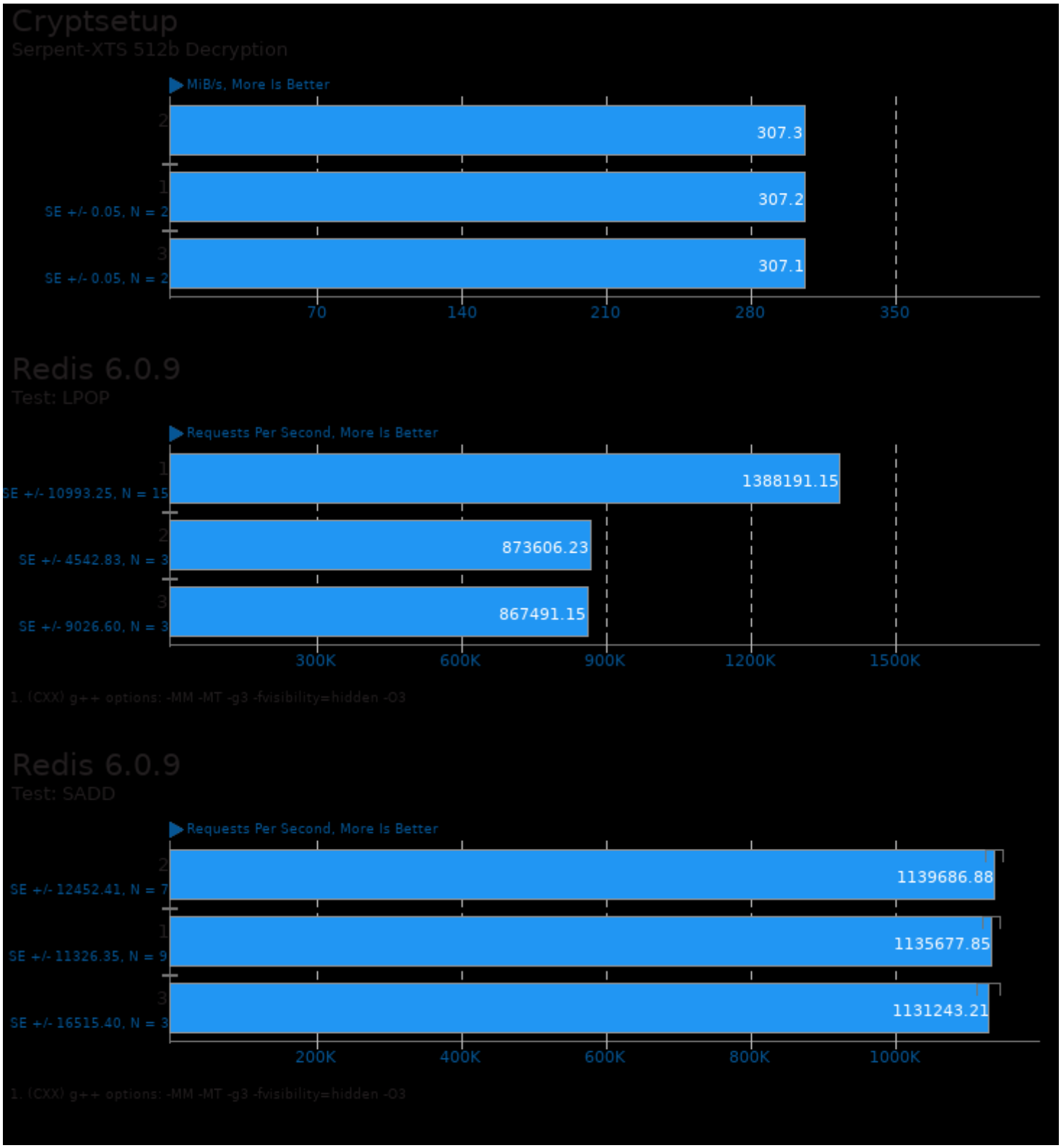

Cpuminer-Opt 3.15.5
Algorithm: Triple SHA-256, Onecoin
kH/s, More Is Better
2
SE +/- 1508.74, N = 3
131067
1
SE +/- 956.04, N = 3
128363
3
SE +/- 1541.96, N = 3
126447
30K
60K
90K
120K
150K
1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp
FinanceBench 2016-07-25
Benchmark: Repo OpenMP
ms, Fewer Is Better
1
SE +/- 385.95, N = 3
67976.98
2
SE +/- 600.26, N = 3
68278.38
3
SE +/- 572.14, N = 3
68716.48
15K
30K
45K
60K
75K
1. (CXX) g++ options: -O3 -march=native -fopenmp
FinanceBench 2016-07-25
Benchmark: Bonds OpenMP
ms, Fewer Is Better
1
SE +/- 220.72, N = 3
121717.09
3
SE +/- 61.79, N = 3
122119.20
2
SE +/- 1111.02, N = 3
123559.10
30K
60K
90K
120K
150K
1. (CXX) g++ options: -O3 -march=native -fopenmp

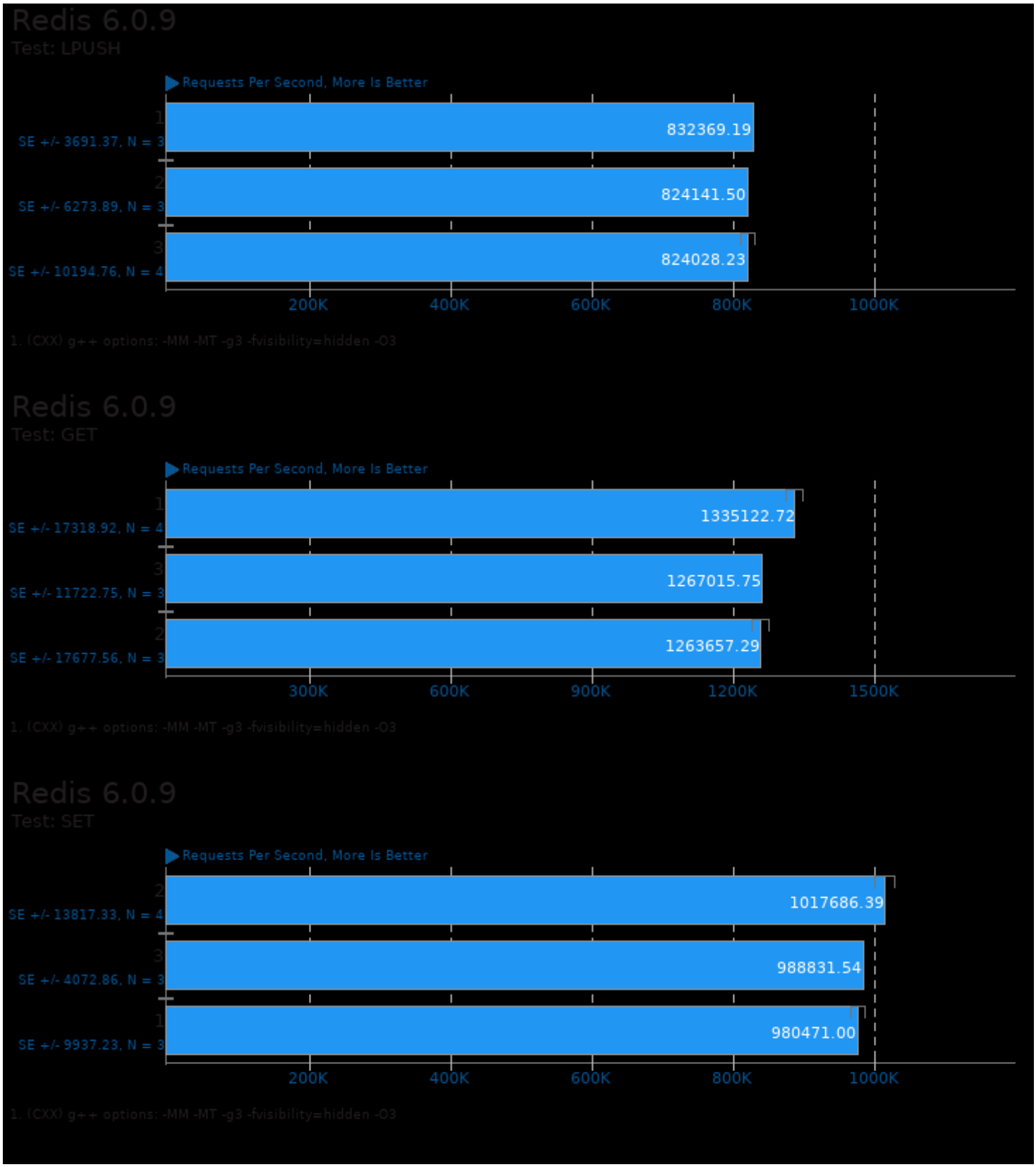

Cryptsetup
PBKDF2-sha512
Iterations Per Second, More Is Better
3
SE +/- 4943.64, N = 3
1183981
2
SE +/- 5857.53, N = 3
1182662
1
SE +/- 1926.10, N = 3
1178623
300K
600K
900K
1200K
1500K
Cryptsetup
PBKDF2-whirlpool
Iterations Per Second, More Is Better
1
SE +/- 581.97, N = 3
514008
3
SE +/- 883.87, N = 3
512336
2
SE +/- 333.67, N = 3
512334
110K
220K
330K
440K
550K
Cryptsetup
AES-XTS 256b Encryption
MiB/s, More Is Better
3
SE +/- 2.92, N = 3
1457.1
2
SE +/- 2.45, N = 3
1453.9
1
SE +/- 1.24, N = 3
1450.3
300
600
900
1200
1500


Cryptsetup
AES-XTS 256b Decryption
MiB/s, More Is Better
3
SE +/- 3.06, N = 3
1459.8
1
SE +/- 4.38, N = 3
1458.3
2
SE +/- 2.42, N = 3
1457.0
300
600
900
1200
1500
Cryptsetup
Serpent-XTS 256b Encryption
MiB/s, More Is Better
3
SE +/- 0.00, N = 3
309.7
2
SE +/- 0.03, N = 3
309.6
1
SE +/- 1.10, N = 3
308.5
70
140
210
280
350
Cryptsetup
Serpent-XTS 256b Decryption
MiB/s, More Is Better
3
SE +/- 0.00, N = 3
307.2
1
SE +/- 0.09, N = 3
307.1
2
SE +/- 1.12, N = 3
306.0
70
140
210
280
350


Cryptsetup
Twofish-XTS 256b Encryption
MiB/s, More Is Better
3
SE +/- 0.12, N = 3
318.8
2
SE +/- 0.07, N = 3
318.8
1
SE +/- 0.97, N = 3
317.4
70
140
210
280
350
Cryptsetup
Twofish-XTS 256b Decryption
MiB/s, More Is Better
2
SE +/- 0.03, N = 3
318.1
3
SE +/- 0.24, N = 3
318.0
1
SE +/- 0.32, N = 3
317.8
70
140
210
280
350
Cryptsetup
AES-XTS 512b Encryption
MiB/s, More Is Better
3
SE +/- 2.33, N = 3
1291.6
1
SE +/- 2.85, N = 3
1290.2
2
SE +/- 1.63, N = 3
1287.3
300
600
900
1200
1500

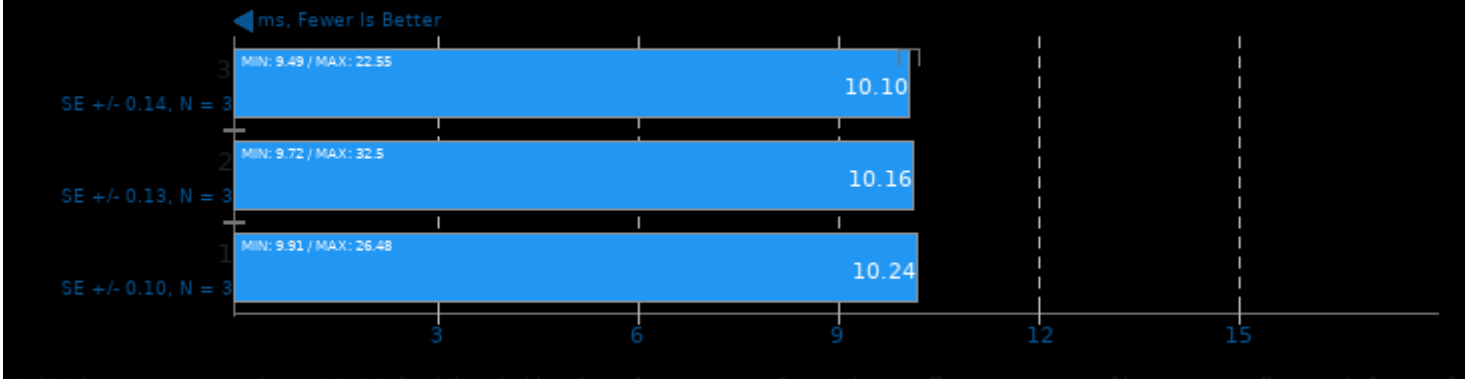

Cryptsetup
AES-XTS 512b Decryption
MiB/s, More Is Better
3
SE +/- 2.34, N = 3
1290.2
1
SE +/- 2.99, N = 3
1289.3
2
SE +/- 1.13, N = 3
1286.4
300
600
900
1200
1500
Cryptsetup
Serpent-XTS 512b Encryption
MiB/s, More Is Better
2
309.7
1
SE +/- 0.03, N = 3
309.6
70
140
210
280
350
Cryptsetup
Twofish-XTS 512b Encryption
MiB/s, More Is Better
2
SE +/- 0.00, N = 2
318.8
3
SE +/- 0.12, N = 3
318.7
1
SE +/- 0.17, N = 3
318.6
70
140
210
280
350
Cryptsetup
Twofish-XTS 512b Decryption
MiB/s, More Is Better
3
SE +/- 0.15, N = 3
317.9
2
SE +/- 0.03, N = 3
317.9
1
SE +/- 0.35, N = 3
317.6
70
140
210
280
350


Cryptsetup
Serpent-XTS 512b Decryption
MiB/s, More Is Better
2
307.3
1
307.2
SE +/- 0.05, N = 2
3
307.1
SE +/- 0.05, N = 2
70
140
210
280
350
Redis 6.0.9
Test: LPOP
Requests Per Second, More Is Better
1
1388191.15
SE +/- 10993.25, N = 15
2
873606.23
SE +/- 4542.83, N = 3
3
867491.15
SE +/- 9026.60, N = 3
300K
600K
900K
1200K
1500K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3
Redis 6.0.9
Test: SADD
Requests Per Second, More Is Better
2
1139686.88
SE +/- 12452.41, N = 7
1
1135677.85
SE +/- 11326.35, N = 9
3
1131243.21
SE +/- 16515.40, N = 3
200K
400K
600K
800K
1000K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3


Redis 6.0.9
Test: LPUSH
Requests Per Second, More Is Better
1
SE +/- 3691.37, N = 3
832369.19
2
SE +/- 6273.89, N = 3
824141.50
3
SE +/- 10194.76, N = 4
824028.23
200K
400K
600K
800K
1000K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3
Redis 6.0.9
Test: GET
Requests Per Second, More Is Better
1
SE +/- 17318.92, N = 4
1335122.72
3
SE +/- 11722.75, N = 3
1267015.75
2
SE +/- 17677.56, N = 3
1263657.29
300K
600K
900K
1200K
1500K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3
Redis 6.0.9
Test: SET
Requests Per Second, More Is Better
2
SE +/- 13817.33, N = 4
1017686.39
3
SE +/- 4072.86, N = 3
988831.54
1
SE +/- 9937.23, N = 3
980471.00
200K
400K
600K
800K
1000K
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

Mobile Neural Network 1.1.1

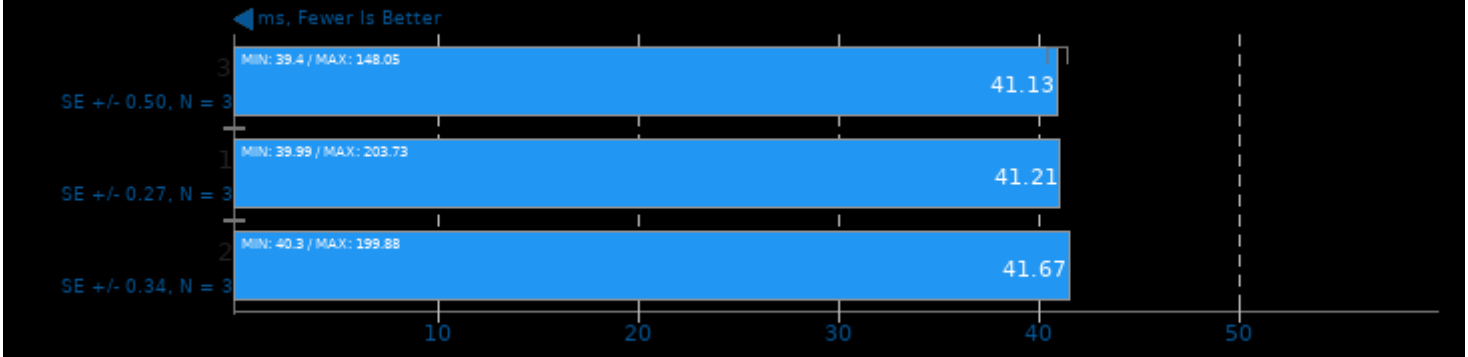
Model: SqueezeNetV1.0



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv

Mobile Neural Network 1.1.1

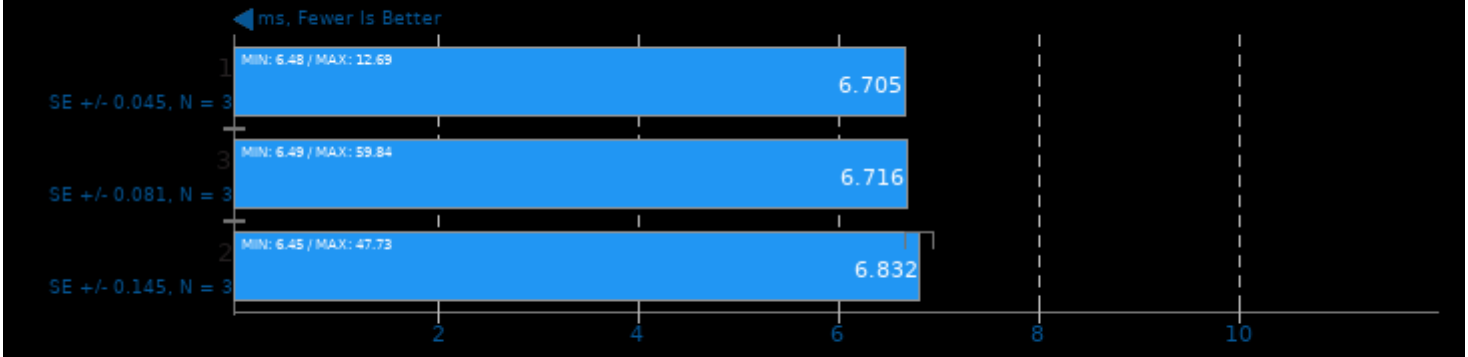
Model: resnet-v2-50



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv

Mobile Neural Network 1.1.1

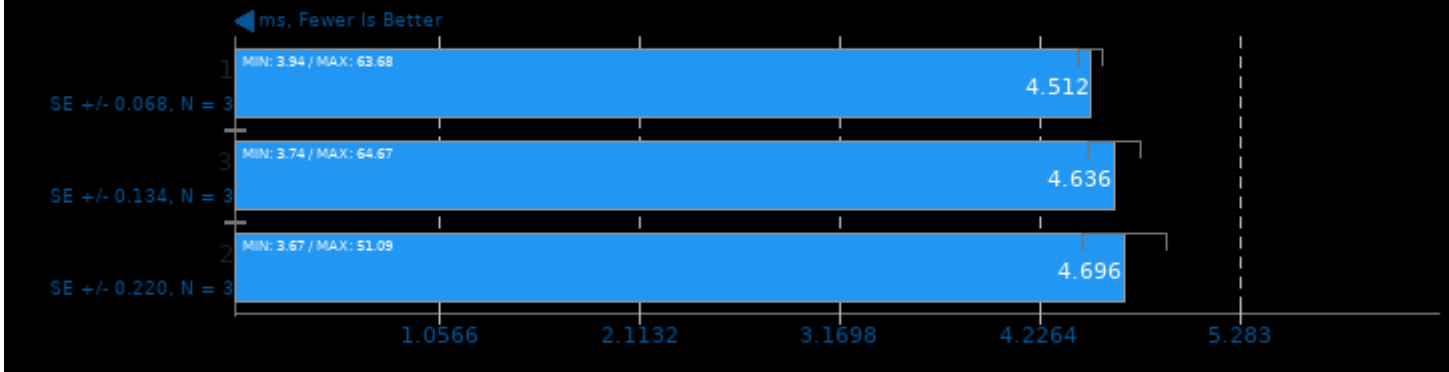
Model: MobileNetV2_224



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv

Mobile Neural Network 1.1.1

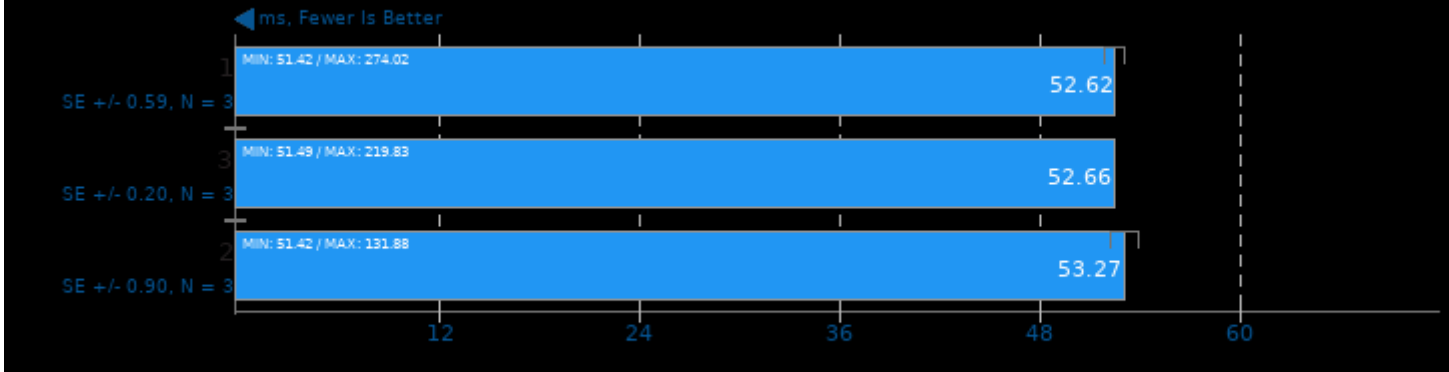
Model: mobilenet-v1-1.0



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv

Mobile Neural Network 1.1.1

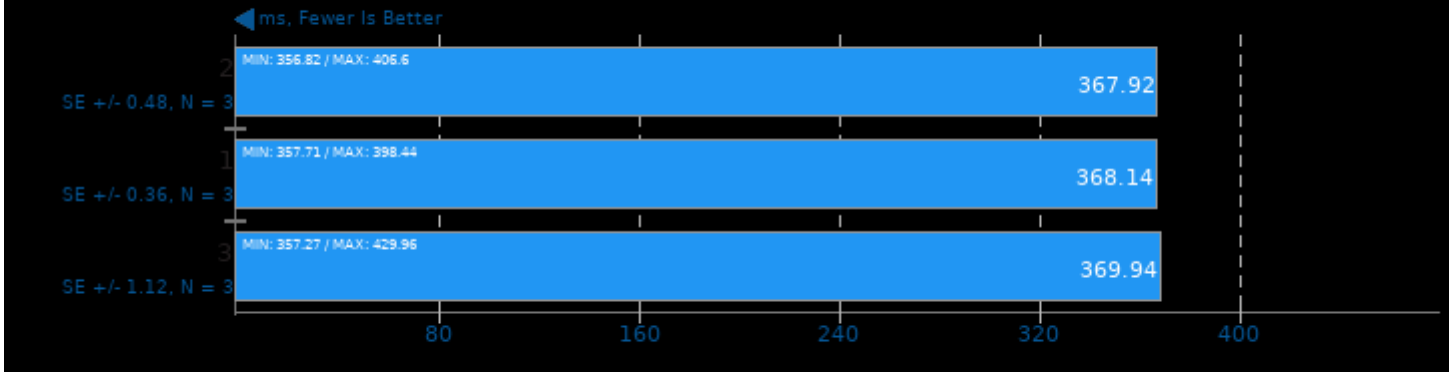
Model: inception-v3



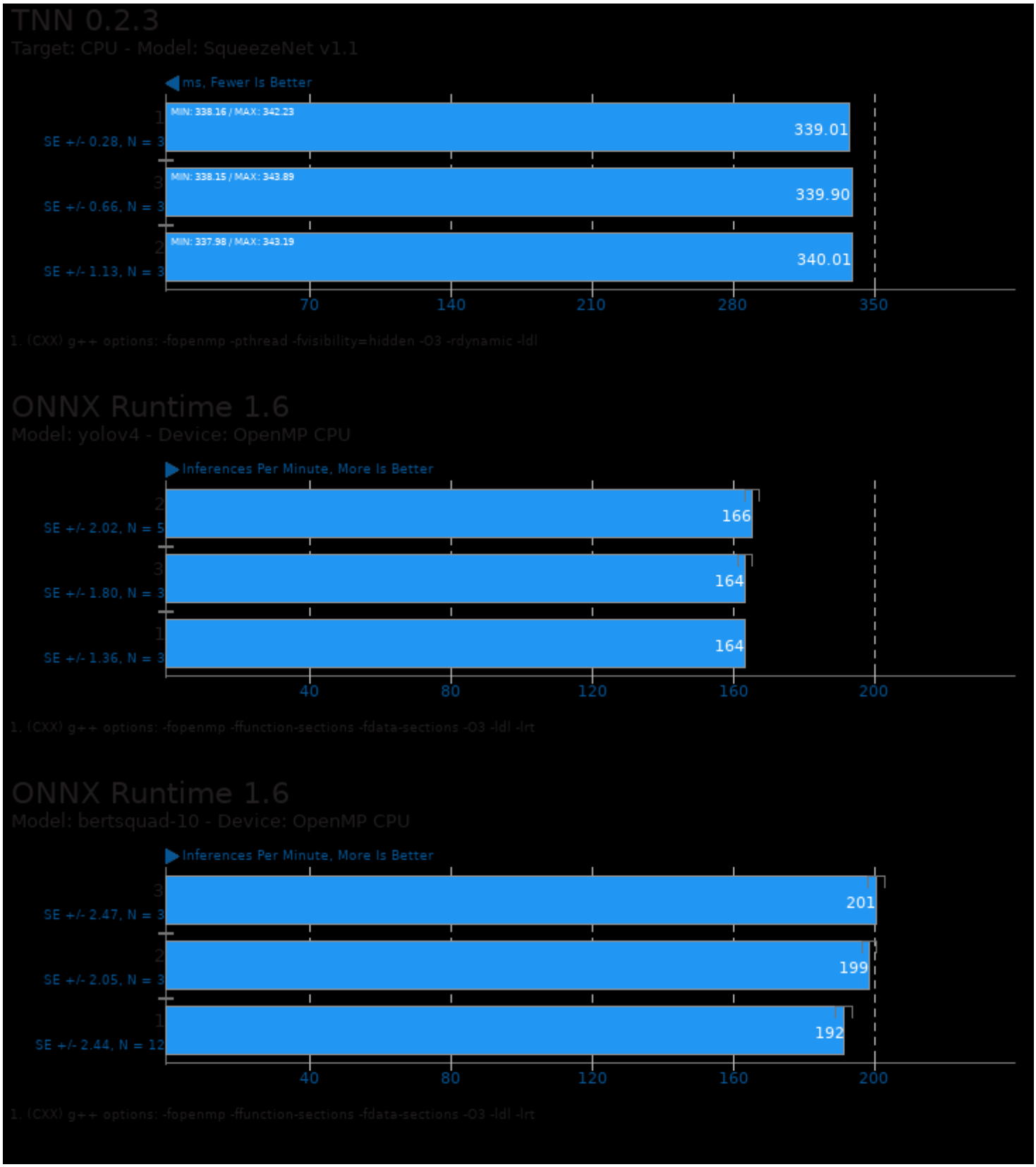
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv

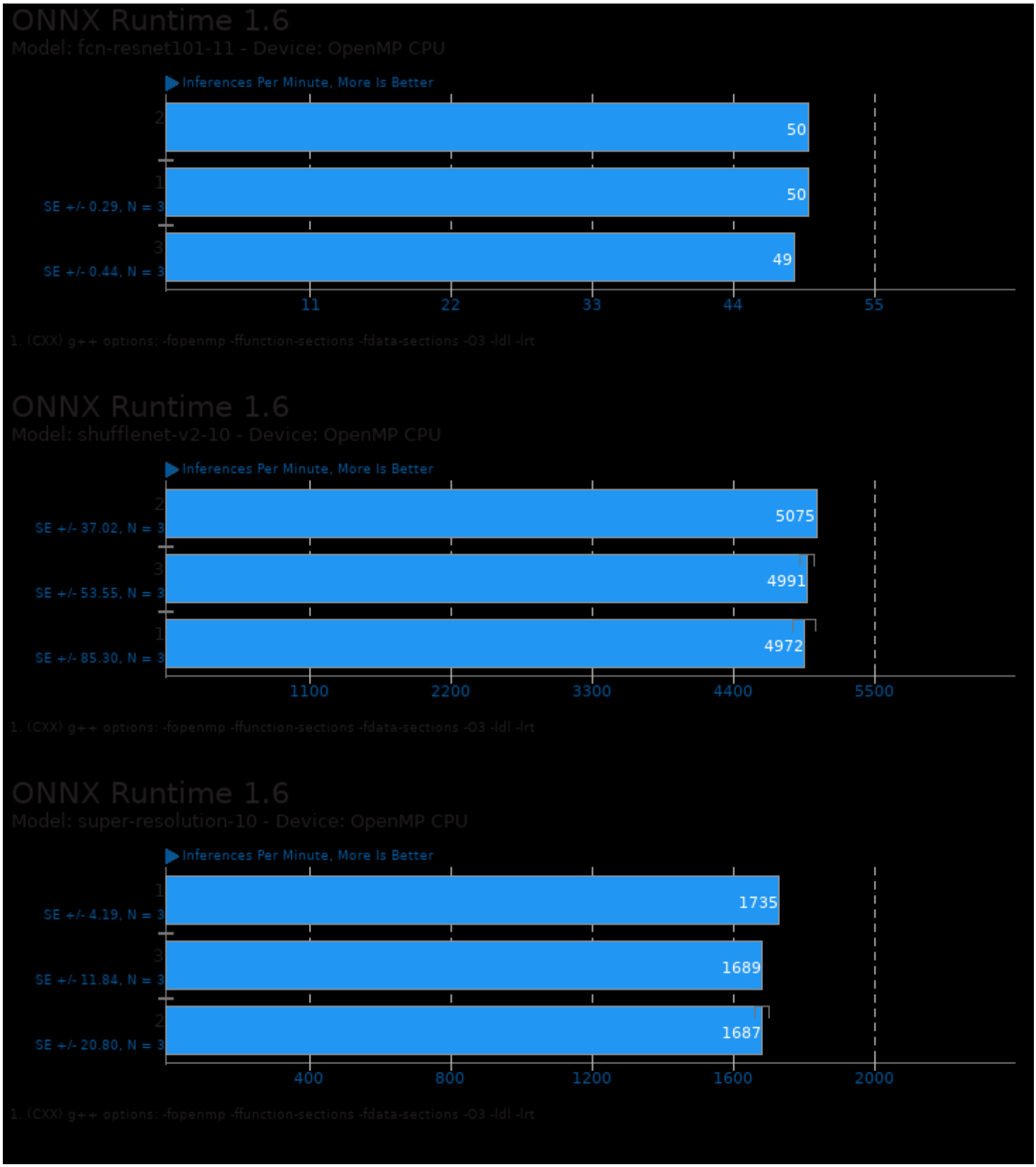
TNN 0.2.3

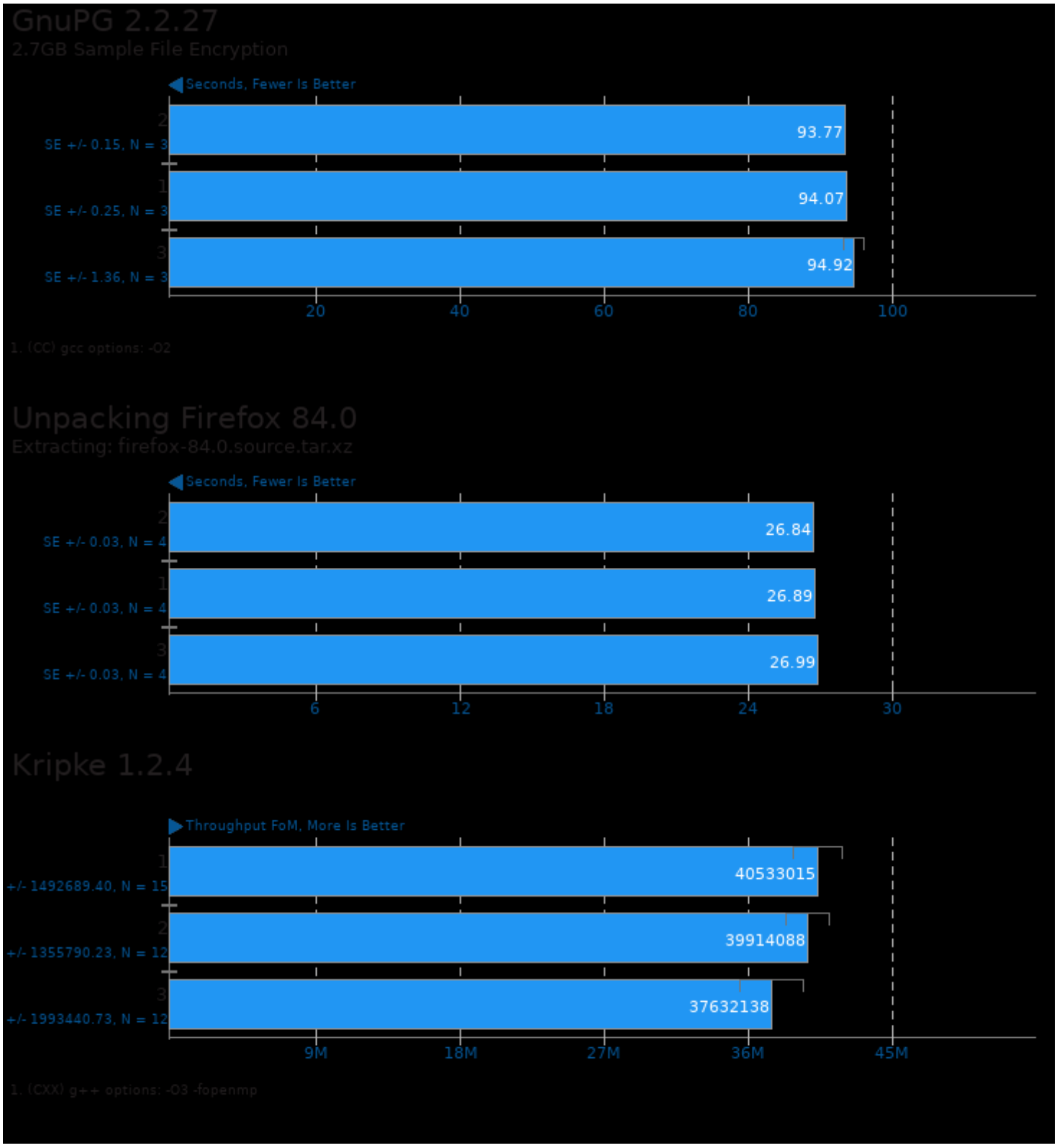
Target: CPU - Model: MobileNet v2

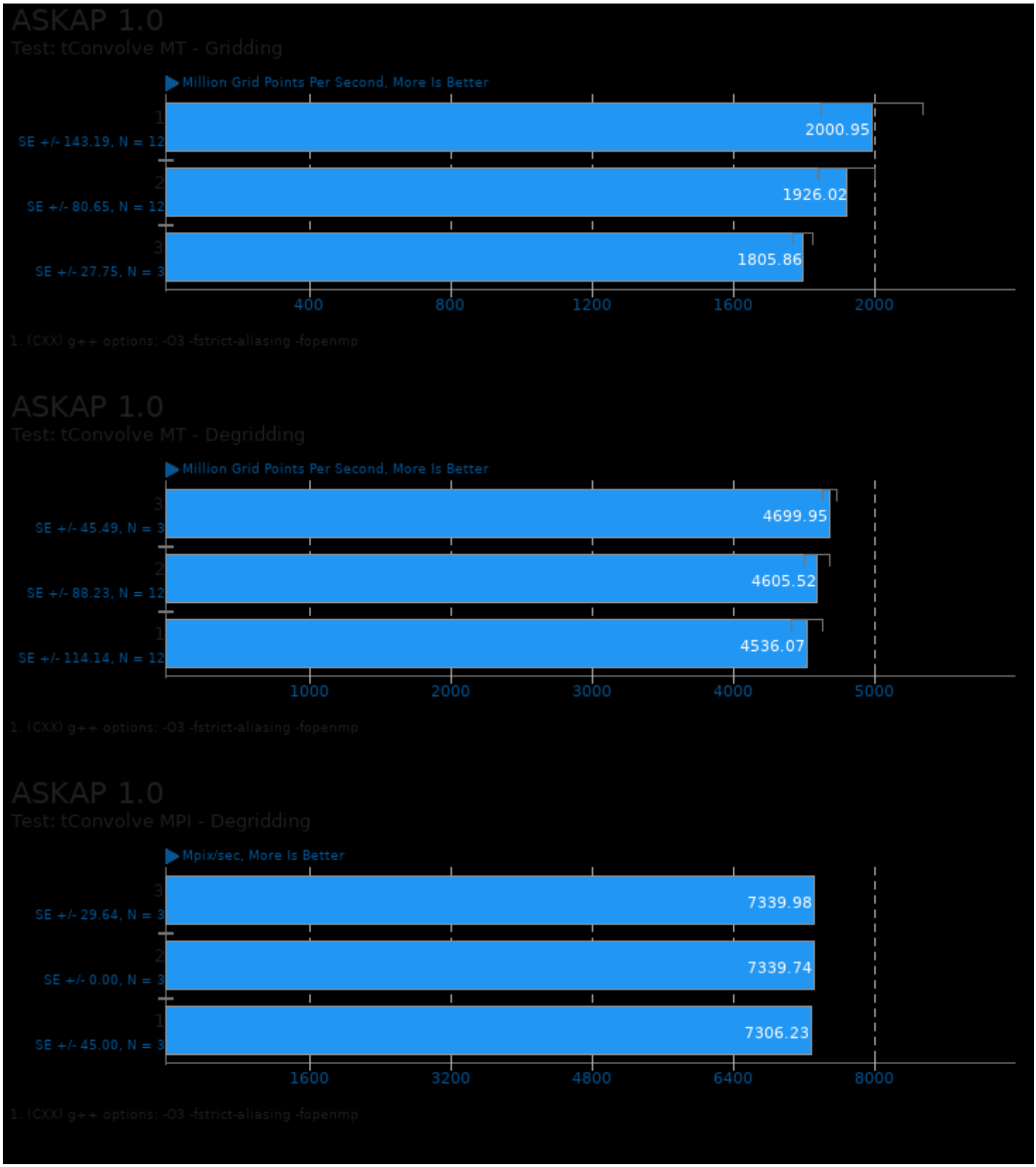


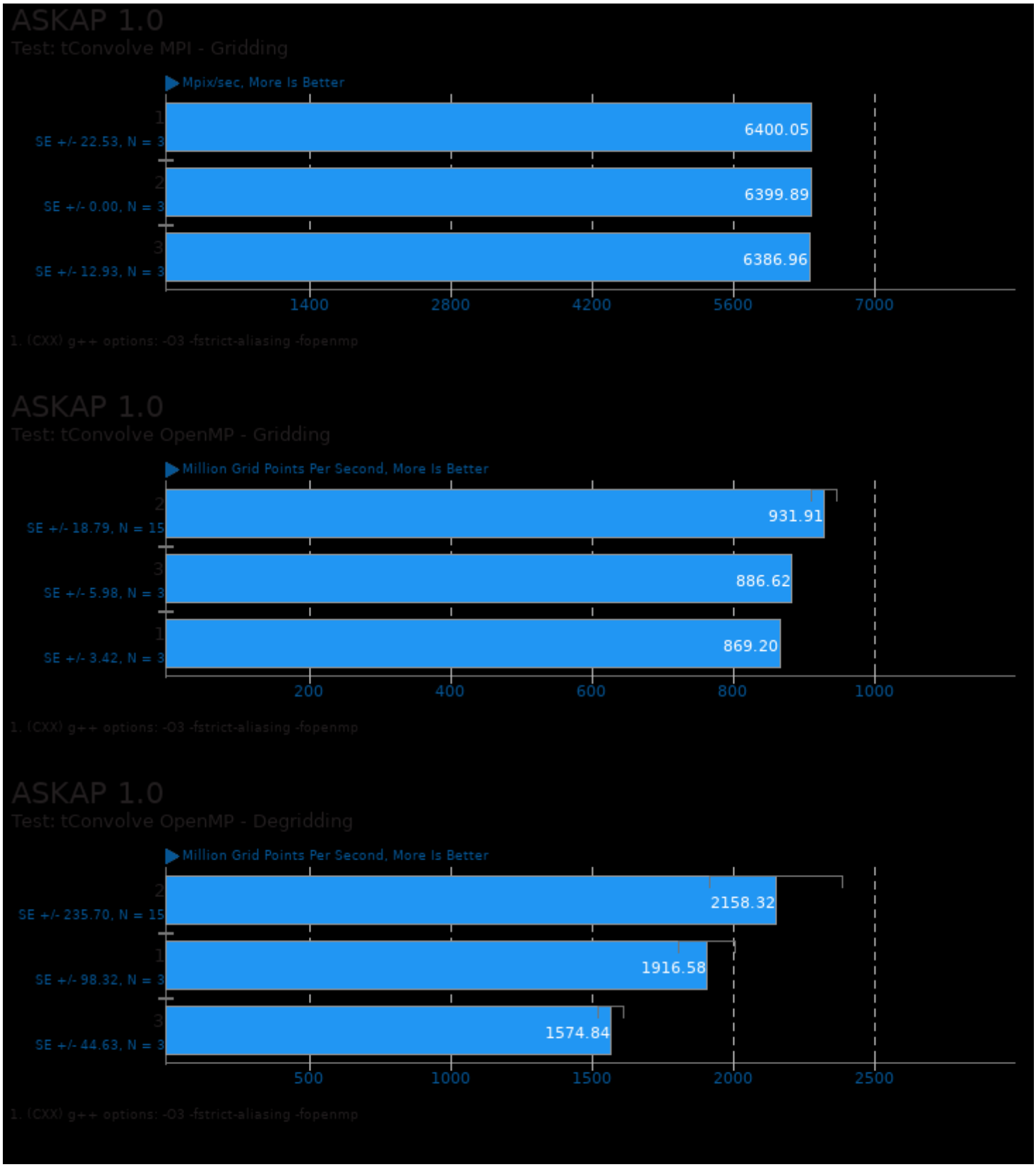
1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -O3 -rdynamic -ldl

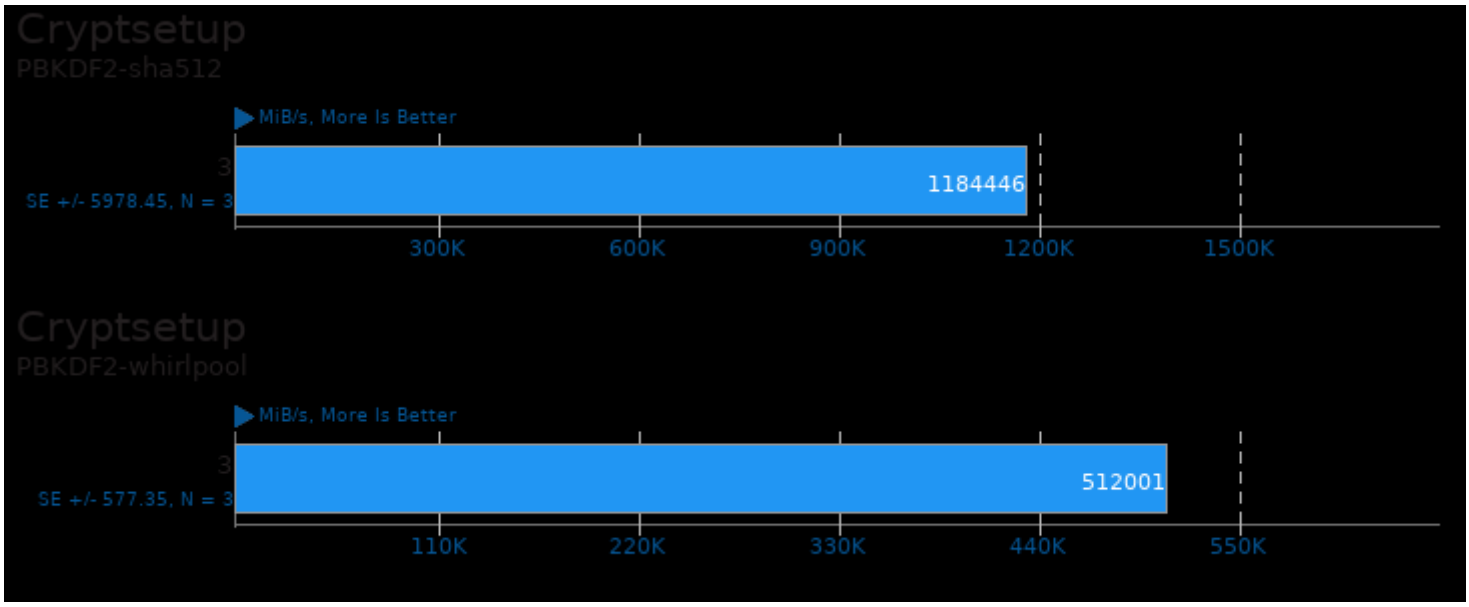

TNN 0.2.3
Target: CPU - Model: SqueezeNet v1.1
ms, Fewer Is Better
1
MIN: 338.16 / MAX: 342.23
339.01
SE +/- 0.28, N = 3
3
MIN: 338.15 / MAX: 343.89
339.90
SE +/- 0.66, N = 3
2
MIN: 337.98 / MAX: 343.19
340.01
SE +/- 1.13, N = 3
70
140
210
280
350
1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -O3 -rdynamic -ldl
ONNX Runtime 1.6
Model: yolov4 - Device: OpenMP CPU
Inferences Per Minute, More Is Better
2
166
SE +/- 2.02, N = 5
3
164
SE +/- 1.80, N = 3
1
164
SE +/- 1.36, N = 3
40
80
120
160
200
1. (CXX) g++ options: -fopenmp -ffunction-sections -fdata-sections -O3 -ldl -lrt
ONNX Runtime 1.6
Model: bertsquad-10 - Device: OpenMP CPU
Inferences Per Minute, More Is Better
3
201
SE +/- 2.47, N = 3
2
199
SE +/- 2.05, N = 3
1
192
SE +/- 2.44, N = 12
40
80
120
160
200
1. (CXX) g++ options: -fopenmp -ffunction-sections -fdata-sections -O3 -ldl -lrt


ONNX Runtime 1.6
Model: fcn-resnet101-11 - Device: OpenMP CPU
Inferences Per Minute, More Is Better
2
50
1
50
SE +/- 0.29, N = 3
3
49
SE +/- 0.44, N = 3
11
22
33
44
55
1. (CXX) g++ options: -fopenmp -ffunction-sections -fdata-sections -O3 -ldl -lrt
ONNX Runtime 1.6
Model: shufflenet-v2-10 - Device: OpenMP CPU
Inferences Per Minute, More Is Better
2
5075
SE +/- 37.02, N = 3
3
4991
SE +/- 53.55, N = 3
1
4972
SE +/- 85.30, N = 3
1100
2200
3300
4400
5500
1. (CXX) g++ options: -fopenmp -ffunction-sections -fdata-sections -O3 -ldl -lrt
ONNX Runtime 1.6
Model: super-resolution-10 - Device: OpenMP CPU
Inferences Per Minute, More Is Better
1
1735
SE +/- 4.19, N = 3
3
1689
SE +/- 11.84, N = 3
2
1687
SE +/- 20.80, N = 3
400
800
1200
1600
2000
1. (CXX) g++ options: -fopenmp -ffunction-sections -fdata-sections -O3 -ldl -lrt

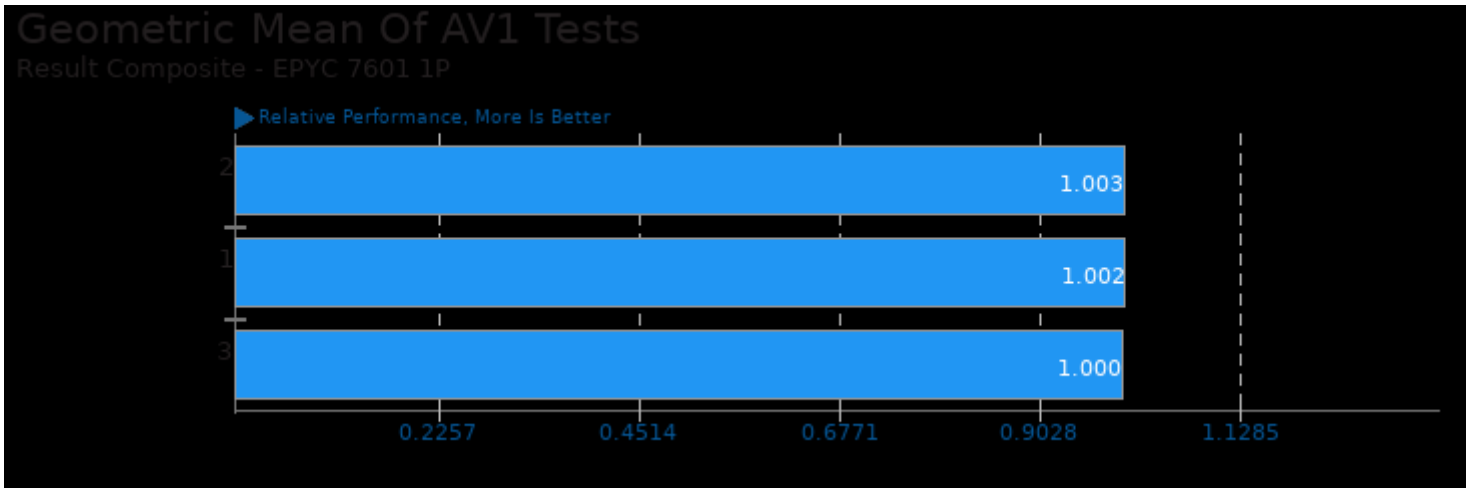

GnuPG 2.2.27
2.7GB Sample File Encryption
Seconds, Fewer Is Better
2
SE +/- 0.15, N = 3
93.77
1
SE +/- 0.25, N = 3
94.07
3
SE +/- 1.36, N = 3
94.92
20
40
60
80
100
1. (CC) gcc options: -O2
Unpacking Firefox 84.0
Extracting: firefox-84.0.source.tar.xz
Seconds, Fewer Is Better
2
SE +/- 0.03, N = 4
26.84
1
SE +/- 0.03, N = 4
26.89
3
SE +/- 0.03, N = 4
26.99
6
12
18
24
30
Kripke 1.2.4
Throughput FoM, More Is Better
1
+/- 1492689.40, N = 15
40533015
2
+/- 1355790.23, N = 12
39914088
3
+/- 1993440.73, N = 12
37632138
9M
18M
27M
36M
45M
1. (CXX) g++ options: -O3 -fopenmp


ASKAP 1.0
Test: tConvolve MT - Gridding
Million Grid Points Per Second, More Is Better
1
SE +/- 143.19, N = 12
2000.95
2
SE +/- 80.65, N = 12
1926.02
3
SE +/- 27.75, N = 3
1805.86
400
800
1200
1600
2000
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp
ASKAP 1.0
Test: tConvolve MT - Degridding
Million Grid Points Per Second, More Is Better
3
SE +/- 45.49, N = 3
4699.95
2
SE +/- 88.23, N = 12
4605.52
1
SE +/- 114.14, N = 12
4536.07
1000
2000
3000
4000
5000
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp
ASKAP 1.0
Test: tConvolve MPI - Degridding
Mpix/sec, More Is Better
3
SE +/- 29.64, N = 3
7339.98
2
SE +/- 0.00, N = 3
7339.74
1
SE +/- 45.00, N = 3
7306.23
1600
3200
4800
6400
8000
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp

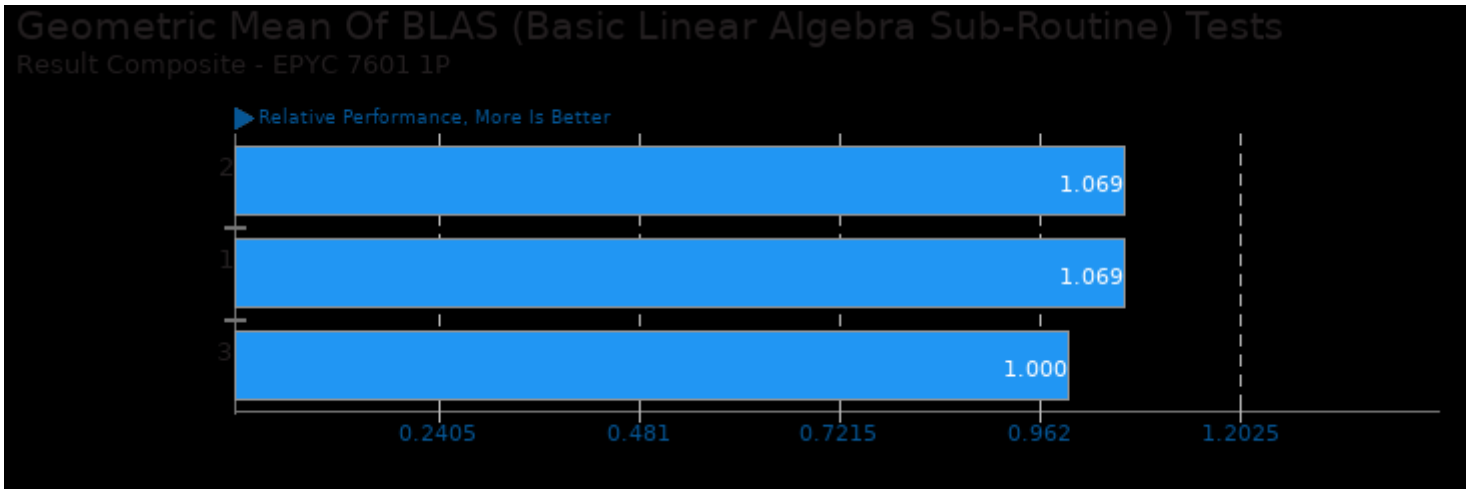

ASKAP 1.0
Test: tConvolve MPI - Gridding
Mpix/sec, More Is Better
1
SE +/- 22.53, N = 3
6400.05
2
SE +/- 0.00, N = 3
6399.89
3
SE +/- 12.93, N = 3
6386.96
1400
2800
4200
5600
7000
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp
ASKAP 1.0
Test: tConvolve OpenMP - Gridding
Million Grid Points Per Second, More Is Better
2
SE +/- 18.79, N = 15
931.91
3
SE +/- 5.98, N = 3
886.62
1
SE +/- 3.42, N = 3
869.20
200
400
600
800
1000
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp
ASKAP 1.0
Test: tConvolve OpenMP - Degridding
Million Grid Points Per Second, More Is Better
2
SE +/- 235.70, N = 15
2158.32
1
SE +/- 98.32, N = 3
1916.58
3
SE +/- 44.63, N = 3
1574.84
500
1000
1500
2000
2500
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp


Cryptsetup
PBKDF2-sha512
MiB/s, More Is Better
3
SE +/- 5978.45, N = 3
1184446
300K
600K
900K
1200K
1500K
Cryptsetup
PBKDF2-whirlpool
MiB/s, More Is Better
3
SE +/- 577.35, N = 3
512001
110K
220K
330K
440K
550K

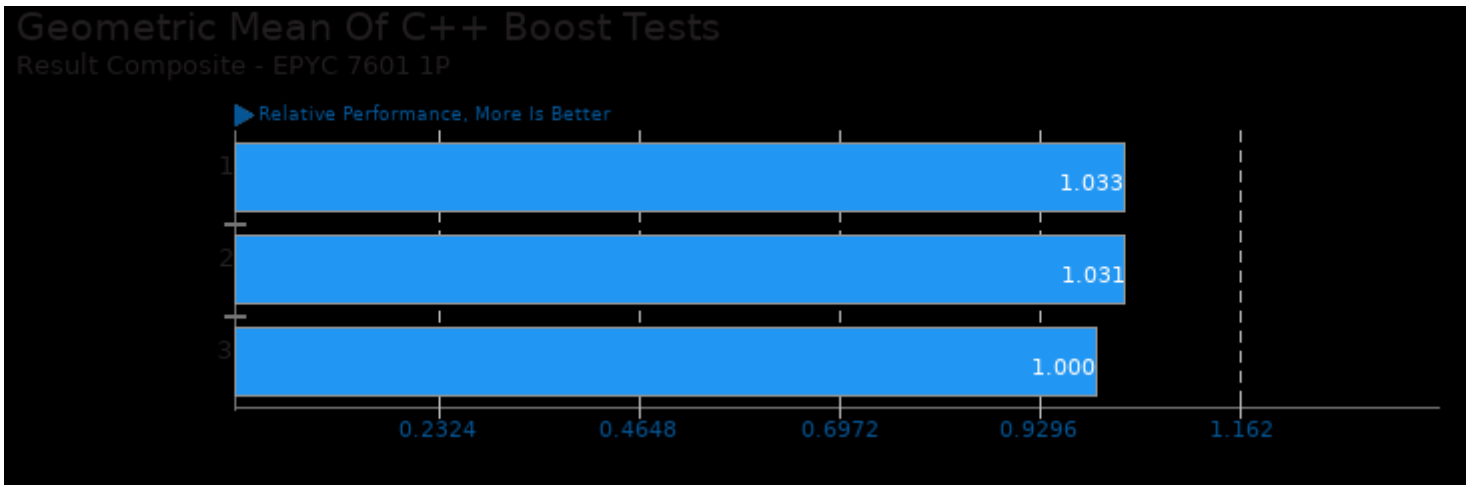
These geometric means are based upon test groupings / test suites for this result file.



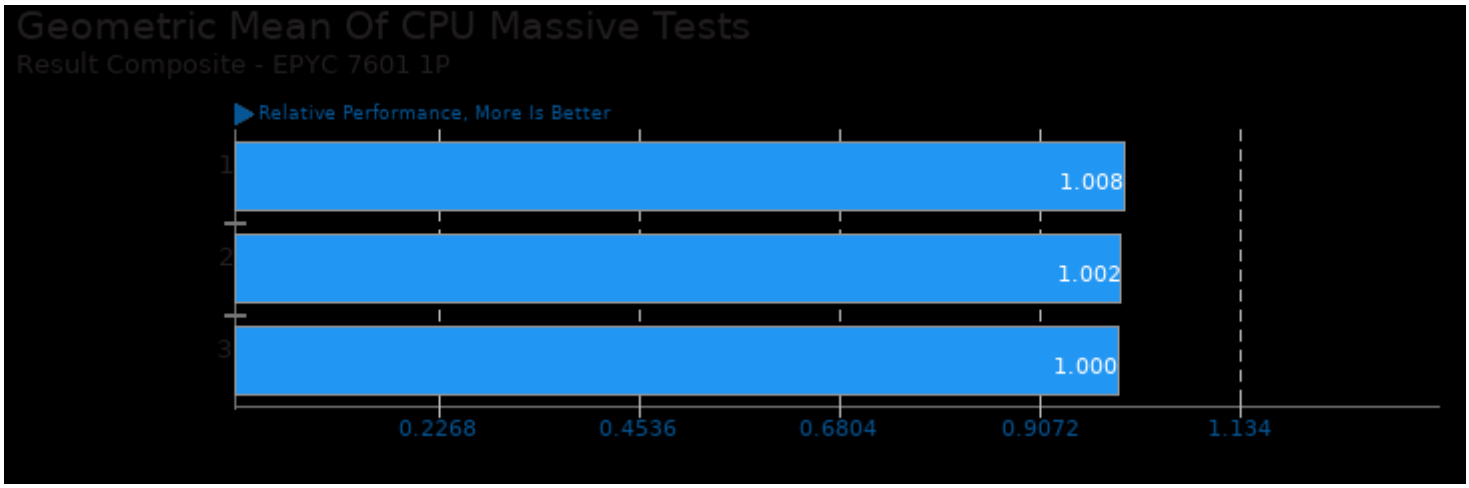
Geometric mean based upon tests: pts/dav1d and pts/rav1e



Geometric mean based upon tests: pts/qmcpack and pts/qe



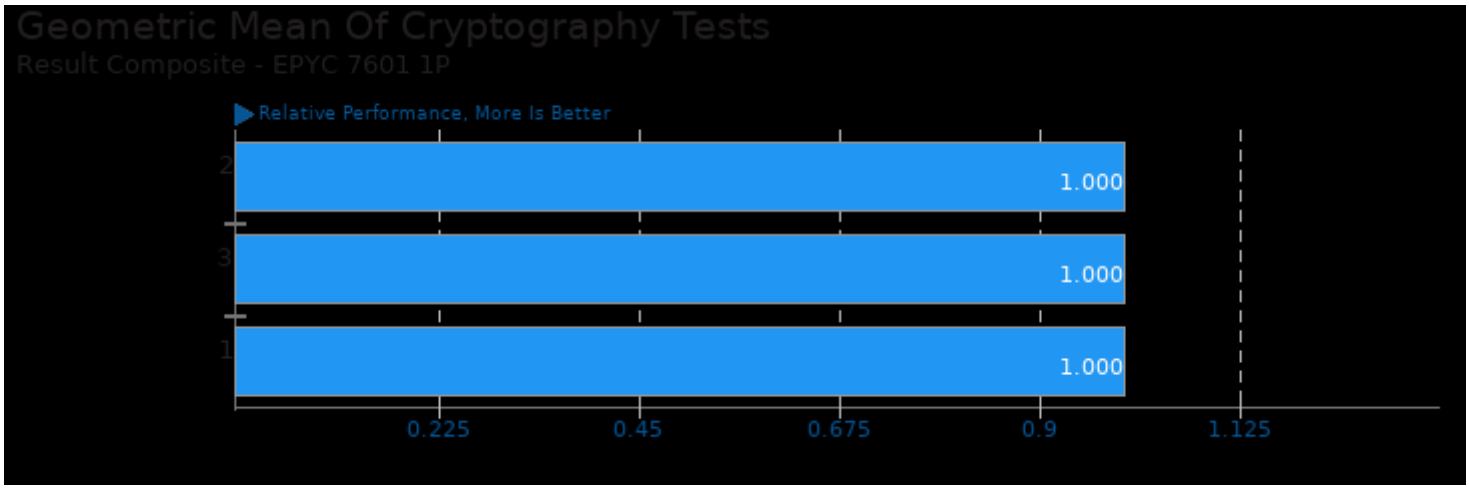
Geometric mean based upon tests: pts/quantlib, pts/qmcpack and pts/openfoam



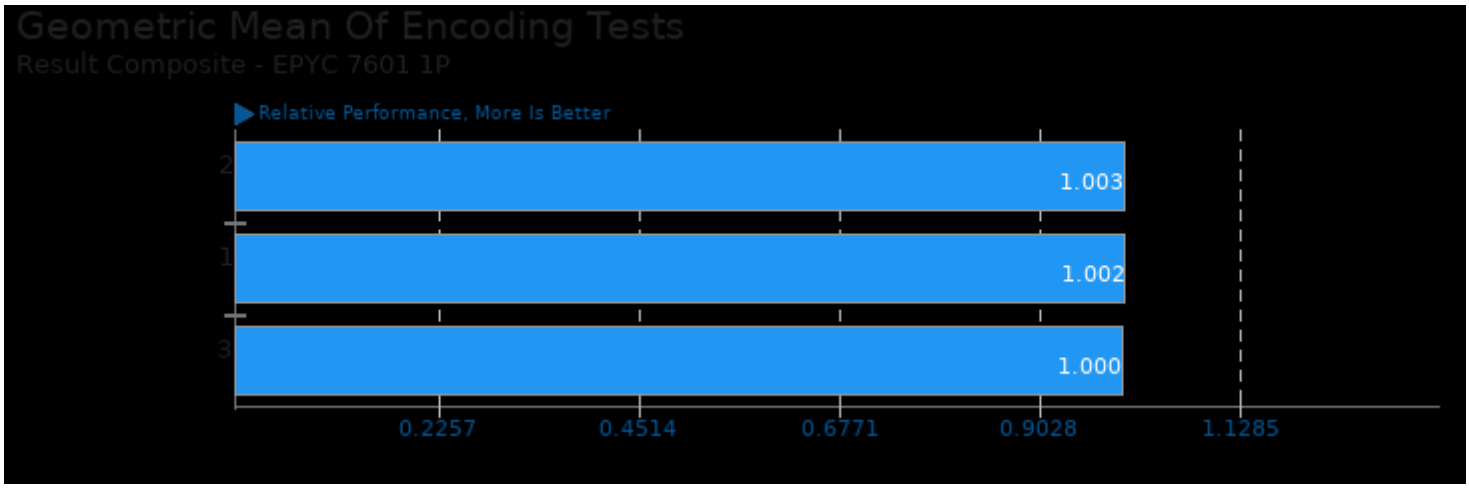
Geometric mean based upon tests: pts/cloverleaf, pts/dav1d, pts/lzbench, pts/npb, pts/redis, system/cryptsetup and pts/cpuminer-opt



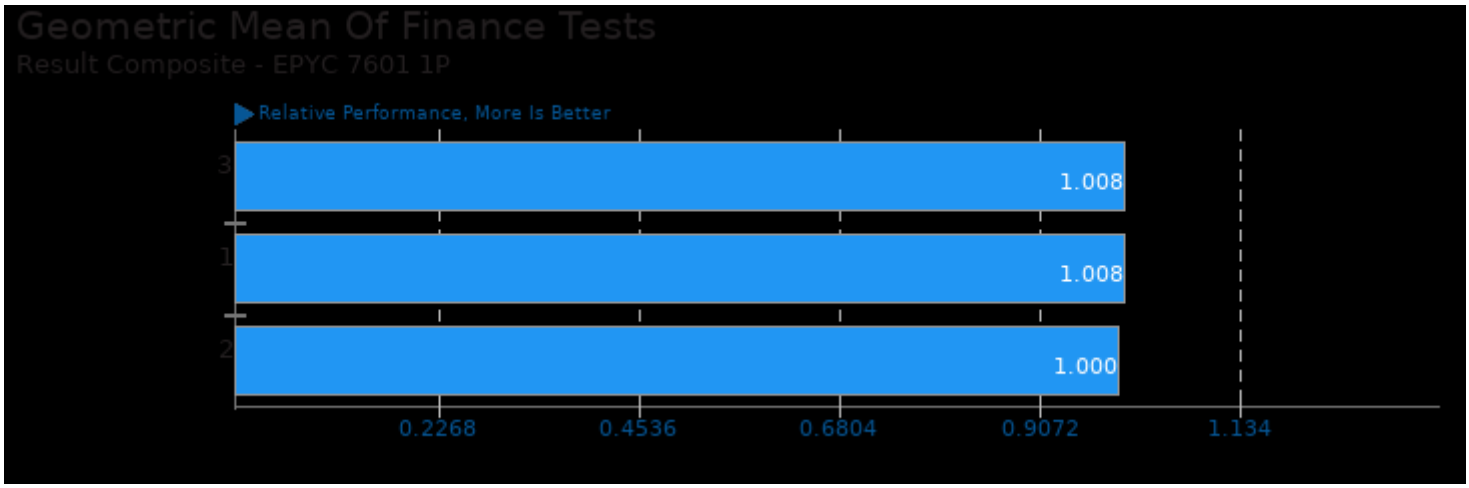
Geometric mean based upon tests: pts/dav1d, pts/rav1e, pts/etcpak, pts/build-godot and pts/synthmark



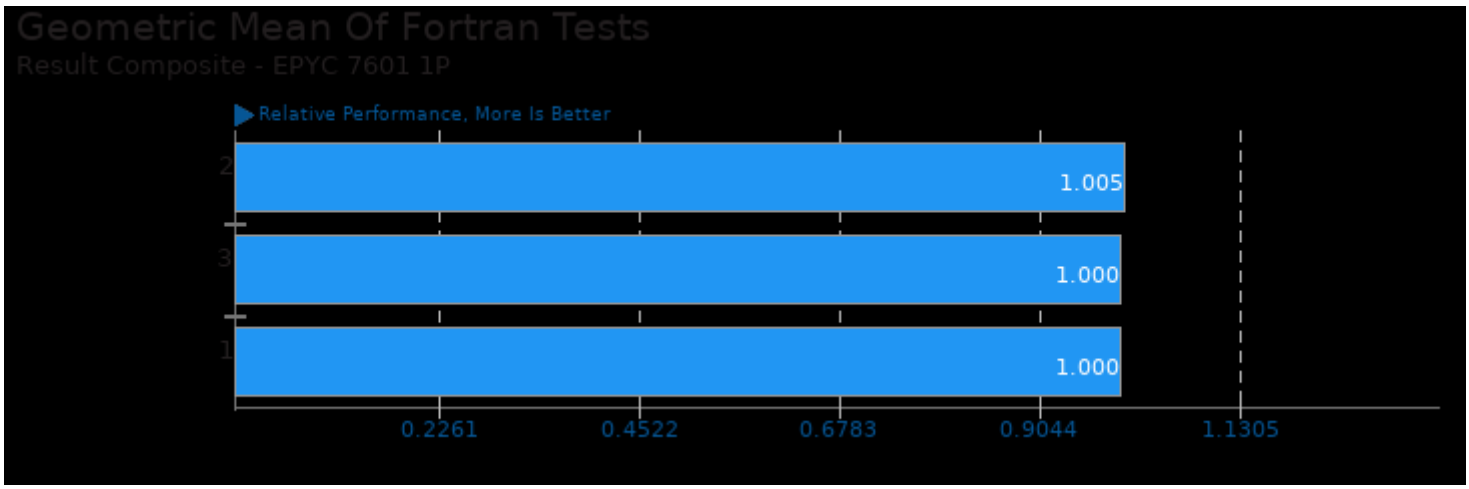
Geometric mean based upon tests: pts/gnupg, pts/gcrypt, system/cryptsetup and pts/cpuminer-opt



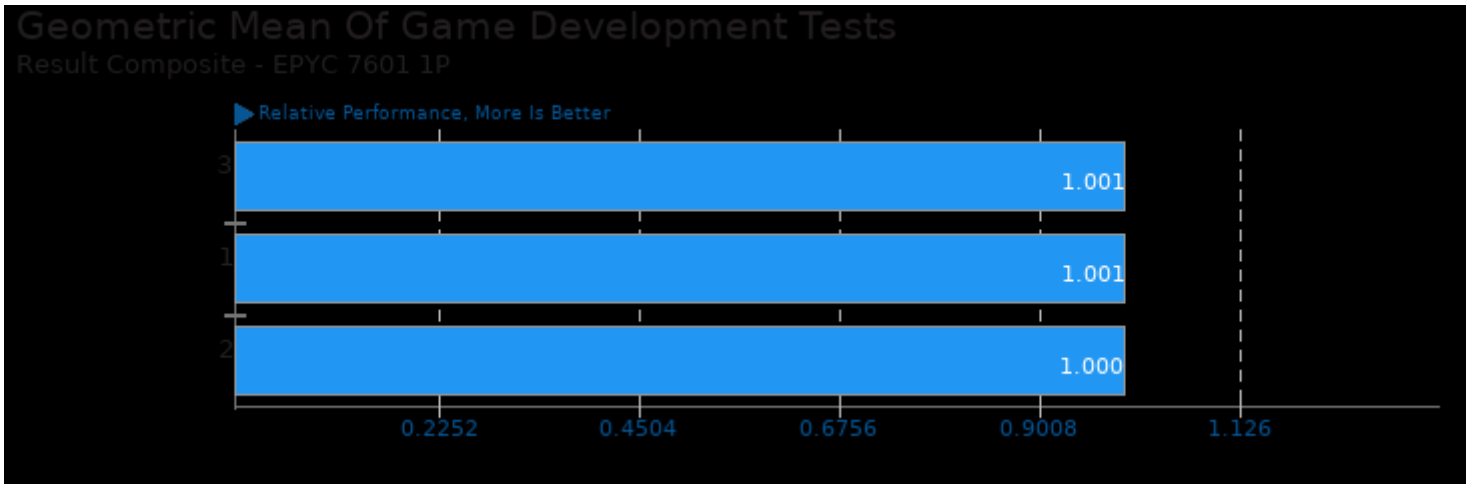
Geometric mean based upon tests: pts/dav1d and pts/rav1e



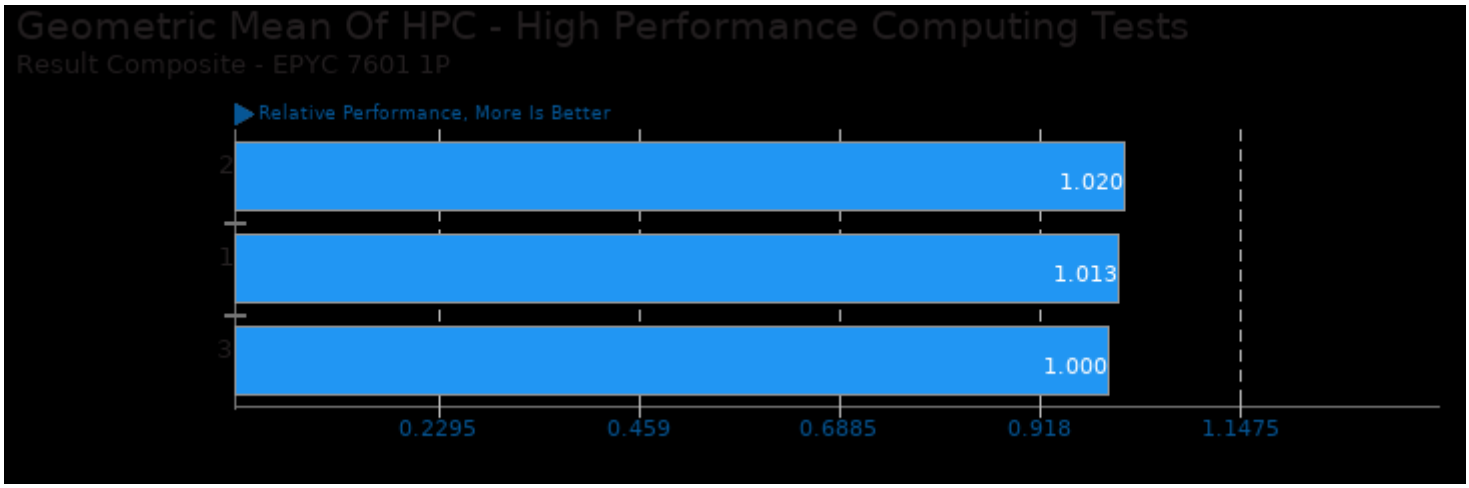
Geometric mean based upon tests: pts/financebench and pts/quantlib



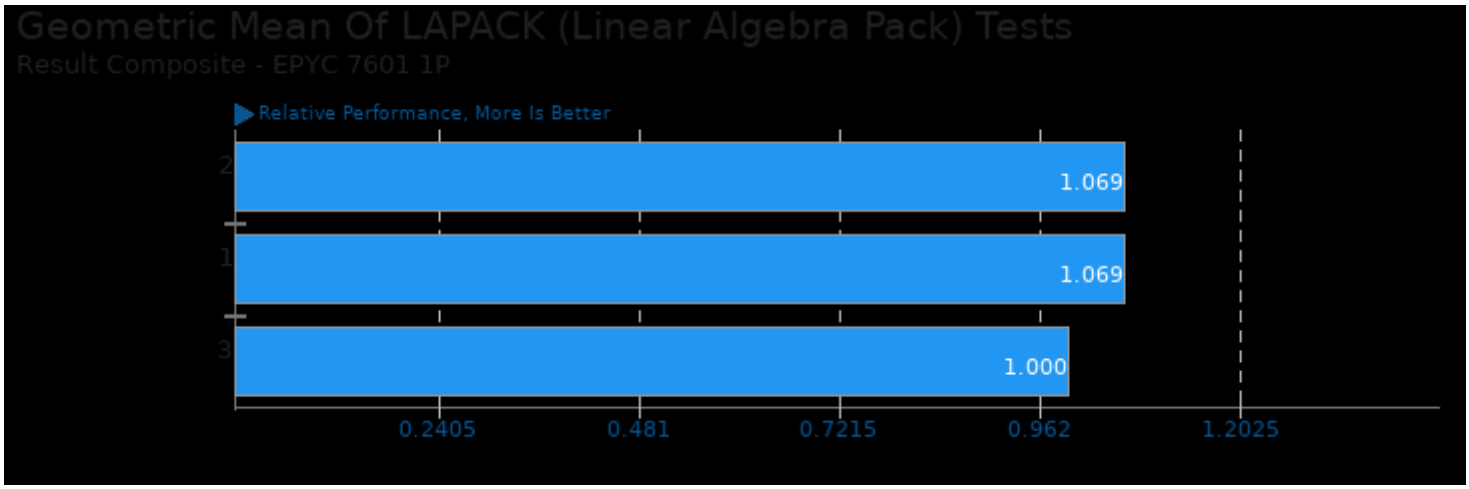
Geometric mean based upon tests: pts/npb, pts/cloverleaf and pts/qe



Geometric mean based upon tests: pts/etcpak and pts/build-godot



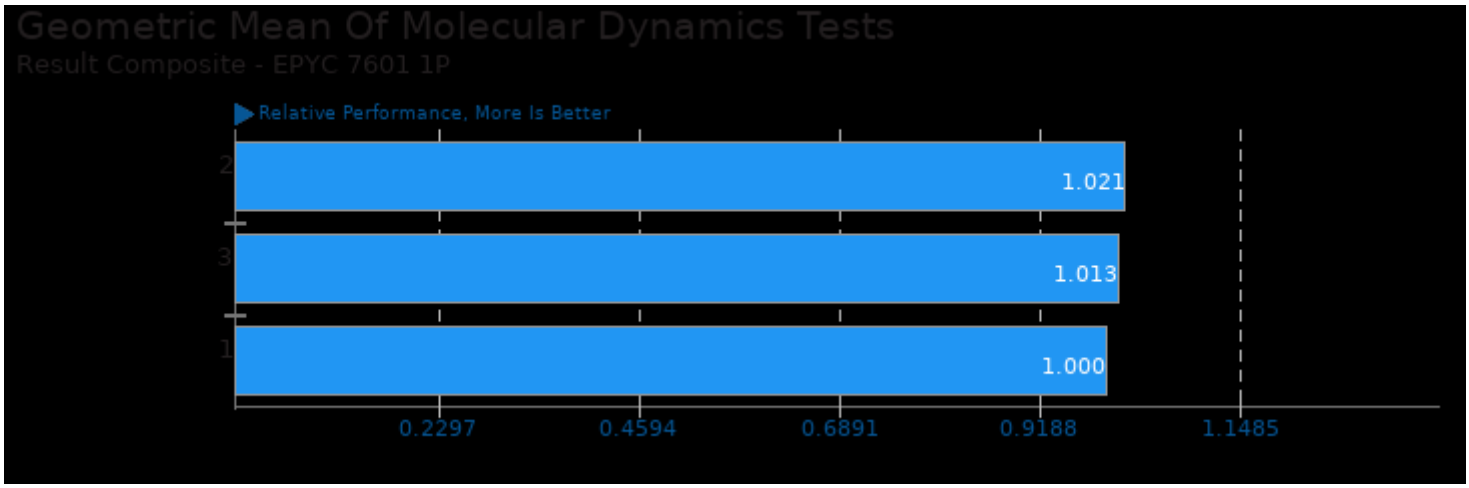
Geometric mean based upon tests: pts/npb, pts/askap, pts/qe, pts/amg, pts/cloverleaf, pts/lulesh, pts/openfoam, pts/qmcpack, pts/kripke, pts/mnn, pts/tnn and pts/onnx



Geometric mean based upon tests: pts/qmcpack and pts/qe



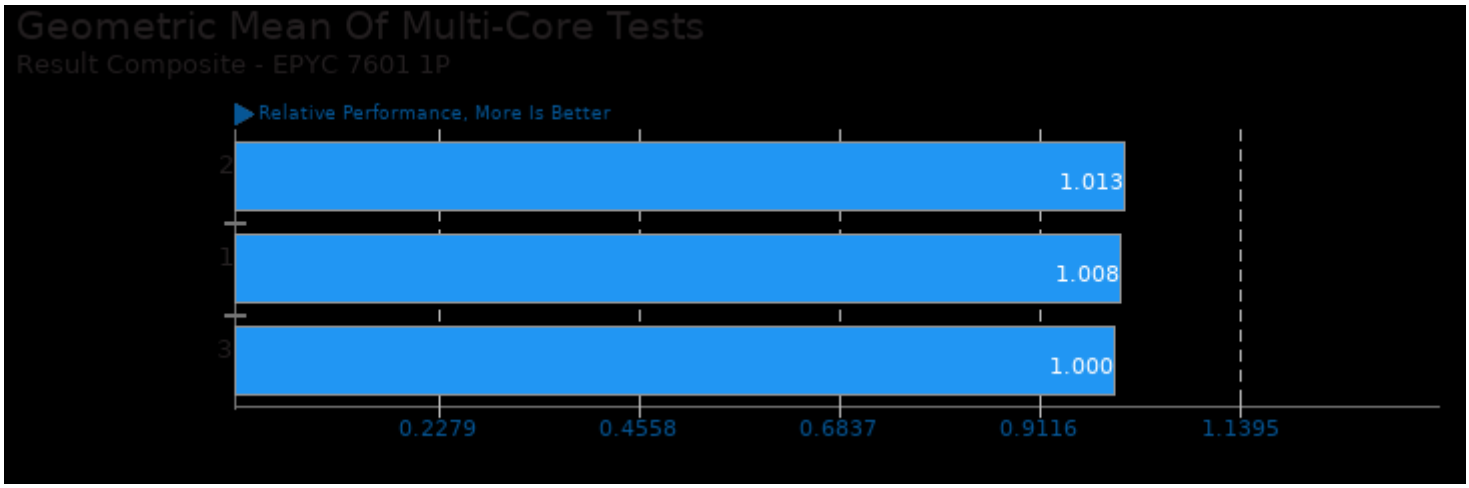
Geometric mean based upon tests: pts/mnn, pts/tnn and pts/onnx



Geometric mean based upon tests: pts/cloverleaf, pts/lulesh and pts/openfoam



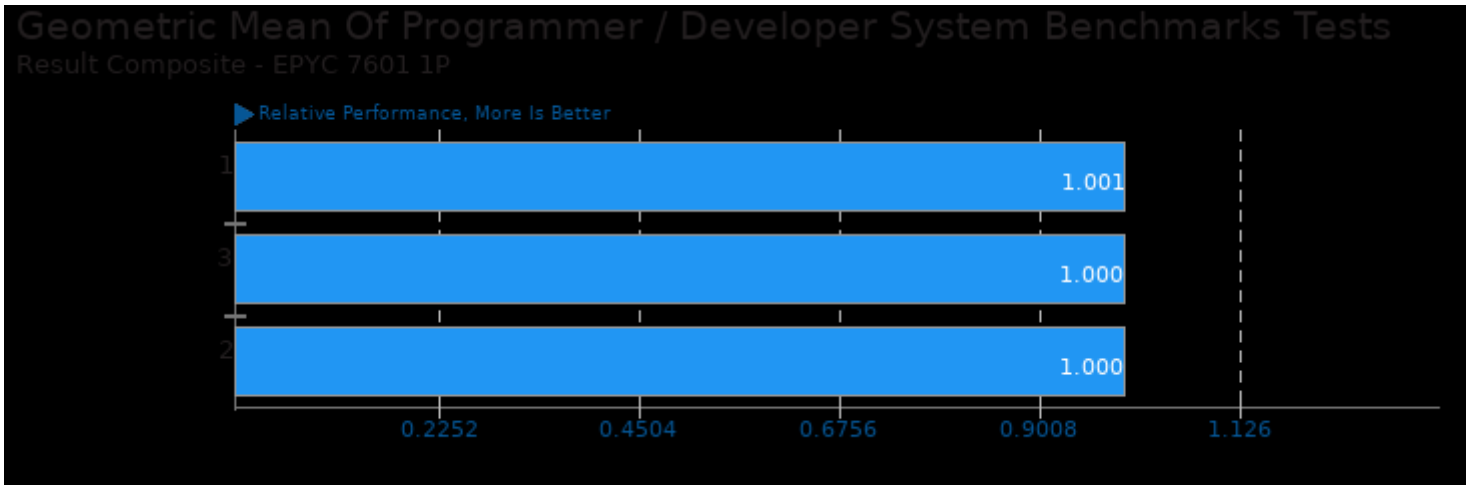
Geometric mean based upon tests: pts/askap, pts/qmcpack and pts/npb



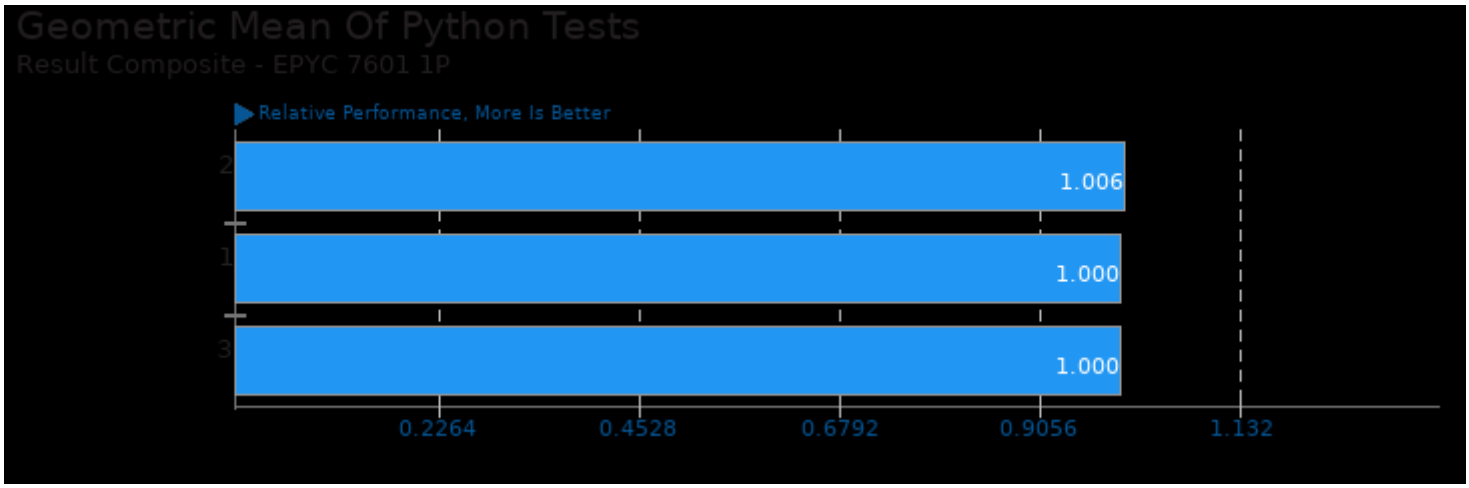
Geometric mean based upon tests: pts/cpuminer-opt, pts/askap, pts/dav1d, pts/rav1e, pts/npb and pts/build-godot



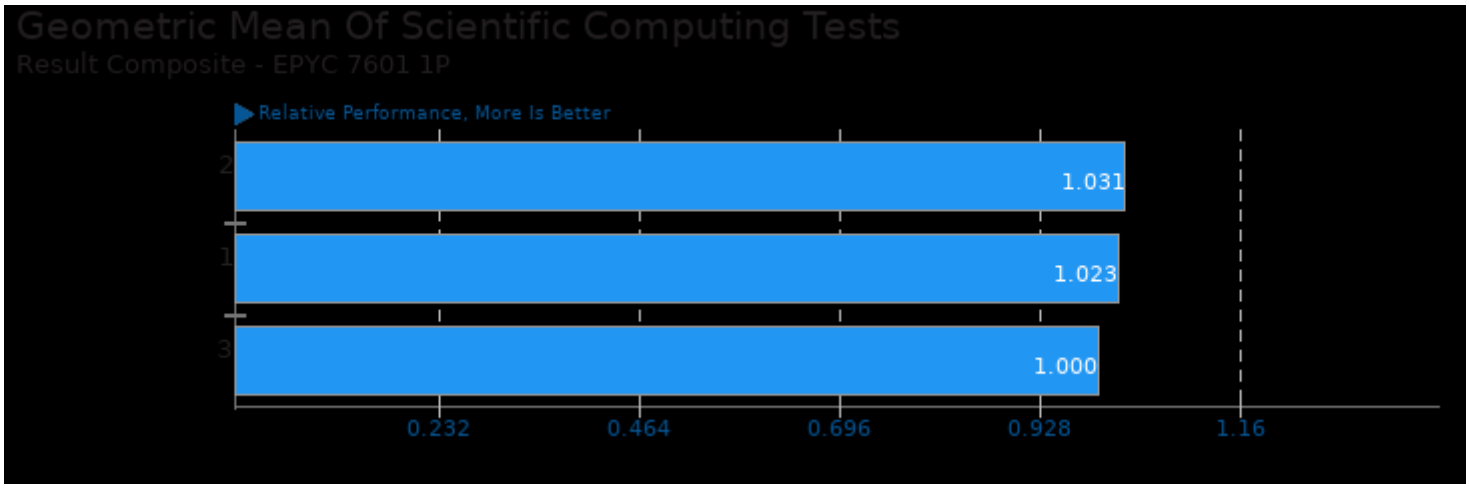
Geometric mean based upon tests: pts/npb, pts/cloverleaf, pts/amg, pts/qmcpack, pts/openfoam, pts/qe, pts/lulesh and pts/askap



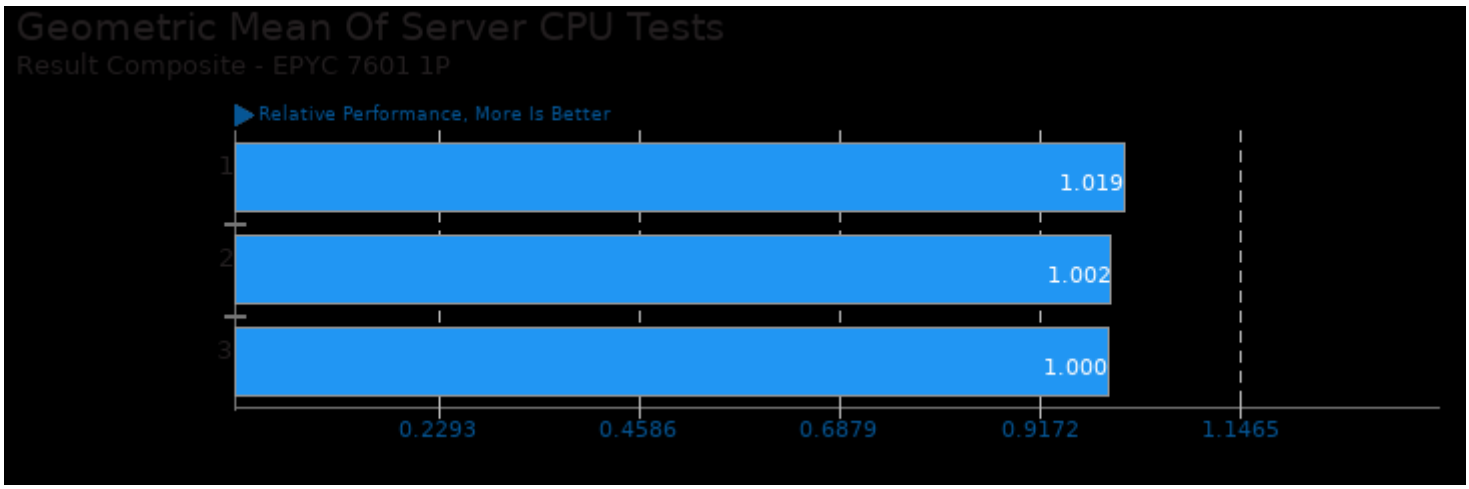
Geometric mean based upon tests: system/cryptsetup, pts/build-godot and pts/amg



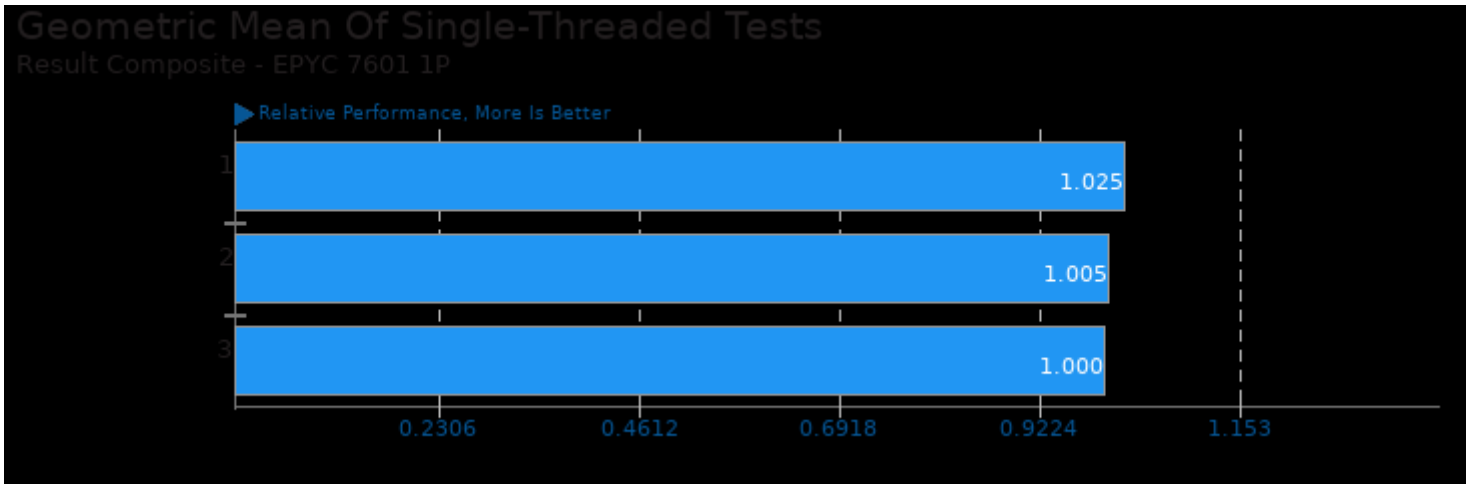
Geometric mean based upon tests: pts/build-godot and pts/onnx



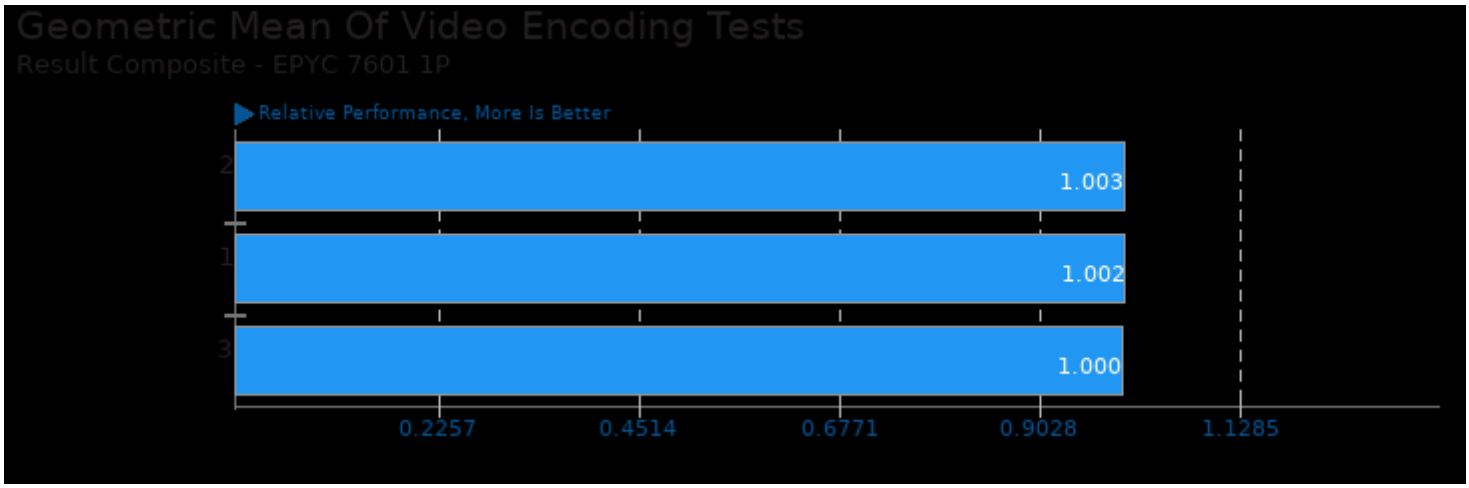
Geometric mean based upon tests: pts/amg, pts/cloverleaf, pts/lulesh, pts/openfoam, pts/qmcpack, pts/qe and pts/kripke



Geometric mean based upon tests: pts/npb, pts/dav1d, pts/redis and pts/cpuminer-opt



Geometric mean based upon tests: pts/lzbench, pts/gnupg and pts/redis



Geometric mean based upon tests: pts/dav1d and pts/rav1e

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 02:18.