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10900k june

Intel Core i9-10900K testing with a Gigabyte Z490 AORUS MASTER (F20d BIOS) and Gigabyte Intel UHD 630 CML GT2 3GB on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

1 had the most wins, coming in first place for 40% of the tests.

Based on the geometric mean of all complete results, the fastest (3) was 1.003x the speed of the slowest (2). 1 was 0.998x the speed of 3 and 2 was 0.998x the speed of 1.

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

NAS Parallel Benchmarks (Test / Class: MG.C) at 1.108x
NAS Parallel Benchmarks (Test / Class: EP.D) at 1.101x
srsRAN (Test: OFDM_Test) at 1.086x
Zstd Compression (Compression Level: 8 - Compression Speed) at 1.064x
NCNN (Target: CPU-v2-v2 - Model: mobilenet-v2) at 1.058x
NCNN (Target: CPU - Model: shufflenet-v2) at 1.054x
NAS Parallel Benchmarks (Test / Class: FT.C) at 1.053x
Mobile Neural Network (Model: inception-v3) at 1.048x
srsRAN (Test: 4G PHY_DL_Test 100 PRB MIMO 64-QAM) at 1.047x

srsRAN (Test: 4G PHY_DL_Test 100 PRB SISO 256-QAM) at 1.045x.

Test Systems:

1

2

3

Processor: Intel Core i9-10900K @ 5.30GHz (10 Cores / 20 Threads), Motherboard: Gigabyte Z490 AORUS MASTER (F20d BIOS), Chipset: Intel Comet Lake PCH, Memory: 16GB, Disk: Samsung SSD 970 EVO 500GB, Graphics: Gigabyte Intel UHD 630 CML GT2 3GB (1200MHz), Audio: Realtek ALC1220, Monitor: G237HL, Network: Intel Device 15f3 + Intel Wi-Fi 6 AX201

OS: Ubuntu 20.04, Kernel: 5.9.0-050900daily20201012-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 20.0.8, OpenCL: OpenCL 2.1, Vulkan: 1.2.131, 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: intel_pstate powersave - CPU Microcode: 0xe2
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	1	2	3
ASTC Encoder - Medium (sec)	4.0492	**4.0720**	**4.0145**
Normalized	99.14%	98.59%	100%
Standard Deviation		0.1%	1.4%
ASTC Encoder - Thorough (sec)	**9.3677**	9.3489	**9.3285**
Normalized	99.58%	99.78%	100%
Standard Deviation		0.2%	0.1%
ASTC Encoder - Exhaustive (sec)	**50.2027**	**50.2359**	50.2140
Normalized	100%	99.93%	99.98%
Standard Deviation		0.1%	0.1%
BRL-CAD - V.P.M (VGR Performance Metric)	**187701**	187547	**187146**
Normalized	100%	99.92%	99.7%
C-Blosc - blosclz (MB/s)	**19606**	19797	**20064**
Normalized	97.72%	98.67%	100%
Standard Deviation		0.3%	0.1%
dav1d - Chimera 1080p (FPS)	**820.43**	819.80	**813.38**

Normalized	100%	99.92%	99.14%
Standard Deviation		0.3%	0.2%
dav1d - Summer Nature 4K (FPS)	**190.74**	191.09	**191.20**
Normalized	99.76%	99.94%	100%
Standard Deviation		0.1%	0.1%
dav1d - S.N.1 (FPS)	770.57	**770.74**	**767.77**
Normalized	99.98%	100%	99.61%
Standard Deviation		0%	0.3%
dav1d - C.1.1.b (FPS)	491.13	**490.72**	**492.52**
Normalized	99.72%	99.63%	100%
Standard Deviation		0.4%	0%
Embree - Pathtracer - Crown (FPS)	**14.343**	14.2603	**14.1407**
Normalized	100%	99.42%	98.59%
Standard Deviation		1.3%	0.9%
Embree - Pathtracer ISPC - Crown (FPS)	**16.0139**	15.9522	**15.9174**
Normalized	100%	99.61%	99.4%
Standard Deviation		0.3%	0.4%
Embree - Pathtracer - Asian Dragon (FPS)	15.9307	**15.8030**	**15.9659**
Normalized	99.78%	98.98%	100%
Standard Deviation		0.9%	1.8%
Embree - Pathtracer - Asian Dragon Obj	**14.7441**	14.8025	**14.8244**
Normalized	99.46%	99.85%	100%
Standard Deviation		0.2%	0.2%
Embree - Pathtracer ISPC - Asian Dragon (FPS)	**18.1986**	**18.5302**	18.3283
Normalized	98.21%	100%	98.91%
Standard Deviation		1.2%	0.1%
Embree - Pathtracer ISPC - Asian Dragon Obj (FPS)	**16.4077**	**16.3105**	16.3384
Normalized	100%	99.41%	99.58%
Standard Deviation		0.1%	0.1%
GROMACS - MPI CPU - water_GMX50_bare (Ns/Day)	**0.963**	**0.964**	**0.963**
Normalized	99.9%	100%	99.9%
Standard Deviation		0.2%	0%
Intel Open Image Denoise - RT.hdr_alb_nrm.3840x2160 (Images / Sec)	0.46	0.46	0.46
Standard Deviation		0.2%	0.1%
Intel Open Image Denoise - RT.ldr_alb_nrm.3840x2160 (Images / Sec)	0.46	0.46	0.46
Standard Deviation		0.1%	0.1%
Intel Open Image Denoise - RTLightmap.hdr.4096x4096 (Images / Sec)	0.23	0.23	0.23
Standard Deviation		0%	0%
Mobile Neural Network - mobilenetV3 (ms)	**1.601**	**1.637**	1.629
Normalized	100%	97.8%	98.28%
Standard Deviation		1.7%	0.6%
Mobile Neural Network - squeezenetv1.1	3.083	**3.173**	**3.060**
Normalized	99.25%	96.44%	100%
Standard Deviation		2.7%	1%
Mobile Neural Network - resnet-v2-50 (ms)	**29.415**	**29.754**	29.488
Normalized	100%	98.86%	99.75%
Standard Deviation		1.3%	1.6%
Mobile Neural Network - SqueezeNetV1.0 (ms)	4.543	**4.552**	**4.411**

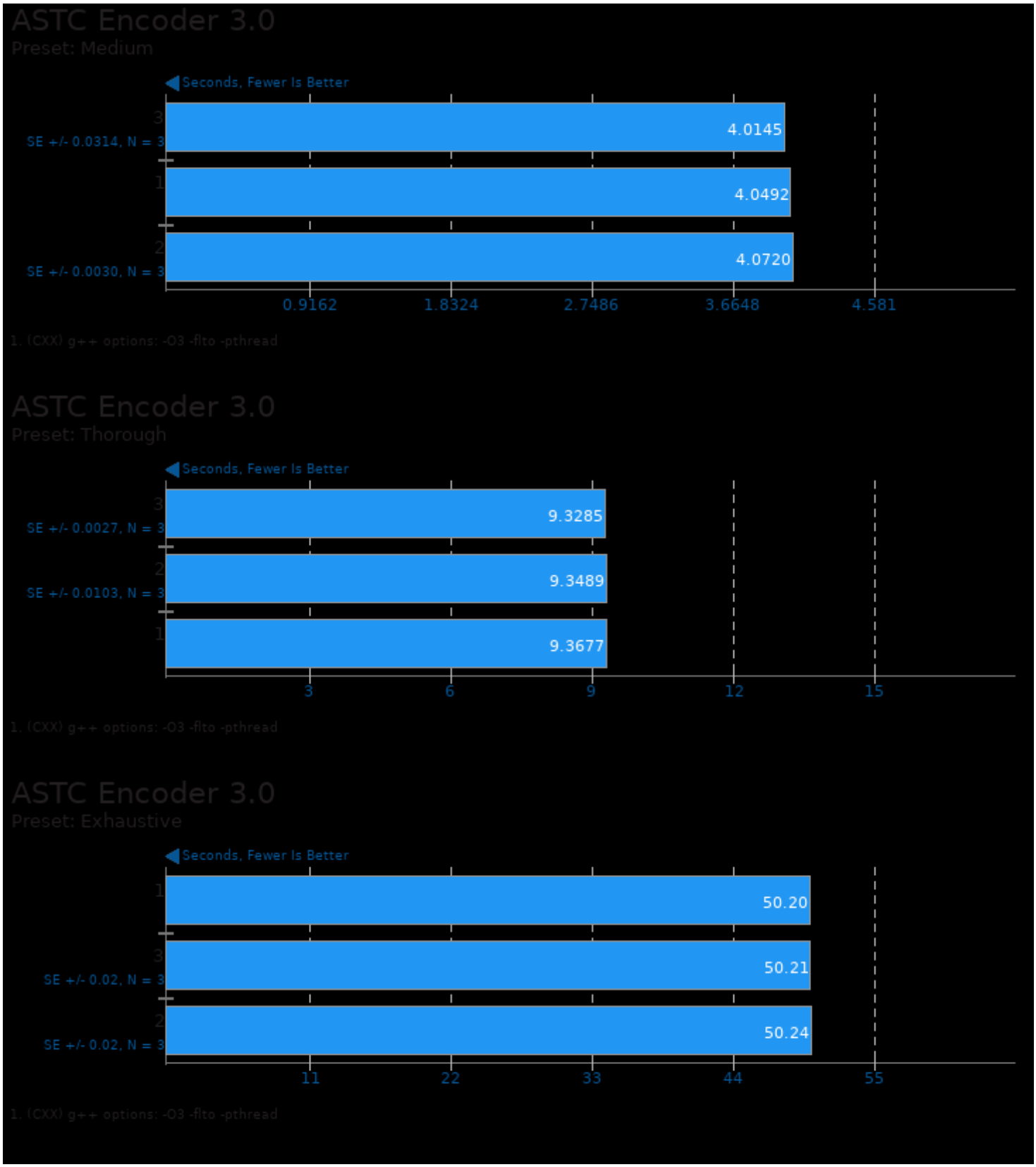
Normalized	97.09%	96.9%	100%
Standard Deviation		0.8%	1.7%
Mobile Neural Network - MobileNetV2_224	**3.151**	2.909	**2.783**
Normalized	88.32%	95.67%	100%
Standard Deviation		8.3%	0.4%
Mobile Neural Network - mobilenet-v1-1.0	3.318	**3.359**	**3.305**
Normalized	99.61%	98.39%	100%
Standard Deviation		1.7%	0.6%
Mobile Neural Network - inception-v3 (ms)	**29.905**	29.321	**28.533**
Normalized	95.41%	97.31%	100%
Standard Deviation		1%	1.4%
NAS Parallel Benchmarks - BT.C (Mop/s)	26302	**26240**	**26422**
Normalized	99.54%	99.31%	100%
Standard Deviation		0%	0.1%
NAS Parallel Benchmarks - CG.C (Mop/s)	**5554**	5559	**5627**
Normalized	98.7%	98.78%	100%
Standard Deviation		0.4%	0.1%
NAS Parallel Benchmarks - EP.C (Mop/s)	**1813**	1791	**1787**
Normalized	100%	98.8%	98.57%
Standard Deviation		2.7%	1.1%
NAS Parallel Benchmarks - EP.D (Mop/s)	**1839**	1833	**1670**
Normalized	100%	99.68%	90.8%
Standard Deviation		0.2%	3%
NAS Parallel Benchmarks - FT.C (Mop/s)	12948	**13117**	**12455**
Normalized	98.71%	100%	94.95%
Standard Deviation		0.2%	1.5%
NAS Parallel Benchmarks - LU.C (Mop/s)	**26905**	26821	**25911**
Normalized	100%	99.69%	96.31%
Standard Deviation		0.3%	0.2%
NAS Parallel Benchmarks - MG.C (Mop/s)	**11137**	11121	**10055**
Normalized	100%	99.86%	90.28%
Standard Deviation		0.1%	2.9%
NAS Parallel Benchmarks - SP.B (Mop/s)	**5354**	5291	**5127**
Normalized	100%	98.82%	95.76%
Standard Deviation		0.1%	2.9%
NAS Parallel Benchmarks - SP.C (Mop/s)	**4950**	**5048**	5031
Normalized	98.06%	100%	99.67%
Standard Deviation		0.2%	0%
NCNN - CPU - mobilenet (ms)	**15.69**	15.77	**15.78**
Normalized	100%	99.49%	99.43%
Standard Deviation		0.2%	0.5%
NCNN - CPU-v2-v2 - mobilenet-v2 (ms)	**4.3**	4.43	**4.55**
Normalized	100%	97.07%	94.51%
Standard Deviation		1.5%	3.9%
NCNN - CPU-v3-v3 - mobilenet-v3 (ms)	**3.39**	**3.48**	3.47
Normalized	100%	97.41%	97.69%
Standard Deviation		1.2%	1%
NCNN - CPU - shufflenet-v2 (ms)	**3.15**	**3.32**	3.30
Normalized	100%	94.88%	95.45%
Standard Deviation		1.7%	2.4%
NCNN - CPU - mnasnet (ms)	**3.34**	3.37	**3.41**
Normalized	100%	99.11%	97.95%
Standard Deviation		2.5%	1.2%
NCNN - CPU - efficientnet-b0 (ms)	**5.33**	**5.47**	**5.47**
Normalized	100%	97.44%	97.44%

Standard Deviation		1.7%	1%
NCNN - CPU - blazeface (ms)	**1.42**	**1.44**	**1.44**
Normalized	100%	98.61%	98.61%
Standard Deviation		2.2%	2%
NCNN - CPU - googlenet (ms)	**12.61**	**12.72**	12.63
Normalized	100%	99.14%	99.84%
Standard Deviation		0.4%	0.3%
NCNN - CPU - vgg16 (ms)	**62.06**	62.08	**62.43**
Normalized	100%	99.97%	99.41%
Standard Deviation		0.1%	0.1%
NCNN - CPU - resnet18 (ms)	**13.71**	**13.68**	**13.68**
Normalized	99.78%	100%	100%
Standard Deviation		0.3%	0.2%
NCNN - CPU - alexnet (ms)	**12.34**	12.33	**12.30**
Normalized	99.68%	99.76%	100%
Standard Deviation		0.3%	0.1%
NCNN - CPU - resnet50 (ms)	**22.5**	**22.50**	**22.52**
Normalized	100%	100%	99.91%
Standard Deviation		0.2%	0.4%
NCNN - CPU - yolov4-tiny (ms)	**23.09**	**23.22**	23.19
Normalized	100%	99.44%	99.57%
Standard Deviation		0.2%	0.2%
NCNN - CPU - squeezenet_ssd (ms)	17.57	17.57	17.57
Standard Deviation		0.2%	0.3%
NCNN - CPU - regnety_400m (ms)	**8.43**	**8.64**	8.53
Normalized	100%	97.57%	98.83%
Standard Deviation		0.2%	0.9%
srsRAN - OFDM_Test (Samples / Second)	127100000	**122966667**	**133566667**
Normalized	95.16%	92.06%	100%
Standard Deviation		2.2%	0.6%
srsRAN - 4.P.1.P.M.6.Q (eNb Mb/s)	418.5	**414.1**	**431.9**
Normalized	96.9%	95.88%	100%
Standard Deviation		0.5%	0.2%
srsRAN - 4.P.1.P.M.6.Q (UE Mb/s)	138.4	**136.9**	**143.3**
Normalized	96.58%	95.53%	100%
Standard Deviation		0.6%	0.2%
srsRAN - 4.P.1.P.S.6.Q (eNb Mb/s)	423.4	**413.2**	**431.5**
Normalized	98.12%	95.76%	100%
Standard Deviation		0.6%	1.5%
srsRAN - 4.P.1.P.S.6.Q (UE Mb/s)	244.1	**238.6**	**248.1**
Normalized	98.39%	96.17%	100%
Standard Deviation		0.4%	1.5%
srsRAN - 4.P.1.P.M.2.Q (eNb Mb/s)	461.1	**456.3**	**472.3**
Normalized	97.63%	96.61%	100%
Standard Deviation		0.3%	0.8%
srsRAN - 4.P.1.P.M.2.Q (UE Mb/s)	151.7	**150.5**	**155.5**
Normalized	97.56%	96.78%	100%
Standard Deviation		0.6%	1.1%
srsRAN - 4.P.1.P.S.2.Q (eNb Mb/s)	461.2	**457.5**	**476.5**
Normalized	96.79%	96.01%	100%
Standard Deviation		0.4%	0.3%
srsRAN - 4.P.1.P.S.2.Q (UE Mb/s)	292.3	**288.8**	**301.8**
Normalized	96.85%	95.69%	100%
Standard Deviation		0.1%	0.4%
srsRAN - 5.P.T.5.P.S.6.Q (eNb Mb/s)	142.2	**142.1**	**146.9**

Normalized	96.8%	96.73%	100%
Standard Deviation		0.1%	0.2%
srsRAN - 5.P.T.5.P.S.6.Q (UE Mb/s)	68	**67.8**	**70.4**
Normalized	96.59%	96.31%	100%
Standard Deviation		0.3%	0.1%
srsRAN - 5.P.T.2.P.S.2.Q (eNb Mb/s)	158.3	**156.4**	**161.0**
Normalized	98.32%	97.14%	100%
Standard Deviation		0.1%	0.9%
srsRAN - 5.P.T.2.P.S.2.Q (UE Mb/s)	94.3	**93.2**	**96.2**
Normalized	98.02%	96.88%	100%
Standard Deviation		0.2%	1.3%
SVT-AV1 - Preset 4 - Bosphorus 4K (FPS)	1.631	**1.629**	**1.634**
Normalized	99.82%	99.69%	100%
Standard Deviation		0.4%	0.3%
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)	**18.379**	18.248	**18.217**
Normalized	100%	99.29%	99.12%
Standard Deviation		0.5%	0.2%
SVT-AV1 - Preset 4 - Bosphorus 1080p (FPS)	**5.431**	5.401	**5.396**
Normalized	100%	99.45%	99.36%
Standard Deviation		1.1%	0.8%
SVT-AV1 - Preset 8 - Bosphorus 1080p (FPS)	69.441	**69.231**	**70.032**
Normalized	99.16%	98.86%	100%
Standard Deviation		0.4%	0.3%
Timed FFmpeg Compilation - Time To Compile (sec)	**48.51**	**48.332**	48.405
Normalized	99.63%	100%	99.85%
Standard Deviation		0.2%	0.3%
Timed GDB GNU Debugger Compilation - Time To Compile (sec)	**56.595**	**56.064**	56.263
Normalized	99.06%	100%	99.65%
Standard Deviation		0.3%	0.5%
TNN - CPU - DenseNet (ms)	2870	**2882**	**2852**
Normalized	99.37%	98.94%	100%
Standard Deviation		3.7%	0.1%
TNN - CPU - MobileNet v2 (ms)	**286.226**	**284.087**	285.361
Normalized	99.25%	100%	99.55%
Standard Deviation		0.3%	1.3%
TNN - CPU - SqueezeNet v2 (ms)	**58.661**	58.722	**58.734**
Normalized	100%	99.9%	99.88%
Standard Deviation		0.1%	0.1%
TNN - CPU - SqueezeNet v1.1 (ms)	**262.424**	**261.693**	261.967
Normalized	99.72%	100%	99.9%
Standard Deviation		0%	0%
VP9 libvpx Encoding - Speed 0 - Bosphorus 4K (FPS)	**6.32**	**6.38**	**6.38**
Normalized	99.06%	100%	100%
Standard Deviation		0.1%	0.9%
VP9 libvpx Encoding - Speed 5 - Bosphorus 4K (FPS)	15.28	**15.40**	**15.24**
Normalized	99.22%	100%	98.96%
Standard Deviation		2%	1.3%
VP9 libvpx Encoding - Speed 0 - Bosphorus 1080p (FPS)	**14.18**	**14.19**	**14.19**
Normalized	99.93%	100%	100%
Standard Deviation		0.2%	0.4%

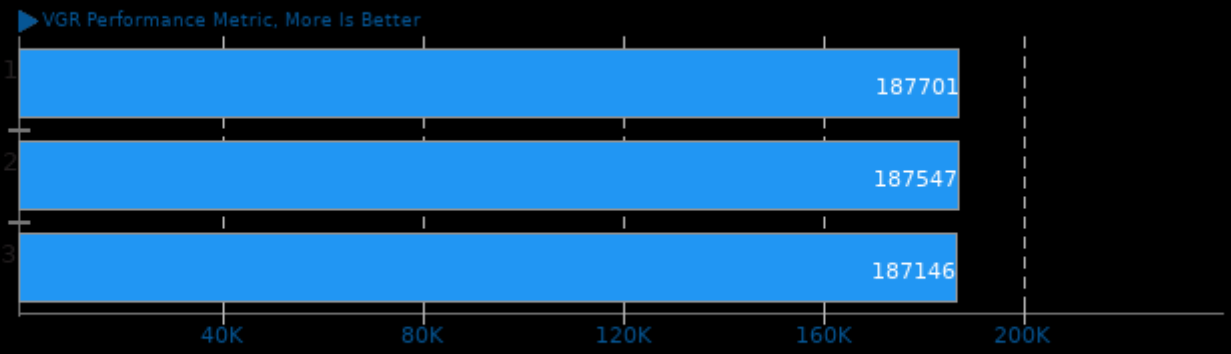
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VP9 libvpx Encoding - Speed 5 - Bosphorus 1080p (FPS)	30.42	**30.99**	**30.39**
Normalized	98.16%	100%	98.06%
Standard Deviation		0.2%	0.2%
Zstd Compression - 3 - Compression Speed (MB/s)	**2271**	**2348**	2307
Normalized	96.73%	100%	98.26%
Standard Deviation		0.9%	1.4%
Zstd Compression - 3 - D.S (MB/s)	**4137**	**4263**	4249
Normalized	97.03%	100%	99.66%
Standard Deviation		0.1%	0.6%
Zstd Compression - 8 - Compression Speed (MB/s)	**177.6**	**189.0**	186.3
Normalized	93.97%	100%	98.57%
Standard Deviation		3%	2.9%
Zstd Compression - 8 - D.S (MB/s)	**4157**	**4318**	4244
Normalized	96.27%	100%	98.27%
Standard Deviation		1.4%	0.9%
Zstd Compression - 19 - Compression Speed (MB/s)	**32.9**	33.0	**33.3**
Normalized	98.8%	99.1%	100%
Standard Deviation		1.6%	0%
Zstd Compression - 19 - D.S (MB/s)	**3870**	3813	**3758**
Normalized	100%	98.51%	97.1%
Standard Deviation		1.1%	0.3%
Zstd Compression - 3, Long Mode - Compression Speed (MB/s)	**1320**	**1308**	1312
Normalized	100%	99.1%	99.39%
Standard Deviation		0.6%	0.6%
Zstd Compression - 3, Long Mode - D.S	**4556**	**4499**	4546
Normalized	100%	98.74%	99.79%
Standard Deviation		0.5%	0.2%
Zstd Compression - 8, Long Mode - Compression Speed (MB/s)	528.8	**546.5**	**527.3**
Normalized	96.76%	100%	96.49%
Standard Deviation		2.8%	3%
Zstd Compression - 8, Long Mode - D.S	4653	**4654**	**4644**
Normalized	99.99%	100%	99.79%
Standard Deviation		0.1%	0.4%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	**29.7**	29.3	**29.0**
Normalized	100%	98.65%	97.64%
Standard Deviation		0.5%	1.6%
Zstd Compression - 19, Long Mode - D.S (MB/s)	3836	**3824**	**3885**
Normalized	98.74%	98.43%	100%
Standard Deviation		0.5%	1.6%


ASTC Encoder 3.0
Preset: Medium
Seconds, Fewer Is Better
3
SE +/- 0.0314, N = 3
4.0145
1
4.0492
2
SE +/- 0.0030, N = 3
4.0720
0.9162
1.8324
2.7486
3.6648
4.581
1. (CXX) g++ options: -O3 -flto -pthread
ASTC Encoder 3.0
Preset: Thorough
Seconds, Fewer Is Better
3
SE +/- 0.0027, N = 3
9.3285
2
SE +/- 0.0103, N = 3
9.3489
1
9.3677
3
6
9
12
15
1. (CXX) g++ options: -O3 -flto -pthread
ASTC Encoder 3.0
Preset: Exhaustive
Seconds, Fewer Is Better
1
50.20
3
SE +/- 0.02, N = 3
50.21
2
SE +/- 0.02, N = 3
50.24
11
22
33
44
55
1. (CXX) g++ options: -O3 -flto -pthread

BRL-CAD 7.32.2

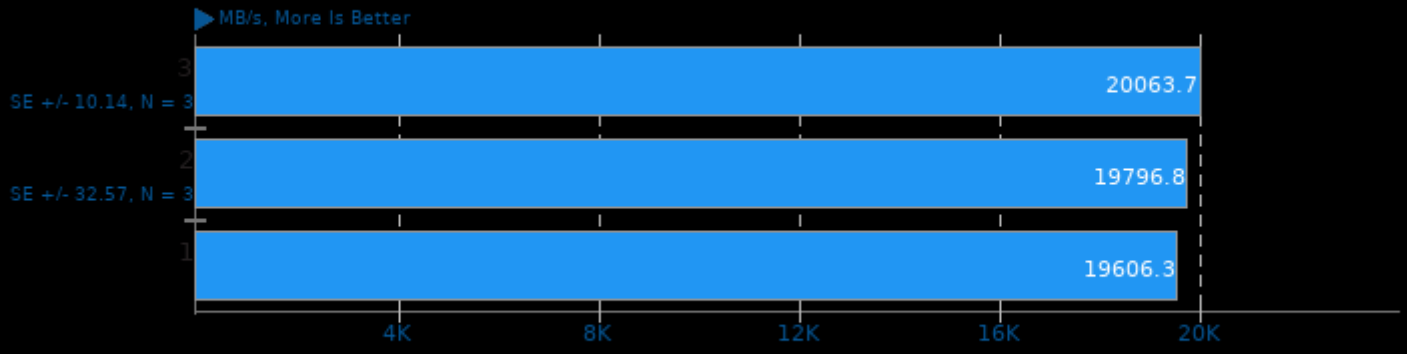
VGR Performance Metric



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

C-Blosc 2.0

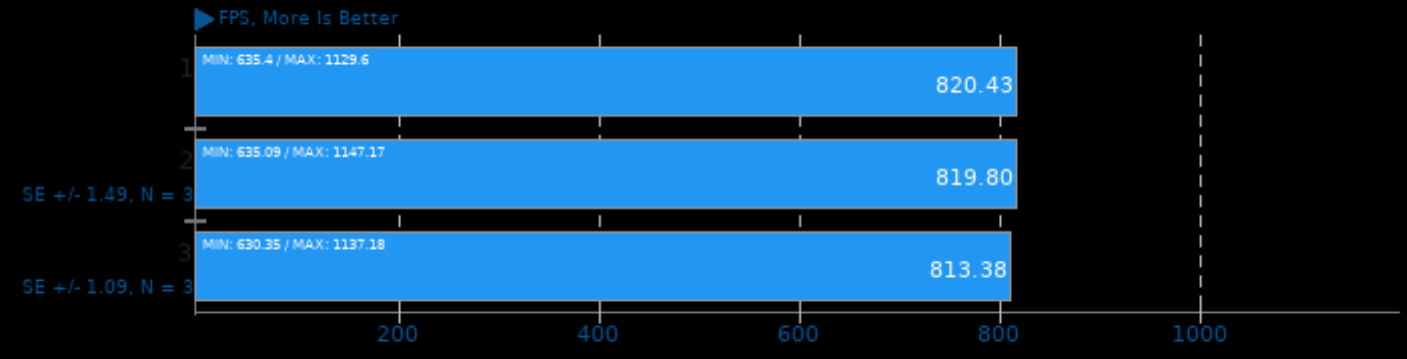
Compressor: blosclz



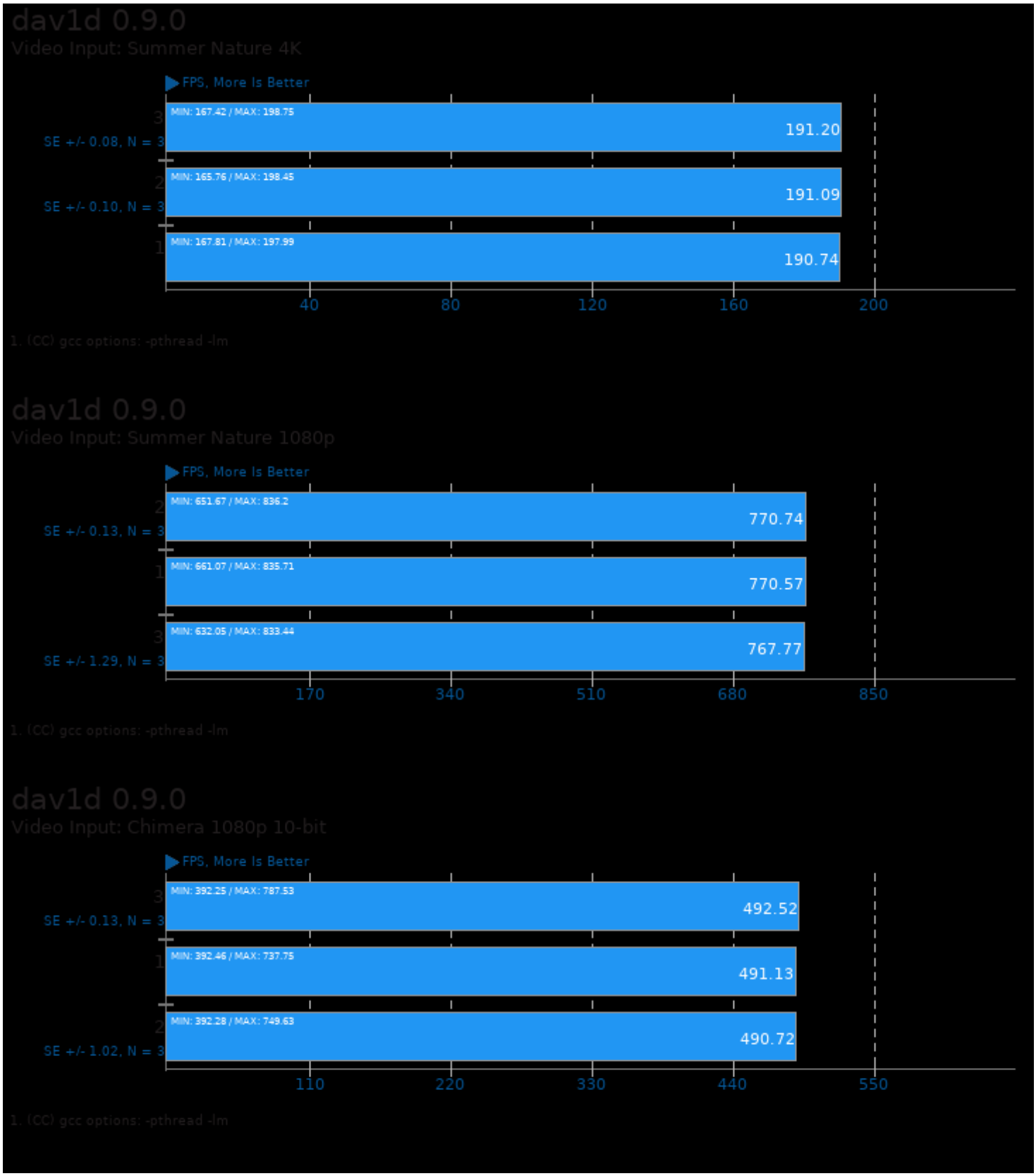
1. (CC) gcc options: -std=gnu99 -O3 -pthread -lrt -lm

dav1d 0.9.0

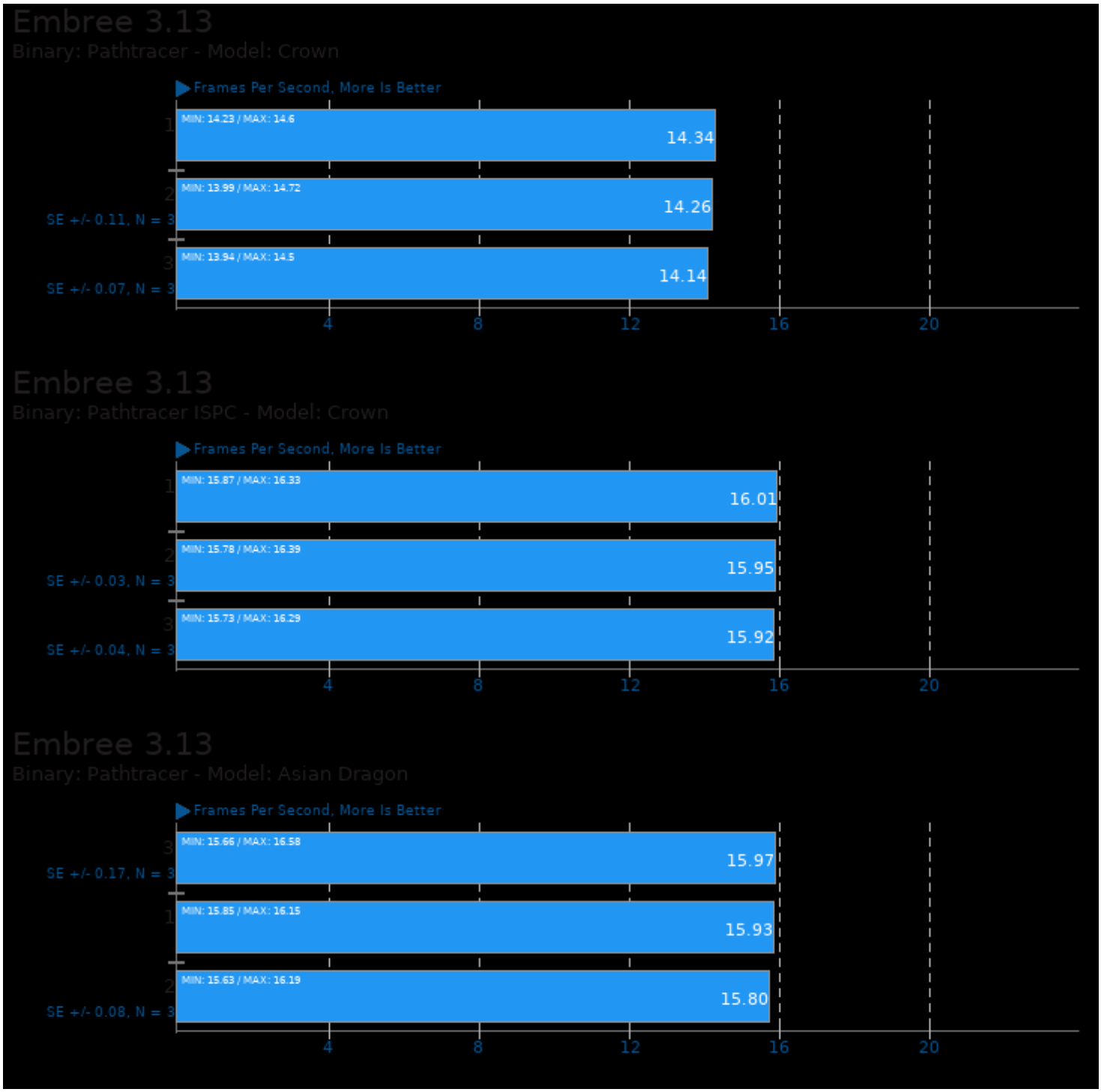
Video Input: Chimera 1080p



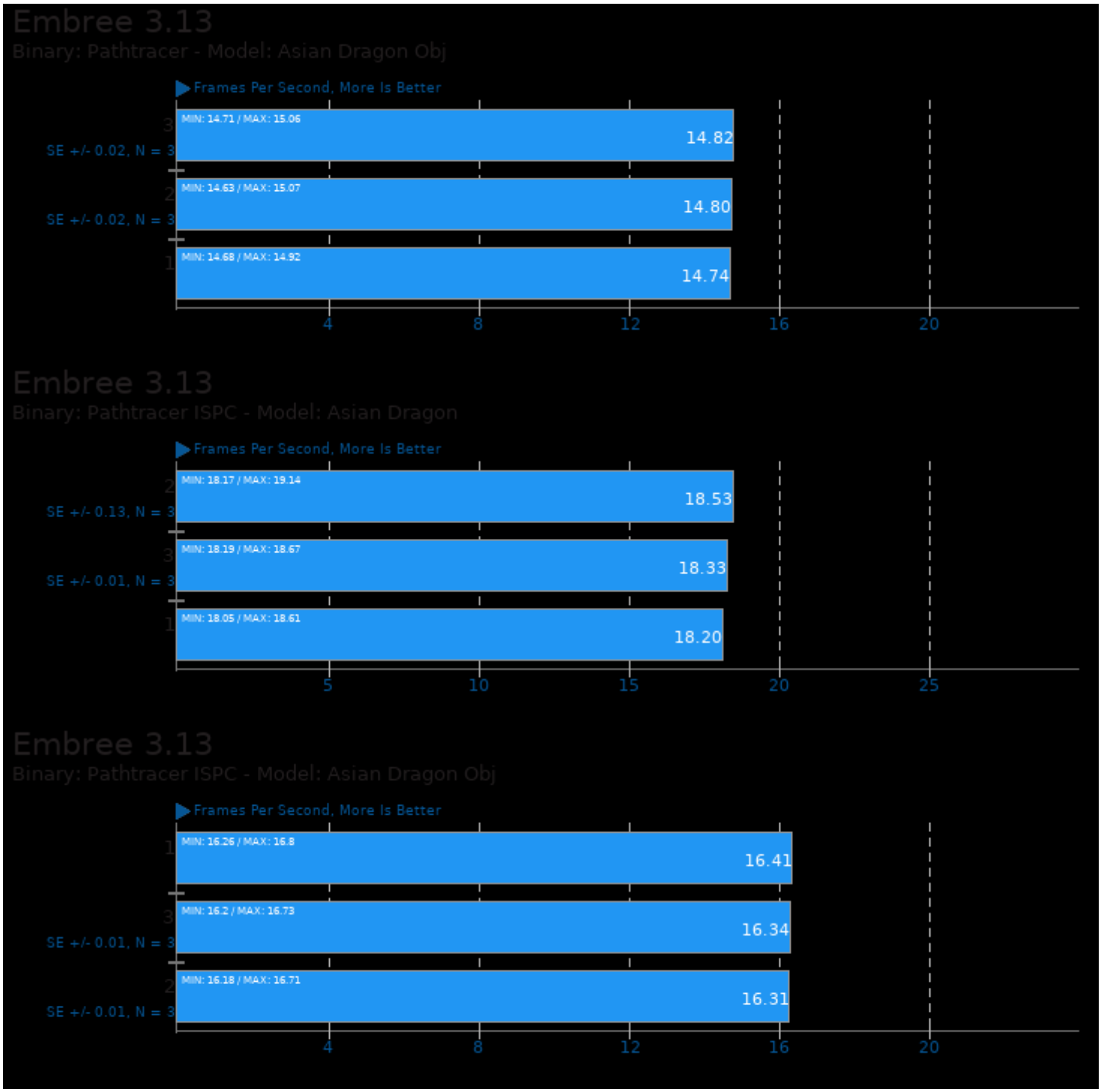
1. (CC) gcc options: -pthread -lm

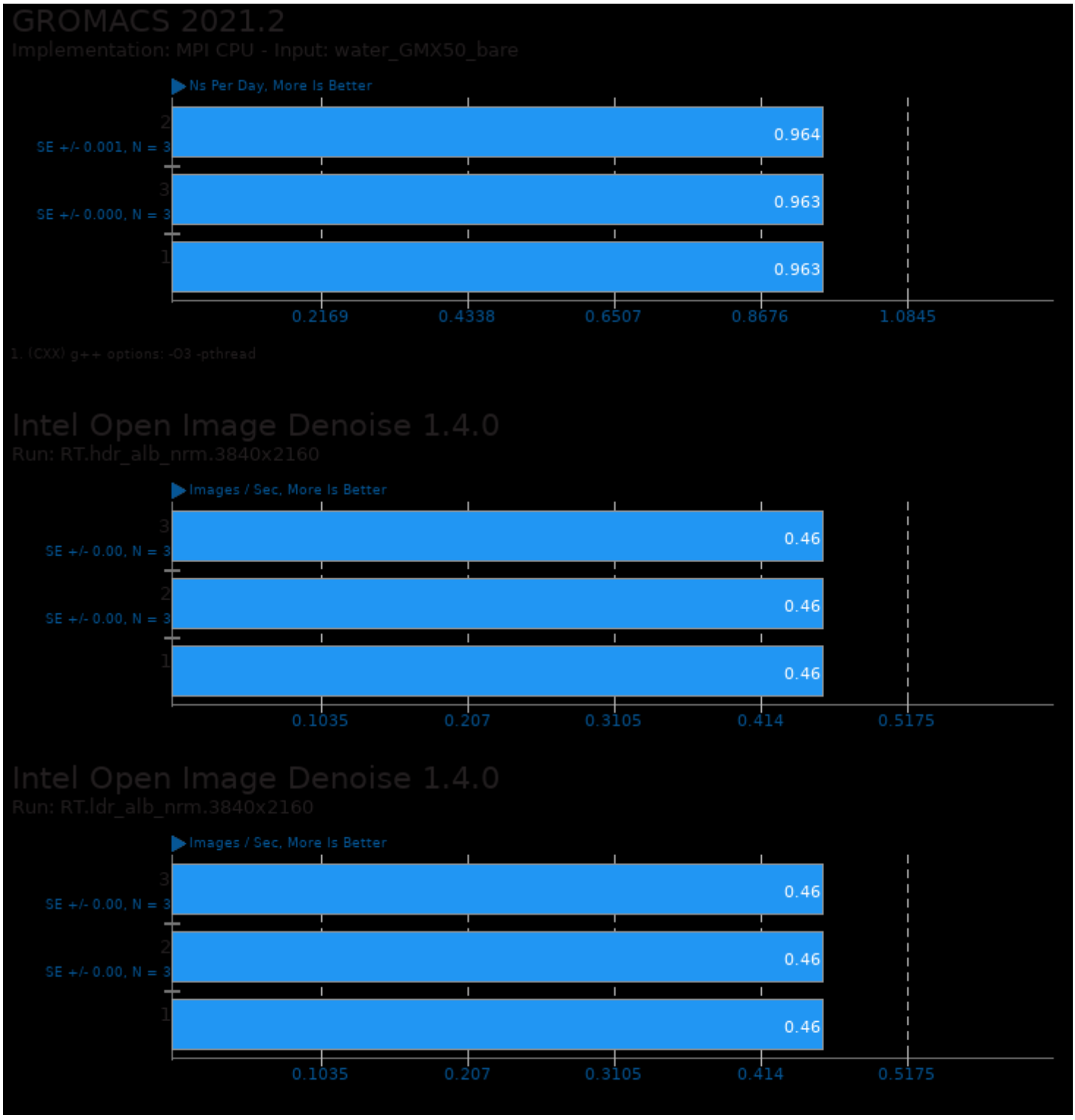

dav1d 0.9.0
Video Input: Summer Nature 4K
FPS, More Is Better
3
MIN: 167.42 / MAX: 198.75
191.20
SE +/- 0.08, N = 3
2
MIN: 165.76 / MAX: 198.45
191.09
SE +/- 0.10, N = 3
1
MIN: 167.81 / MAX: 197.99
190.74
40
80
120
160
200
1. (CC) gcc options: -pthread -lm
dav1d 0.9.0
Video Input: Summer Nature 1080p
FPS, More Is Better
2
MIN: 651.67 / MAX: 836.2
770.74
SE +/- 0.13, N = 3
1
MIN: 661.07 / MAX: 835.71
770.57
3
MIN: 632.05 / MAX: 833.44
767.77
SE +/- 1.29, N = 3
170
340
510
680
850
1. (CC) gcc options: -pthread -lm
dav1d 0.9.0
Video Input: Chimera 1080p 10-bit
FPS, More Is Better
3
MIN: 392.25 / MAX: 787.53
492.52
SE +/- 0.13, N = 3
1
MIN: 392.46 / MAX: 737.75
491.13
2
MIN: 392.28 / MAX: 749.63
490.72
SE +/- 1.02, N = 3
110
220
330
440
550
1. (CC) gcc options: -pthread -lm

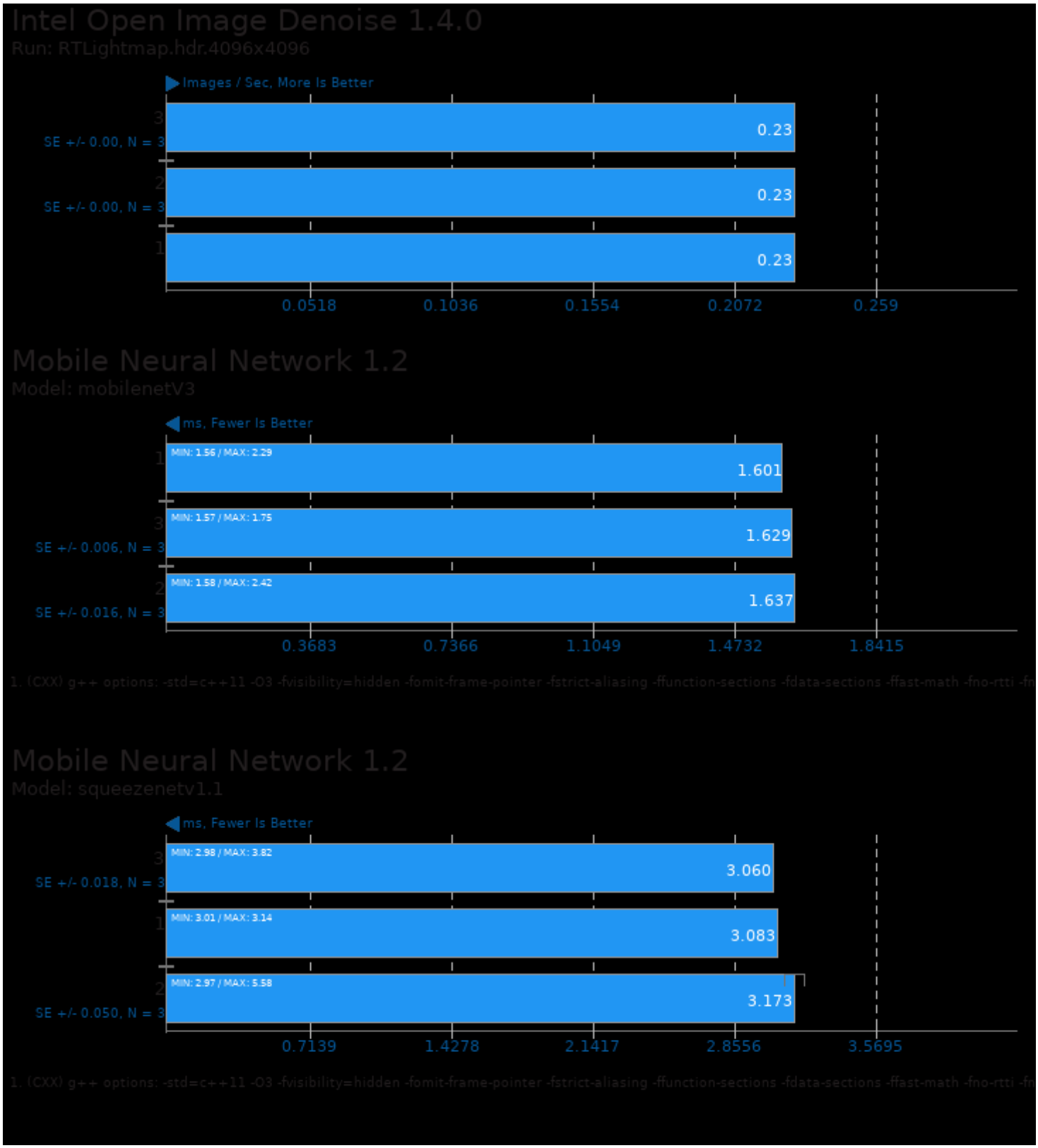
10900k june

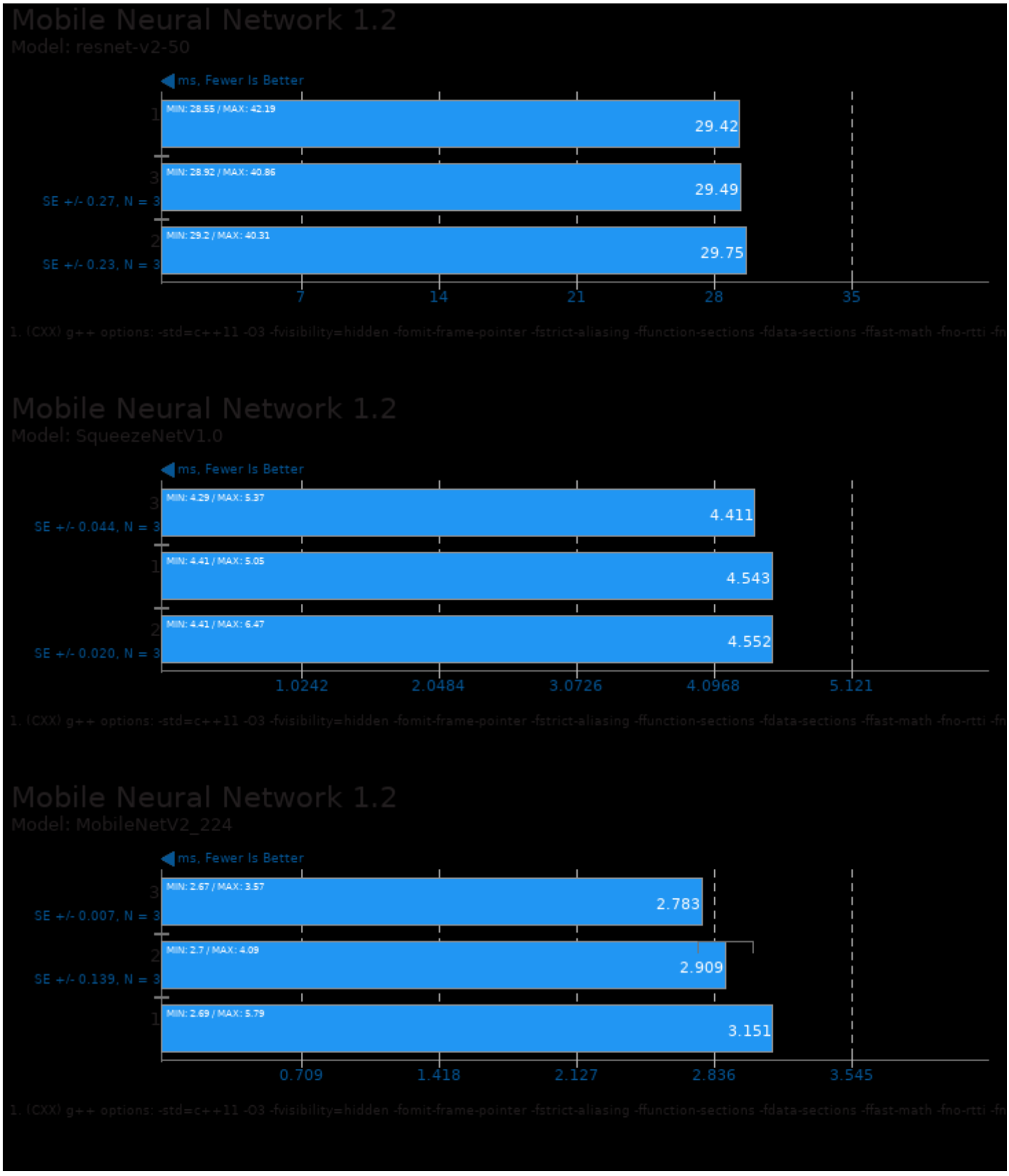

Embree 3.13
Binary: Pathtracer - Model: Crown
Frames Per Second, More Is Better
1
MIN: 14.23 / MAX: 14.6
14.34
2
MIN: 13.99 / MAX: 14.72
14.26
SE +/- 0.11, N = 3
3
MIN: 13.94 / MAX: 14.5
14.14
SE +/- 0.07, N = 3
4
8
12
16
20
Embree 3.13
Binary: Pathtracer ISPC - Model: Crown
Frames Per Second, More Is Better
1
MIN: 15.87 / MAX: 16.33
16.01
2
MIN: 15.78 / MAX: 16.39
15.95
SE +/- 0.03, N = 3
3
MIN: 15.73 / MAX: 16.29
15.92
SE +/- 0.04, N = 3
4
8
12
16
20
Embree 3.13
Binary: Pathtracer - Model: Asian Dragon
Frames Per Second, More Is Better
3
MIN: 15.66 / MAX: 16.58
15.97
SE +/- 0.17, N = 3
1
MIN: 15.85 / MAX: 16.15
15.93
2
MIN: 15.63 / MAX: 16.19
15.80
SE +/- 0.08, N = 3
4
8
12
16
20

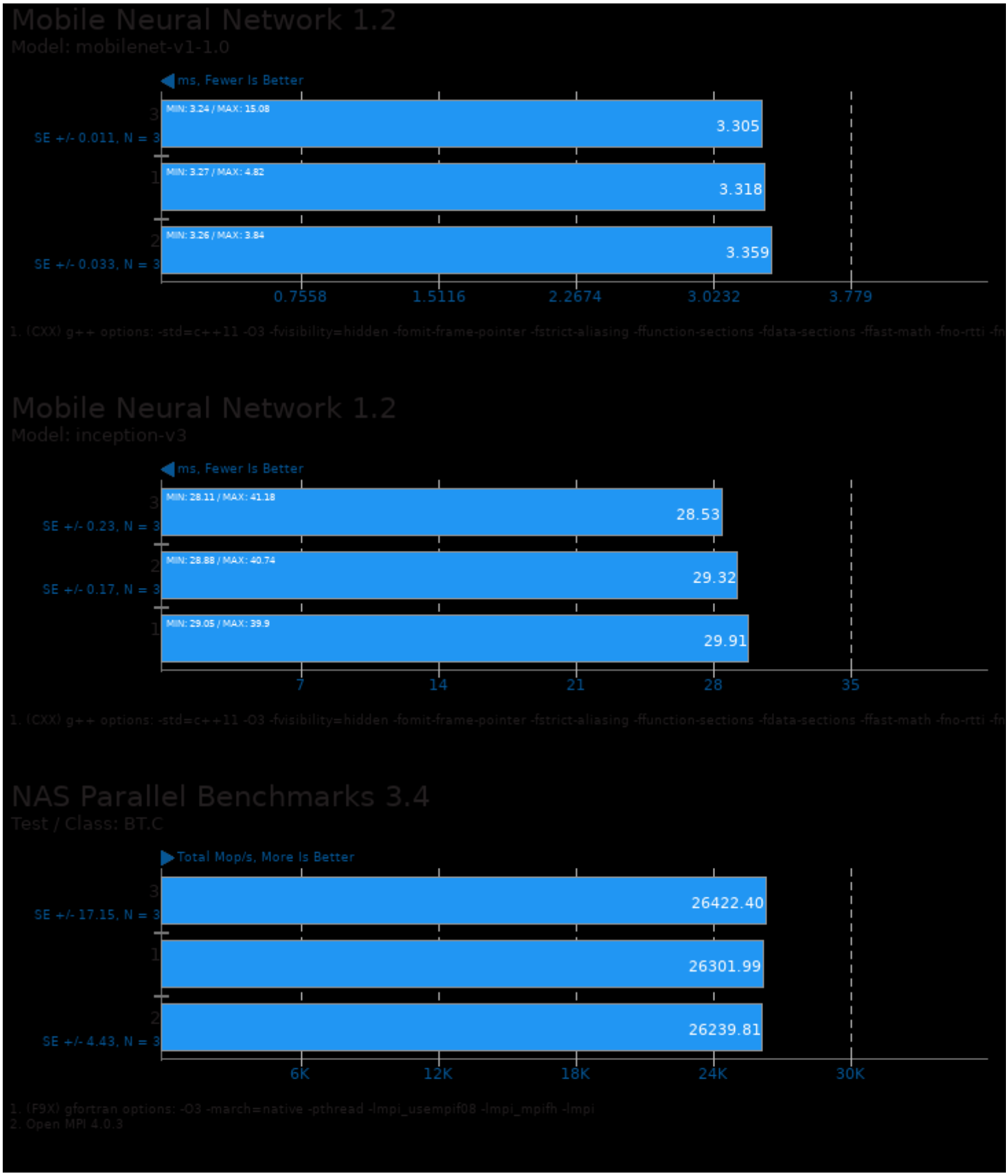
10900k june

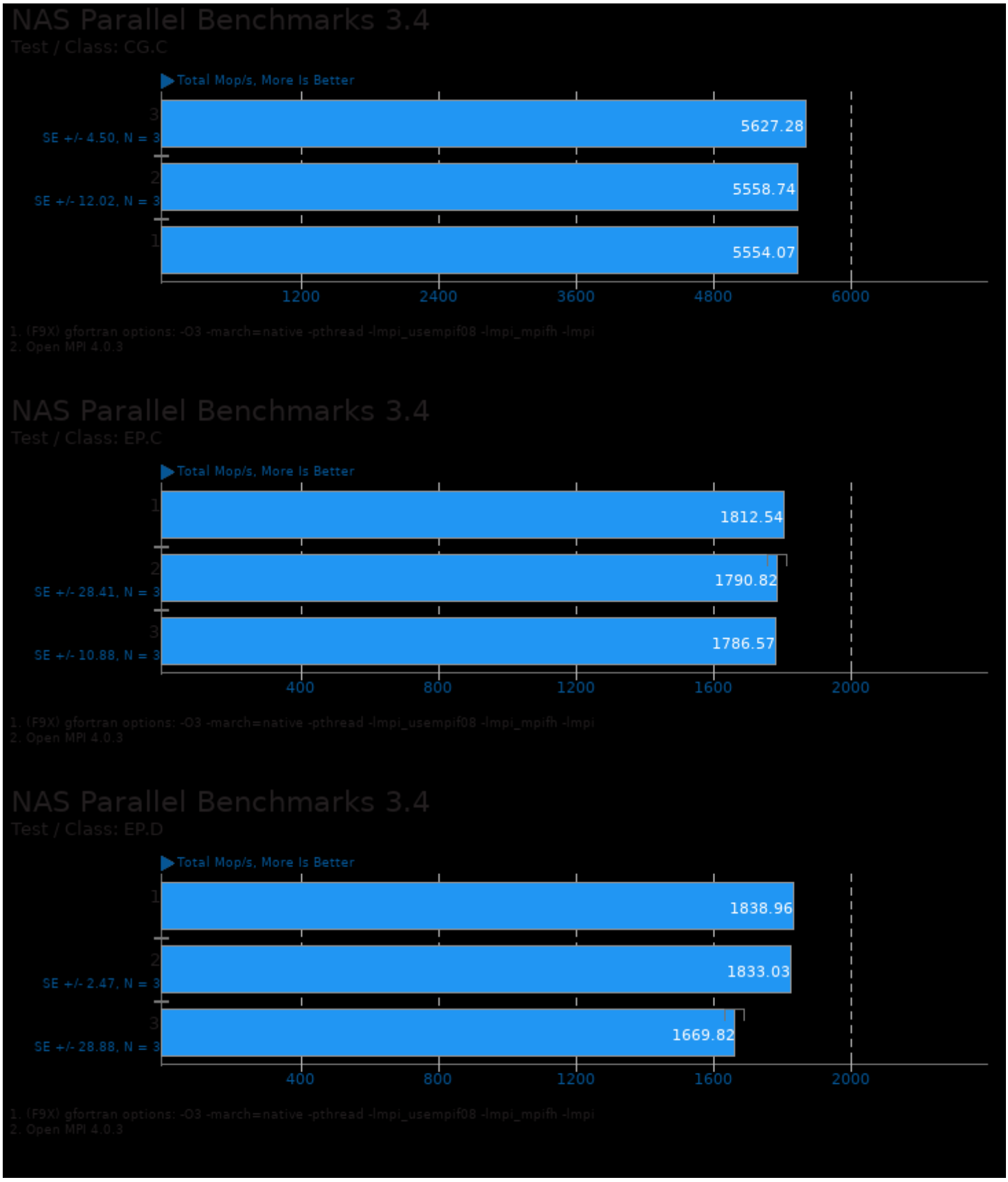

Embree 3.13
Binary: Pathtracer - Model: Asian Dragon Obj
Frames Per Second, More Is Better
3
SE +/- 0.02, N = 3
MIN: 14.71 / MAX: 15.06
14.82
2
SE +/- 0.02, N = 3
MIN: 14.63 / MAX: 15.07
14.80
1
MIN: 14.68 / MAX: 14.92
14.74
4
8
12
16
20
Embree 3.13
Binary: Pathtracer ISPC - Model: Asian Dragon
Frames Per Second, More Is Better
2
SE +/- 0.13, N = 3
MIN: 18.17 / MAX: 19.14
18.53
3
SE +/- 0.01, N = 3
MIN: 18.19 / MAX: 18.67
18.33
1
MIN: 18.05 / MAX: 18.61
18.20
5
10
15
20
25
Embree 3.13
Binary: Pathtracer ISPC - Model: Asian Dragon Obj
Frames Per Second, More Is Better
1
MIN: 16.26 / MAX: 16.8
16.41
3
SE +/- 0.01, N = 3
MIN: 16.2 / MAX: 16.73
16.34
2
SE +/- 0.01, N = 3
MIN: 16.18 / MAX: 16.71
16.31
4
8
12
16
20

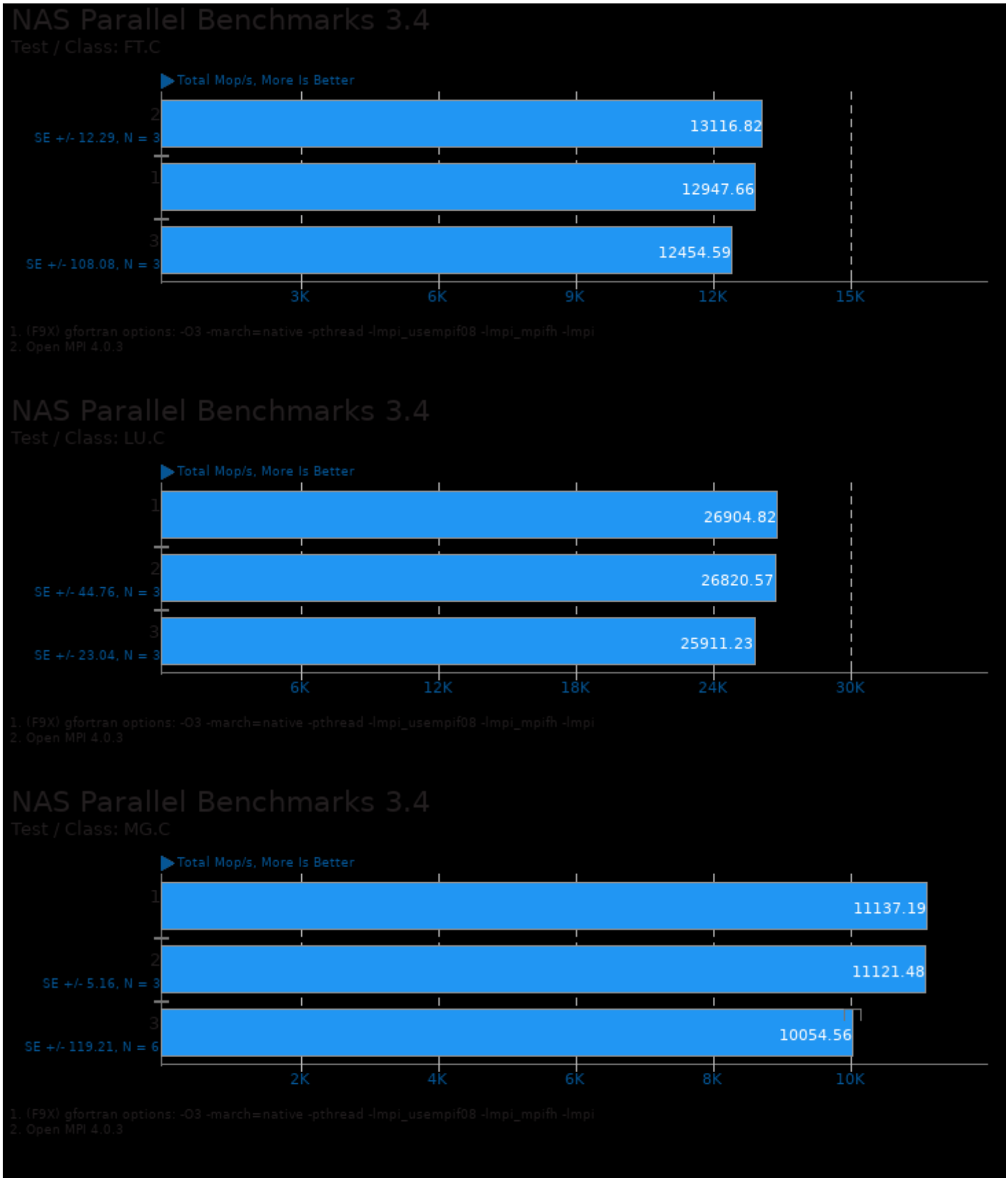

GROMACS 2021.2
Implementation: MPI CPU - Input: water_GMX50_bare
Ns Per Day, More Is Better
2
SE +/- 0.001, N = 3
0.964
3
SE +/- 0.000, N = 3
0.963
1
0.963
0.2169
0.4338
0.6507
0.8676
1.0845
1. (CXX) g++ options: -O3 -pthread
Intel Open Image Denoise 1.4.0
Run: RT.hdr_alb_nrm.3840x2160
Images / Sec, More Is Better
3
SE +/- 0.00, N = 3
0.46
2
SE +/- 0.00, N = 3
0.46
1
0.46
0.1035
0.207
0.3105
0.414
0.5175
Intel Open Image Denoise 1.4.0
Run: RT.ldr_alb_nrm.3840x2160
Images / Sec, More Is Better
3
SE +/- 0.00, N = 3
0.46
2
SE +/- 0.00, N = 3
0.46
1
0.46
0.1035
0.207
0.3105
0.414
0.5175


Intel Open Image Denoise 1.4.0
Run: RTLightmap.hdr.4096x4096
Images / Sec, More Is Better
SE +/- 0.00, N = 3
0.23
SE +/- 0.00, N = 3
0.23
0.23
0.0518
0.1036
0.1554
0.2072
0.259
Mobile Neural Network 1.2
Model: mobilenetV3
ms, Fewer Is Better
MIN: 1.56 / MAX: 2.29
1.601
SE +/- 0.006, N = 3
MIN: 1.57 / MAX: 1.75
1.629
SE +/- 0.016, N = 3
MIN: 1.58 / MAX: 2.42
1.637
0.3683
0.7366
1.1049
1.4732
1.8415
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti
Mobile Neural Network 1.2
Model: squeezenetv1.1
ms, Fewer Is Better
MIN: 2.98 / MAX: 3.82
3.060
SE +/- 0.018, N = 3
MIN: 3.01 / MAX: 3.14
3.083
MIN: 2.97 / MAX: 5.58
3.173
SE +/- 0.050, N = 3
0.7139
1.4278
2.1417
2.8556
3.5695
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti


Mobile Neural Network 1.2
Model: resnet-v2-50
ms, Fewer Is Better
MIN: 28.55 / MAX: 42.19
29.42
MIN: 28.92 / MAX: 40.86
29.49
SE +/- 0.27, N = 3
MIN: 29.2 / MAX: 40.31
29.75
SE +/- 0.23, N = 3
7
14
21
28
35
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 1.2
Model: SqueezeNetV1.0
ms, Fewer Is Better
MIN: 4.29 / MAX: 5.37
4.411
SE +/- 0.044, N = 3
MIN: 4.41 / MAX: 5.05
4.543
MIN: 4.41 / MAX: 6.47
4.552
SE +/- 0.020, N = 3
1.0242
2.0484
3.0726
4.0968
5.121
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 1.2
Model: MobileNetV2_224
ms, Fewer Is Better
MIN: 2.67 / MAX: 3.57
2.783
SE +/- 0.007, N = 3
MIN: 2.7 / MAX: 4.09
2.909
SE +/- 0.139, N = 3
MIN: 2.69 / MAX: 5.79
3.151
0.709
1.418
2.127
2.836
3.545
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv

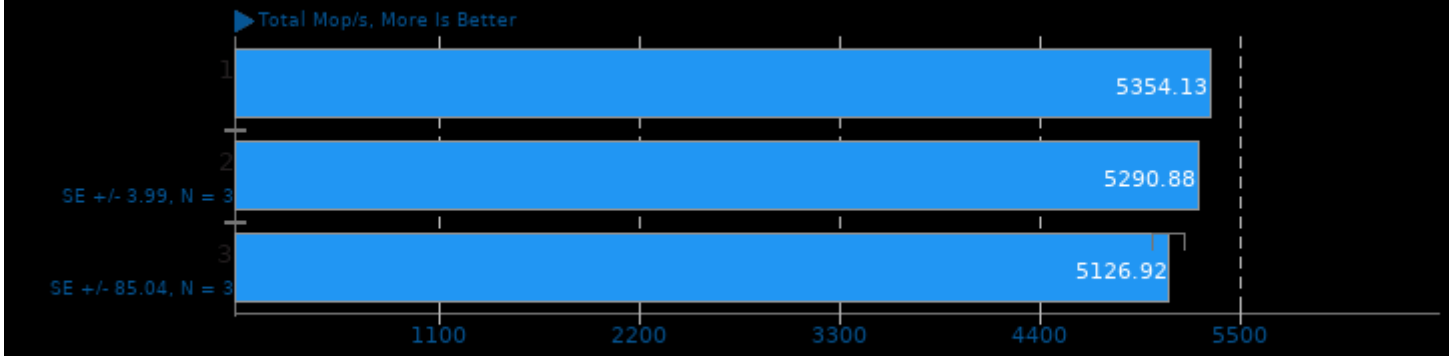

Mobile Neural Network 1.2
Model: mobilenet-v1-1.0
ms, Fewer Is Better
MIN: 3.24 / MAX: 15.08
3.305
SE +/- 0.011, N = 3
MIN: 3.27 / MAX: 4.82
3.318
MIN: 3.26 / MAX: 3.84
3.359
SE +/- 0.033, N = 3
0.7558
1.5116
2.2674
3.0232
3.779
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr
Mobile Neural Network 1.2
Model: inception-v3
ms, Fewer Is Better
MIN: 28.11 / MAX: 41.18
28.53
SE +/- 0.23, N = 3
MIN: 28.88 / MAX: 40.74
29.32
SE +/- 0.17, N = 3
MIN: 29.05 / MAX: 39.9
29.91
7
14
21
28
35
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fr
NAS Parallel Benchmarks 3.4
Test / Class: BT.C
Total Mop/s, More Is Better
26422.40
SE +/- 17.15, N = 3
26301.99
26239.81
SE +/- 4.43, N = 3
6K
12K
18K
24K
30K
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
Total Mop/s, More Is Better
3
SE +/- 4.50, N = 3
5627.28
2
SE +/- 12.02, N = 3
5558.74
1
5554.07
1200
2400
3600
4800
6000
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
Total Mop/s, More Is Better
1
1812.54
2
SE +/- 28.41, N = 3
1790.82
3
SE +/- 10.88, N = 3
1786.57
400
800
1200
1600
2000
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
Total Mop/s, More Is Better
1
1838.96
2
SE +/- 2.47, N = 3
1833.03
3
SE +/- 28.88, N = 3
1669.82
400
800
1200
1600
2000
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
Total Mop/s, More Is Better
13116.82
12947.66
12454.59
SE +/- 12.29, N = 3
SE +/- 108.08, N = 3
3K
6K
9K
12K
15K
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
Total Mop/s, More Is Better
26904.82
26820.57
25911.23
SE +/- 44.76, N = 3
SE +/- 23.04, N = 3
6K
12K
18K
24K
30K
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
Total Mop/s, More Is Better
11137.19
11121.48
10054.56
SE +/- 5.16, N = 3
SE +/- 119.21, N = 6
2K
4K
6K
8K
10K
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 4.0.3

NAS Parallel Benchmarks 3.4

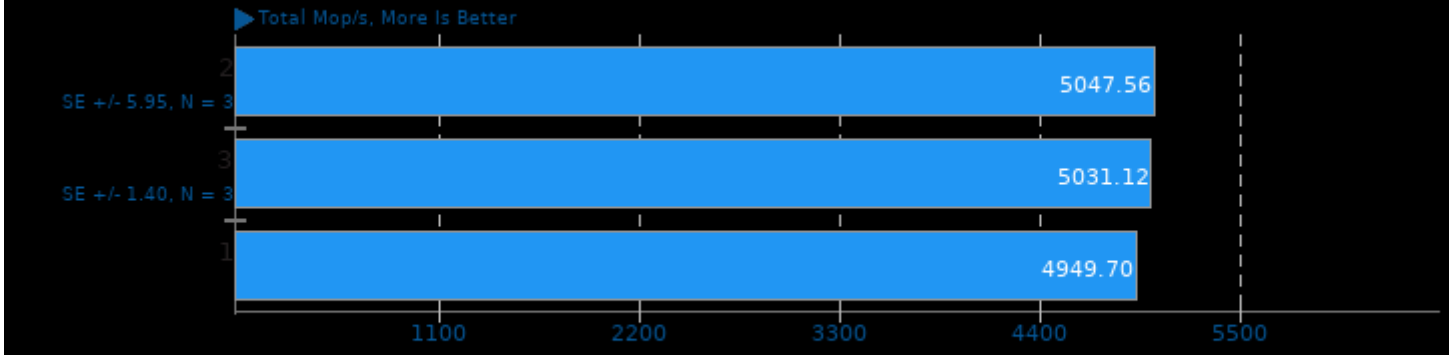
Test / Class: SP.B



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

NAS Parallel Benchmarks 3.4

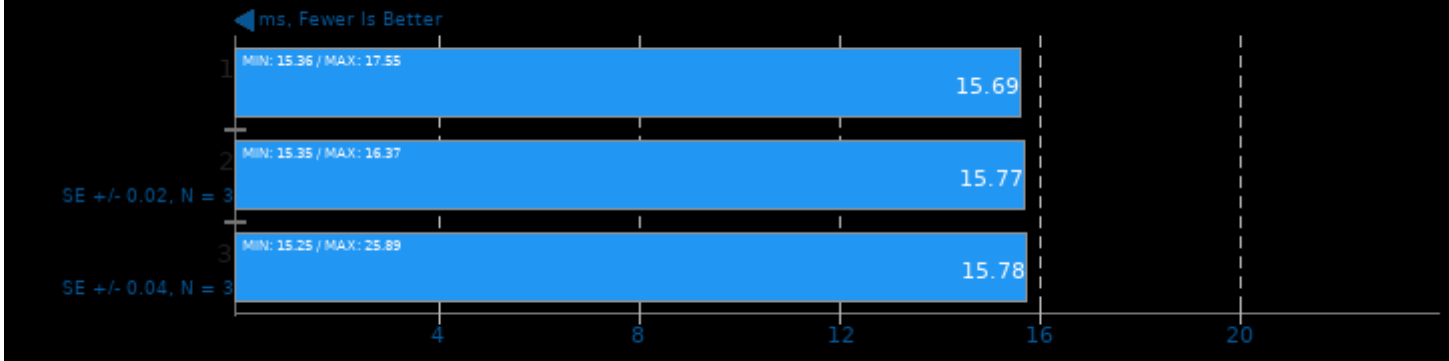
Test / Class: SP.C



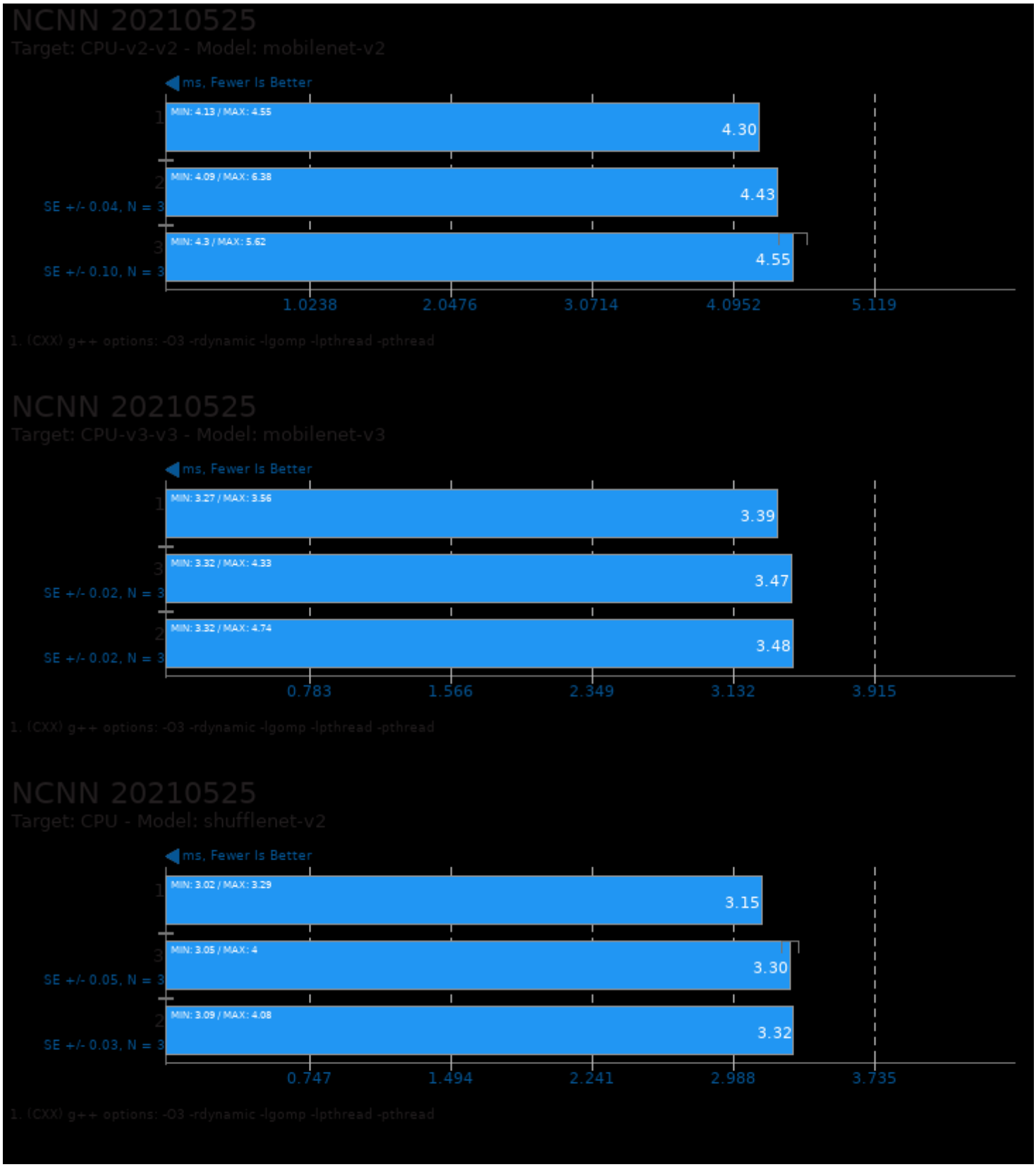
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 4.0.3

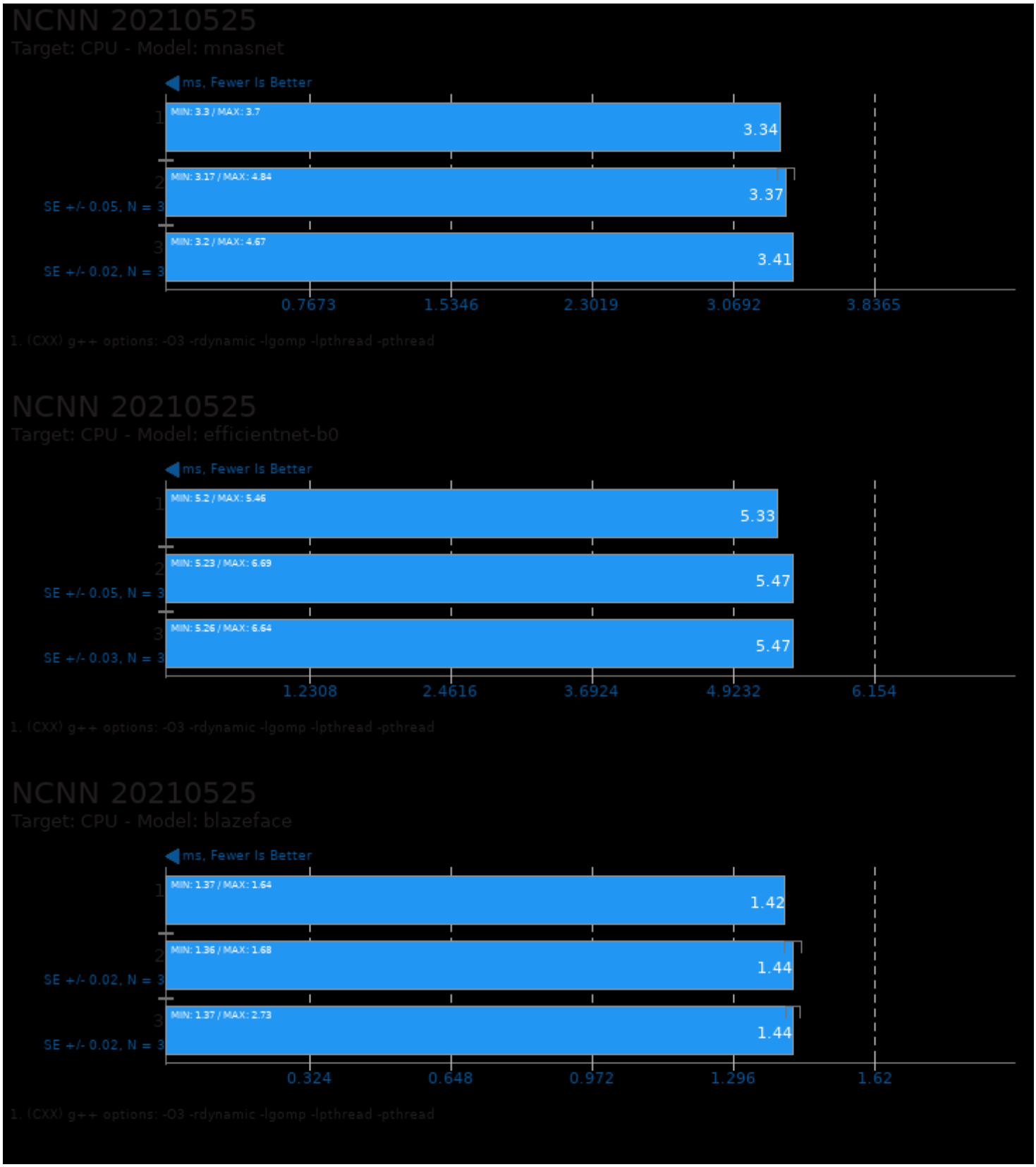
NCNN 20210525

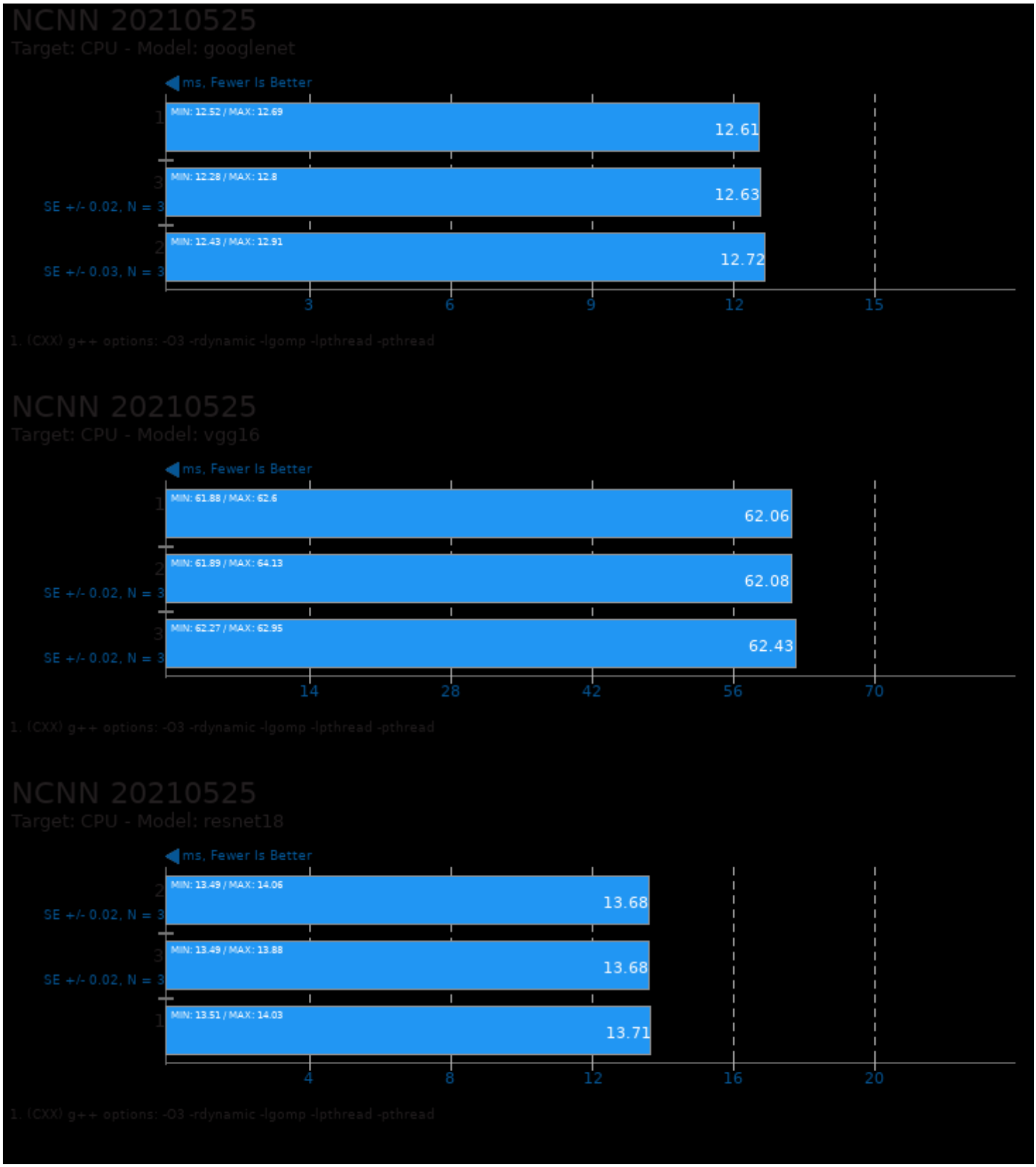
Target: CPU - Model: mobilenet

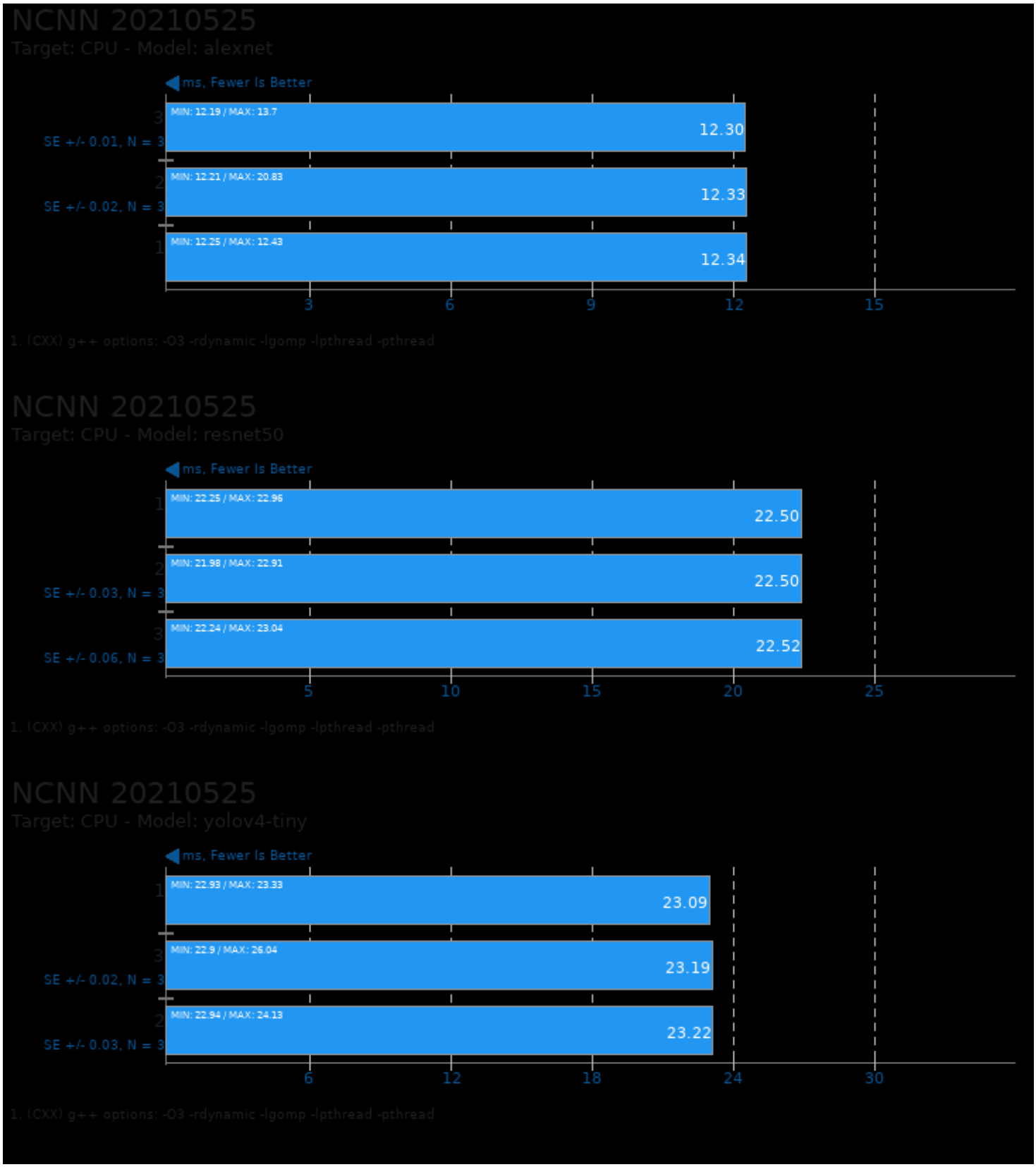


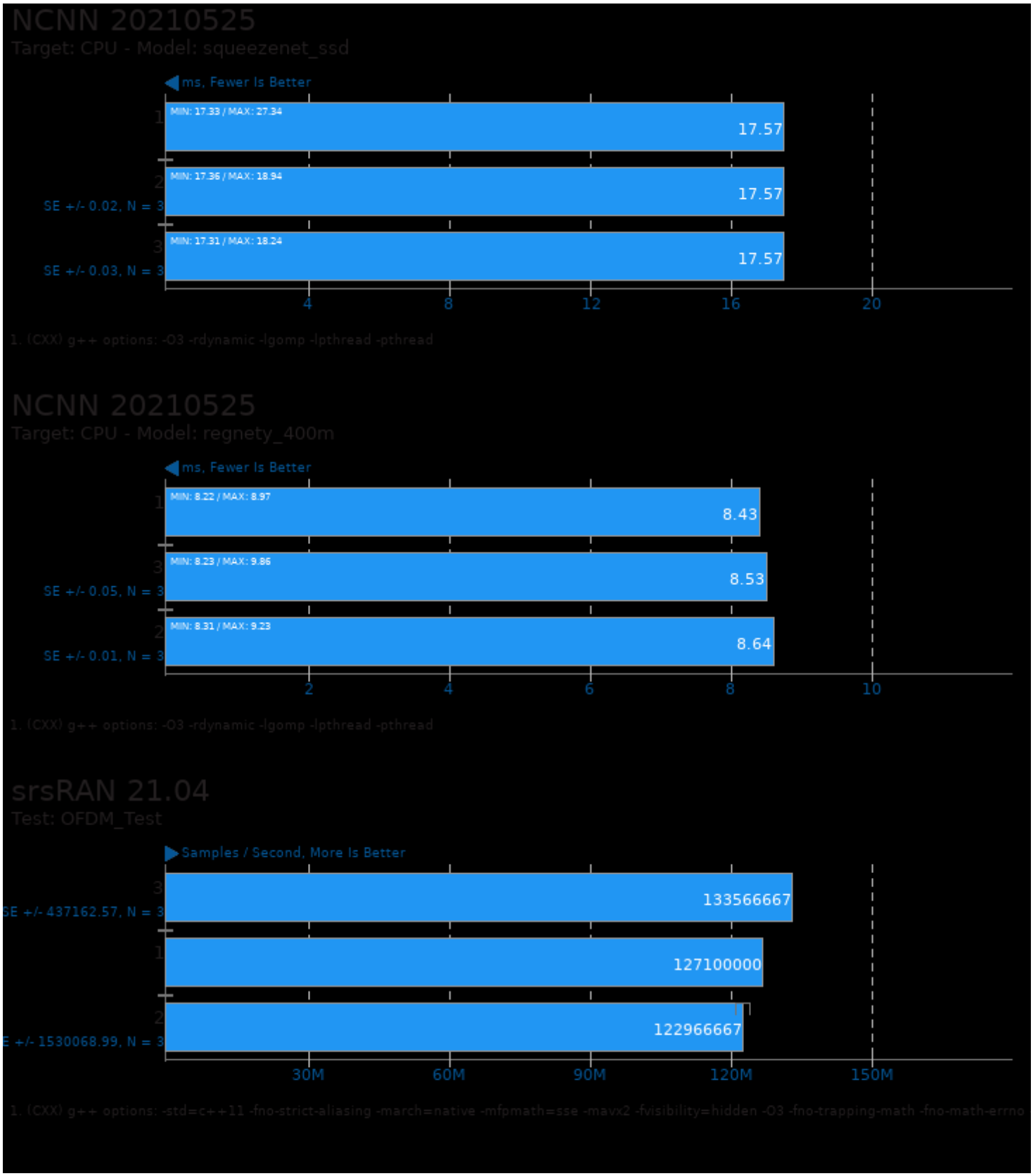
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

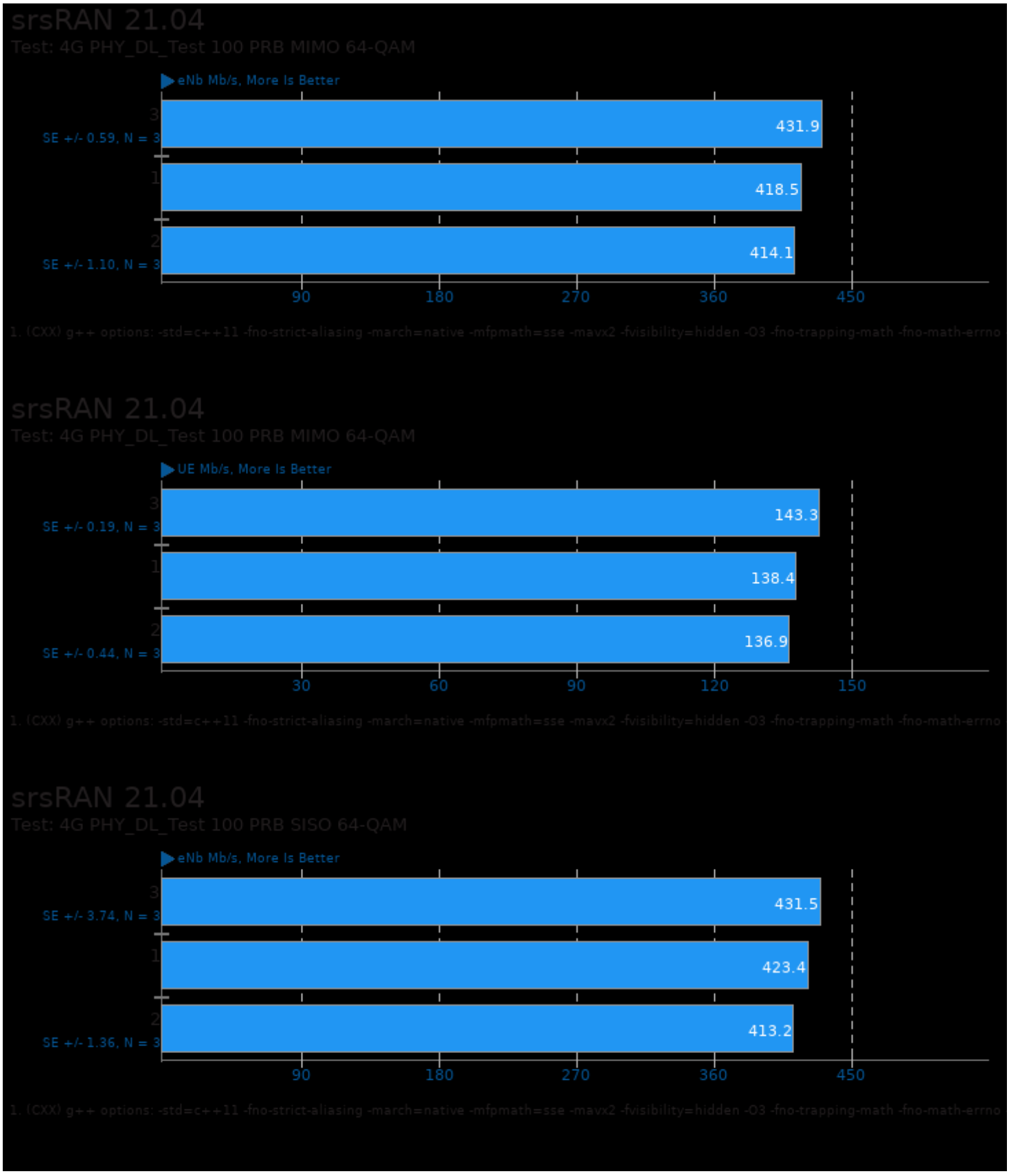

NCNN 20210525
Target: CPU-v2-v2 - Model: mobilenet-v2
ms, Fewer Is Better
MIN: 4.13 / MAX: 4.55
4.30
MIN: 4.09 / MAX: 6.38
4.43
SE +/- 0.04, N = 3
MIN: 4.3 / MAX: 5.62
4.55
SE +/- 0.10, N = 3
1.0238
2.0476
3.0714
4.0952
5.119
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
NCNN 20210525
Target: CPU-v3-v3 - Model: mobilenet-v3
ms, Fewer Is Better
MIN: 3.27 / MAX: 3.56
3.39
MIN: 3.32 / MAX: 4.33
3.47
SE +/- 0.02, N = 3
MIN: 3.32 / MAX: 4.74
3.48
SE +/- 0.02, N = 3
0.783
1.566
2.349
3.132
3.915
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
NCNN 20210525
Target: CPU - Model: shufflenet-v2
ms, Fewer Is Better
MIN: 3.02 / MAX: 3.29
3.15
MIN: 3.05 / MAX: 4
3.30
SE +/- 0.05, N = 3
MIN: 3.09 / MAX: 4.08
3.32
SE +/- 0.03, N = 3
0.747
1.494
2.241
2.988
3.735
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

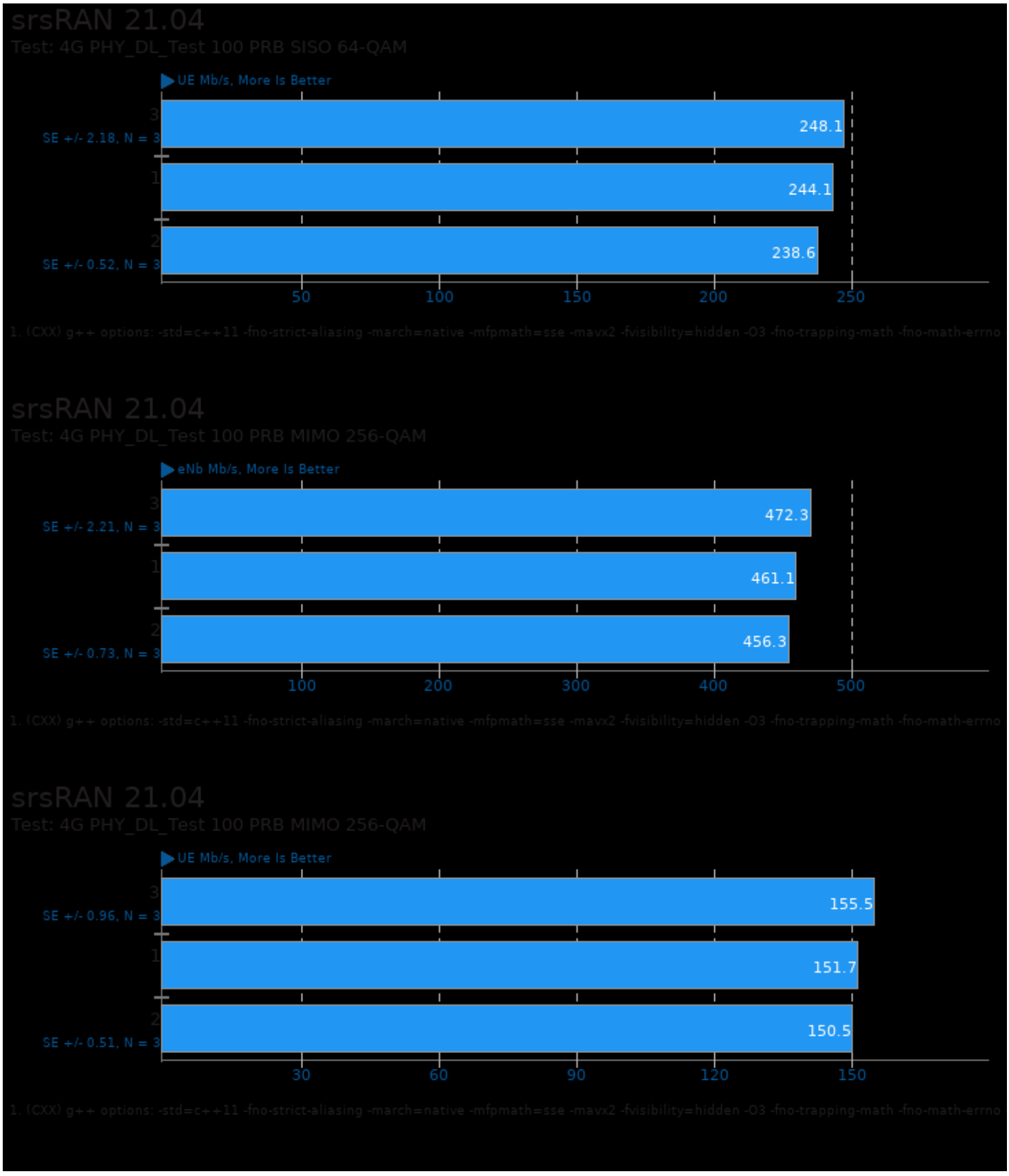

NCNN 20210525
Target: CPU - Model: mnasnet
ms, Fewer Is Better
MIN: 3.3 / MAX: 3.7
3.34
MIN: 3.17 / MAX: 4.84
3.37
SE +/- 0.05, N = 3
MIN: 3.2 / MAX: 4.67
3.41
SE +/- 0.02, N = 3
0.7673
1.5346
2.3019
3.0692
3.8365
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
NCNN 20210525
Target: CPU - Model: efficientnet-b0
ms, Fewer Is Better
MIN: 5.2 / MAX: 5.46
5.33
MIN: 5.23 / MAX: 6.69
5.47
SE +/- 0.05, N = 3
MIN: 5.26 / MAX: 6.64
5.47
SE +/- 0.03, N = 3
1.2308
2.4616
3.6924
4.9232
6.154
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
NCNN 20210525
Target: CPU - Model: blazeface
ms, Fewer Is Better
MIN: 1.37 / MAX: 1.64
1.42
MIN: 1.36 / MAX: 1.68
1.44
SE +/- 0.02, N = 3
MIN: 1.37 / MAX: 2.73
1.44
SE +/- 0.02, N = 3
0.324
0.648
0.972
1.296
1.62
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

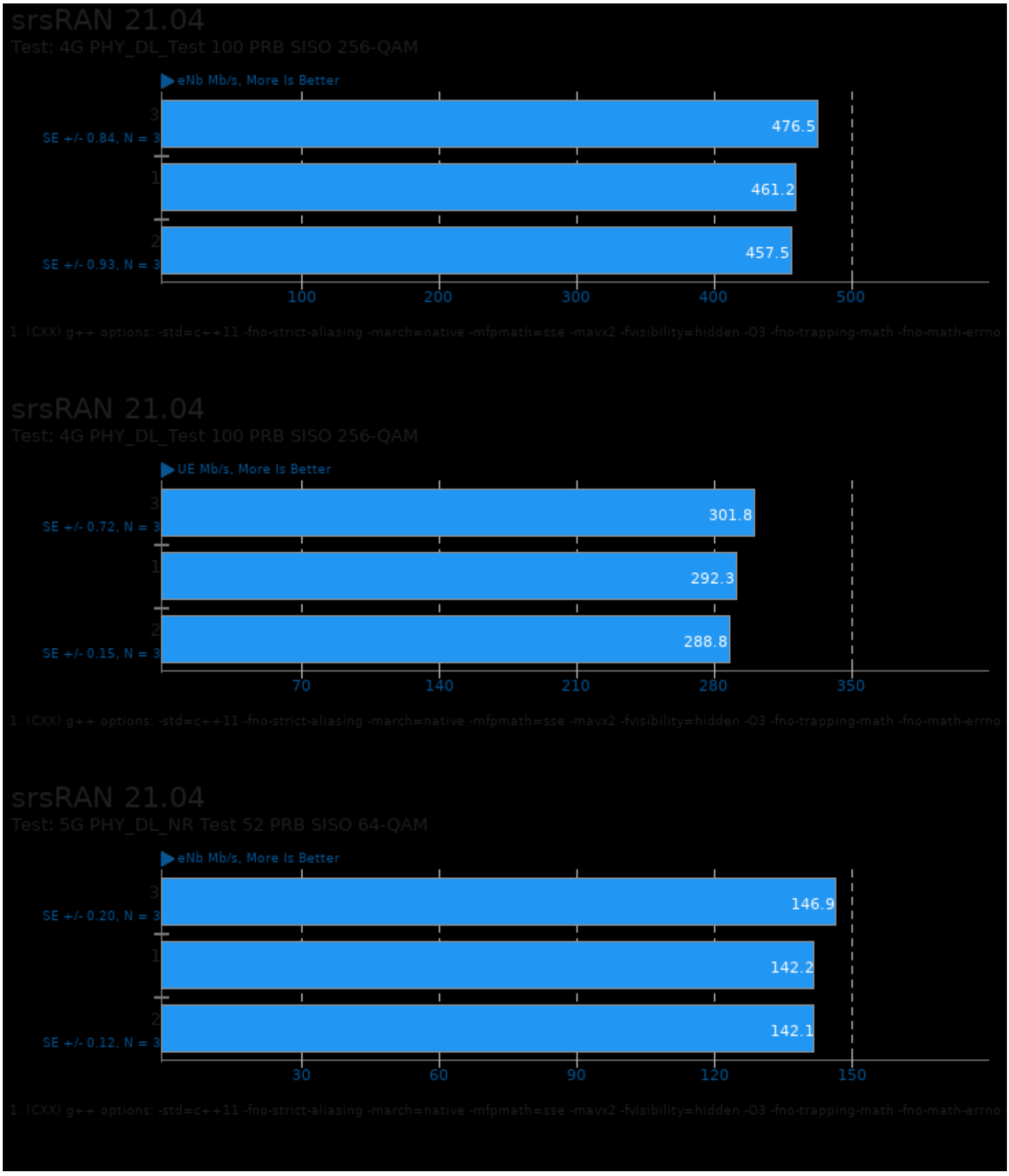

NCNN 20210525
Target: CPU - Model: googlenet
ms, Fewer Is Better
MIN: 12.52 / MAX: 12.69
12.61
MIN: 12.28 / MAX: 12.8
12.63
SE +/- 0.02, N = 3
MIN: 12.43 / MAX: 12.91
12.72
SE +/- 0.03, N = 3
3
6
9
12
15
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
NCNN 20210525
Target: CPU - Model: vgg16
ms, Fewer Is Better
MIN: 61.88 / MAX: 62.6
62.06
MIN: 61.89 / MAX: 64.13
62.08
SE +/- 0.02, N = 3
MIN: 62.27 / MAX: 62.95
62.43
SE +/- 0.02, N = 3
14
28
42
56
70
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
NCNN 20210525
Target: CPU - Model: resnet18
ms, Fewer Is Better
MIN: 13.49 / MAX: 14.06
13.68
SE +/- 0.02, N = 3
MIN: 13.49 / MAX: 13.88
13.68
SE +/- 0.02, N = 3
MIN: 13.51 / MAX: 14.03
13.71
4
8
12
16
20
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

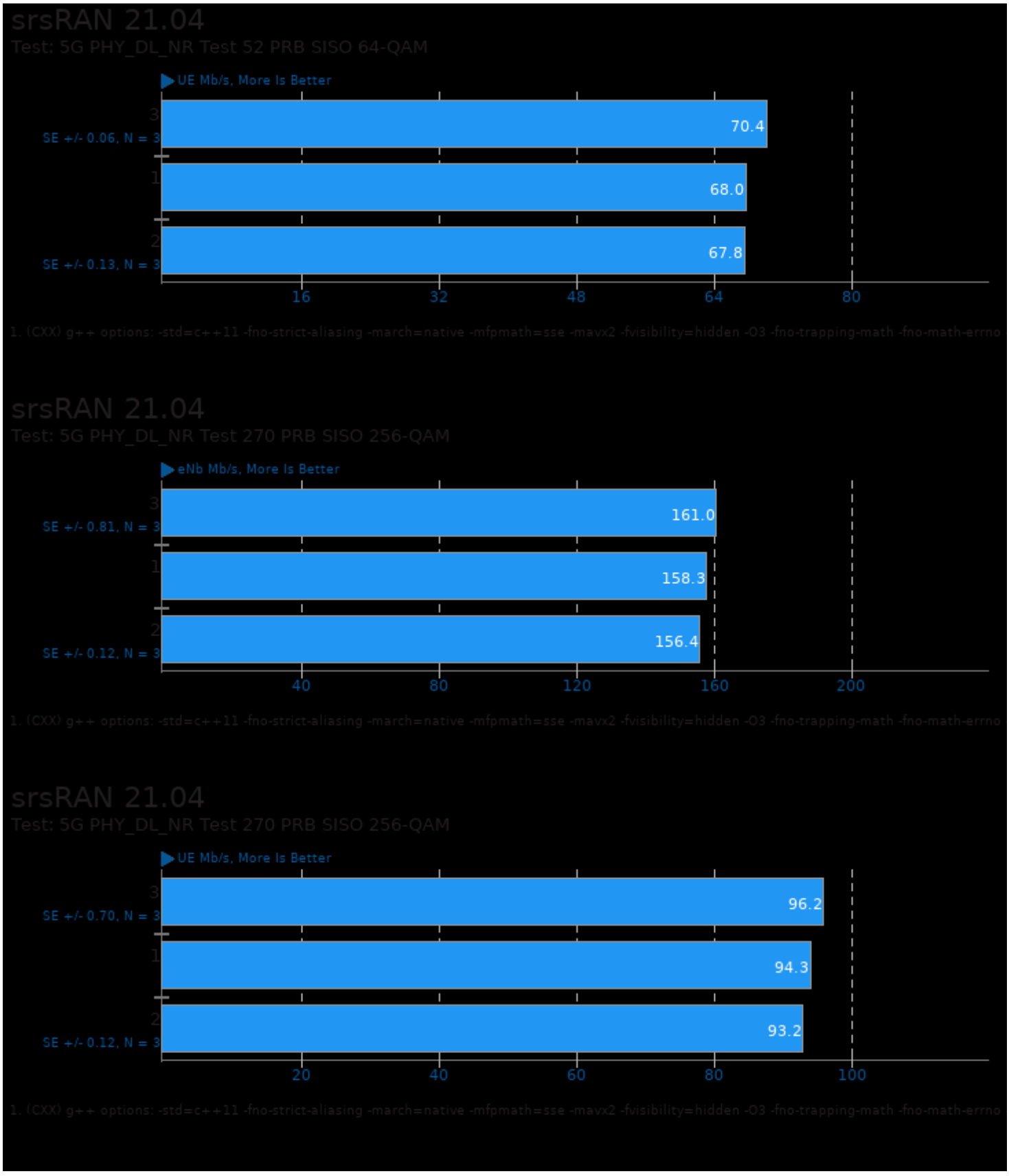

NCNN 20210525
Target: CPU - Model: alexnet
ms, Fewer Is Better
MIN: 12.19 / MAX: 13.7
12.30
SE +/- 0.01, N = 3
MIN: 12.21 / MAX: 20.83
12.33
SE +/- 0.02, N = 3
MIN: 12.25 / MAX: 12.43
12.34
3
6
9
12
15
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
NCNN 20210525
Target: CPU - Model: resnet50
ms, Fewer Is Better
MIN: 22.25 / MAX: 22.96
22.50
MIN: 21.98 / MAX: 22.91
22.50
SE +/- 0.03, N = 3
MIN: 22.24 / MAX: 23.04
22.52
SE +/- 0.06, N = 3
5
10
15
20
25
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
NCNN 20210525
Target: CPU - Model: yolov4-tiny
ms, Fewer Is Better
MIN: 22.93 / MAX: 23.33
23.09
MIN: 22.9 / MAX: 26.04
23.19
SE +/- 0.02, N = 3
MIN: 22.94 / MAX: 24.13
23.22
SE +/- 0.03, N = 3
6
12
18
24
30
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

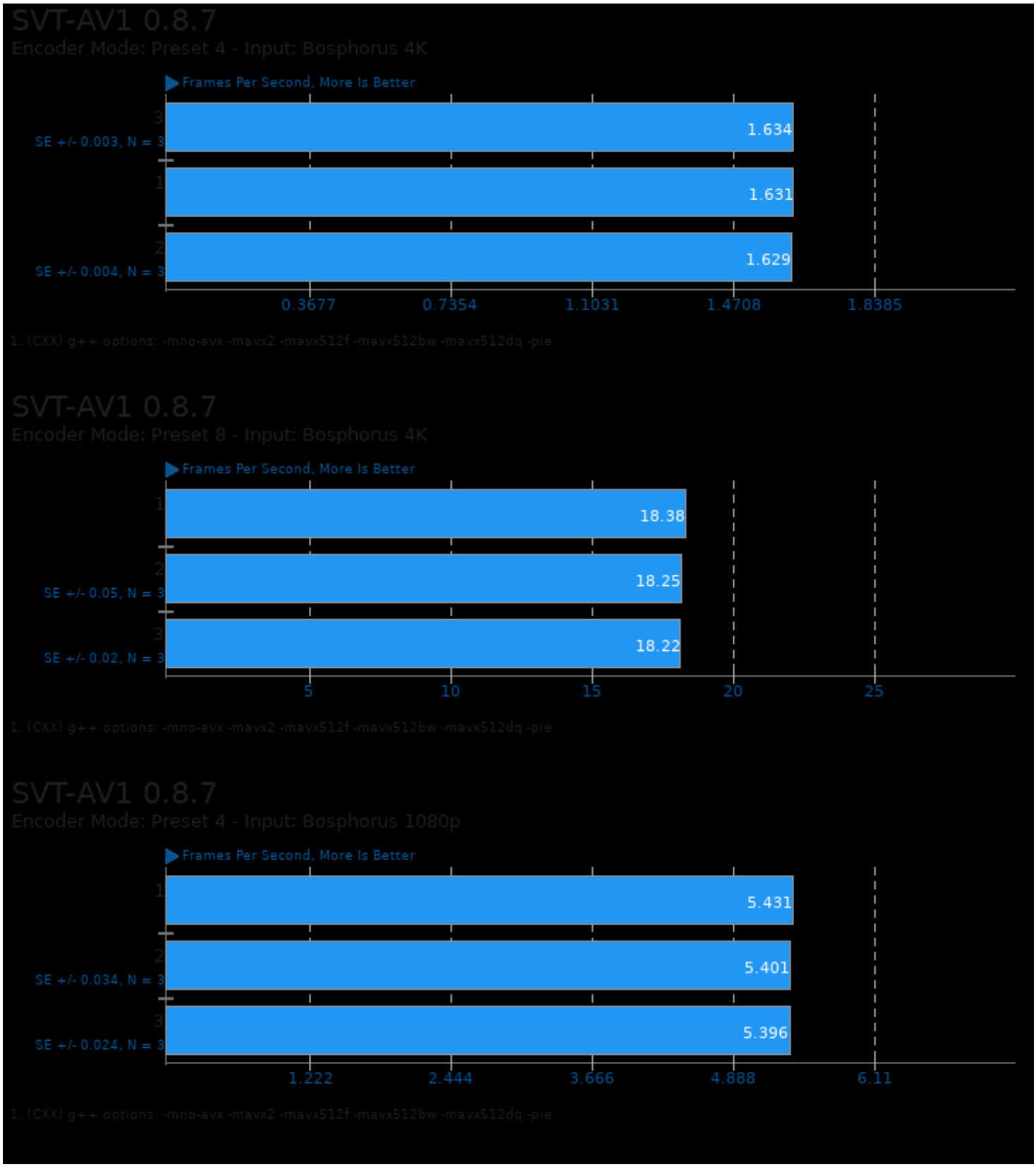

NCNN 20210525
Target: CPU - Model: squeezenet_ssd
ms, Fewer Is Better
MIN: 17.33 / MAX: 27.34
17.57
MIN: 17.36 / MAX: 18.94
17.57
SE +/- 0.02, N = 3
MIN: 17.31 / MAX: 18.24
17.57
SE +/- 0.03, N = 3
4
8
12
16
20
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
NCNN 20210525
Target: CPU - Model: regnety_400m
ms, Fewer Is Better
MIN: 8.22 / MAX: 8.97
8.43
MIN: 8.23 / MAX: 9.86
8.53
SE +/- 0.05, N = 3
MIN: 8.31 / MAX: 9.23
8.64
SE +/- 0.01, N = 3
2
4
6
8
10
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread
srsRAN 21.04
Test: OFDM_Test
Samples / Second, More Is Better
133566667
SE +/- 437162.57, N = 3
127100000
122966667
E +/- 1530068.99, N = 3
30M
60M
90M
120M
150M
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

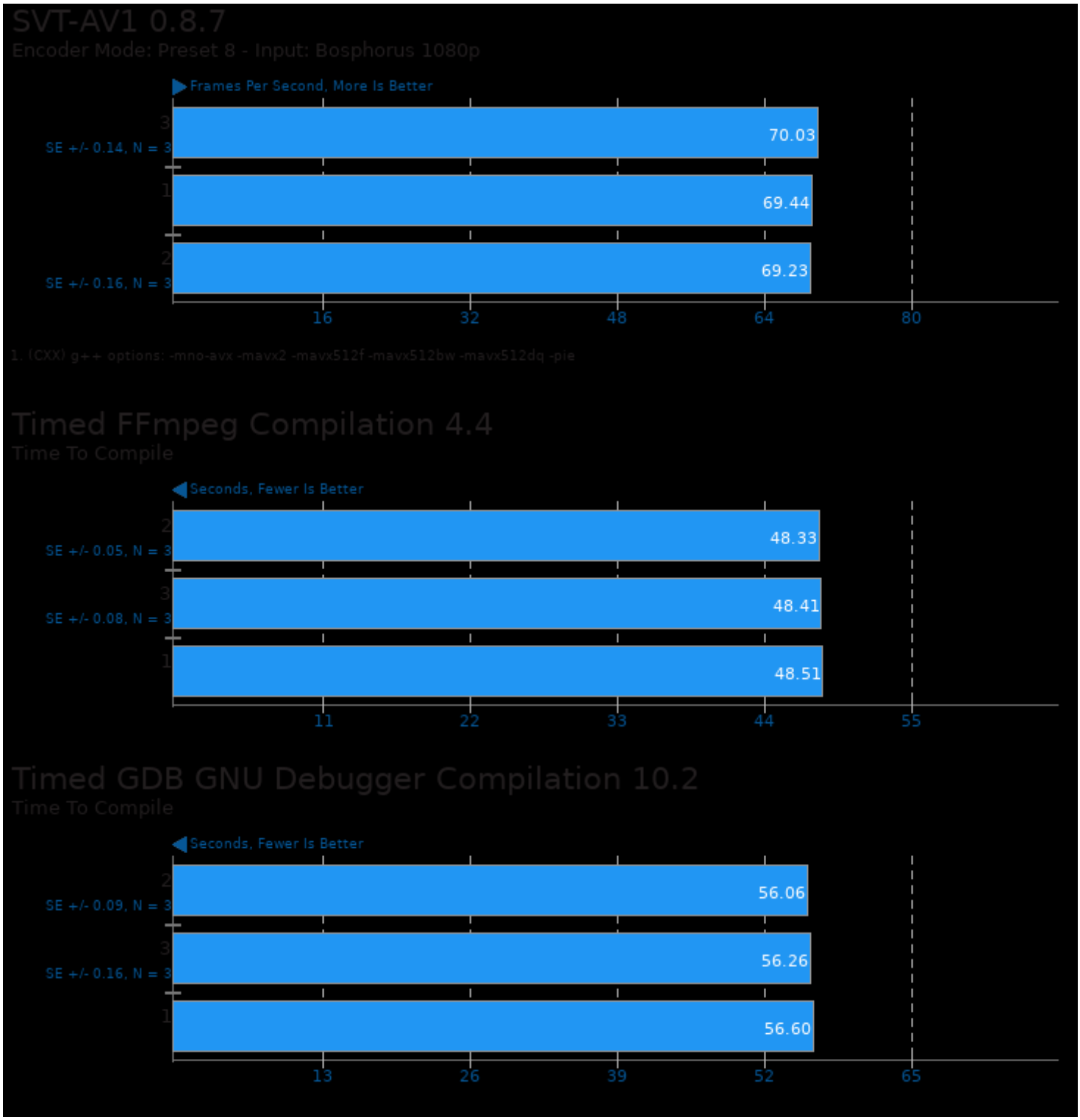

srsRAN 21.04
Test: 4G PHY_DL_Test 100 PRB MIMO 64-QAM
eNb Mb/s, More Is Better
3
SE +/- 0.59, N = 3
431.9
1
418.5
2
SE +/- 1.10, N = 3
414.1
90
180
270
360
450
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.04
Test: 4G PHY_DL_Test 100 PRB MIMO 64-QAM
UE Mb/s, More Is Better
3
SE +/- 0.19, N = 3
143.3
1
138.4
2
SE +/- 0.44, N = 3
136.9
30
60
90
120
150
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.04
Test: 4G PHY_DL_Test 100 PRB SISO 64-QAM
eNb Mb/s, More Is Better
3
SE +/- 3.74, N = 3
431.5
1
423.4
2
SE +/- 1.36, N = 3
413.2
90
180
270
360
450
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

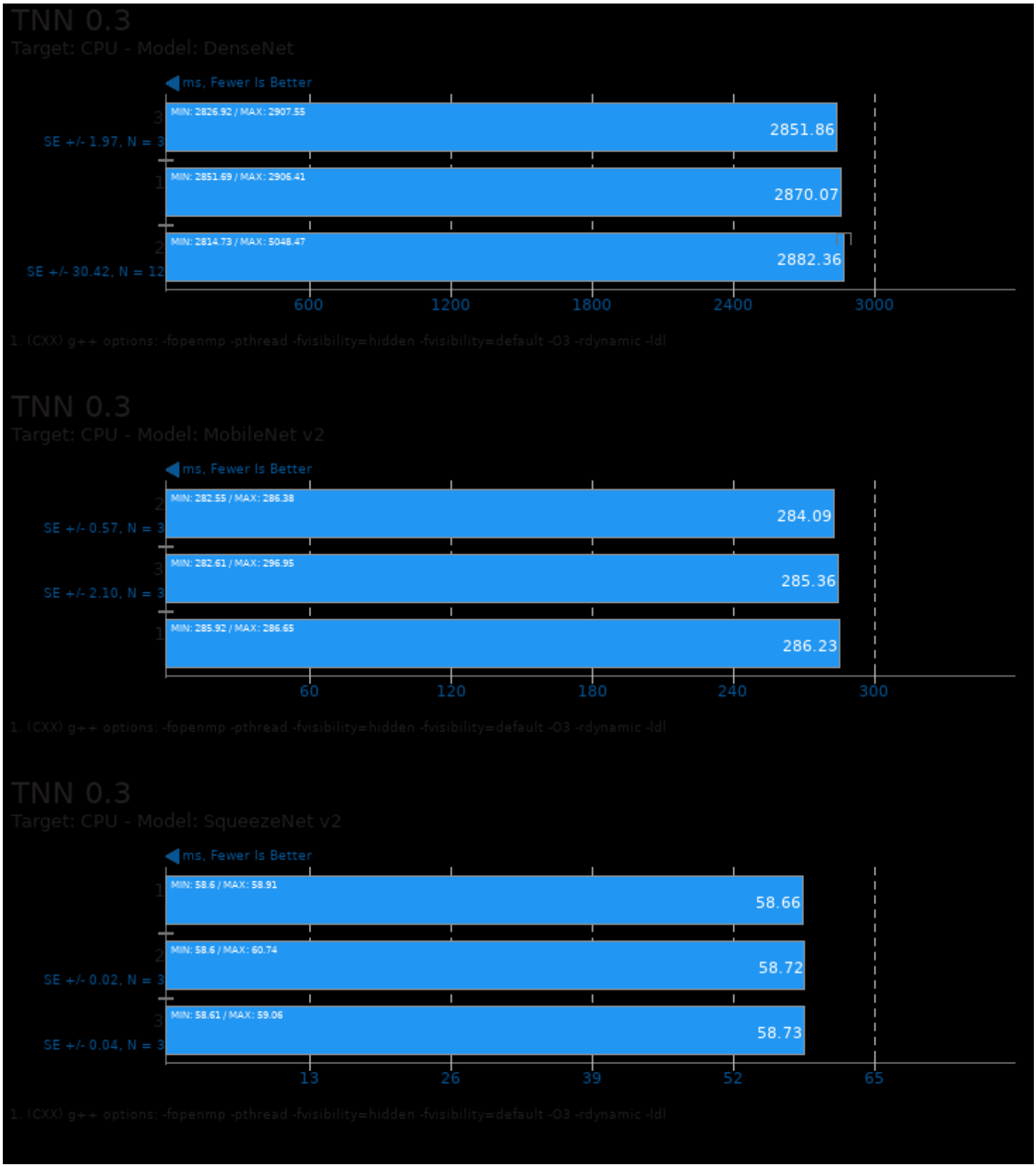

srsRAN 21.04
Test: 4G PHY_DL_Test 100 PRB SISO 64-QAM
UE Mb/s, More Is Better
3
248.1
SE +/- 2.18, N = 3
1
244.1
2
238.6
SE +/- 0.52, N = 3
50
100
150
200
250
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.04
Test: 4G PHY_DL_Test 100 PRB MIMO 256-QAM
eNb Mb/s, More Is Better
3
472.3
SE +/- 2.21, N = 3
1
461.1
2
456.3
SE +/- 0.73, N = 3
100
200
300
400
500
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.04
Test: 4G PHY_DL_Test 100 PRB MIMO 256-QAM
UE Mb/s, More Is Better
3
155.5
SE +/- 0.96, N = 3
1
151.7
2
150.5
SE +/- 0.51, N = 3
30
60
90
120
150
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno


srsRAN 21.04
Test: 4G PHY_DL_Test 100 PRB SISO 256-QAM
eNb Mb/s, More Is Better
3
SE +/- 0.84, N = 3
476.5
1
461.2
2
SE +/- 0.93, N = 3
457.5
100
200
300
400
500
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.04
Test: 4G PHY_DL_Test 100 PRB SISO 256-QAM
UE Mb/s, More Is Better
3
SE +/- 0.72, N = 3
301.8
1
292.3
2
SE +/- 0.15, N = 3
288.8
70
140
210
280
350
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.04
Test: 5G PHY_DL_NR Test 52 PRB SISO 64-QAM
eNb Mb/s, More Is Better
3
SE +/- 0.20, N = 3
146.9
1
142.2
2
SE +/- 0.12, N = 3
142.1
30
60
90
120
150
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno


srsRAN 21.04
Test: 5G PHY_DL_NR Test 52 PRB SISO 64-QAM
UE Mb/s, More Is Better
3
SE +/- 0.06, N = 3
70.4
1
68.0
2
SE +/- 0.13, N = 3
67.8
16
32
48
64
80
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.04
Test: 5G PHY_DL_NR Test 270 PRB SISO 256-QAM
eNb Mb/s, More Is Better
3
SE +/- 0.81, N = 3
161.0
1
158.3
2
SE +/- 0.12, N = 3
156.4
40
80
120
160
200
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.04
Test: 5G PHY_DL_NR Test 270 PRB SISO 256-QAM
UE Mb/s, More Is Better
3
SE +/- 0.70, N = 3
96.2
1
94.3
2
SE +/- 0.12, N = 3
93.2
20
40
60
80
100
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

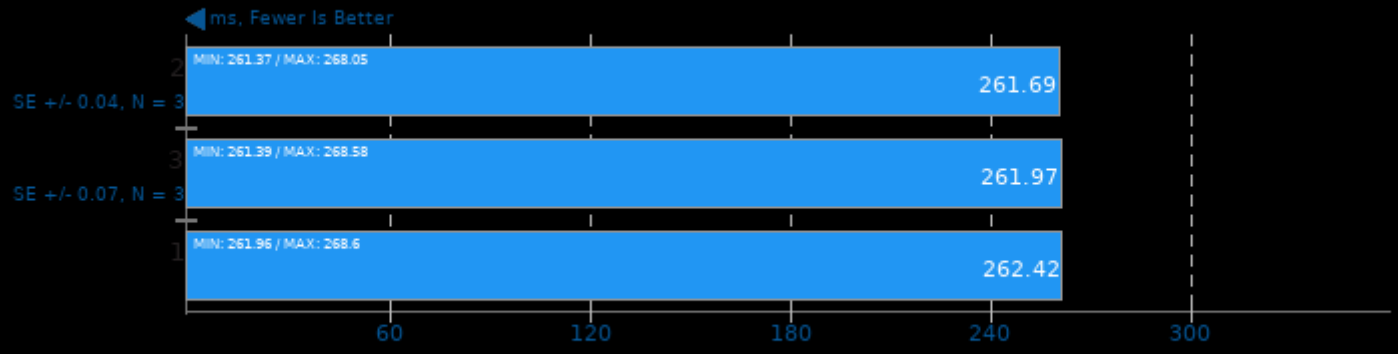

SVT-AV1 0.8.7
Encoder Mode: Preset 4 - Input: Bosphorus 4K
Frames Per Second, More Is Better
3
SE +/- 0.003, N = 3
1.634
1
1.631
2
SE +/- 0.004, N = 3
1.629
0.3677
0.7354
1.1031
1.4708
1.8385
1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie
SVT-AV1 0.8.7
Encoder Mode: Preset 8 - Input: Bosphorus 4K
Frames Per Second, More Is Better
1
18.38
2
SE +/- 0.05, N = 3
18.25
3
SE +/- 0.02, N = 3
18.22
5
10
15
20
25
1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie
SVT-AV1 0.8.7
Encoder Mode: Preset 4 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
1
5.431
2
SE +/- 0.034, N = 3
5.401
3
SE +/- 0.024, N = 3
5.396
1.222
2.444
3.666
4.888
6.11
1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie


SVT-AV1 0.8.7
Encoder Mode: Preset 8 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
3
SE +/- 0.14, N = 3
70.03
1
69.44
2
SE +/- 0.16, N = 3
69.23
16
32
48
64
80
1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie
Timed FFmpeg Compilation 4.4
Time To Compile
Seconds, Fewer Is Better
2
SE +/- 0.05, N = 3
48.33
3
SE +/- 0.08, N = 3
48.41
1
48.51
11
22
33
44
55
Timed GDB GNU Debugger Compilation 10.2
Time To Compile
Seconds, Fewer Is Better
2
SE +/- 0.09, N = 3
56.06
3
SE +/- 0.16, N = 3
56.26
1
56.60
13
26
39
52
65


TNN 0.3
Target: CPU - Model: DenseNet
ms, Fewer Is Better
MIN: 2826.92 / MAX: 2907.55
2851.86
SE +/- 1.97, N = 3
MIN: 2851.69 / MAX: 2906.41
2870.07
MIN: 2814.73 / MAX: 5048.47
2882.36
SE +/- 30.42, N = 12
600
1200
1800
2400
3000
1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -fvisibility=default -O3 -rdynamic -ldl
TNN 0.3
Target: CPU - Model: MobileNet v2
ms, Fewer Is Better
MIN: 282.55 / MAX: 286.38
284.09
SE +/- 0.57, N = 3
MIN: 282.61 / MAX: 296.95
285.36
SE +/- 2.10, N = 3
MIN: 285.92 / MAX: 286.65
286.23
60
120
180
240
300
1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -fvisibility=default -O3 -rdynamic -ldl
TNN 0.3
Target: CPU - Model: SqueezeNet v2
ms, Fewer Is Better
MIN: 58.6 / MAX: 58.91
58.66
MIN: 58.6 / MAX: 60.74
58.72
SE +/- 0.02, N = 3
MIN: 58.61 / MAX: 59.06
58.73
SE +/- 0.04, N = 3
13
26
39
52
65
1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -fvisibility=default -O3 -rdynamic -ldl

TNN 0.3

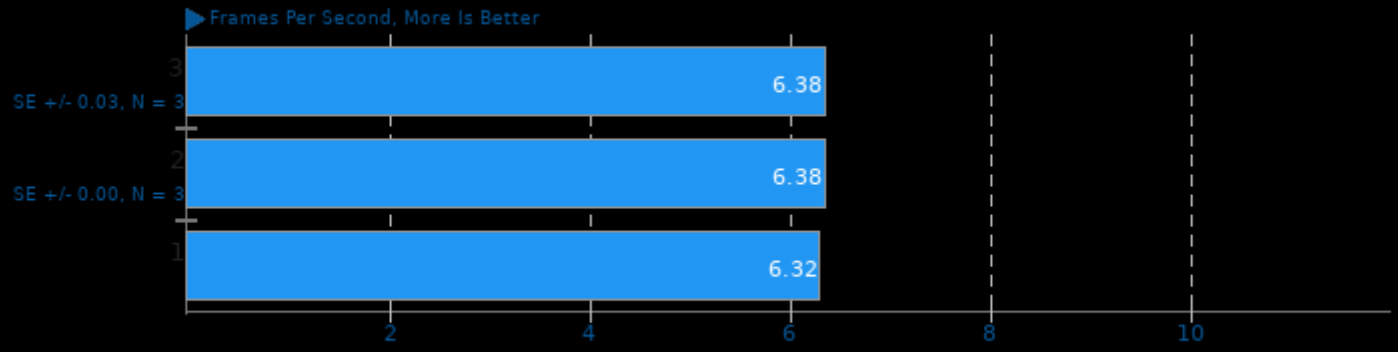
Target: CPU - Model: SqueezeNet v1.1



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

VP9 libvpx Encoding 1.10.0

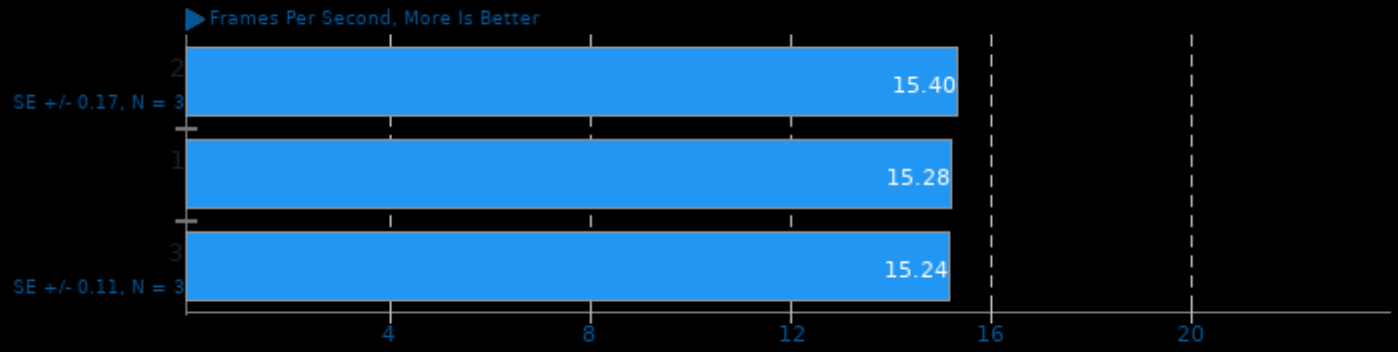
Speed: Speed 0 - Input: Bosphorus 4K



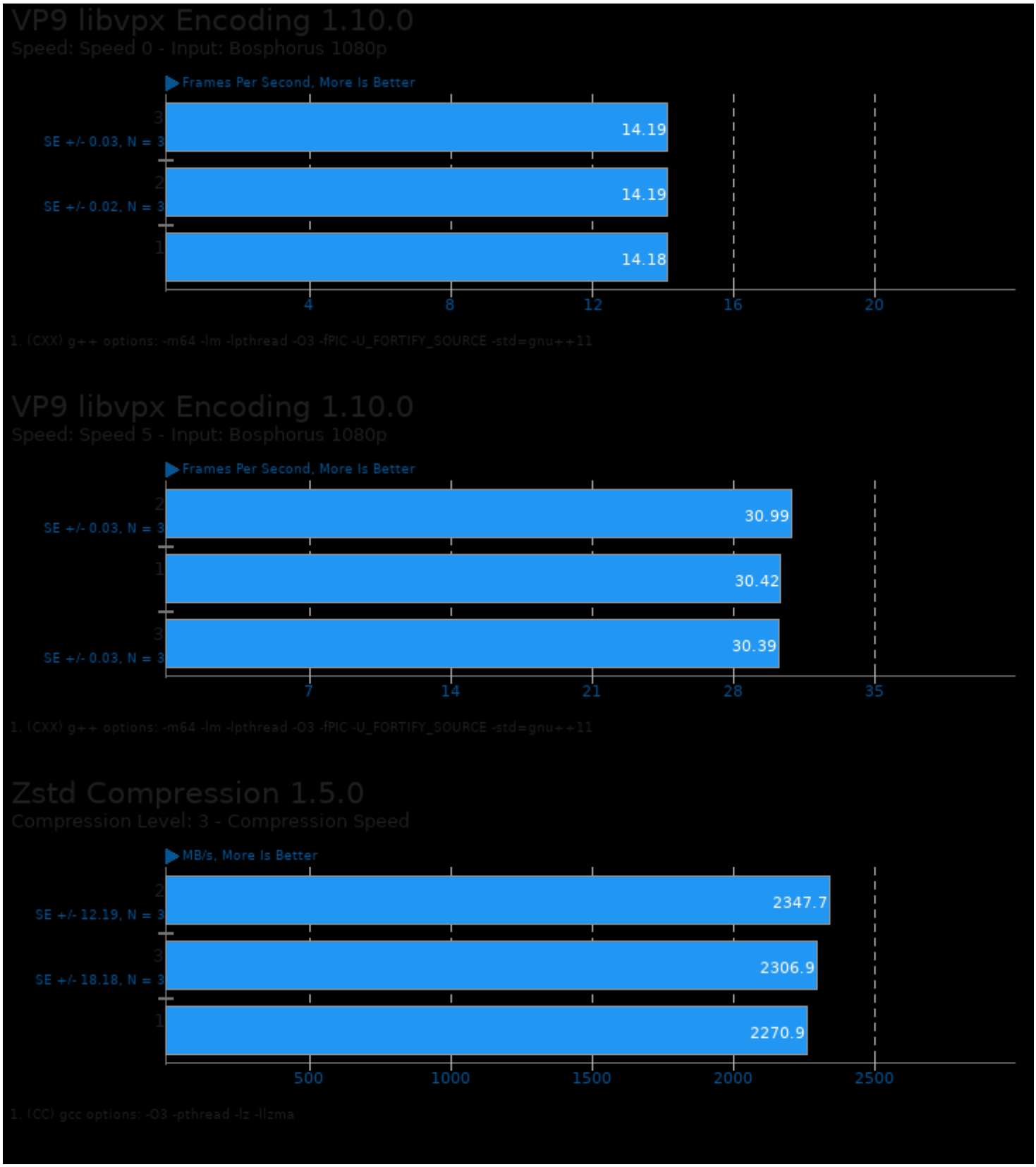
1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

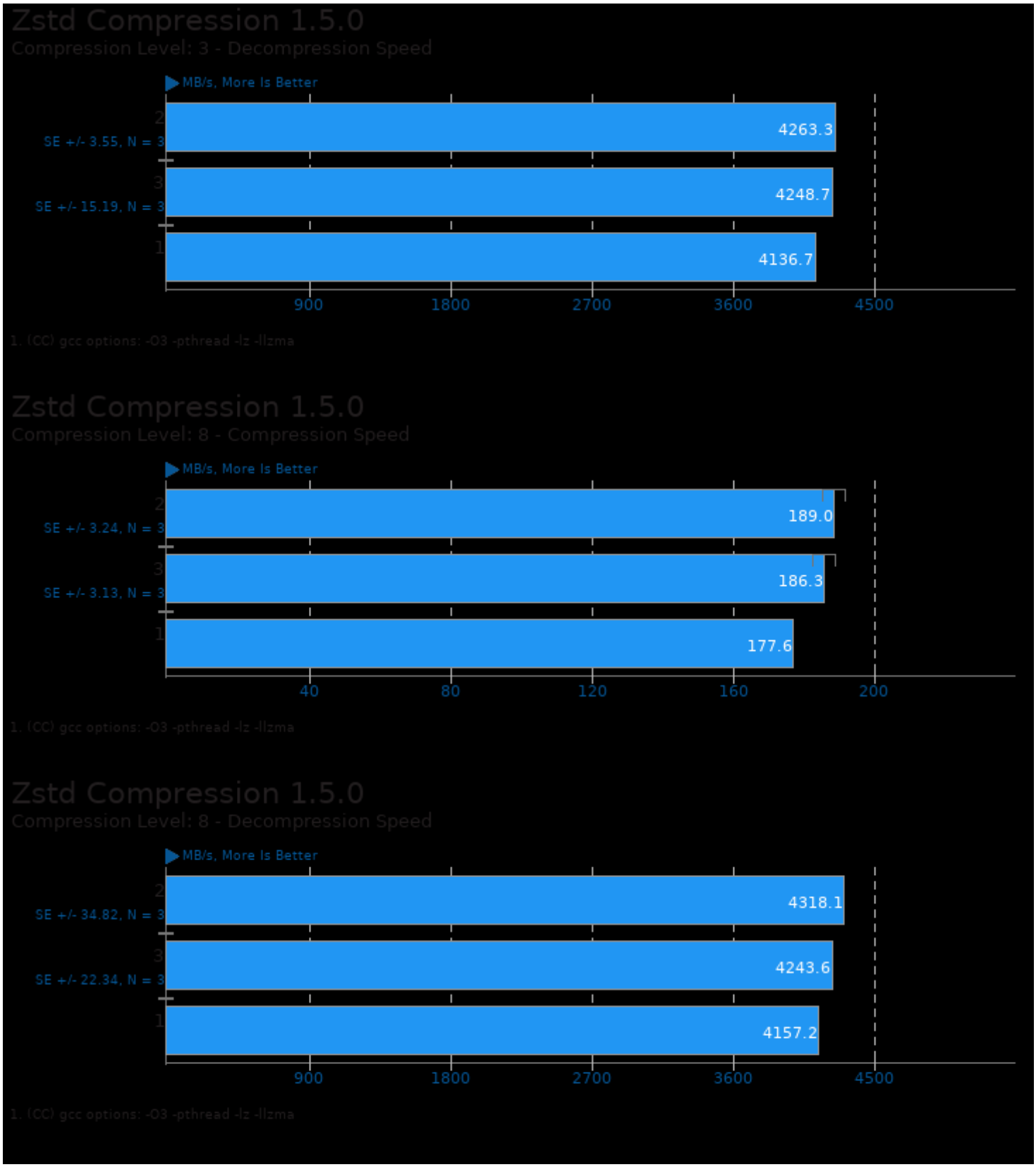
VP9 libvpx Encoding 1.10.0

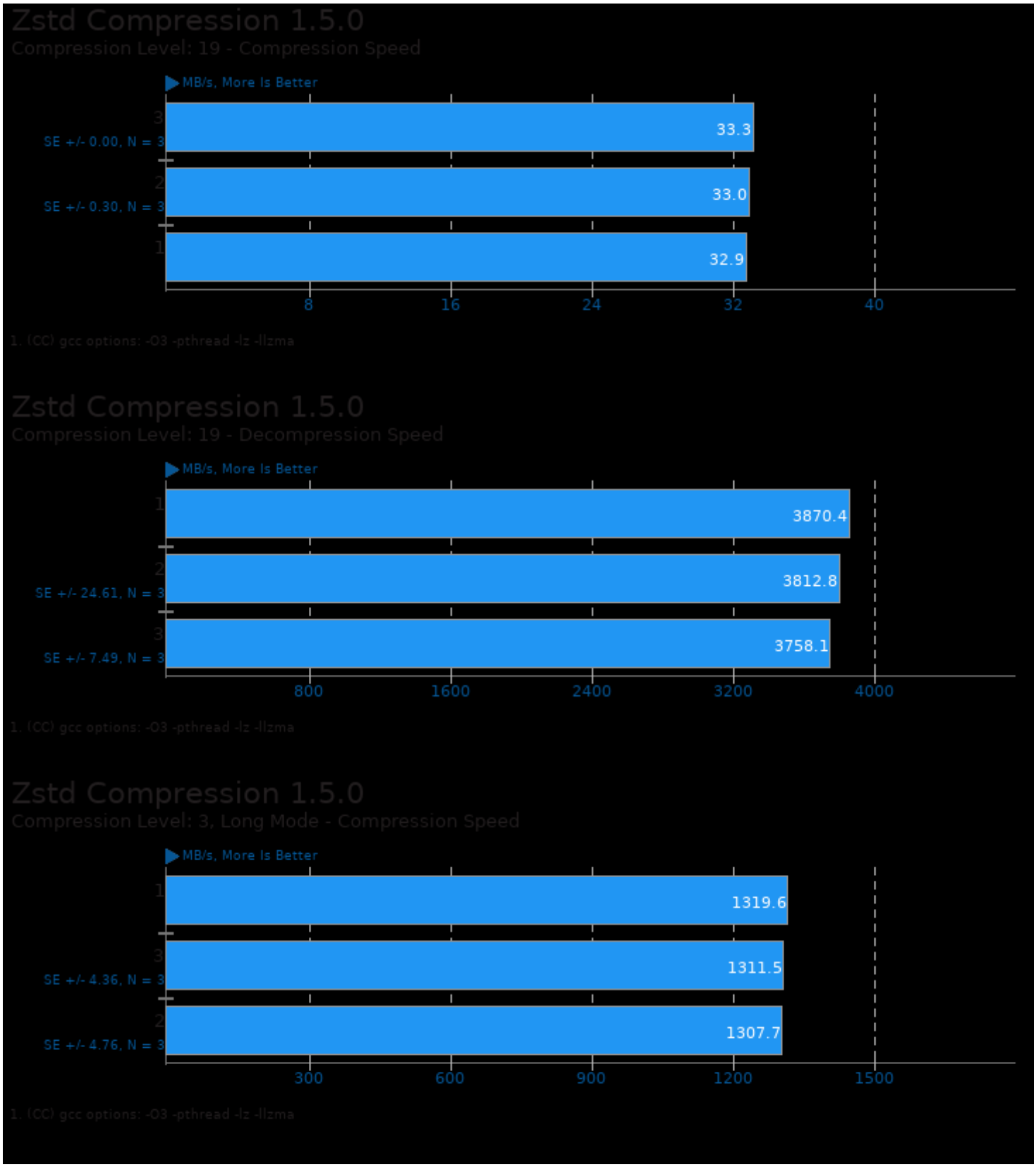
Speed: Speed 5 - Input: Bosphorus 4K

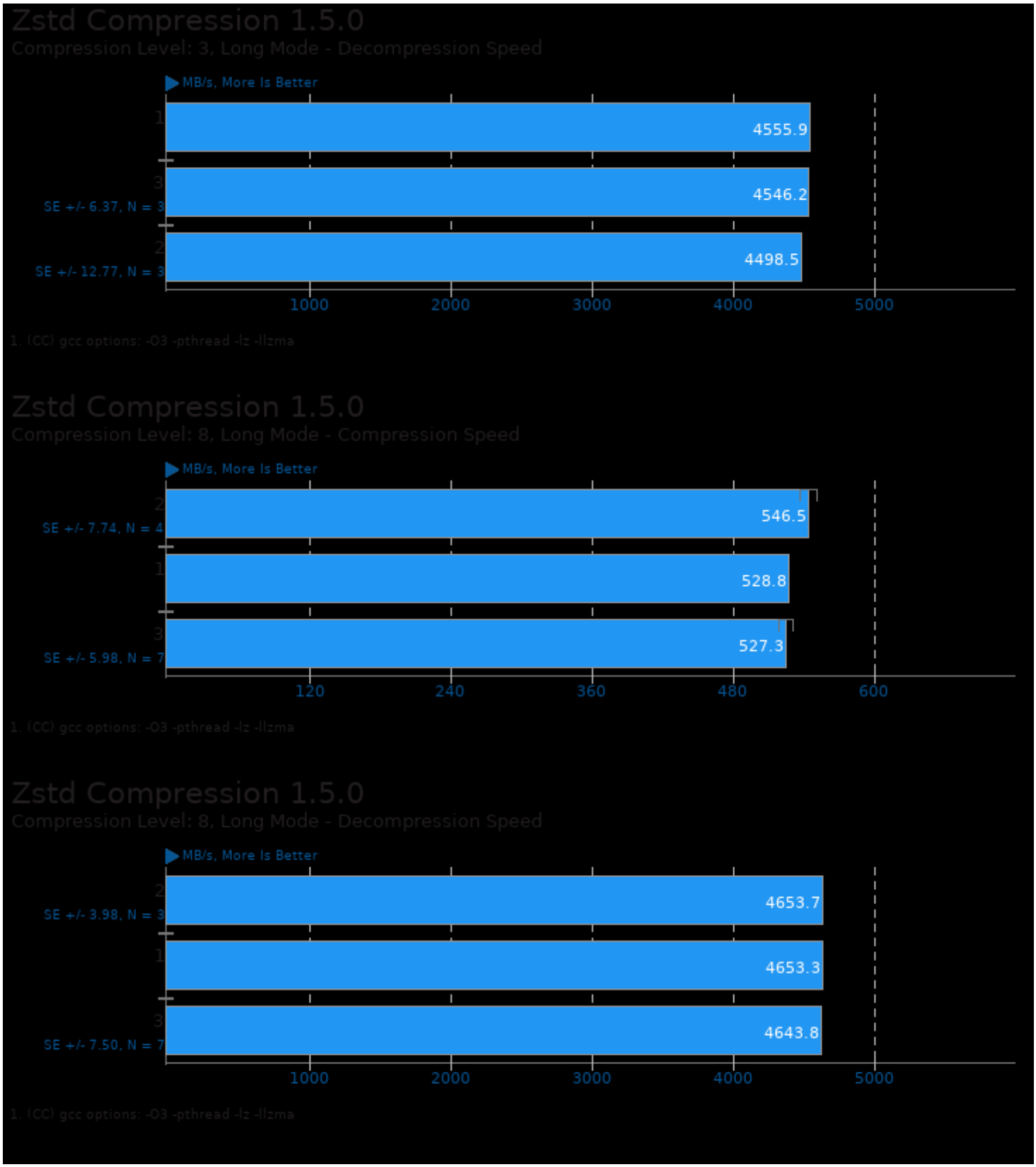


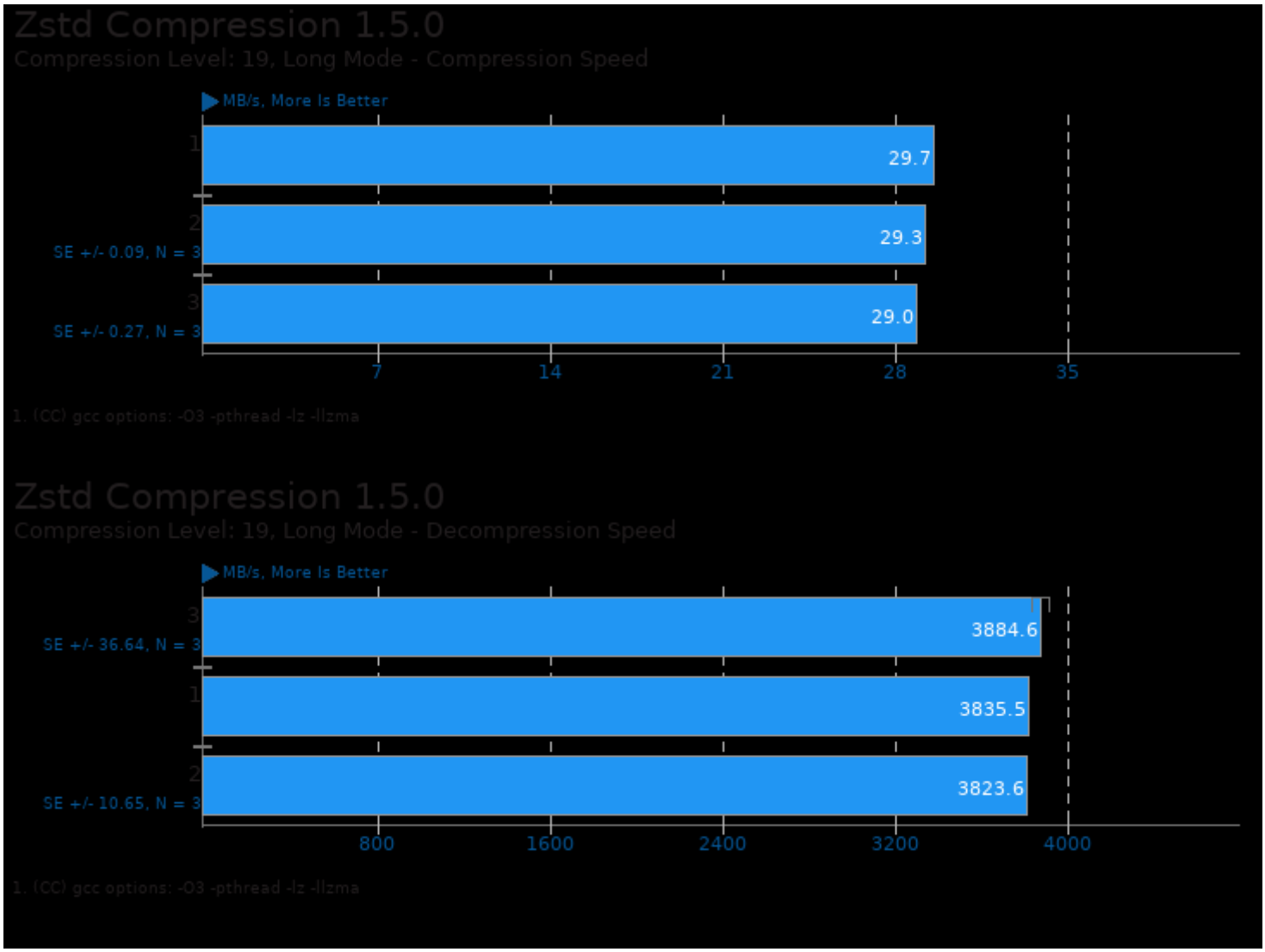
1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11


VP9 libvpx Encoding 1.10.0
Speed: Speed 0 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
3
SE +/- 0.03, N = 3
14.19
2
SE +/- 0.02, N = 3
14.19
1
14.18
4
8
12
16
20
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 1080p
Frames Per Second, More Is Better
2
SE +/- 0.03, N = 3
30.99
1
30.42
3
SE +/- 0.03, N = 3
30.39
7
14
21
28
35
1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11
Zstd Compression 1.5.0
Compression Level: 3 - Compression Speed
MB/s, More Is Better
2
SE +/- 12.19, N = 3
2347.7
3
SE +/- 18.18, N = 3
2306.9
1
2270.9
500
1000
1500
2000
2500
1. (CC) gcc options: -O3 -pthread -lz -llzma

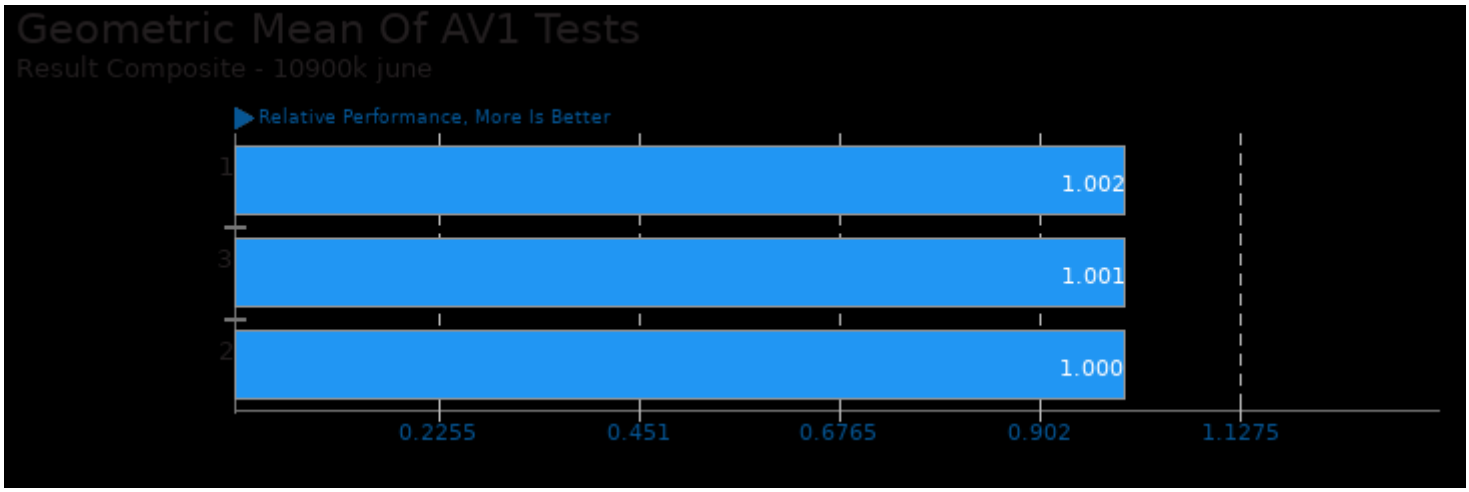

Zstd Compression 1.5.0
Compression Level: 3 - Decompression Speed
MB/s, More Is Better
2
SE +/- 3.55, N = 3
4263.3
3
SE +/- 15.19, N = 3
4248.7
1
4136.7
900
1800
2700
3600
4500
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 8 - Compression Speed
MB/s, More Is Better
2
SE +/- 3.24, N = 3
189.0
3
SE +/- 3.13, N = 3
186.3
1
177.6
40
80
120
160
200
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 8 - Decompression Speed
MB/s, More Is Better
2
SE +/- 34.82, N = 3
4318.1
3
SE +/- 22.34, N = 3
4243.6
1
4157.2
900
1800
2700
3600
4500
1. (CC) gcc options: -O3 -pthread -lz -llzma


Zstd Compression 1.5.0
Compression Level: 19 - Compression Speed
MB/s, More Is Better
3
SE +/- 0.00, N = 3
33.3
2
SE +/- 0.30, N = 3
33.0
1
32.9
8
16
24
32
40
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 19 - Decompression Speed
MB/s, More Is Better
1
3870.4
2
SE +/- 24.61, N = 3
3812.8
3
SE +/- 7.49, N = 3
3758.1
800
1600
2400
3200
4000
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 3, Long Mode - Compression Speed
MB/s, More Is Better
1
1319.6
3
SE +/- 4.36, N = 3
1311.5
2
SE +/- 4.76, N = 3
1307.7
300
600
900
1200
1500
1. (CC) gcc options: -O3 -pthread -lz -llzma

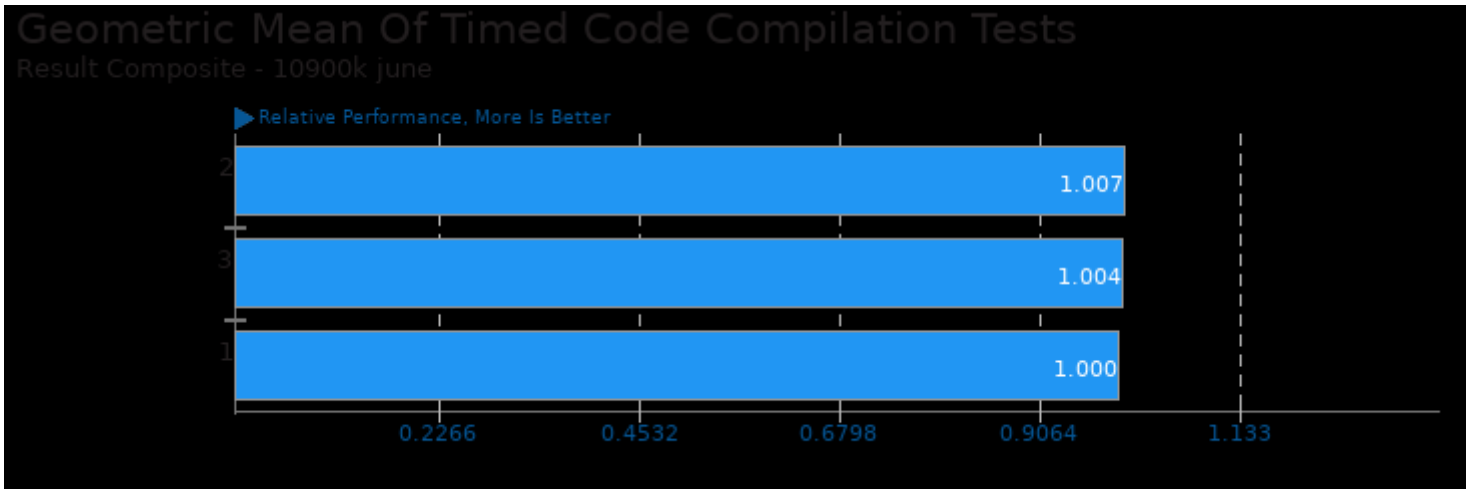

Zstd Compression 1.5.0
Compression Level: 3, Long Mode - Decompression Speed
MB/s, More Is Better
1
4555.9
3
4546.2
SE +/- 6.37, N = 3
2
4498.5
SE +/- 12.77, N = 3
1000
2000
3000
4000
5000
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 8, Long Mode - Compression Speed
MB/s, More Is Better
2
546.5
SE +/- 7.74, N = 4
1
528.8
3
527.3
SE +/- 5.98, N = 7
120
240
360
480
600
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 8, Long Mode - Decompression Speed
MB/s, More Is Better
2
4653.7
SE +/- 3.98, N = 3
1
4653.3
3
4643.8
SE +/- 7.50, N = 7
1000
2000
3000
4000
5000
1. (CC) gcc options: -O3 -pthread -lz -llzma


Zstd Compression 1.5.0
Compression Level: 19, Long Mode - Compression Speed
MB/s, More Is Better
1
29.7
2
29.3
SE +/- 0.09, N = 3
3
29.0
SE +/- 0.27, N = 3
7
14
21
28
35
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 19, Long Mode - Decompression Speed
MB/s, More Is Better
3
3884.6
SE +/- 36.64, N = 3
1
3835.5
2
3823.6
SE +/- 10.65, N = 3
800
1600
2400
3200
4000
1. (CC) gcc options: -O3 -pthread -lz -llzma

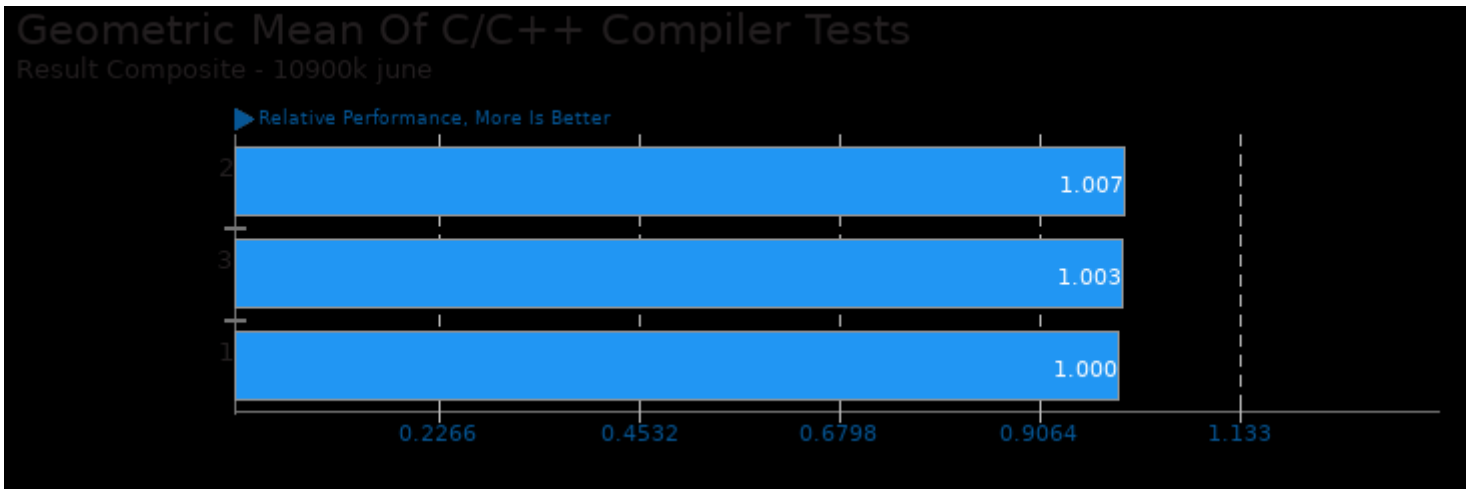
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/dav1d and pts/svt-av1

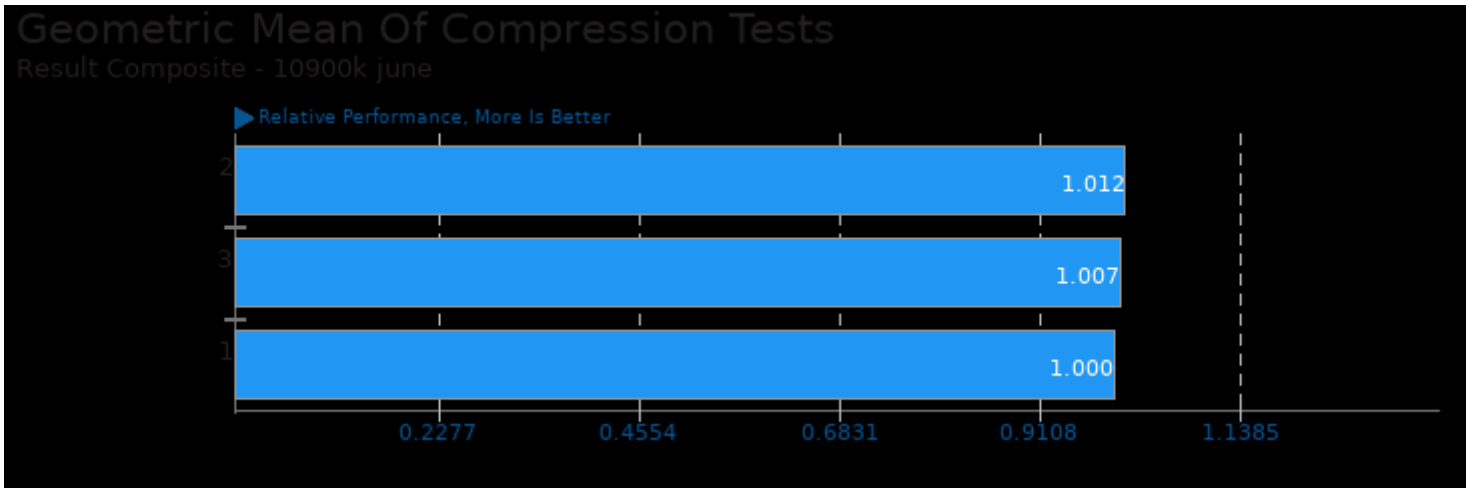


Geometric mean based upon tests: pts/build-gdb and pts/build-ffmpeg



Geometric mean based upon tests: pts/vpxenc, pts/dav1d, pts/compress-zstd, pts/svt-av1, pts/gromacs, pts/build-gdb and pts/build-ffmpeg

10900k june



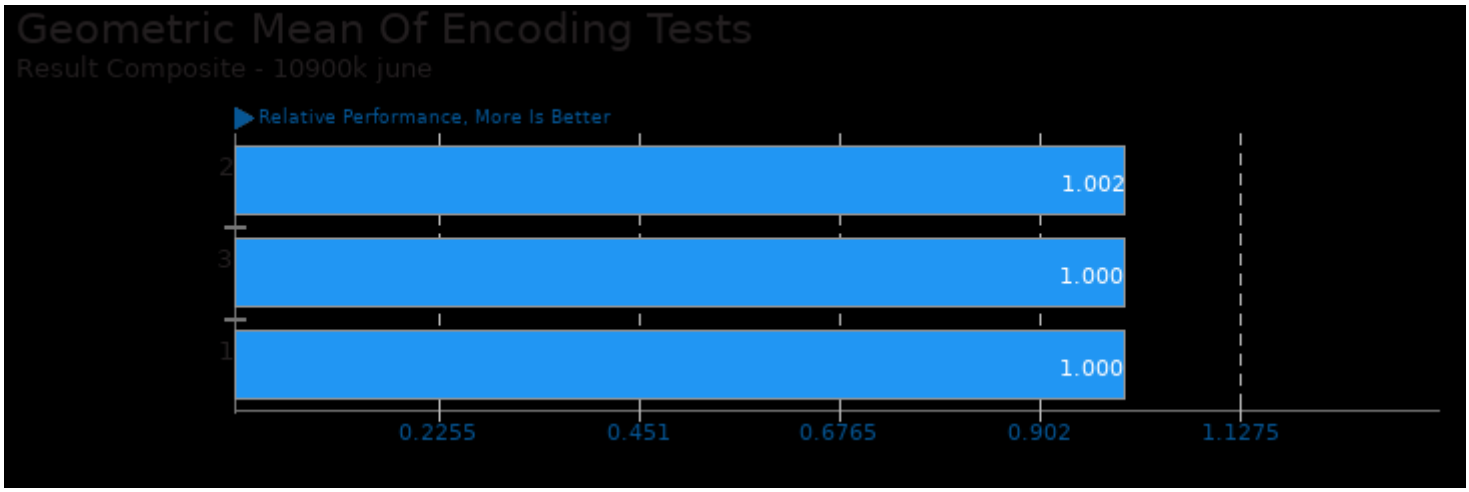
Geometric mean based upon tests: pts/compress-zstd and pts/blosc



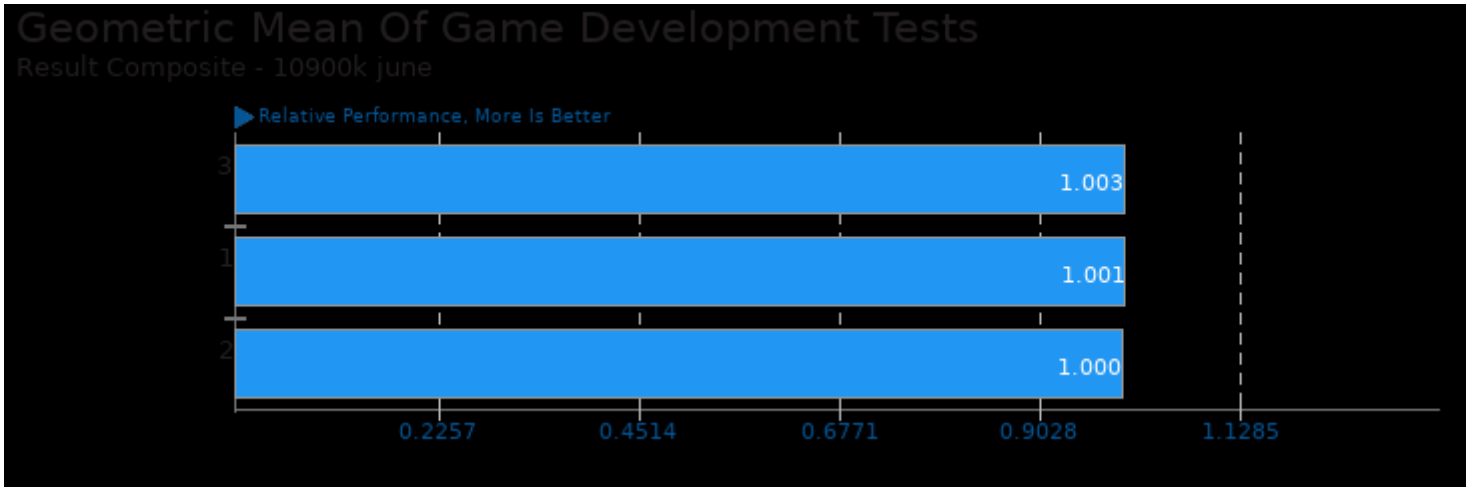
Geometric mean based upon tests: pts/brl-cad, pts/compress-zstd, pts/dav1d, pts/svt-av1, pts/vpxenc and pts/npb



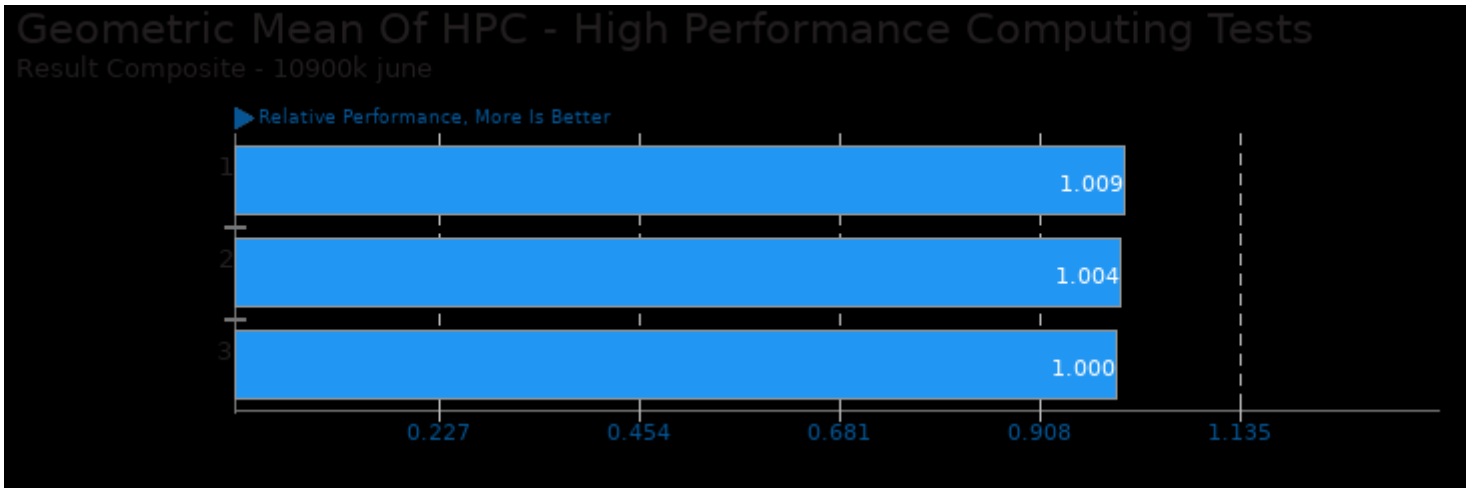
Geometric mean based upon tests: pts/vpxenc, pts/dav1d, pts/svt-av1, pts/embree, pts/oidn, pts/astcenc and pts/brl-cad



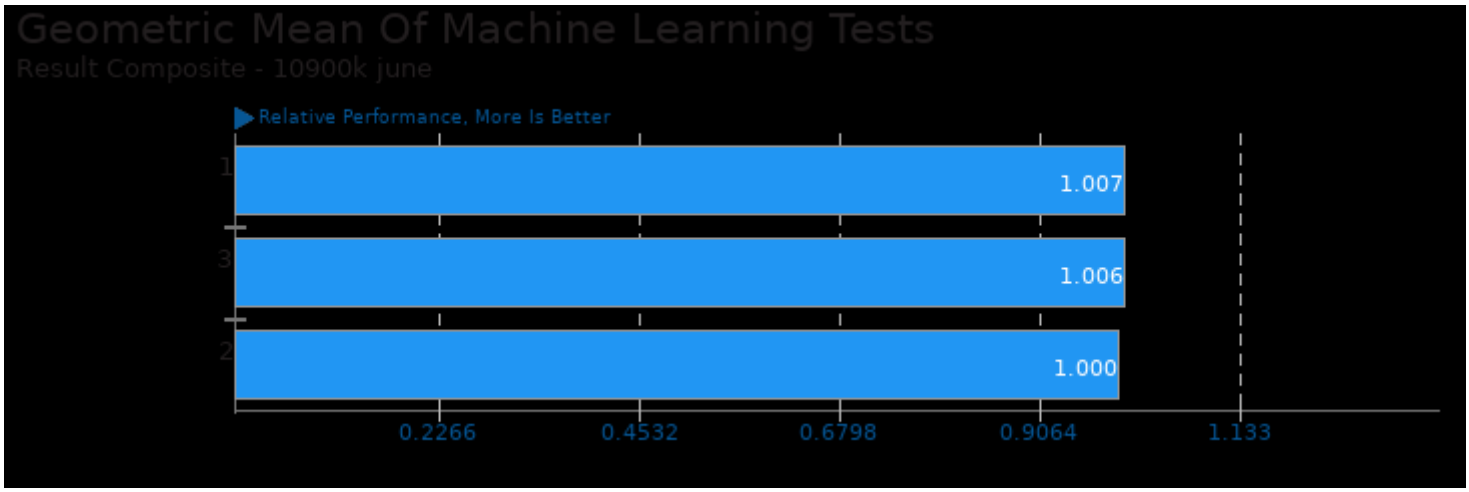
Geometric mean based upon tests: pts/vpxenc, pts/dav1d and pts/svt-av1



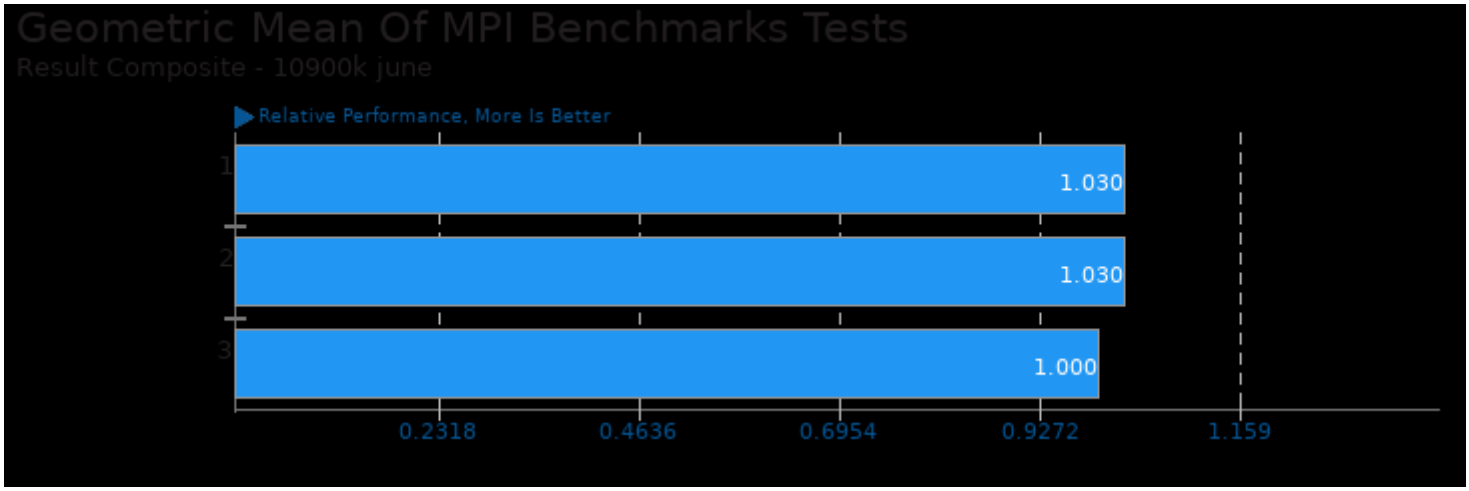
Geometric mean based upon tests: pts/astcenc and pts/oidn



Geometric mean based upon tests: pts/npb, pts/gromacs, pts/mnn, pts/ncnn and pts/tnn



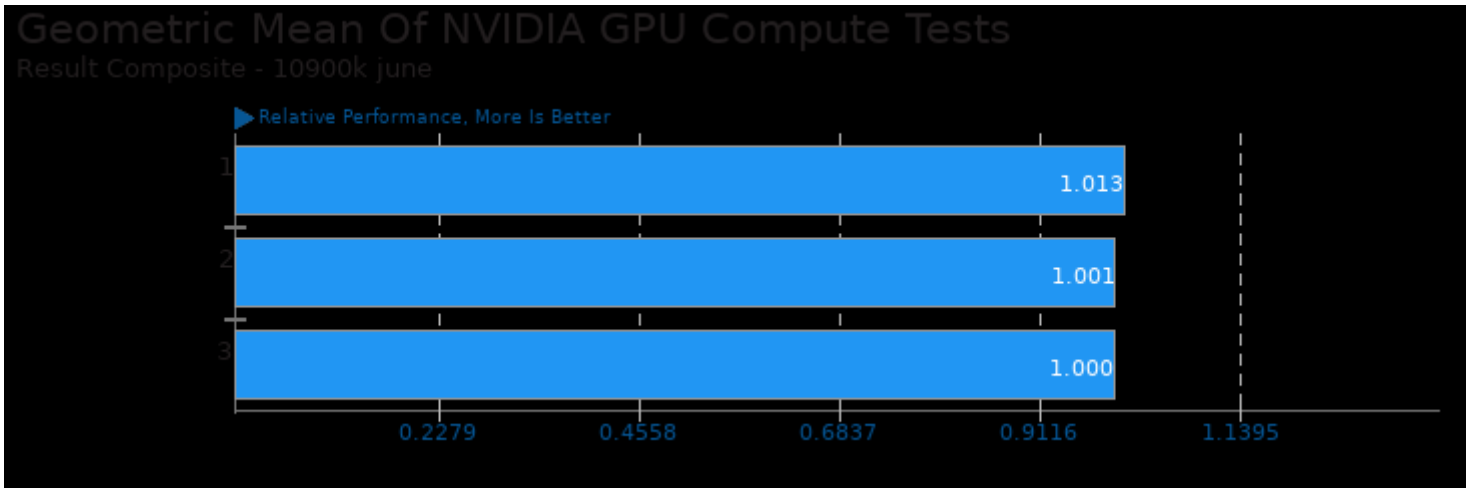
Geometric mean based upon tests: pts/mnn, pts/ncnn and pts/tnn



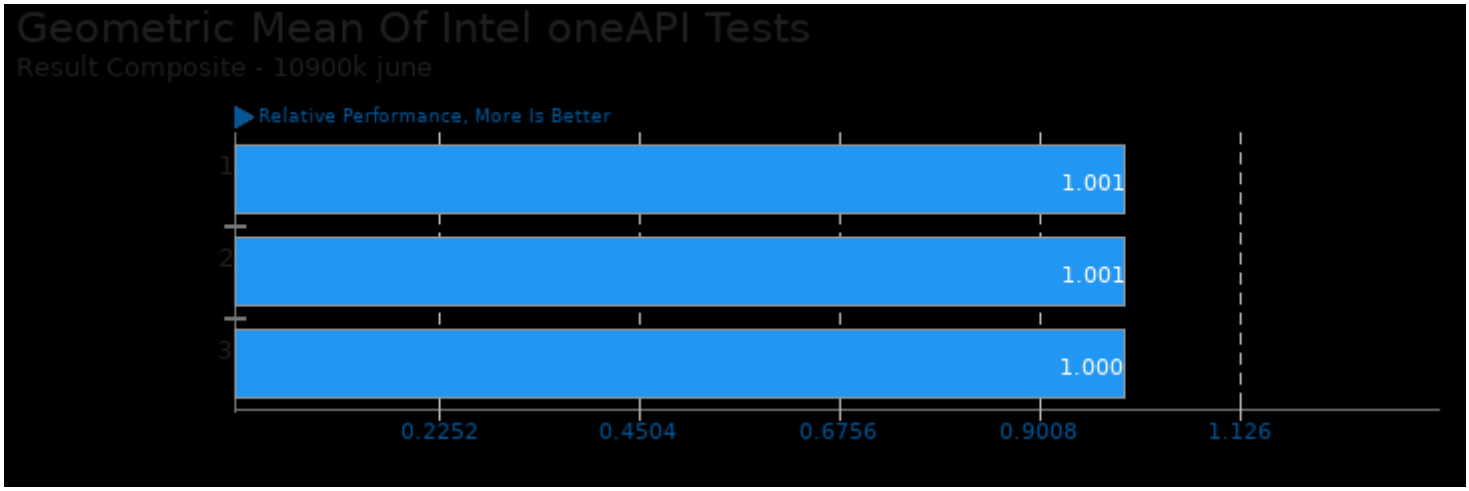
Geometric mean based upon tests: pts/gromacs and pts/npb



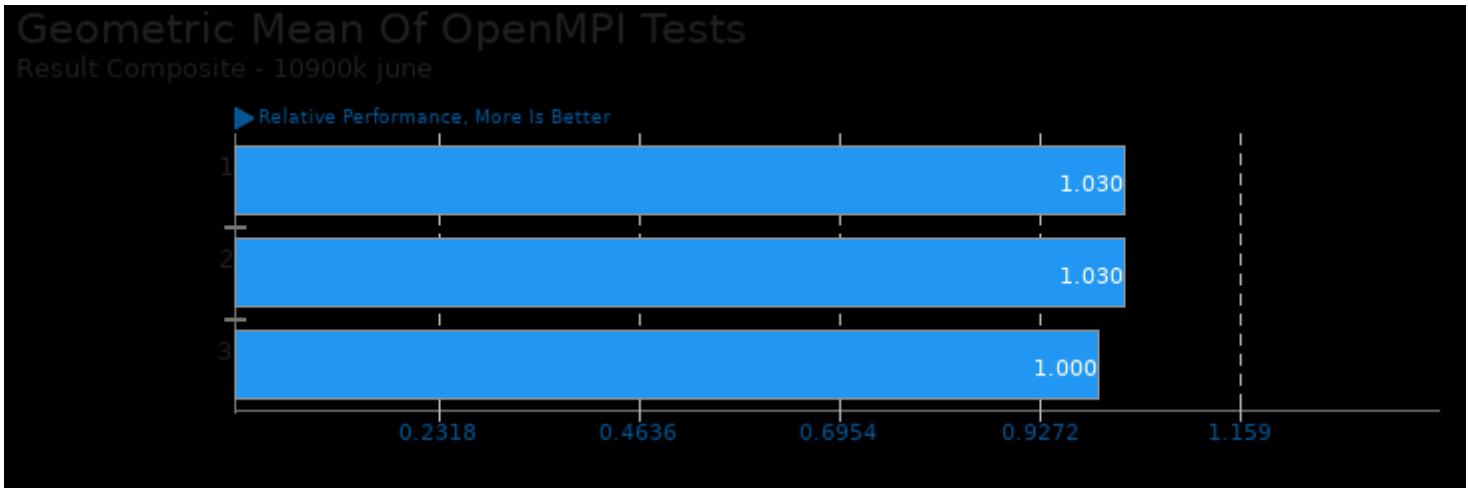
Geometric mean based upon tests: pts/vpxenc, pts/dav1d, pts/svt-av1, pts/npb, pts/gromacs, pts/compress-zstd, pts/build-gdb, pts/build-ffmpeg, pts/embree and pts/oidn



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

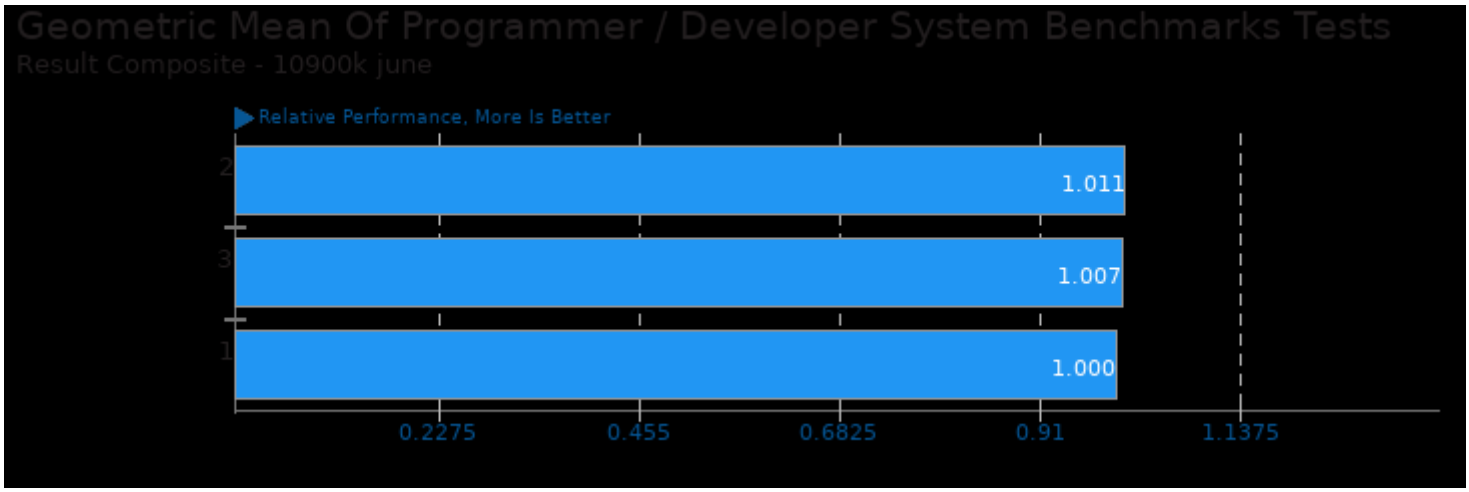


Geometric mean based upon tests: pts/embree and pts/oidn

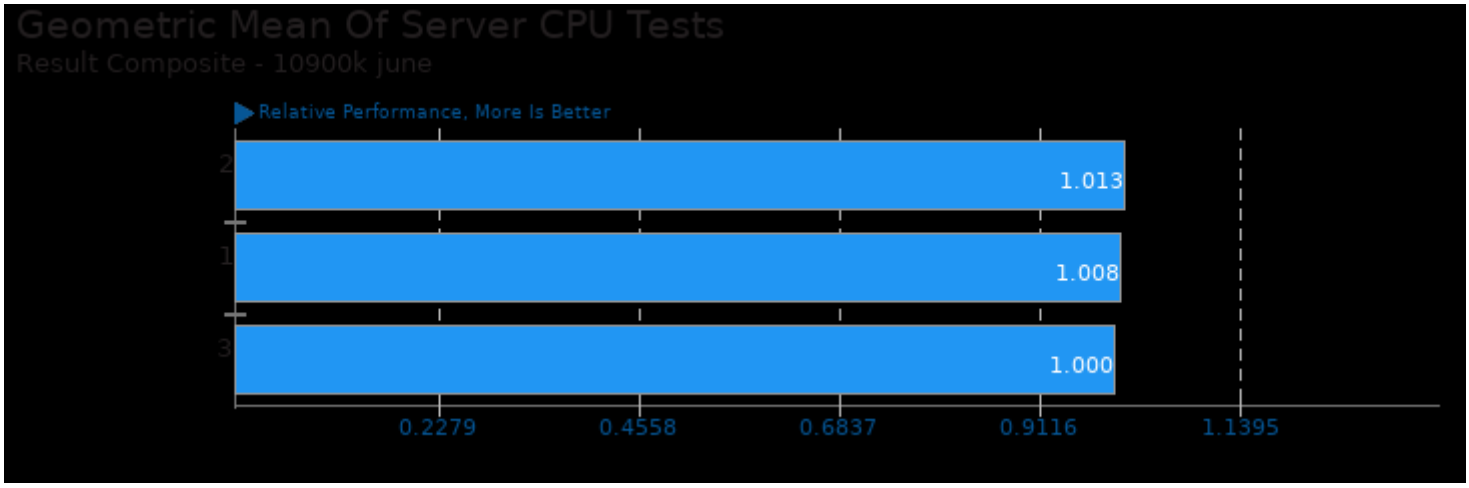


Geometric mean based upon tests: pts/gromacs and pts/npb

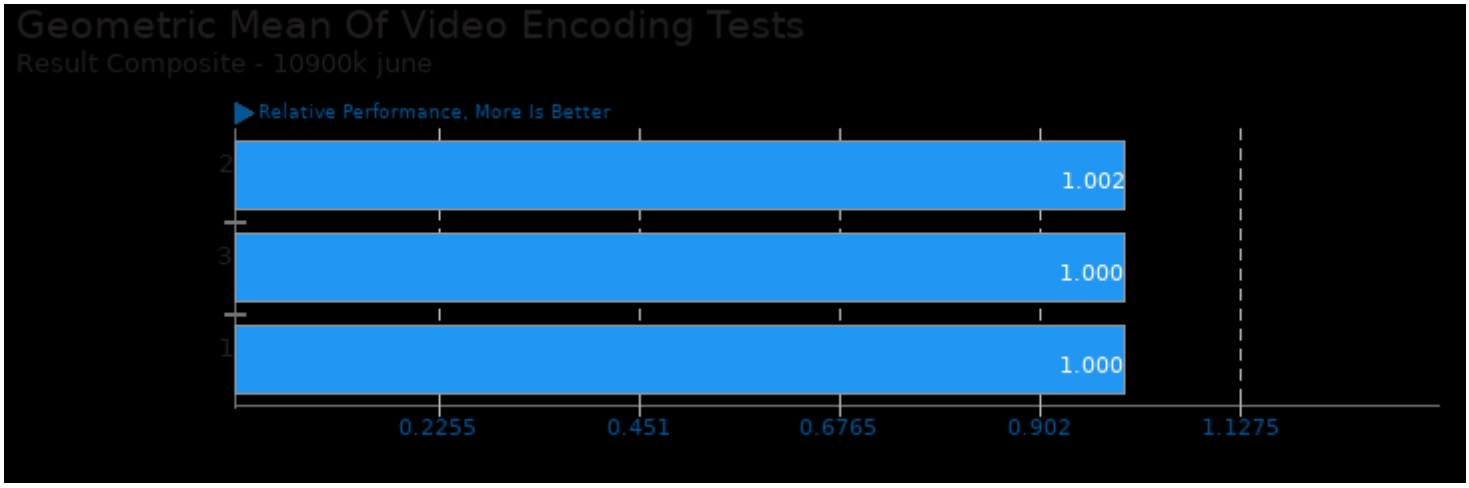
10900k june



Geometric mean based upon tests: pts/blosc, pts/compress-zstd, pts/build-gdb and pts/build-ffmpeg



Geometric mean based upon tests: pts/npb, pts/svt-av1, pts/dav1d and pts/compress-zstd



Geometric mean based upon tests: pts/vpxenc, pts/dav1d and pts/svt-av1

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 11:18.