

www.phoronix-test-suite.com

i7 6800K Debian

Intel Core i7-6800K testing with a MSI X99A WORKSTATION (MS-7A54) v1.0 (1.10 BIOS) and Zotac NVIDIA GeForce GTX 1050 2GB on Debian 10 via the Phoronix Test Suite.

Automated Executive Summary

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

Based on the geometric mean of all complete results, the fastest (Debian 10 Buster) was 1.001x the speed of the slowest (Debian 10). Debian 10 Buster was 1x the speed of Repeat and Debian 10 was 0.999x the speed of Debian 10 Buster.

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

Zstd Compression (Compression Level: 19) at 1.111x
NCNN (Target: CPU - Model: blazeface) at 1.035x
OSBench (Test: Memory Allocations) at 1.031x
WebP Image Encode (Encode Settings: Quality 100, Lossless) at 1.03x
Incompact3D (Input: Cylinder) at 1.028x
NCNN (Target: CPU - Model: squeezenet_int8) at 1.026x
dcraw (RAW To PPM Image Conversion) at 1.023x
OSBench (Test: Launch Programs) at 1.022x

eSpeak-NG Speech Engine (Text-To-Speech Synthesis) at 1.02x
WebP Image Encode (Encode Settings: Default) at 1.017x.

Test Systems:

Debian 10

Debian 10 Buster

Repeat

Processor: Intel Core i7-6800K @ 3.80GHz (6 Cores / 12 Threads), Motherboard: MSI X99A WORKSTATION (MS-7A54) v1.0 (1.10 BIOS), Chipset: Intel Xeon E7 v4/Xeon, Memory: 16GB, Disk: 120GB TOSHIBA TR150, Graphics: Zotac NVIDIA GeForce GTX 1050 2GB, Audio: Realtek ALC1150, Monitor: G237HL, Network: Intel I218-LM + Intel I210

OS: Debian 10, Kernel: 4.19.0-10-amd64 (x86_64), Desktop: GNOME Shell 3.30.2, Display Server: X Server 1.20.4 + Wayland, Display Driver: modesetting 1.20.4, Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xb00002e
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Vulnerable: Clear buffers attempted no microcode; SMT vulnerable + meltdown: Mitigation of PTI + 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 generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Vulnerable: Clear buffers attempted no microcode; SMT vulnerable

	Debian 10	Debian 10 Buster	Repeat
Zstd Compression - 19 (MB/s)	**34.2**	**38**	**38**
Normalized	90%	100%	100%
Standard Deviation	0.2%		
NCNN - CPU - blazeface (ms)	**1.98**	2.02	**2.05**
Normalized	100%	98.02%	96.59%
Standard Deviation	1.3%	3%	2.1%
OSBench - Memory Allocations (Ns/Event)	**84.364653**	**81.814369**	84.232648
Normalized	96.98%	100%	97.13%
Standard Deviation	0.1%	1.5%	0.3%
WebP Image Encode - Q.1.L (Encode Time - sec)	19.790	**19.819**	**19.239**
Normalized	97.22%	97.07%	100%
Standard Deviation	0.2%	0.3%	2.3%
Incompact3D - Cylinder (sec)	**535.034912**	**550.102097**	536.131409
Normalized	100%	97.26%	99.8%
Standard Deviation	0.4%	2.6%	0.2%

i7 6800K Debian

NCNN - CPU - squeezenet_int8 (ms)	**22.38**	**22.96**	22.88
Normalized	100%	97.47%	97.81%
Standard Deviation	2.4%	0.3%	0.8%
dcraw - R.T.P.I.C (sec)	**48.356**	**49.476**	49.447
Normalized	100%	97.74%	97.79%
Standard Deviation	2.8%	0%	0.2%
OSBench - Launch Programs (us/Event)	**39.476554**	40.109952	**40.352344**
Normalized	100%	98.42%	97.83%
Standard Deviation	0.2%	0.4%	0.1%
eSpeak-NG Speech Engine - T.T.S.S (sec)	**39.383**	**38.614**	39.052
Normalized	98.05%	100%	98.88%
Standard Deviation	3%	2%	2.8%
WebP Image Encode - Default (Encode Time - sec)	1.875	**1.877**	**1.845**
Normalized	98.4%	98.3%	100%
Standard Deviation	2.7%	2.8%	2.6%
NCNN - CPU - resnet50_int8 (ms)	**108.20**	**109.90**	108.37
Normalized	100%	98.45%	99.84%
Standard Deviation	0.3%	0.4%	0.1%
OSBench - Create Processes (us/Event)	23.462772	**23.286343**	**23.643971**
Normalized	99.25%	100%	98.49%
Standard Deviation	1.7%	1.1%	1.8%
NCNN - CPU - mnasnet (ms)	5.52	**5.55**	**5.47**
Normalized	99.09%	98.56%	100%
Standard Deviation	2.5%	2.2%	2.1%
WebP Image Encode - Q.1.H.C (Encode Time - sec)	8.550	**8.566**	**8.447**
Normalized	98.8%	98.61%	100%
Standard Deviation	0.3%	0.4%	2.9%
OSBench - Create Files (us/Event)	**14.685416**	14.684122	**14.494470**
Normalized	98.7%	98.71%	100%
Standard Deviation	0.1%	1.3%	2.9%
NCNN - CPU - mobilenetv2_yolov3 (ms)	**21.73**	21.60	**21.45**
Normalized	98.71%	99.31%	100%
Standard Deviation	1.1%	0.7%	0.1%
InfluxDB - 64 - 10000 - 2,5000,1 - 10000 (val/sec)	983617	**977784**	**990405**
Normalized	99.31%	98.73%	100%
Standard Deviation	1.2%	2.7%	2.1%
Blender - Classroom - CPU-Only (sec)	**786.59**	**796.08**	790.46
Normalized	100%	98.81%	99.51%
Standard Deviation	0.2%	0.7%	0.6%
Zstd Compression - 3 (MB/s)	**3026**	**3062**	3056
Normalized	98.82%	100%	99.79%
Standard Deviation	0.1%	0.2%	0.2%
WebP Image Encode - Quality 100 (Encode Time - sec)	**2.848**	**2.881**	2.878
Normalized	100%	98.85%	98.96%
Standard Deviation	2.7%	0.5%	0.2%
NCNN - CPU - resnet18_int8 (ms)	**32.83**	32.97	**33.16**
Normalized	100%	99.58%	99%
Standard Deviation	2.2%	1.9%	2.1%

i7 6800K Debian

InfluxDB - 1024 - 10000 - 2,5000,1 - 10000 (val/sec)	**1089453**	1096129	**1099269**
Normalized	99.11%	99.71%	100%
Standard Deviation	1.5%	0.2%	1%
AOM AV1 - Speed 6 Realtime (FPS)	**14.61**	14.67	**14.73**
Normalized	99.19%	99.59%	100%
Standard Deviation	1.3%	0.7%	0.5%
WebP Image Encode - Q.1.L.H.C (Encode Time - sec)	41.613	**41.648**	**41.311**
Normalized	99.27%	99.19%	100%
Standard Deviation	0.1%	0.2%	2.2%
NCNN - CPU - mobilenet_v3 (ms)	5.56	**5.57**	**5.53**
Normalized	99.46%	99.28%	100%
Standard Deviation	1%	0.7%	0.2%
Blender - Barbershop - CPU-Only (sec)	**1053**	**1045**	1048
Normalized	99.28%	100%	99.76%
Standard Deviation	1.1%	0.1%	0.1%
AOM AV1 - Speed 6 Two-Pass (FPS)	**2.88**	**2.90**	**2.90**
Normalized	99.31%	100%	100%
Standard Deviation	0.5%	0.7%	0.3%
NCNN - CPU - squeezenet (ms)	4.58	**4.59**	**4.56**
Normalized	99.56%	99.35%	100%
Standard Deviation	1.1%	0.9%	0.3%
Timed LLVM Compilation - Time To Compile (sec)	**886.587**	**881.705**	883.997
Normalized	99.45%	100%	99.74%
Standard Deviation	0.5%	0.3%	0.2%
Blender - Fishy Cat - CPU-Only (sec)	364.79	**366.18**	**364.20**
Normalized	99.84%	99.46%	100%
Standard Deviation	0.1%	0.2%	0.2%
NCNN - CPU - googlenet_int8 (ms)	**61.10**	**60.77**	60.96
Normalized	99.46%	100%	99.69%
Standard Deviation	0.9%	0.7%	0.9%
Mobile Neural Network - inception-v3 (ms)	**49.966**	49.977	**50.233**
Normalized	100%	99.98%	99.47%
Standard Deviation	0.7%	1.7%	1%
Mobile Neural Network - resnet-v2-50 (ms)	40.059	**39.918**	**40.129**
Normalized	99.65%	100%	99.47%
Standard Deviation	1.5%	1.1%	1.5%
AOM AV1 - Speed 8 Realtime (FPS)	**30.50**	**30.66**	30.52
Normalized	99.48%	100%	99.54%
Standard Deviation	0.2%	1.4%	0.5%
Blender - Pabellon Barcelona - CPU-Only	876.25	**872.30**	**876.86**
Normalized	99.55%	100%	99.48%
Standard Deviation	0.1%	0.4%	0.1%
NCNN - CPU - alexnet (ms)	**15.78**	15.73	**15.71**
Normalized	99.56%	99.87%	100%
Standard Deviation	1%	0.4%	0.4%
Mobile Neural Network - MobileNetV2_224	**4.655**	4.648	**4.635**
Normalized	99.57%	99.72%	100%
Standard Deviation	1.1%	0.9%	0.4%
Monte Carlo Simulations of Ionised Nebulae - Dust 2D tau100.0 (sec)	**253**	**252**	**252**
Normalized	99.6%	100%	100%
Standard Deviation	0.2%		

i7 6800K Debian

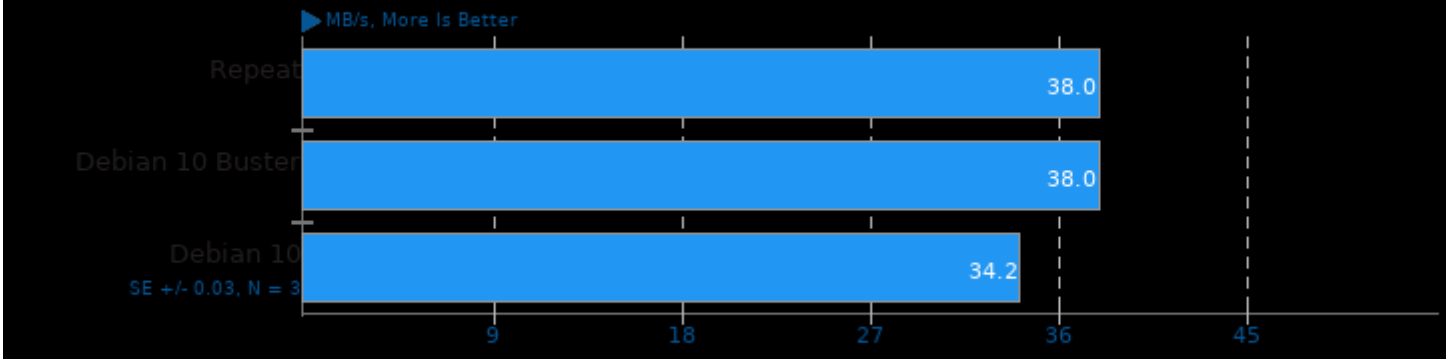
NCNN - CPU - vgg16_int8 (ms)	**179.99**	179.89	**179.30**
Normalized	99.62%	99.67%	100%
Standard Deviation	0.4%	0.2%	0.3%
LAMMPS Molecular Dynamics Simulator - Rhodopsin Protein (ns/day)	**4.247**	**4.231**	4.246
Normalized	100%	99.62%	99.98%
Standard Deviation	0.5%	0.6%	0.3%
LibRaw - P.P.B (Mpix/sec)	30.31	**30.37**	**30.26**
Normalized	99.8%	100%	99.64%
Standard Deviation	1%	1.4%	1.2%
Blender - BMW27 - CPU-Only (sec)	259.45	**260.13**	**259.34**
Normalized	99.96%	99.7%	100%
Standard Deviation	0.3%	0.4%	0.1%
Mobile Neural Network - SqueezeNetV1.0	**7.681**	7.687	**7.704**
Normalized	100%	99.92%	99.7%
Standard Deviation	0.7%	0.8%	0.3%
InfluxDB - 4 - 10000 - 2,5000,1 - 10000	**902054**	**904699**	902556
Normalized	99.71%	100%	99.76%
Standard Deviation	2.7%	2.6%	2.2%
Mobile Neural Network - mobilenet-v1-1.0	7.219	**7.223**	**7.202**
Normalized	99.76%	99.71%	100%
Standard Deviation	0.2%	0.5%	0.1%
LAMMPS Molecular Dynamics Simulator - 20k Atoms (ns/day)	**4.050**	**4.060**	**4.050**
Normalized	99.75%	100%	99.75%
Standard Deviation	0.5%	0.4%	0.2%
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	**2.75748**	**2.76335**	2.76279
Normalized	100%	99.79%	99.81%
Standard Deviation	0.6%	0.1%	0.3%
TensorFlow Lite - NASNet Mobile (us)	**302458**	302155	**302017**
Normalized	99.85%	99.95%	100%
Standard Deviation	0.2%	0.3%	0.4%
TensorFlow Lite - Mobilenet Float (us)	254122	**254280**	**253975**
Normalized	99.94%	99.88%	100%
Standard Deviation	0.2%	0.2%	0.1%
TensorFlow Lite - Mobilenet Quant (us)	**246406**	246397	**246225**
Normalized	99.93%	99.93%	100%
Standard Deviation	0.2%	0.2%	0.1%
TensorFlow Lite - Inception V4 (us)	5425967	**5428113**	**5425307**
Normalized	99.99%	99.95%	100%
Standard Deviation	0%	0%	0.1%
TensorFlow Lite - I.R.V (us)	4888407	**4888160**	**4889750**
Normalized	99.99%	100%	99.97%
Standard Deviation	0.1%	0.1%	0.1%
GPAW - Carbon Nanotube (sec)	**436.433**	436.385	**436.322**
Normalized	99.97%	99.99%	100%
Standard Deviation	0.1%	0.1%	0.3%
TensorFlow Lite - SqueezeNet (us)	370424	**370419**	**370499**
Normalized	100%	100%	99.98%
Standard Deviation	0.1%	0.2%	0.1%
AOM AV1 - Speed 4 Two-Pass (FPS)	1.83	1.83	1.83
Standard Deviation	0.3%	0.3%	0.3%
AOM AV1 - Speed 0 Two-Pass (FPS)	0.24	0.24	0.24
Standard Deviation	2.4%	2.4%	2.4%

i7 6800K Debian

OpenCV - DNN - D.N.N (ms)	**8326**	**9290**	8743
Normalized	100%	89.62%	95.23%
Standard Deviation	12.7%	13.4%	9.3%
Kripke (Throughput FoM)	**3130019**	**3527303**	3145270
Normalized	88.74%	100%	89.17%
Standard Deviation	1.1%	25.2%	2.8%
System GZIP Decompression (sec)	**3.580**	3.463	**3.433**
Normalized	95.89%	99.13%	100%
Standard Deviation	10.9%	10%	3%
OSBench - Create Threads (us/Event)	**11.610190**	12.149334	**12.640794**
Normalized	100%	95.56%	91.85%
Standard Deviation	2.5%	9.8%	11.4%

Zstd Compression 1.4.5

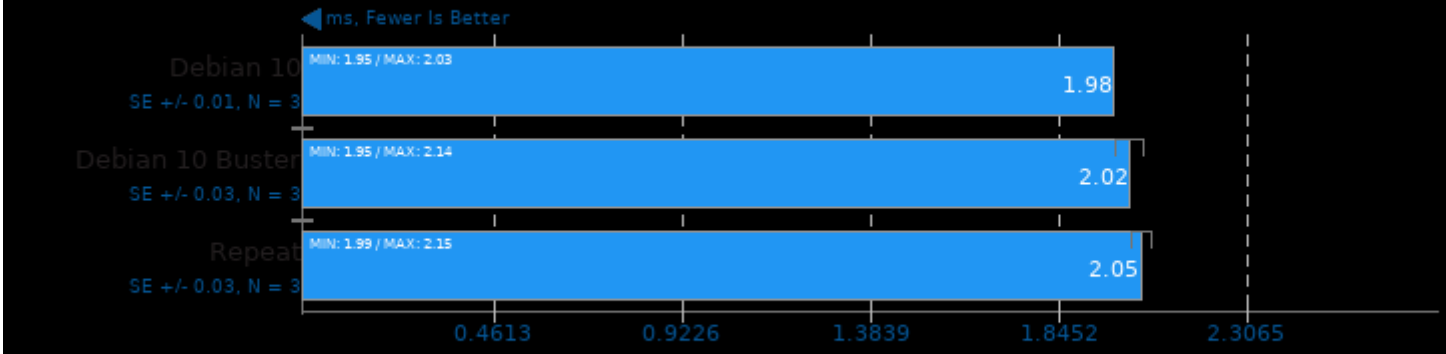
Compression Level: 19



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

NCNN 20200916

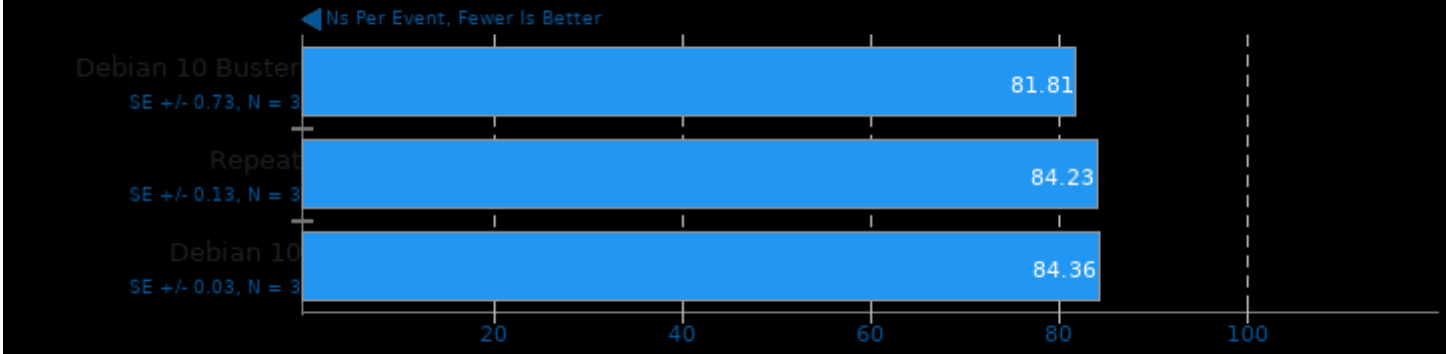
Target: CPU - Model: blazeface



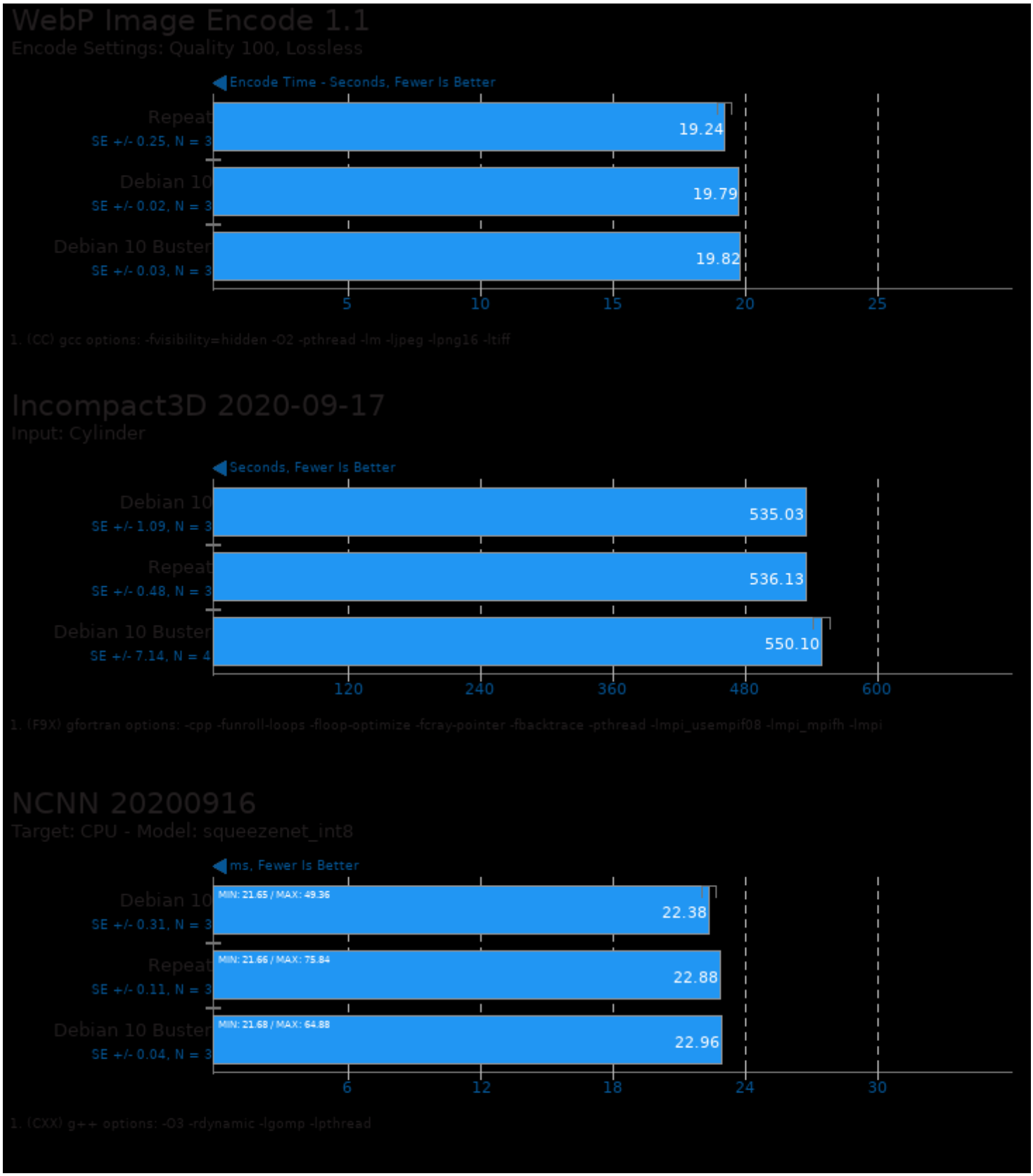
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

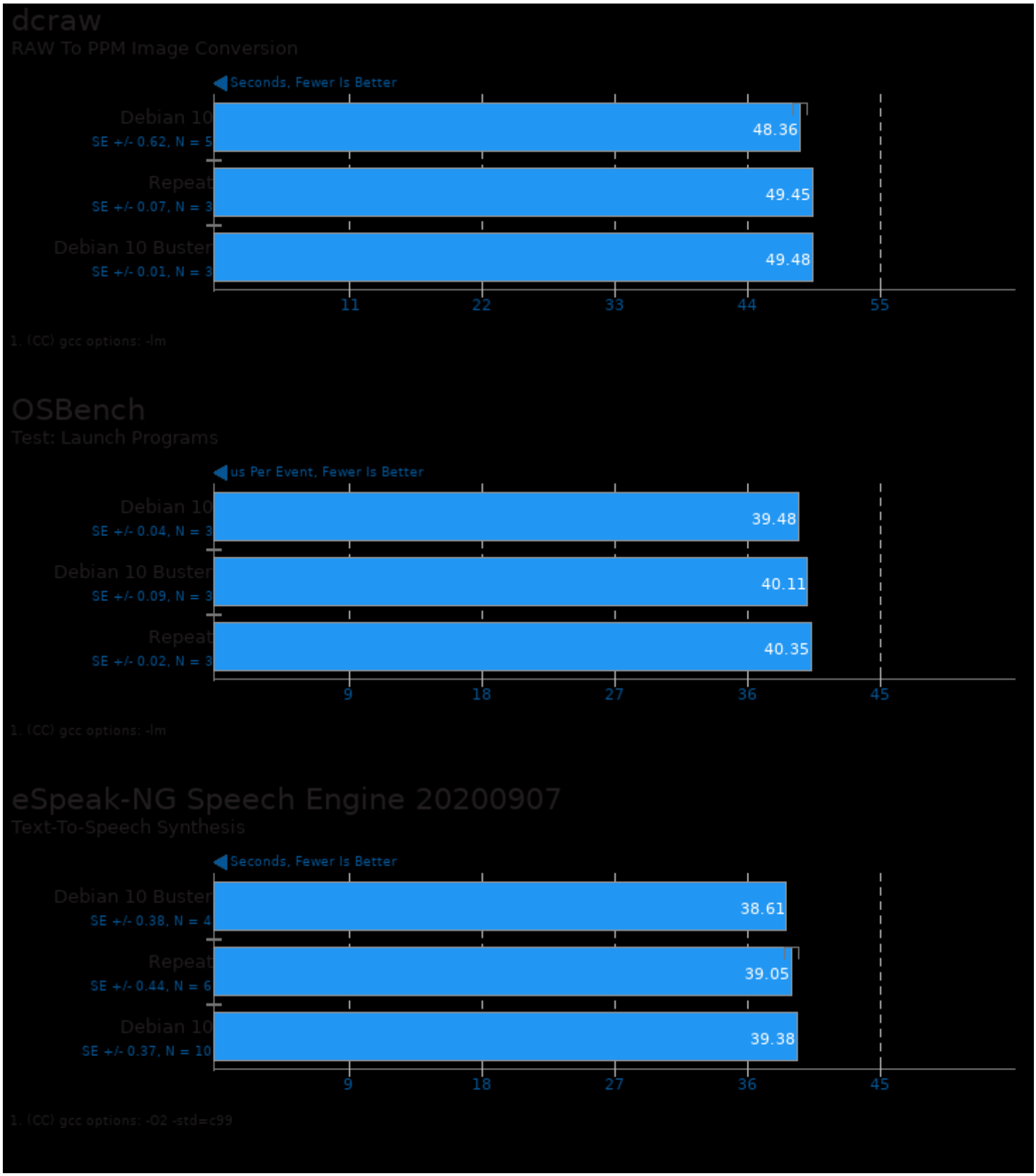
OSBench

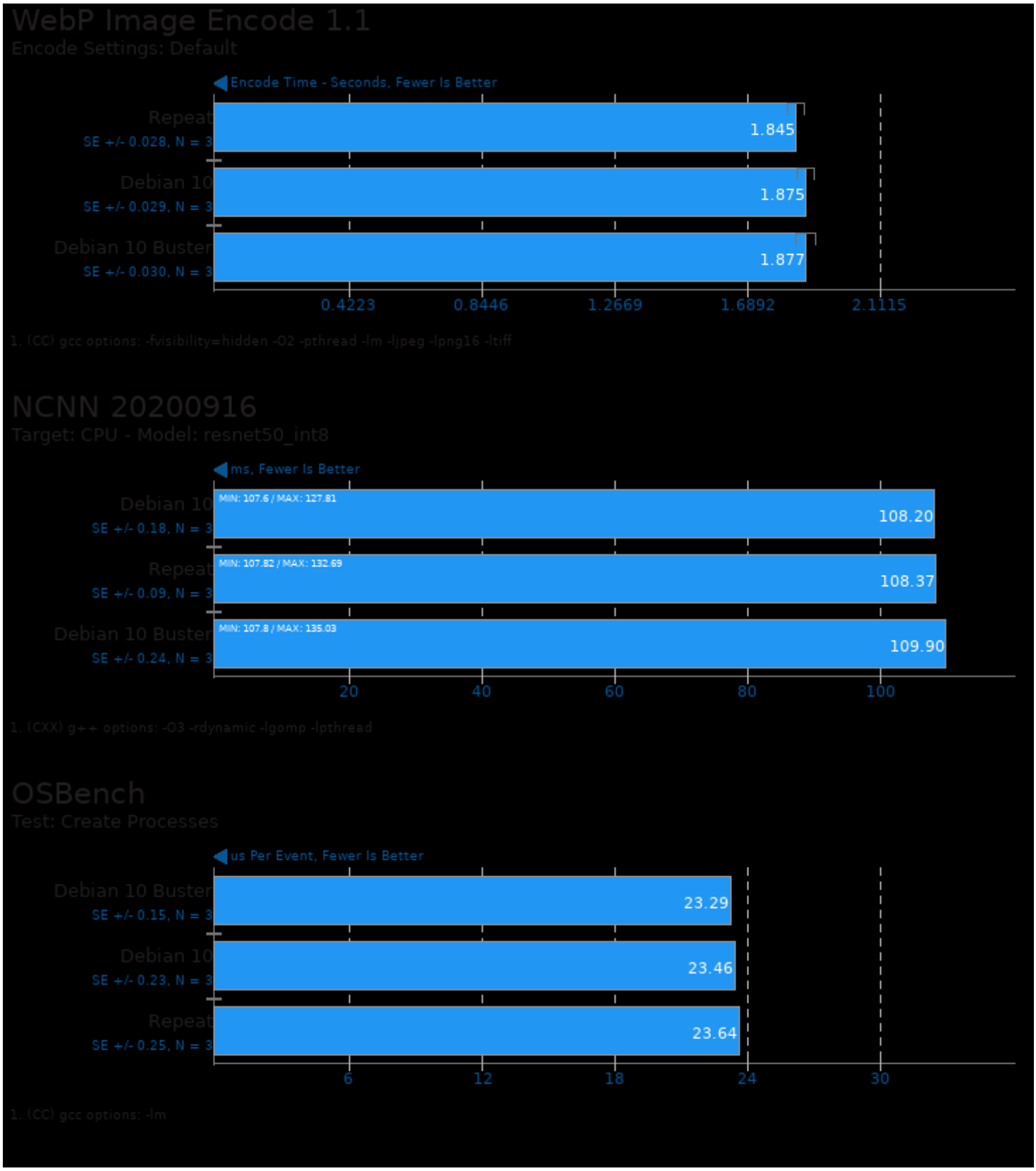
Test: Memory Allocations

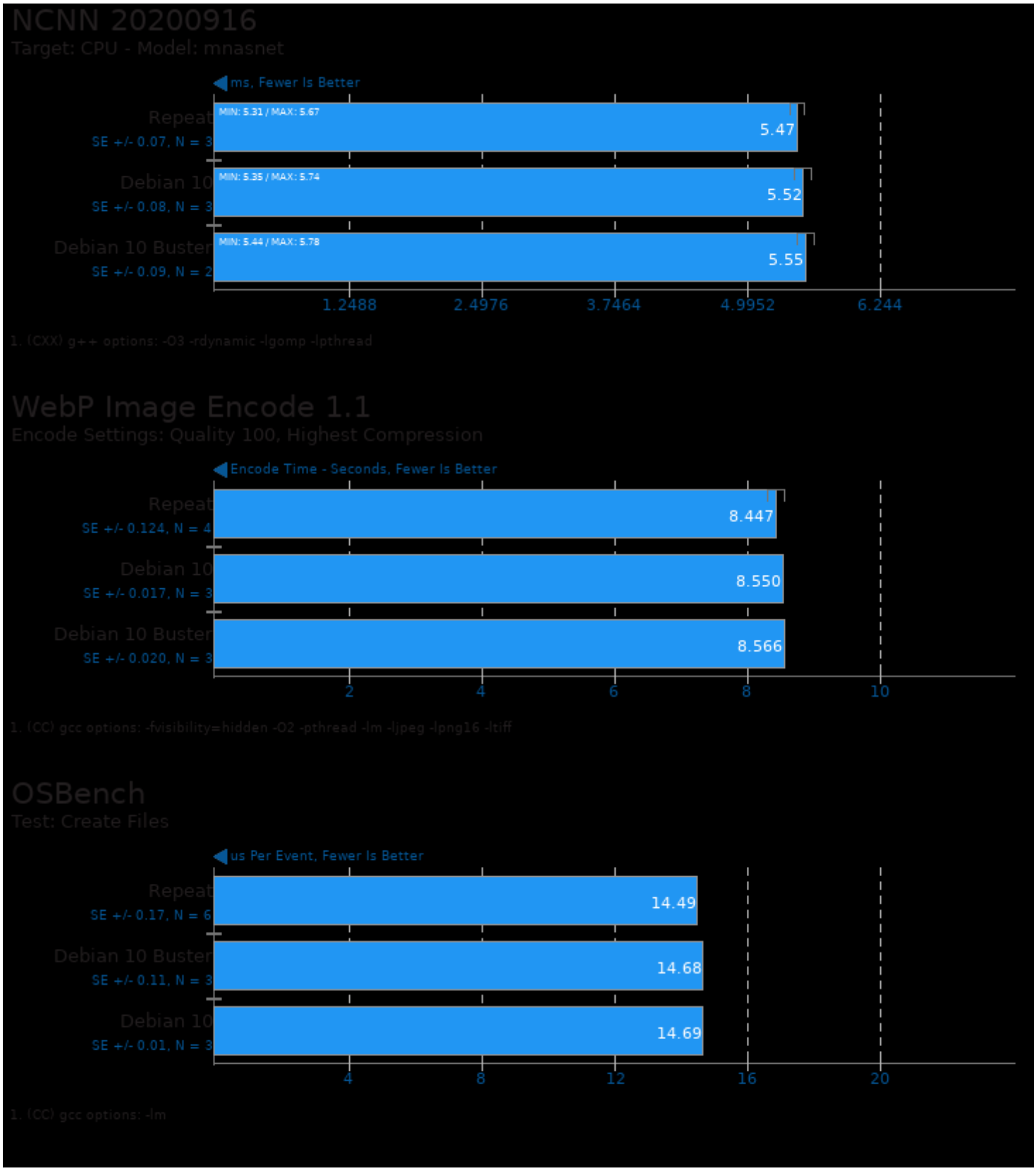


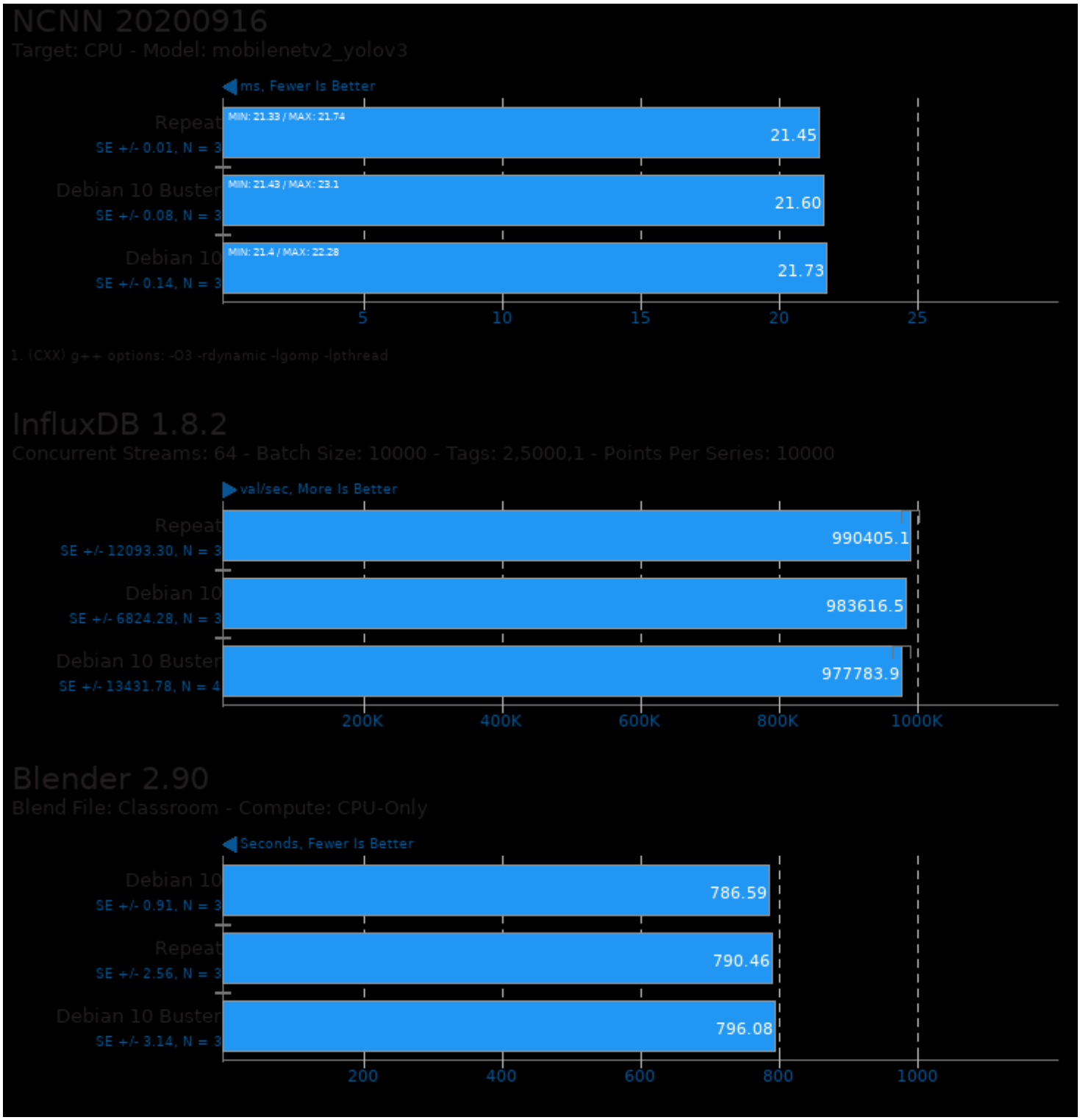
1. (CC) gcc options: -lm

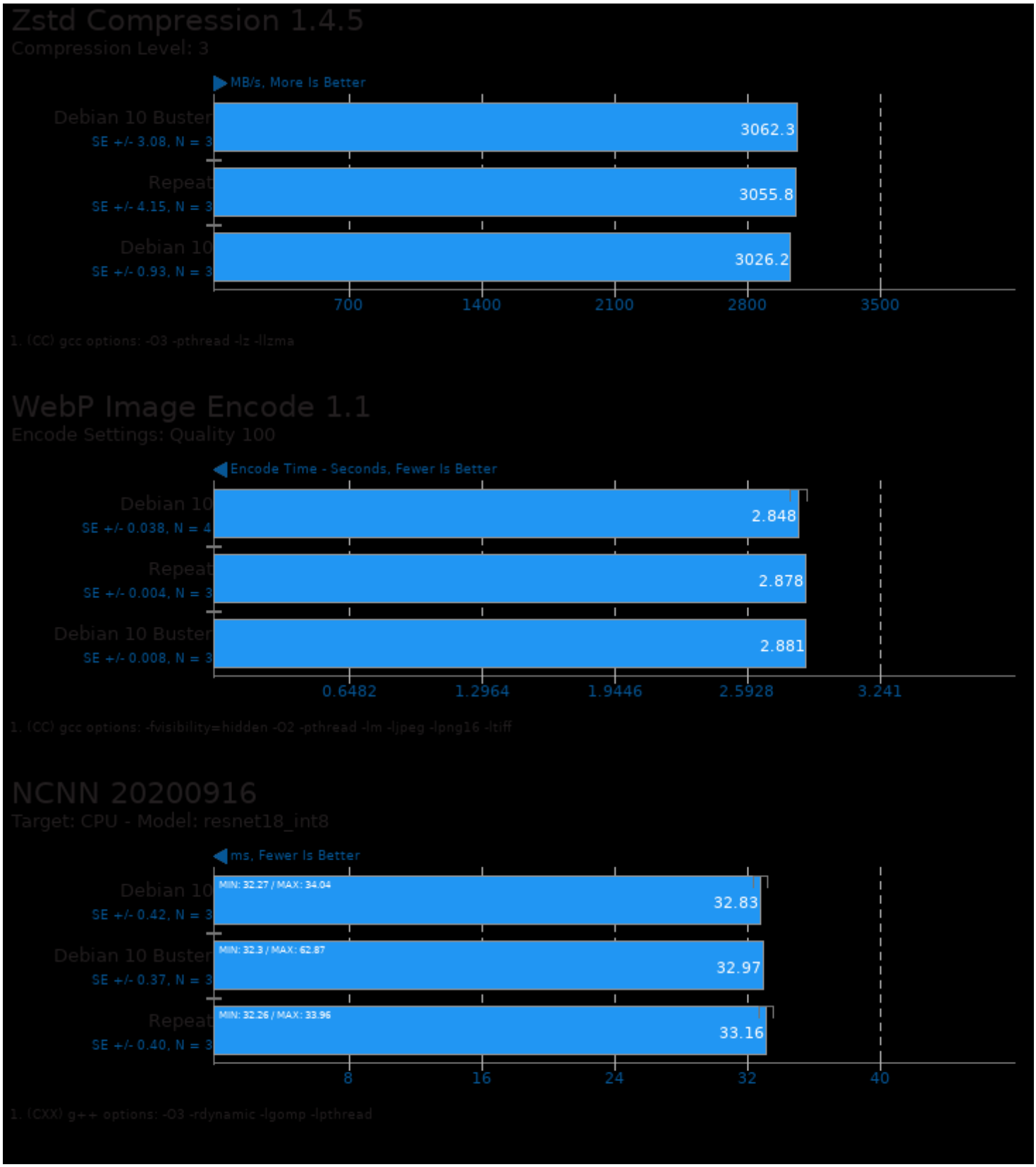

WebP Image Encode 1.1
Encode Settings: Quality 100, Lossless
Encode Time - Seconds, Fewer Is Better
Repeat
SE +/- 0.25, N = 3
19.24
Debian 10
SE +/- 0.02, N = 3
19.79
Debian 10 Buster
SE +/- 0.03, N = 3
19.82
5
10
15
20
25
1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff
Incompact3D 2020-09-17
Input: Cylinder
Seconds, Fewer Is Better
Debian 10
SE +/- 1.09, N = 3
535.03
Repeat
SE +/- 0.48, N = 3
536.13
Debian 10 Buster
SE +/- 7.14, N = 4
550.10
120
240
360
480
600
1. (F9X) gfortran options: -cpp -funroll-loops -floop-optimize -fcray-pointer -fbacktrace -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
NCNN 20200916
Target: CPU - Model: squeezenet_int8
ms, Fewer Is Better
Debian 10
SE +/- 0.31, N = 3
MIN: 21.65 / MAX: 49.36
22.38
Repeat
SE +/- 0.11, N = 3
MIN: 21.66 / MAX: 75.84
22.88
Debian 10 Buster
SE +/- 0.04, N = 3
MIN: 21.68 / MAX: 64.88
22.96
6
12
18
24
30
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

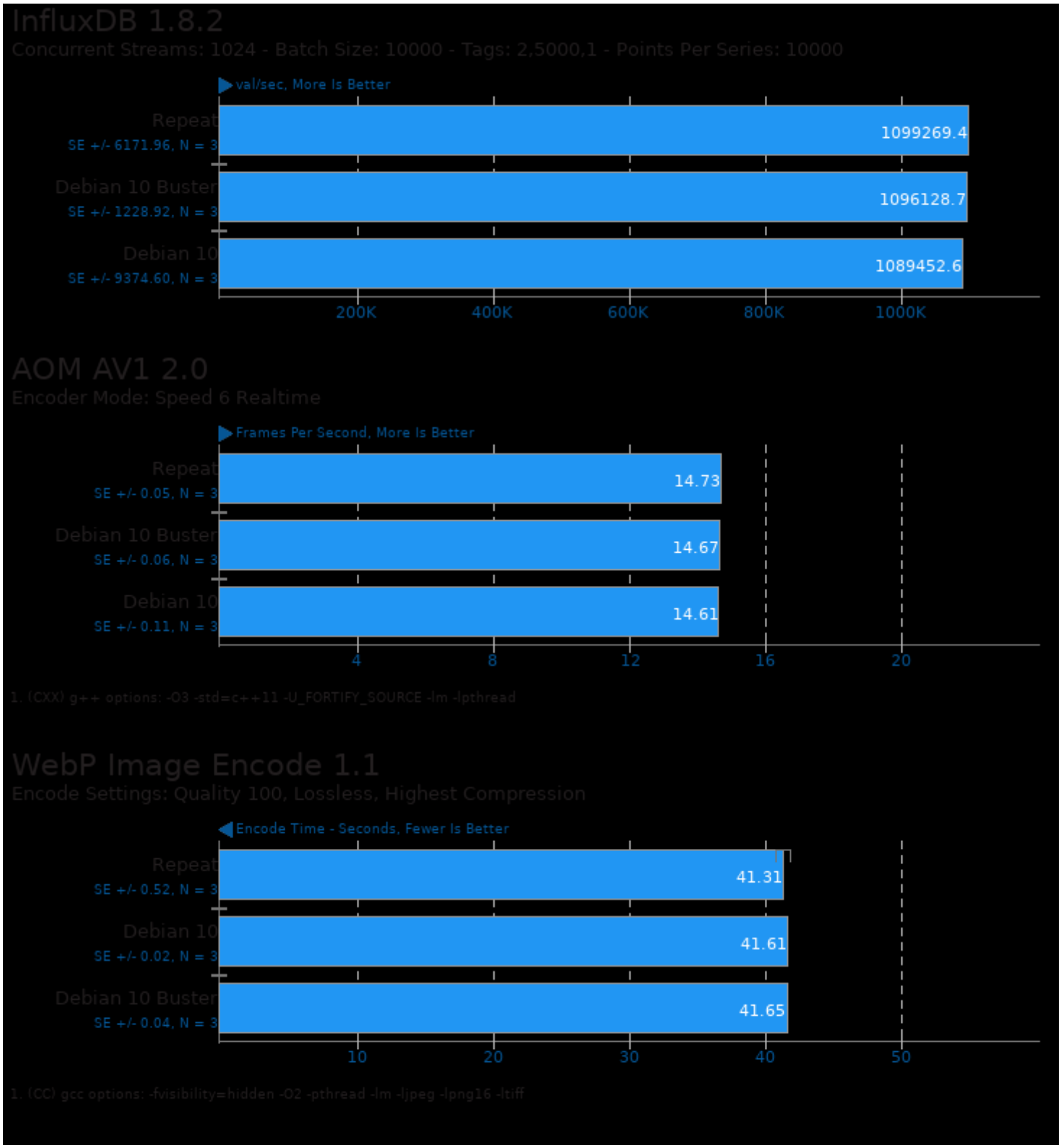

dcraw
RAW To PPM Image Conversion
Seconds, Fewer Is Better
Debian 10
SE +/- 0.62, N = 5
48.36
Repeat
SE +/- 0.07, N = 3
49.45
Debian 10 Buster
SE +/- 0.01, N = 3
49.48
11
22
33
44
55
1. (CC) gcc options: -lm
OSBench
Test: Launch Programs
us Per Event, Fewer Is Better
Debian 10
SE +/- 0.04, N = 3
39.48
Debian 10 Buster
SE +/- 0.09, N = 3
40.11
Repeat
SE +/- 0.02, N = 3
40.35
9
18
27
36
45
1. (CC) gcc options: -lm
eSpeak-NG Speech Engine 20200907
Text-To-Speech Synthesis
Seconds, Fewer Is Better
Debian 10 Buster
SE +/- 0.38, N = 4
38.61
Repeat
SE +/- 0.44, N = 6
39.05
Debian 10
SE +/- 0.37, N = 10
39.38
9
18
27
36
45
1. (CC) gcc options: -O2 -std=c99

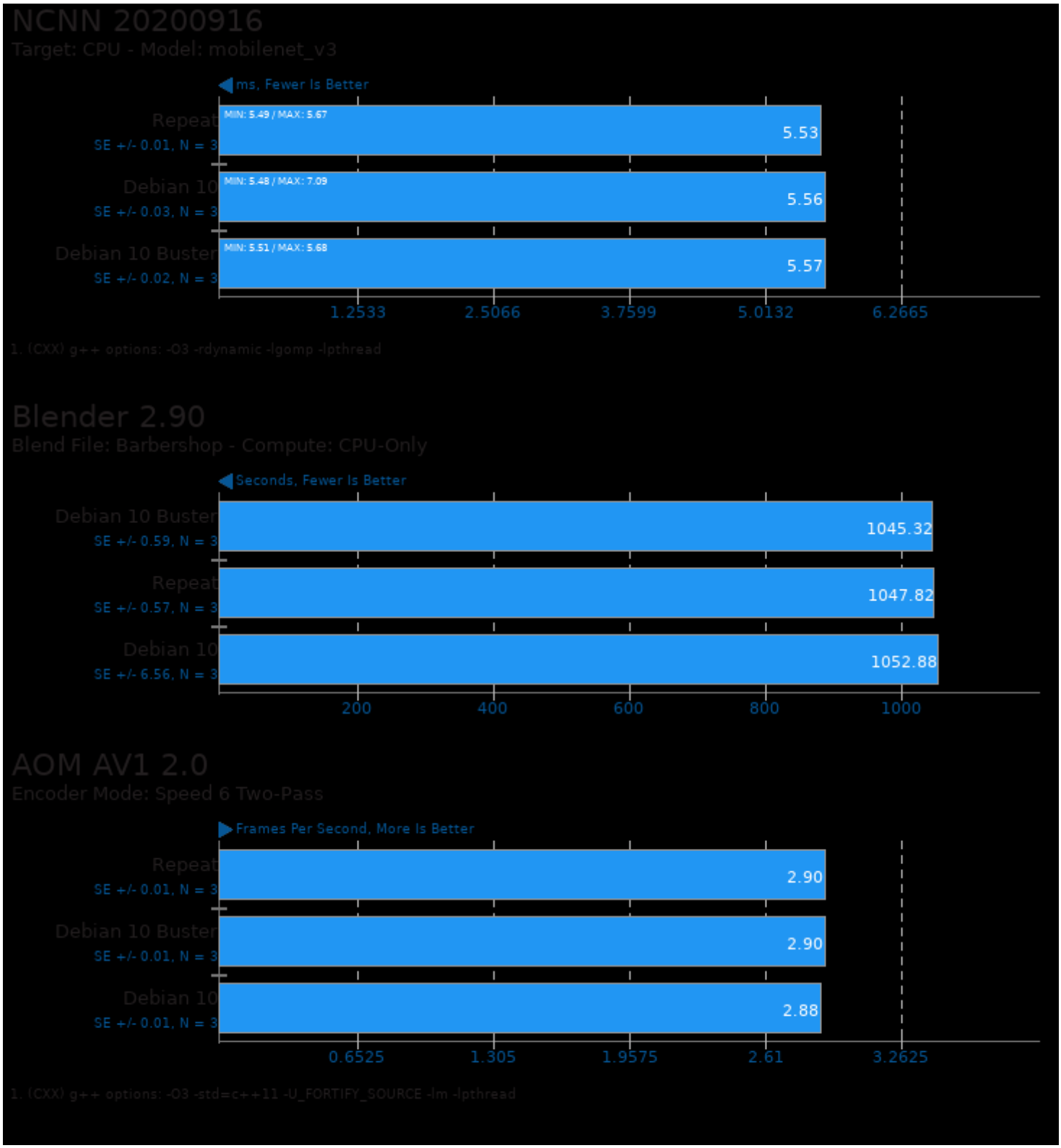

WebP Image Encode 1.1
Encode Settings: Default
Encode Time - Seconds, Fewer Is Better
Repeat
SE +/- 0.028, N = 3
1.845
Debian 10
SE +/- 0.029, N = 3
1.875
Debian 10 Buster
SE +/- 0.030, N = 3
1.877
0.4223
0.8446
1.2669
1.6892
2.1115
1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff
NCNN 20200916
Target: CPU - Model: resnet50_int8
ms, Fewer Is Better
Debian 10
SE +/- 0.18, N = 3
MIN: 107.6 / MAX: 127.81
108.20
Repeat
SE +/- 0.09, N = 3
MIN: 107.82 / MAX: 132.69
108.37
Debian 10 Buster
SE +/- 0.24, N = 3
MIN: 107.8 / MAX: 135.03
109.90
20
40
60
80
100
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
OSBench
Test: Create Processes
us Per Event, Fewer Is Better
Debian 10 Buster
SE +/- 0.15, N = 3
23.29
Debian 10
SE +/- 0.23, N = 3
23.46
Repeat
SE +/- 0.25, N = 3
23.64
6
12
18
24
30
1. (CC) gcc options: -lm

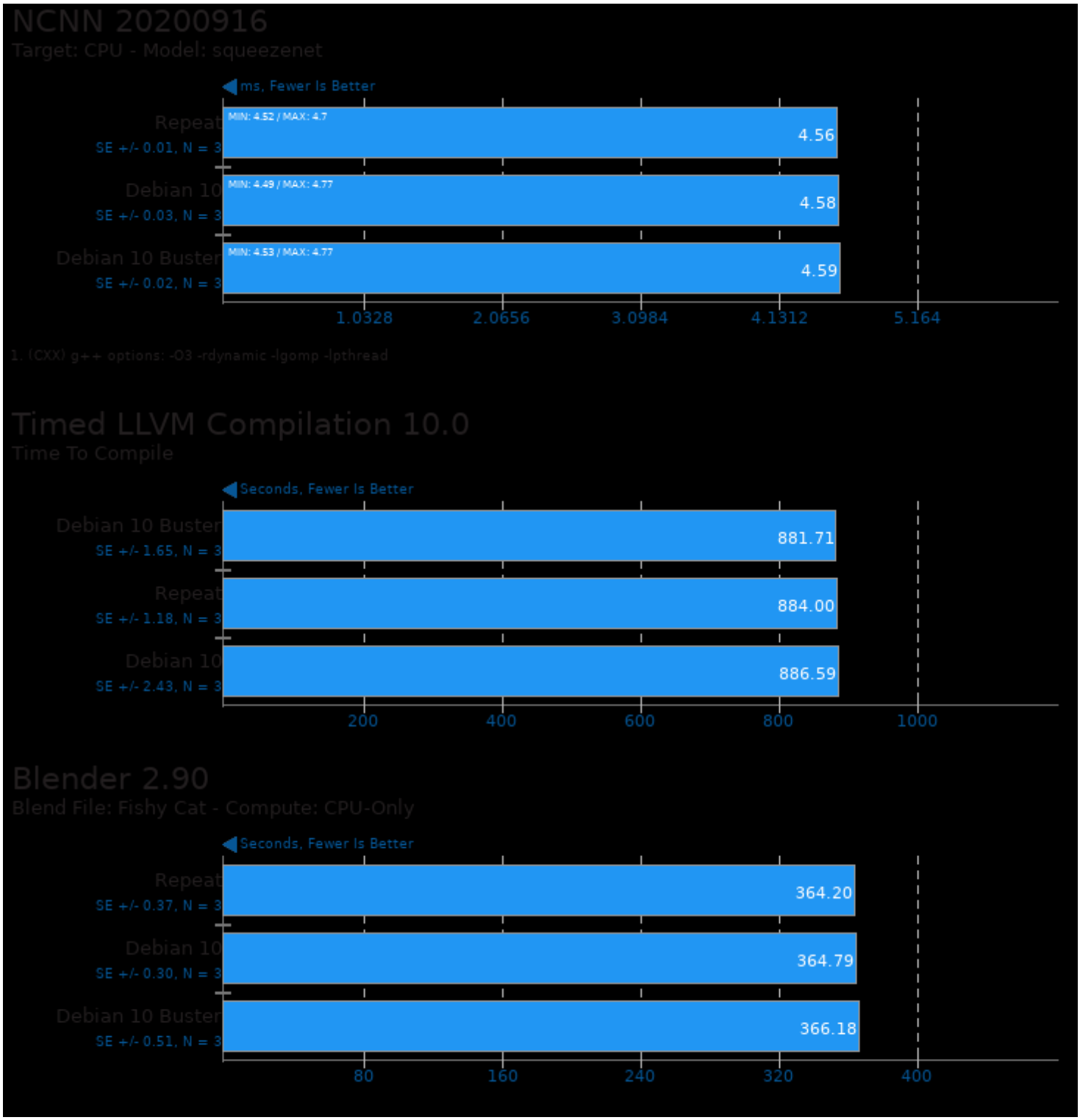

NCNN 20200916
Target: CPU - Model: mnasnet
ms, Fewer Is Better
Repeat
SE +/- 0.07, N = 3
MIN: 5.31 / MAX: 5.67
5.47
Debian 10
SE +/- 0.08, N = 3
MIN: 5.35 / MAX: 5.74
5.52
Debian 10 Buster
SE +/- 0.09, N = 2
MIN: 5.44 / MAX: 5.78
5.55
1.2488
2.4976
3.7464
4.9952
6.244
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
WebP Image Encode 1.1
Encode Settings: Quality 100, Highest Compression
Encode Time - Seconds, Fewer Is Better
Repeat
SE +/- 0.124, N = 4
8.447
Debian 10
SE +/- 0.017, N = 3
8.550
Debian 10 Buster
SE +/- 0.020, N = 3
8.566
2
4
6
8
10
1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff
OSBench
Test: Create Files
us Per Event, Fewer Is Better
Repeat
SE +/- 0.17, N = 6
14.49
Debian 10 Buster
SE +/- 0.11, N = 3
14.68
Debian 10
SE +/- 0.01, N = 3
14.69
4
8
12
16
20
1. (CC) gcc options: -lm


NCNN 20200916
Target: CPU - Model: mobilenetv2_yolov3
ms, Fewer Is Better
Repeat
SE +/- 0.01, N = 3
MIN: 21.33 / MAX: 21.74
21.45
Debian 10 Buster
SE +/- 0.08, N = 3
MIN: 21.43 / MAX: 23.1
21.60
Debian 10
SE +/- 0.14, N = 3
MIN: 21.4 / MAX: 22.28
21.73
5
10
15
20
25
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
InfluxDB 1.8.2
Concurrent Streams: 64 - Batch Size: 10000 - Tags: 2,5000,1 - Points Per Series: 10000
val/sec, More Is Better
Repeat
SE +/- 12093.30, N = 3
990405.1
Debian 10
SE +/- 6824.28, N = 3
983616.5
Debian 10 Buster
SE +/- 13431.78, N = 4
977783.9
200K
400K
600K
800K
1000K
Blender 2.90
Blend File: Classroom - Compute: CPU-Only
Seconds, Fewer Is Better
Debian 10
SE +/- 0.91, N = 3
786.59
Repeat
SE +/- 2.56, N = 3
790.46
Debian 10 Buster
SE +/- 3.14, N = 3
796.08
200
400
600
800
1000


Zstd Compression 1.4.5
Compression Level: 3
MB/s, More Is Better
Debian 10 Buster
SE +/- 3.08, N = 3
3062.3
Repeat
SE +/- 4.15, N = 3
3055.8
Debian 10
SE +/- 0.93, N = 3
3026.2
700
1400
2100
2800
3500
1. (CC) gcc options: -O3 -pthread -lz -llzma
WebP Image Encode 1.1
Encode Settings: Quality 100
Encode Time - Seconds, Fewer Is Better
Debian 10
SE +/- 0.038, N = 4
2.848
Repeat
SE +/- 0.004, N = 3
2.878
Debian 10 Buster
SE +/- 0.008, N = 3
2.881
0.6482
1.2964
1.9446
2.5928
3.241
1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff
NCNN 20200916
Target: CPU - Model: resnet18_int8
ms, Fewer Is Better
Debian 10
SE +/- 0.42, N = 3
MIN: 32.27 / MAX: 34.04
32.83
Debian 10 Buster
SE +/- 0.37, N = 3
MIN: 32.3 / MAX: 62.87
32.97
Repeat
SE +/- 0.40, N = 3
MIN: 32.26 / MAX: 33.96
33.16
8
16
24
32
40
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

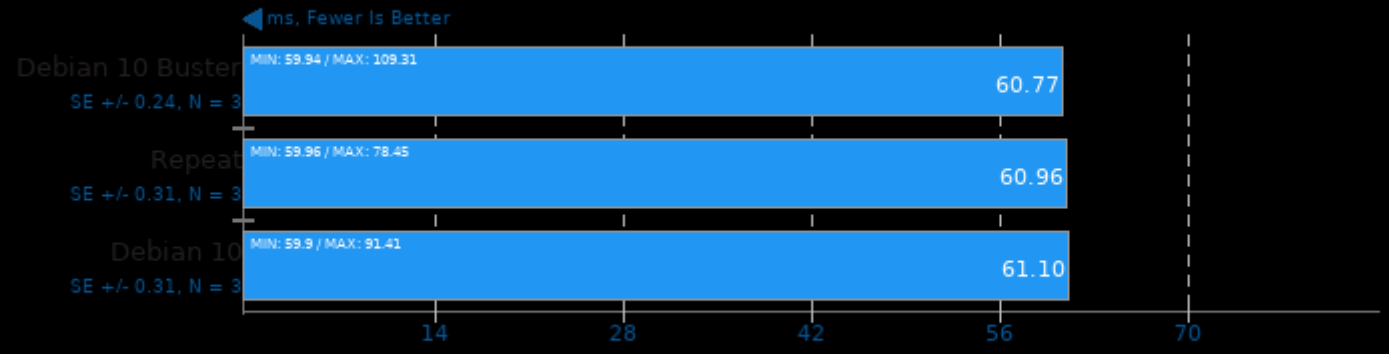

InfluxDB 1.8.2
Concurrent Streams: 1024 - Batch Size: 10000 - Tags: 2,5000,1 - Points Per Series: 10000
val/sec, More Is Better
Repeat
SE +/- 6171.96, N = 3
1099269.4
Debian 10 Buster
SE +/- 1228.92, N = 3
1096128.7
Debian 10
SE +/- 9374.60, N = 3
1089452.6
200K
400K
600K
800K
1000K
AOM AV1 2.0
Encoder Mode: Speed 6 Realtime
Frames Per Second, More Is Better
Repeat
SE +/- 0.05, N = 3
14.73
Debian 10 Buster
SE +/- 0.06, N = 3
14.67
Debian 10
SE +/- 0.11, N = 3
14.61
4
8
12
16
20
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
WebP Image Encode 1.1
Encode Settings: Quality 100, Lossless, Highest Compression
Encode Time - Seconds, Fewer Is Better
Repeat
SE +/- 0.52, N = 3
41.31
Debian 10
SE +/- 0.02, N = 3
41.61
Debian 10 Buster
SE +/- 0.04, N = 3
41.65
10
20
30
40
50
1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff


NCNN 20200916
Target: CPU - Model: mobilenet_v3
ms, Fewer Is Better
Repeat
SE +/- 0.01, N = 3
MIN: 5.49 / MAX: 5.67
5.53
Debian 10
SE +/- 0.03, N = 3
MIN: 5.48 / MAX: 7.09
5.56
Debian 10 Buster
SE +/- 0.02, N = 3
MIN: 5.51 / MAX: 5.68
5.57
1.2533
2.5066
3.7599
5.0132
6.2665
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
Blender 2.90
Blend File: Barbershop - Compute: CPU-Only
Seconds, Fewer Is Better
Debian 10 Buster
SE +/- 0.59, N = 3
1045.32
Repeat
SE +/- 0.57, N = 3
1047.82
Debian 10
SE +/- 6.56, N = 3
1052.88
200
400
600
800
1000
AOM AV1 2.0
Encoder Mode: Speed 6 Two-Pass
Frames Per Second, More Is Better
Repeat
SE +/- 0.01, N = 3
2.90
Debian 10 Buster
SE +/- 0.01, N = 3
2.90
Debian 10
SE +/- 0.01, N = 3
2.88
0.6525
1.305
1.9575
2.61
3.2625
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread


NCNN 20200916
Target: CPU - Model: squeezenet
ms, Fewer Is Better
Repeat
SE +/- 0.01, N = 3
MIN: 4.52 / MAX: 4.7
4.56
Debian 10
SE +/- 0.03, N = 3
MIN: 4.49 / MAX: 4.77
4.58
Debian 10 Buster
SE +/- 0.02, N = 3
MIN: 4.53 / MAX: 4.77
4.59
1.0328
2.0656
3.0984
4.1312
5.164
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
Timed LLVM Compilation 10.0
Time To Compile
Seconds, Fewer Is Better
Debian 10 Buster
SE +/- 1.65, N = 3
881.71
Repeat
SE +/- 1.18, N = 3
884.00
Debian 10
SE +/- 2.43, N = 3
886.59
200
400
600
800
1000
Blender 2.90
Blend File: Fishy Cat - Compute: CPU-Only
Seconds, Fewer Is Better
Repeat
SE +/- 0.37, N = 3
364.20
Debian 10
SE +/- 0.30, N = 3
364.79
Debian 10 Buster
SE +/- 0.51, N = 3
366.18
80
160
240
320
400

NCNN 20200916

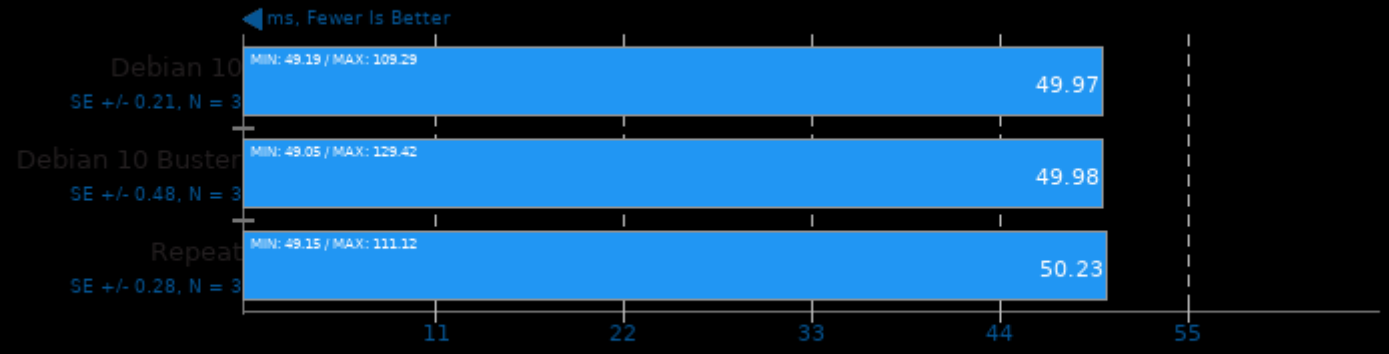
Target: CPU - Model: googlenet_int8



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

Mobile Neural Network 2020-09-17

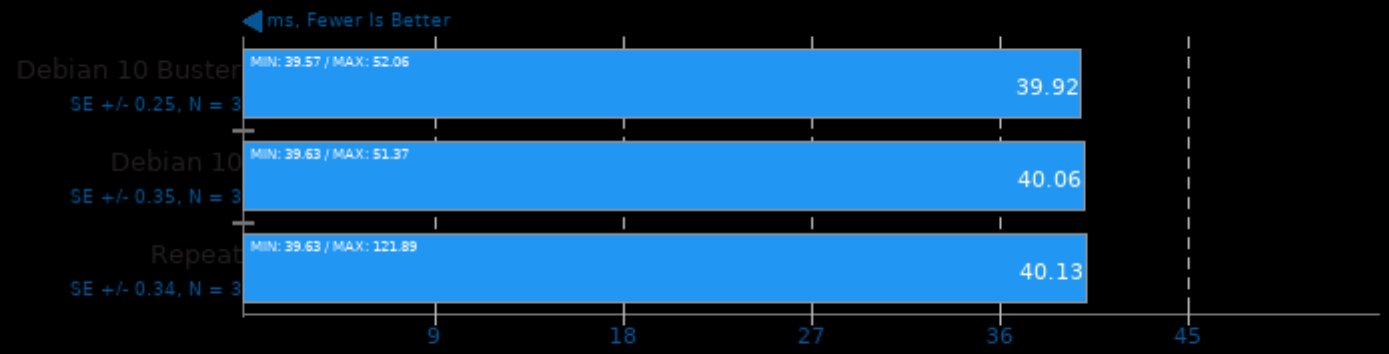
Model: inception-v3



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

Mobile Neural Network 2020-09-17

Model: resnet-v2-50

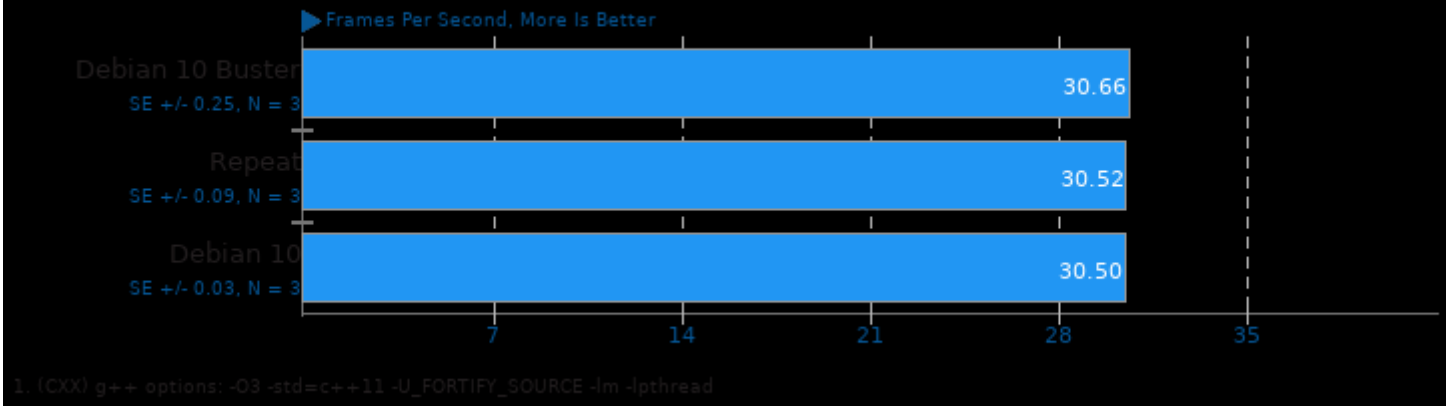


1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv

i7 6800K Debian

AOM AV1 2.0

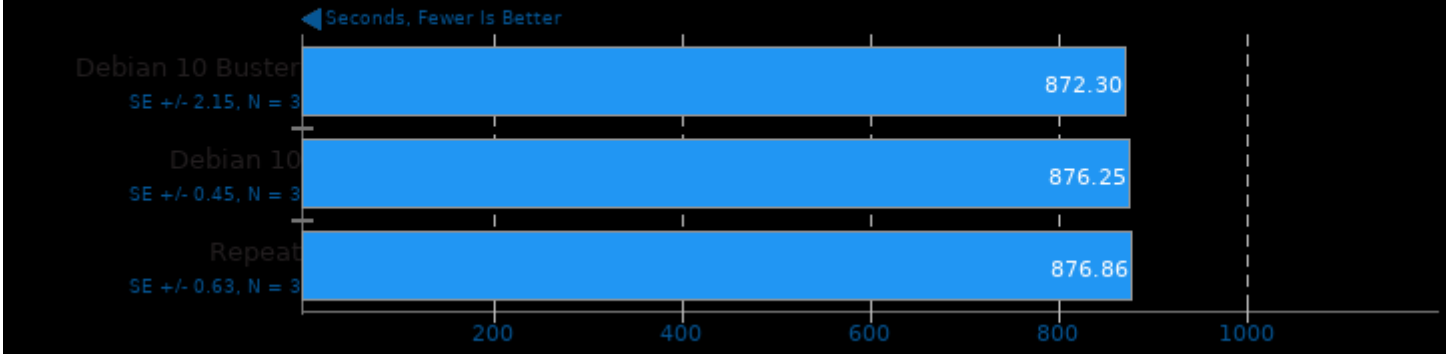
Encoder Mode: Speed 8 Realtime



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

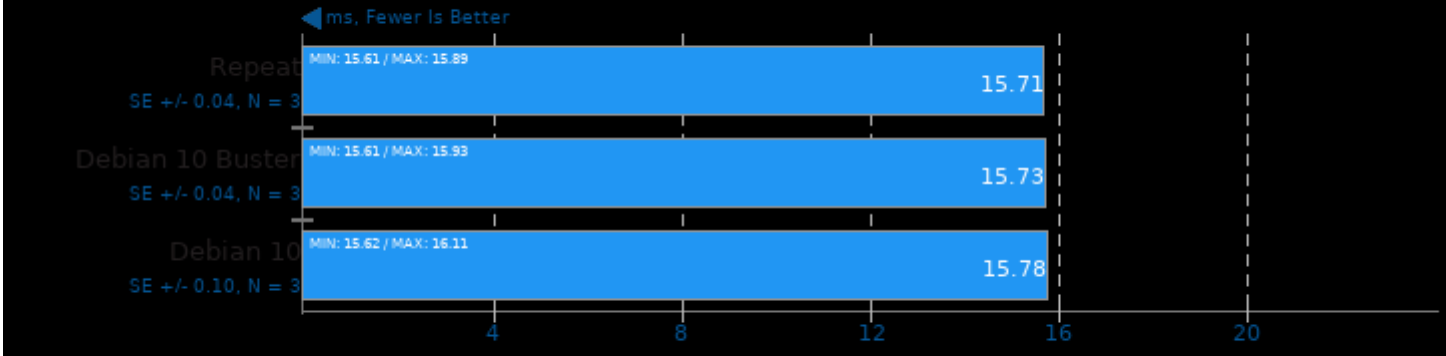
Blender 2.90

Blend File: Pabellon Barcelona - Compute: CPU-Only



NCNN 20200916

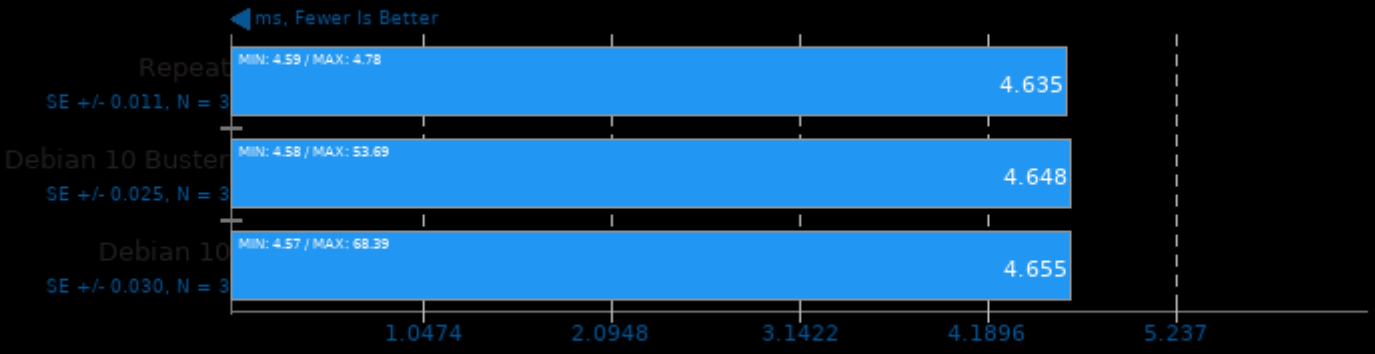
Target: CPU - Model: alexnet



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

Mobile Neural Network 2020-09-17

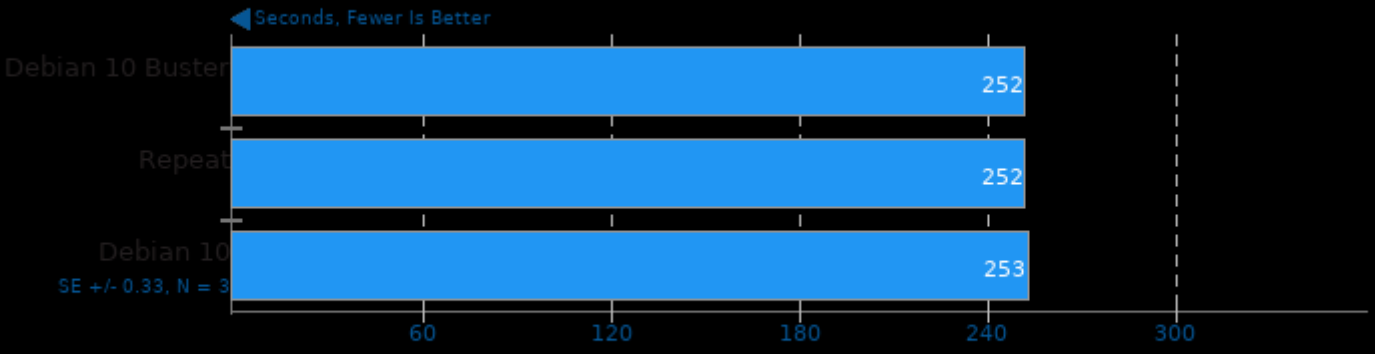
Model: MobileNetV2_224



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

Monte Carlo Simulations of Ionised Nebulae 2019-03-24

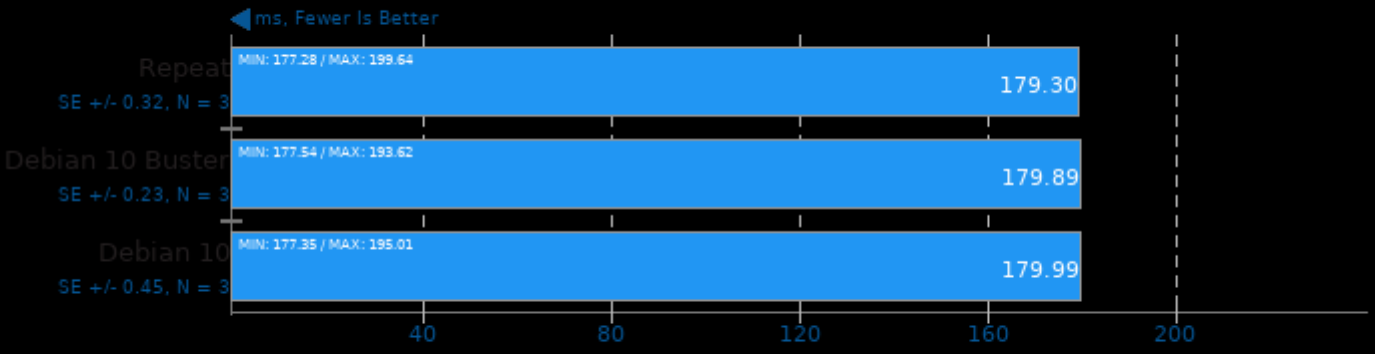
Input: Dust 2D tau100.0



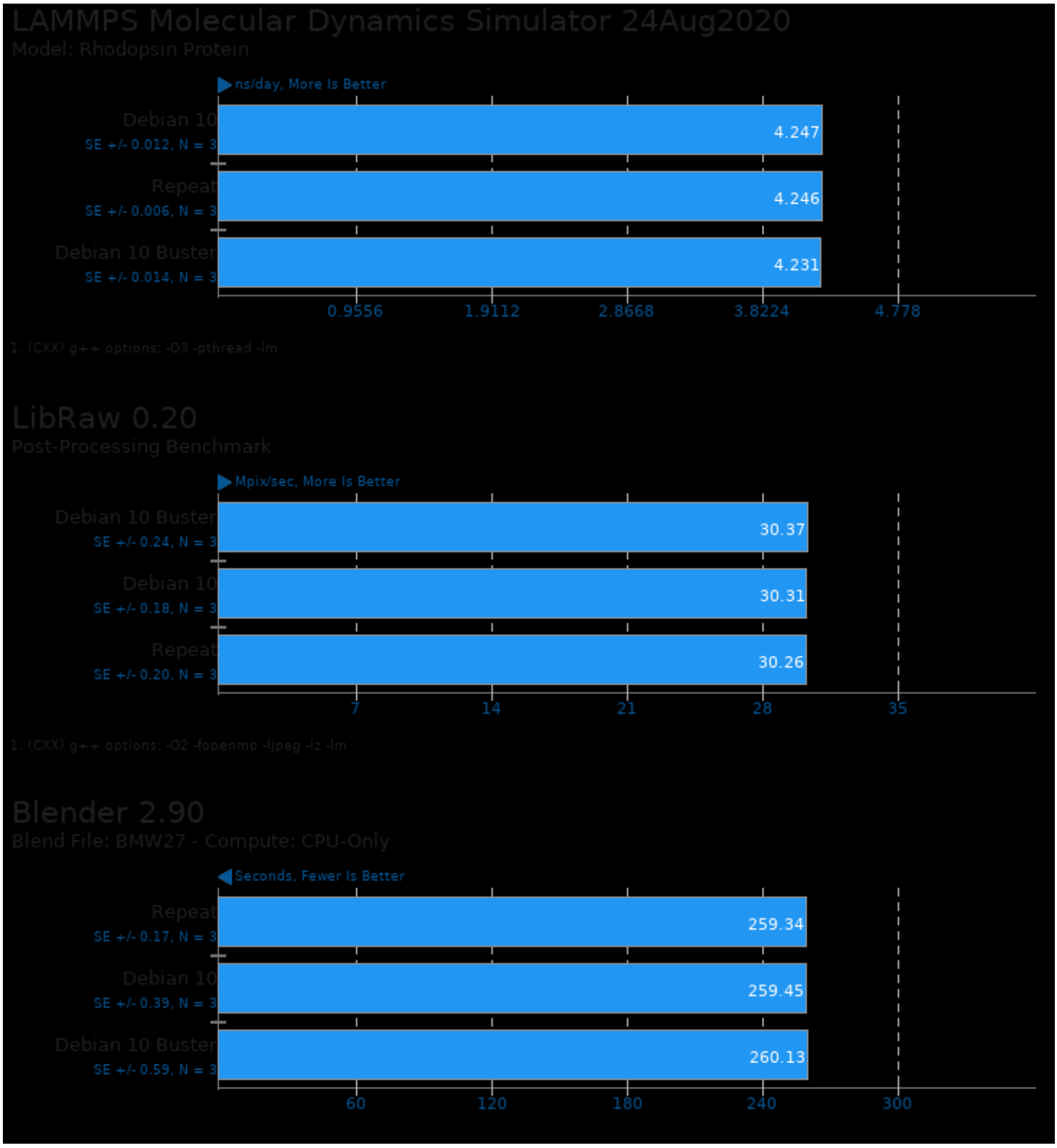
1. (F9X) gfortran options: -cpp -Jsource/ -ffree-line-length-0 -lm -std=legacy -O3 -O2 -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

NCNN 20200916

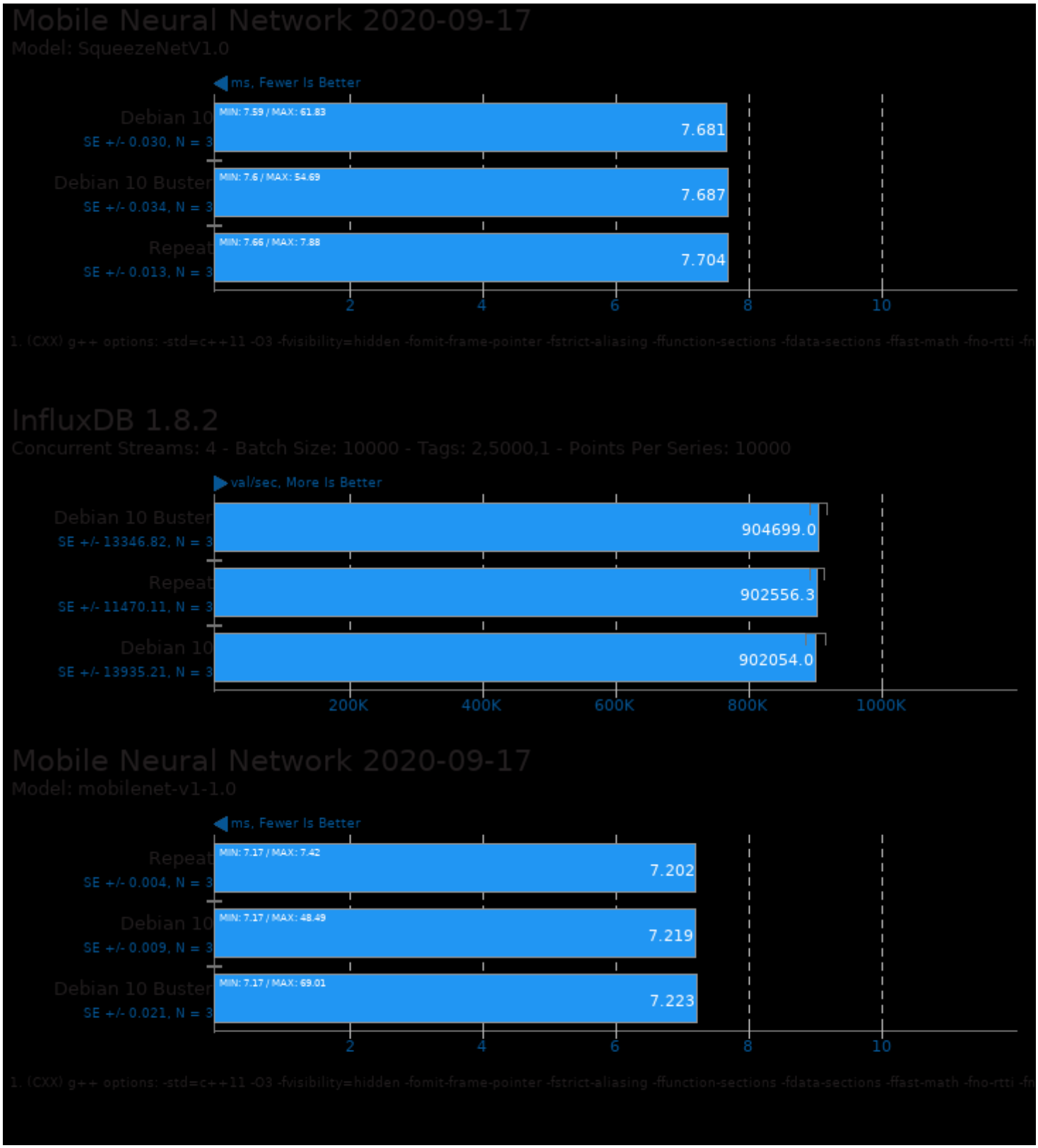
Target: CPU - Model: vgg16_int8



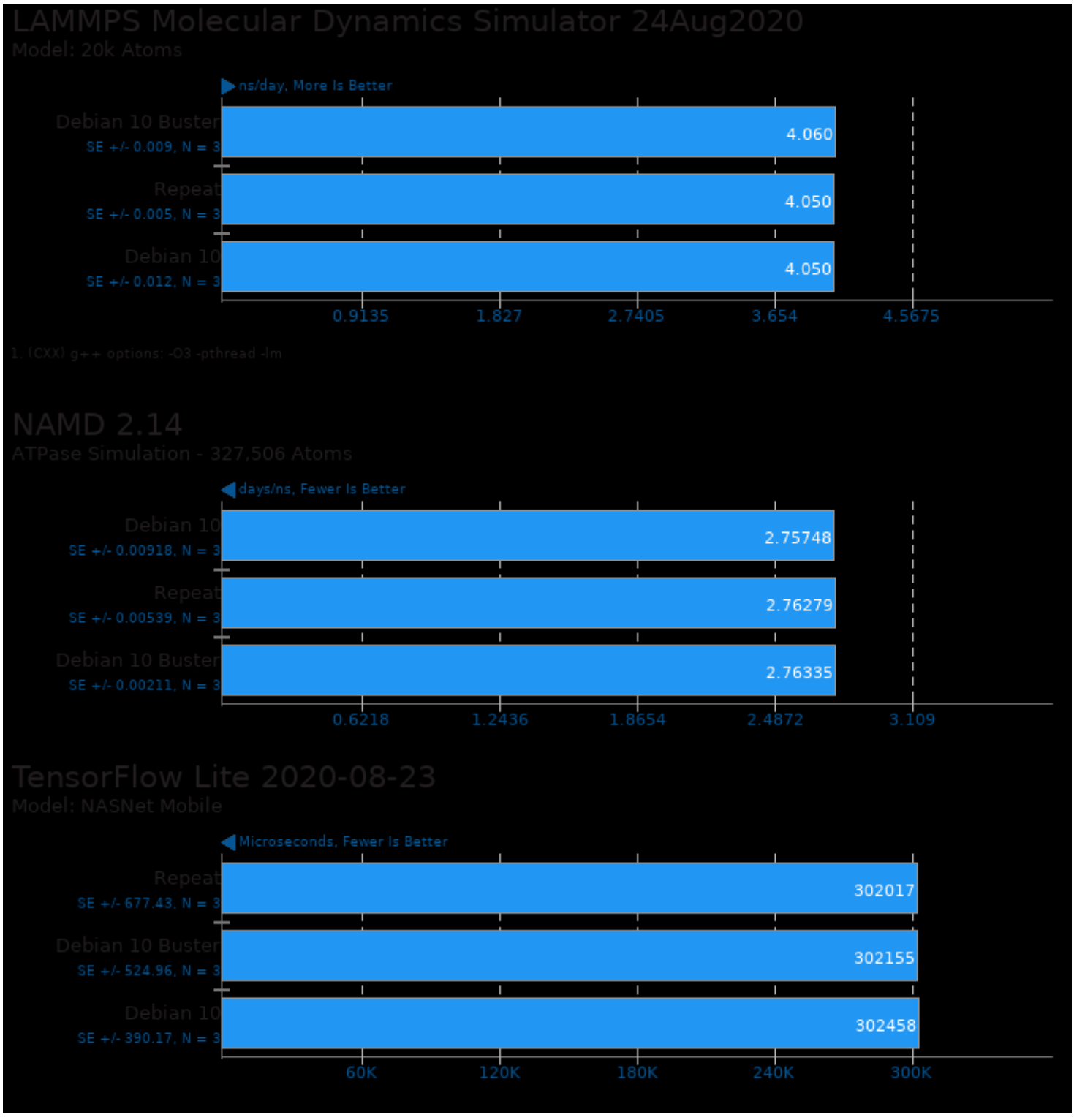
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread


LAMMPS Molecular Dynamics Simulator 24Aug2020
Model: Rhodopsin Protein
ns/day, More Is Better
Debian 10
SE +/- 0.012, N = 3
4.247
Repeat
SE +/- 0.006, N = 3
4.246
Debian 10 Buster
SE +/- 0.014, N = 3
4.231
0.9556
1.9112
2.8668
3.8224
4.778
1. (CXX) g++ options: -O3 -pthread -lm
LibRaw 0.20
Post-Processing Benchmark
Mpix/sec, More Is Better
Debian 10 Buster
SE +/- 0.24, N = 3
30.37
Debian 10
SE +/- 0.18, N = 3
30.31
Repeat
SE +/- 0.20, N = 3
30.26
7
14
21
28
35
1. (CXX) g++ options: -O2 -fopenmp -ljpeg -lz -lm
Blender 2.90
Blend File: BMW27 - Compute: CPU-Only
Seconds, Fewer Is Better
Repeat
SE +/- 0.17, N = 3
259.34
Debian 10
SE +/- 0.39, N = 3
259.45
Debian 10 Buster
SE +/- 0.59, N = 3
260.13
60
120
180
240
300

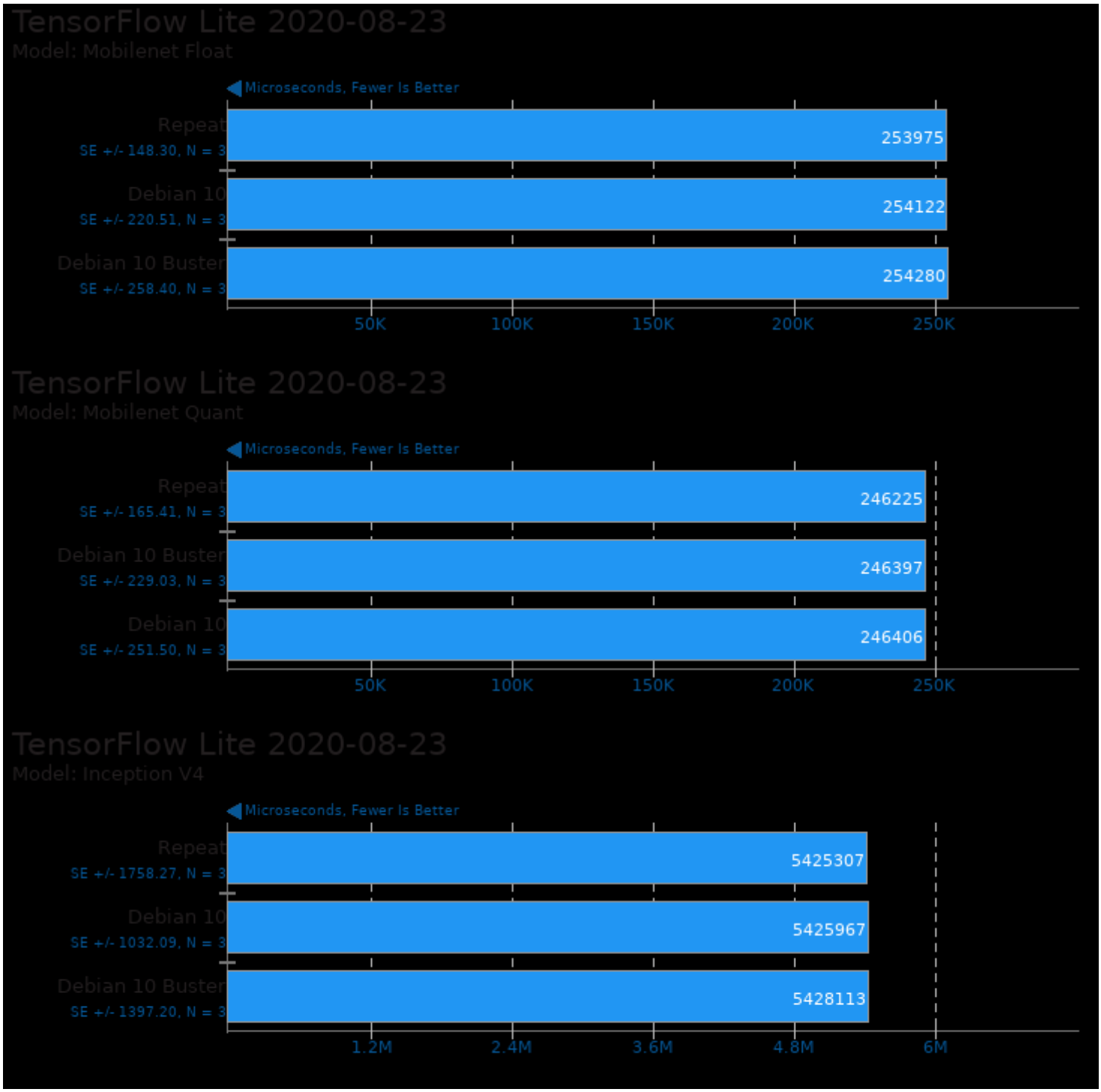
i7 6800K Debian



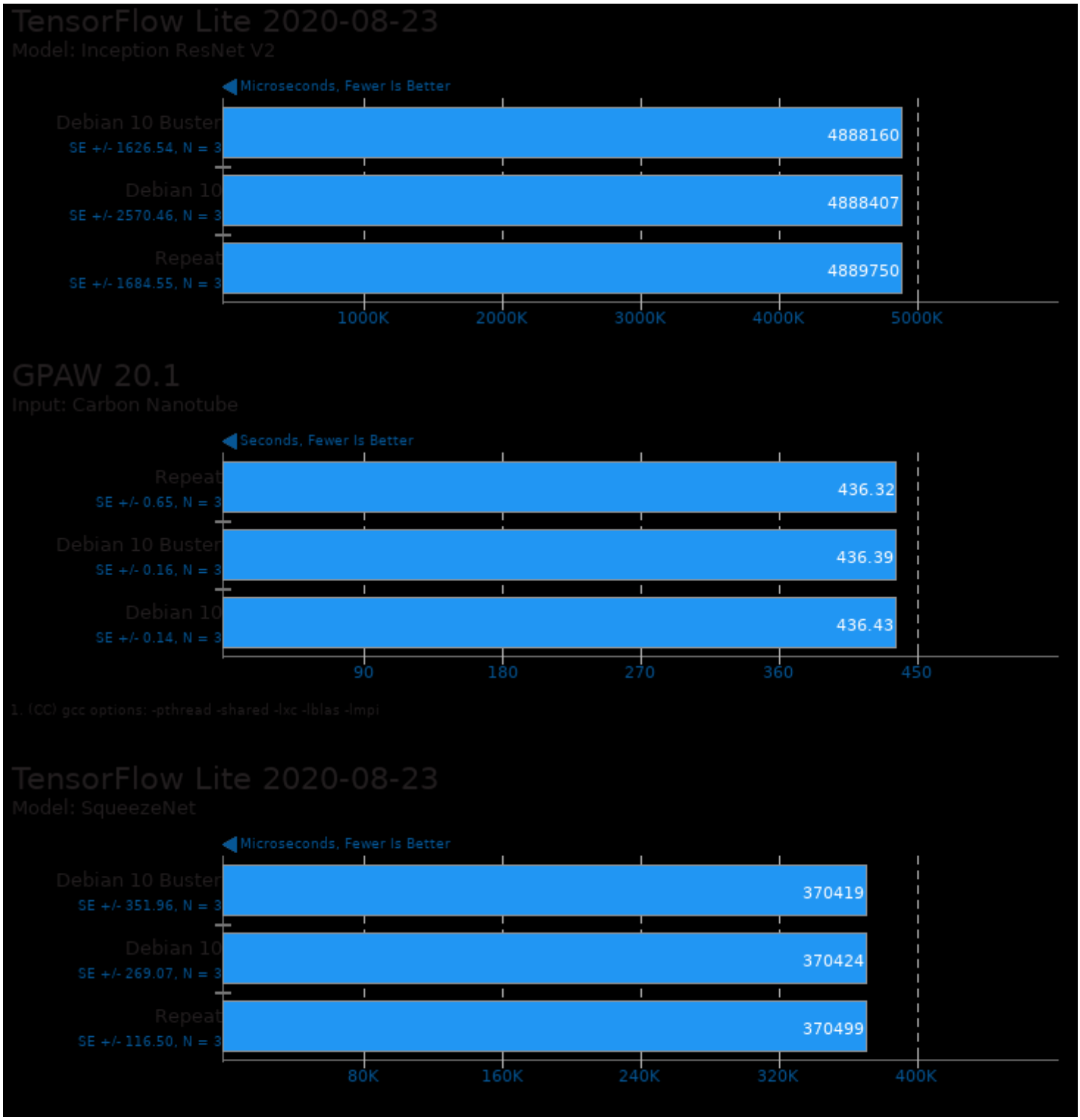
i7 6800K Debian

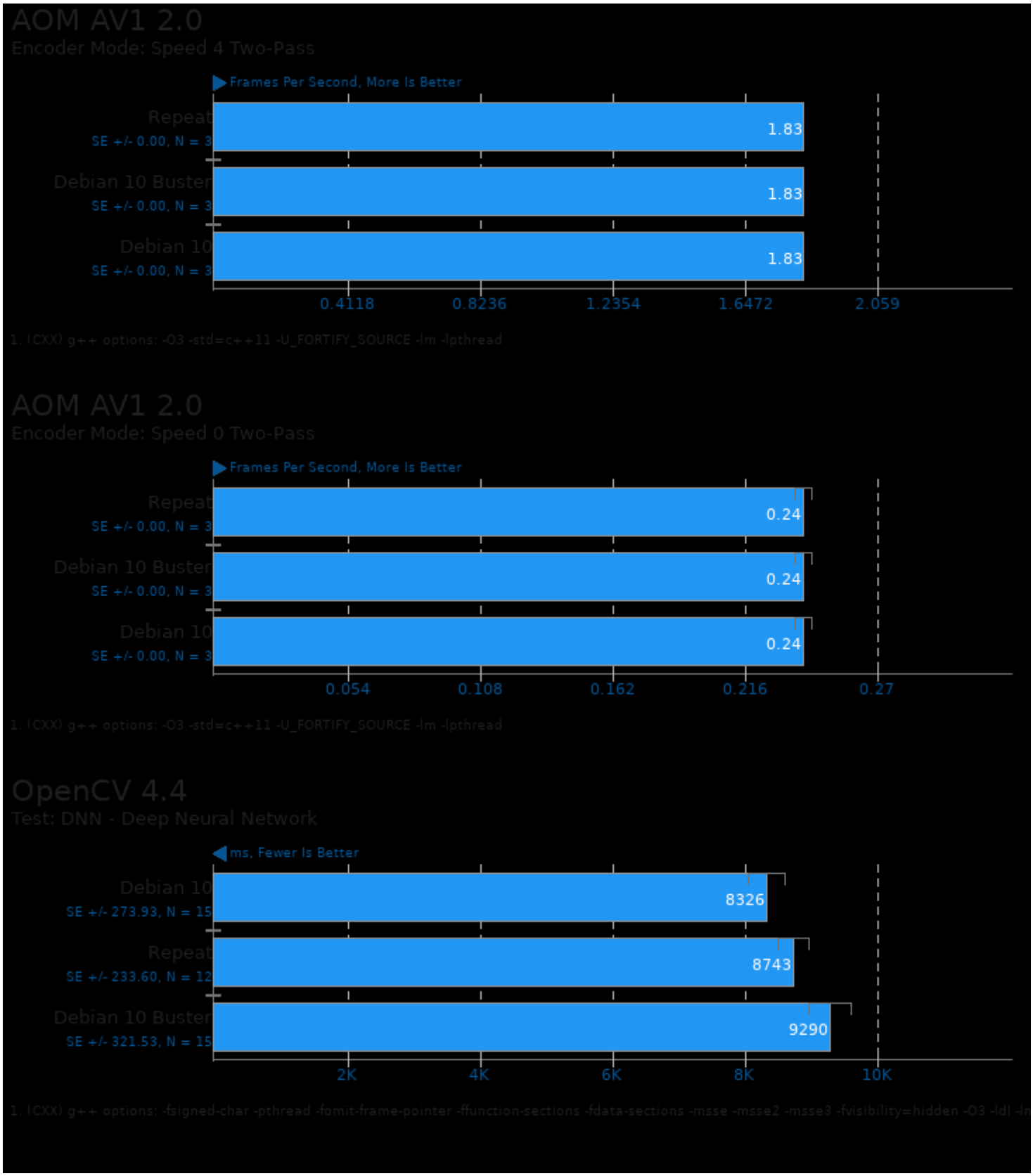


i7 6800K Debian

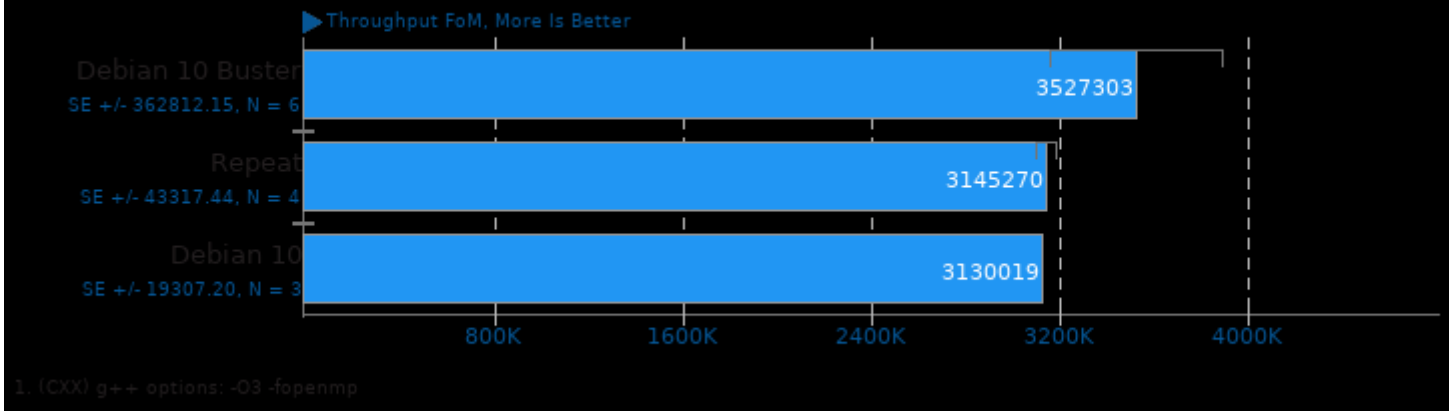


i7 6800K Debian



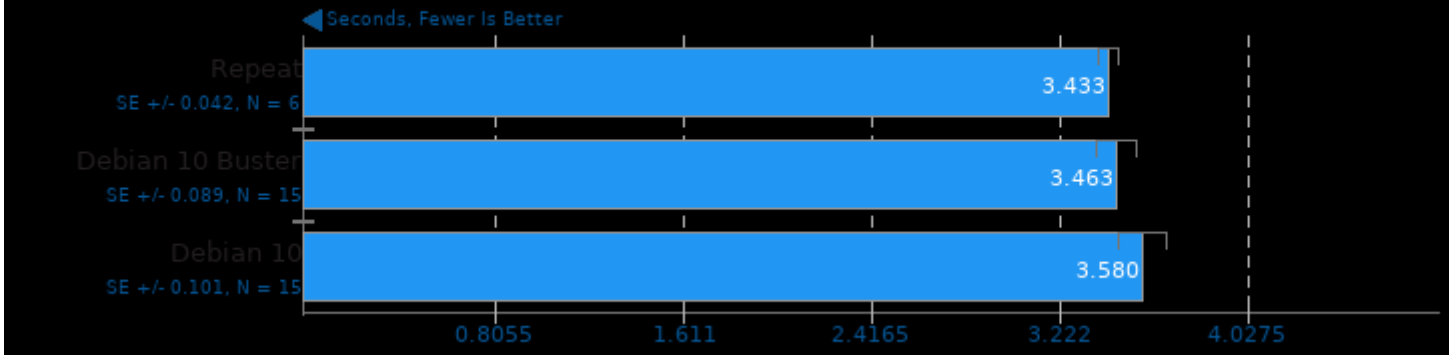

AOM AV1 2.0
Encoder Mode: Speed 4 Two-Pass
Frames Per Second, More Is Better
Repeat
SE +/- 0.00, N = 3
1.83
Debian 10 Buster
SE +/- 0.00, N = 3
1.83
Debian 10
SE +/- 0.00, N = 3
1.83
0.4118
0.8236
1.2354
1.6472
2.059
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 2.0
Encoder Mode: Speed 0 Two-Pass
Frames Per Second, More Is Better
Repeat
SE +/- 0.00, N = 3
0.24
Debian 10 Buster
SE +/- 0.00, N = 3
0.24
Debian 10
SE +/- 0.00, N = 3
0.24
0.054
0.108
0.162
0.216
0.27
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
OpenCV 4.4
Test: DNN - Deep Neural Network
ms, Fewer Is Better
Debian 10
SE +/- 273.93, N = 15
8326
Repeat
SE +/- 233.60, N = 12
8743
Debian 10 Buster
SE +/- 321.53, N = 15
9290
2K
4K
6K
8K
10K
1. (CXX) g++ options: -fsigned-char -pthread -fomit-frame-pointer -ffunction-sections -fdata-sections -msse -msse2 -msse3 -fvisibility=hidden -O3 -ldl

Kripke 1.2.4



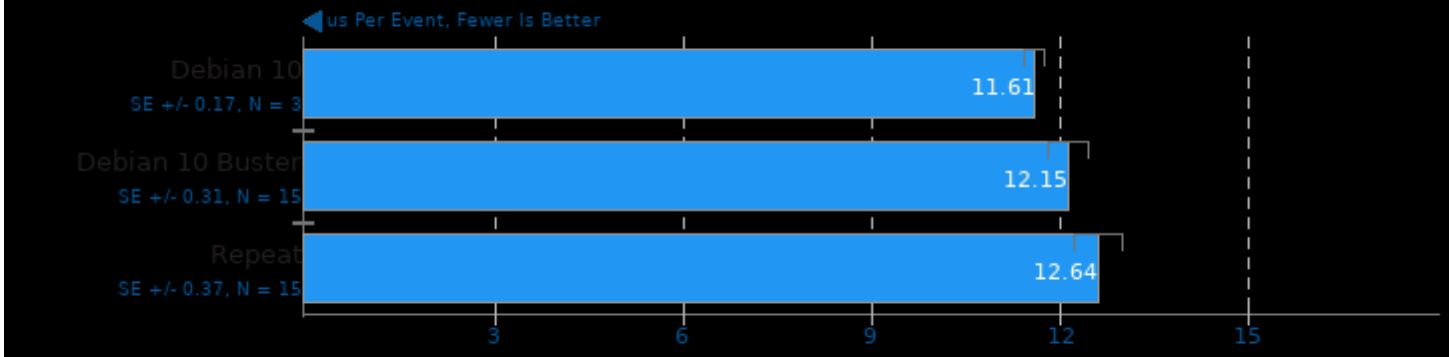
1. (CXX) g++ options: -O3 -fopenmp

System GZIP Decompression



OSBench

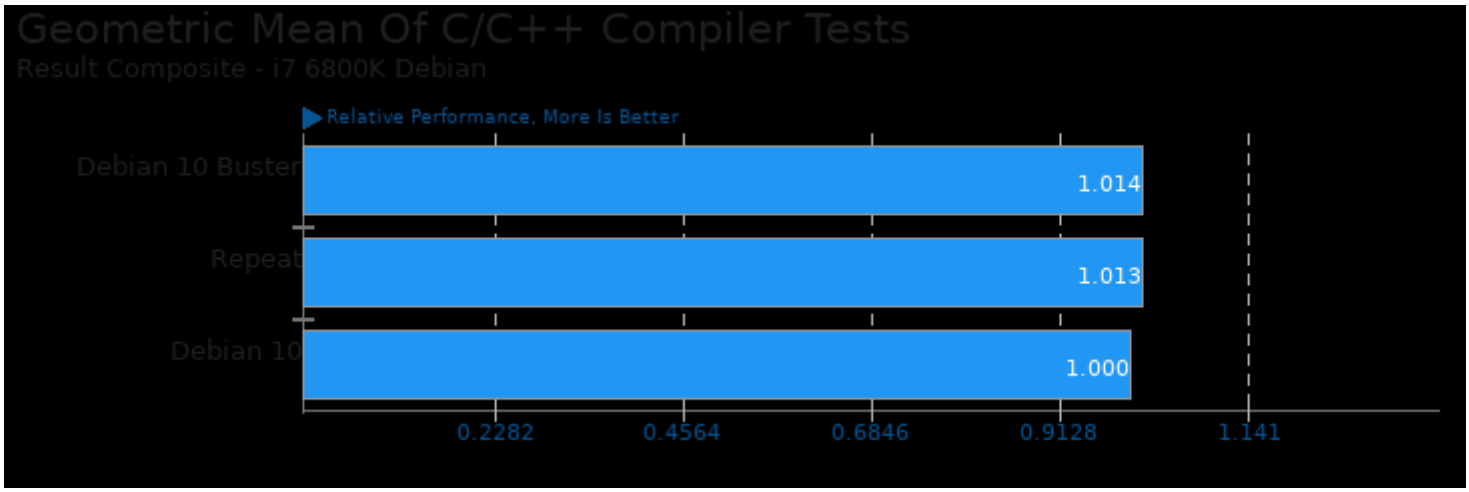
Test: Create Threads



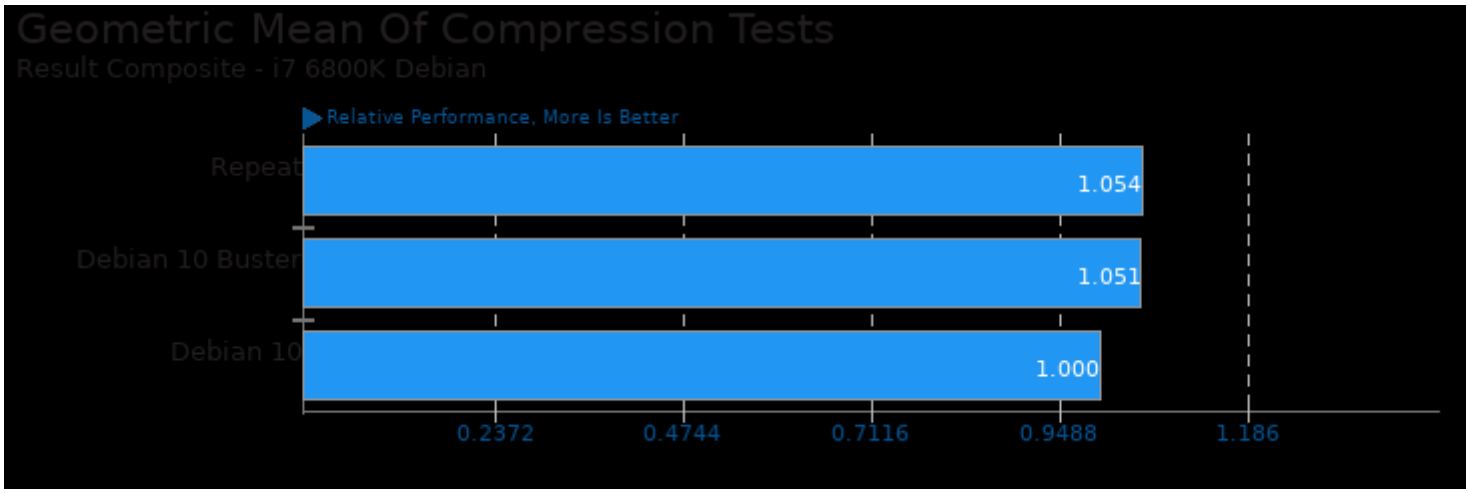
1. (CC) gcc options: -lm

i7 6800K Debian

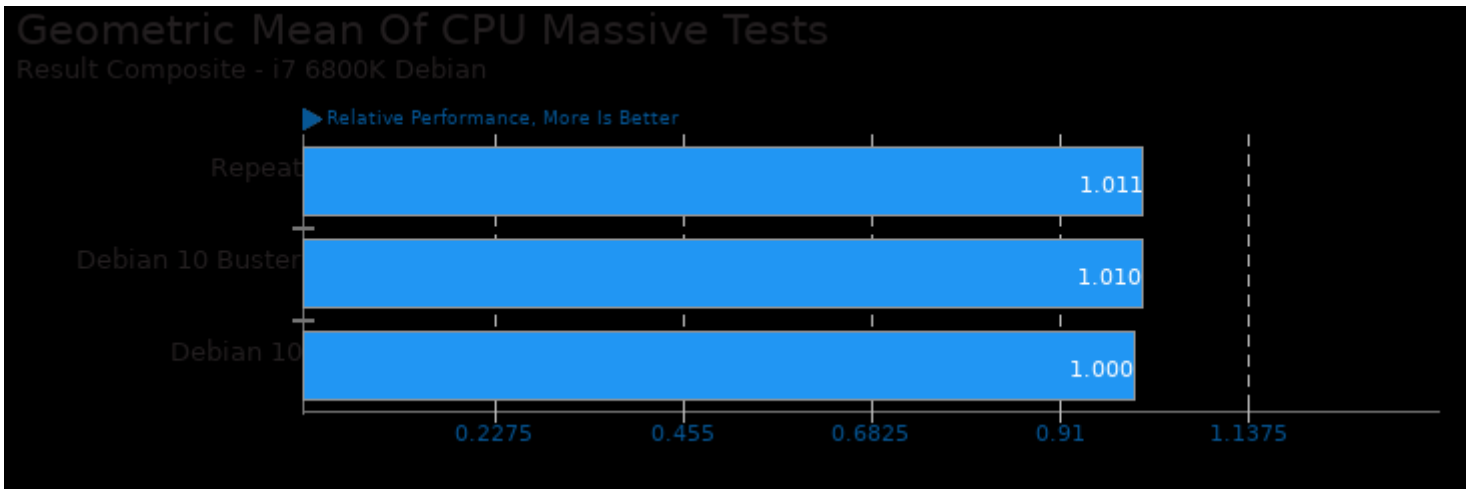
These geometric means are based upon test groupings / test suites for this result file.



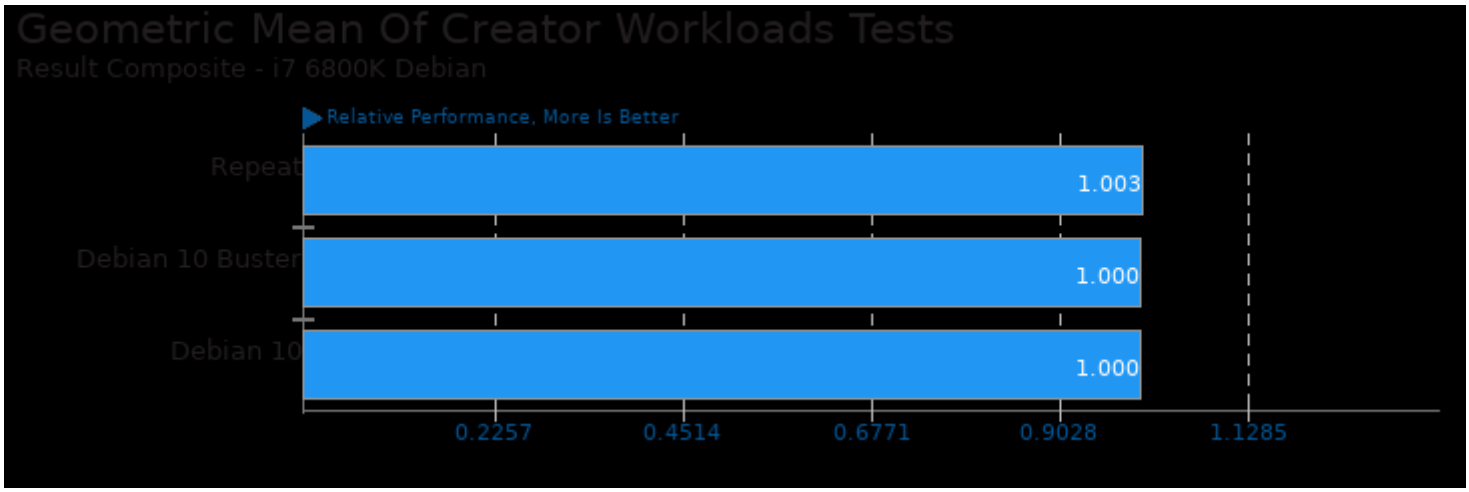
Geometric mean based upon tests: pts/build-llvm, pts/compress-zstd, pts/lammps and pts/aom-av1



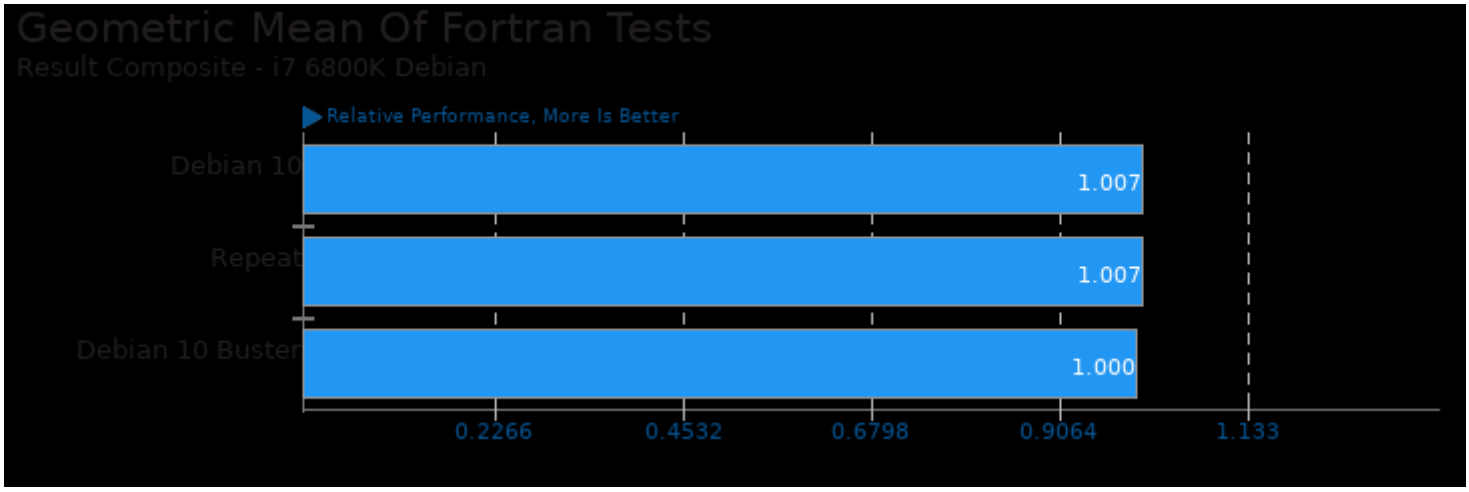
Geometric mean based upon tests: pts/compress-zstd and pts/system-decompress-gzip



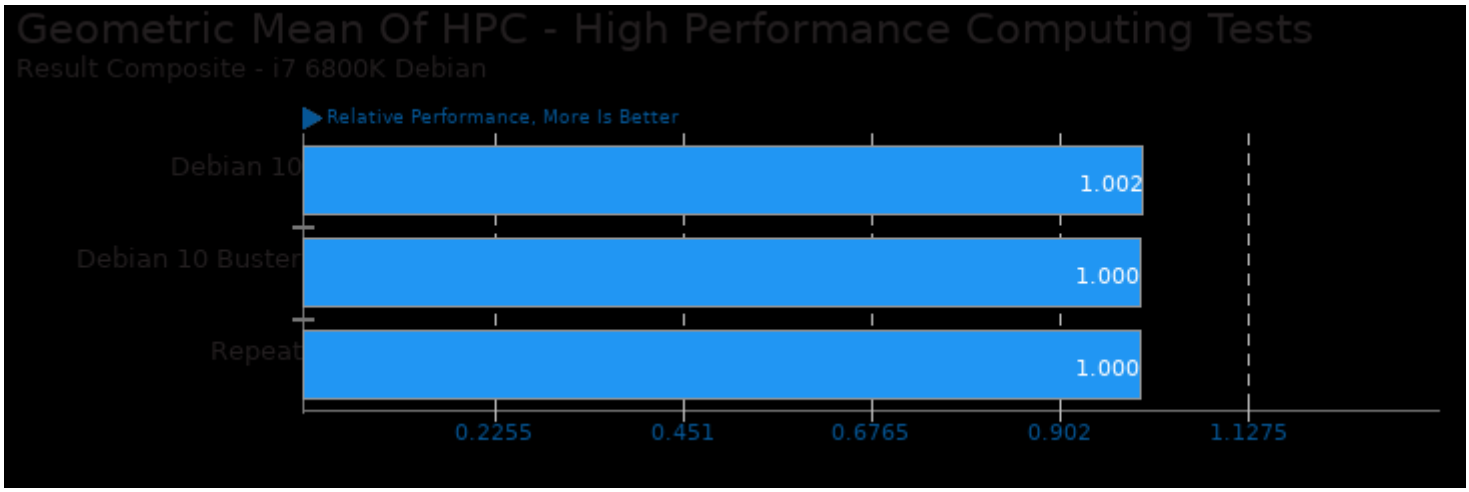
Geometric mean based upon tests: pts/build-llvm, pts/compress-zstd, pts/lammps, pts/namd and pts/blender



Geometric mean based upon tests: pts/blender, pts/aom-av1, pts/libraw, pts/webp, pts/dcraw and pts/espeak

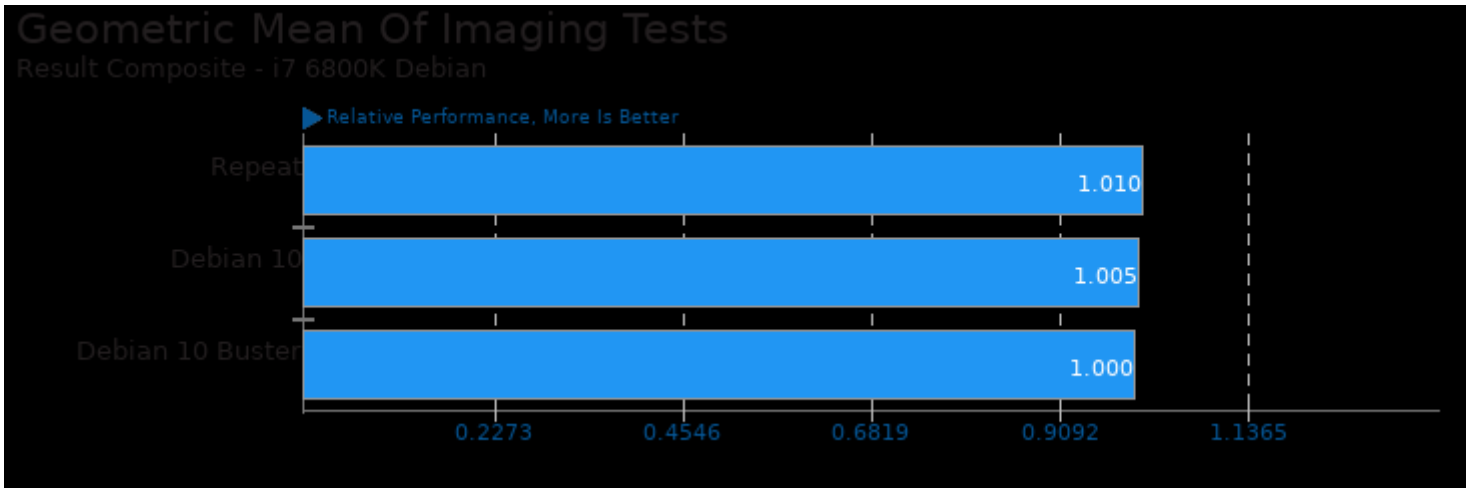


Geometric mean based upon tests: pts/incompact3d, pts/mocassin and pts/lammps

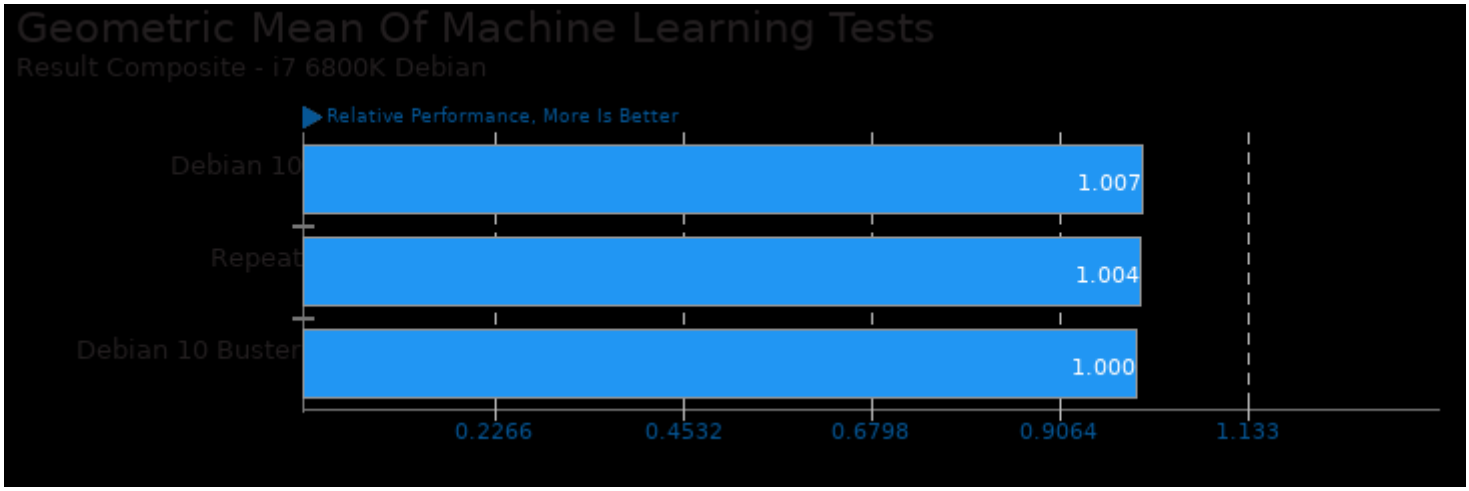


Geometric mean based upon tests: pts/namd, pts/lammps, pts/incompact3d, pts/gpaw, pts/mocassin, pts/kripke, pts/mnn, pts/ncnn, pts/opencv and pts/tensorflow-lite

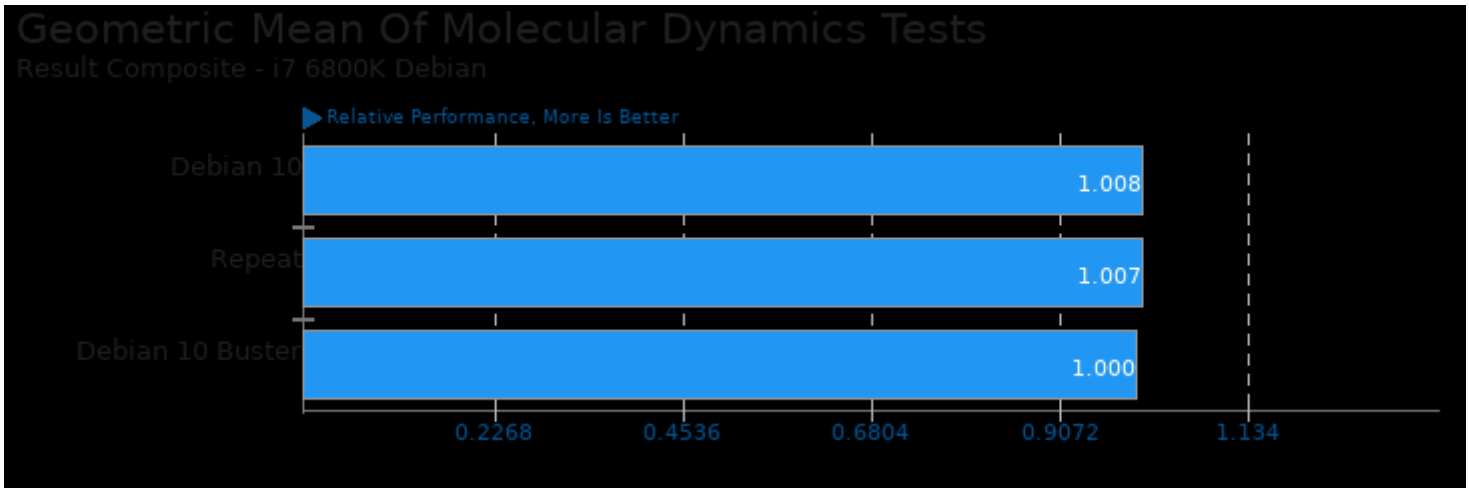
i7 6800K Debian



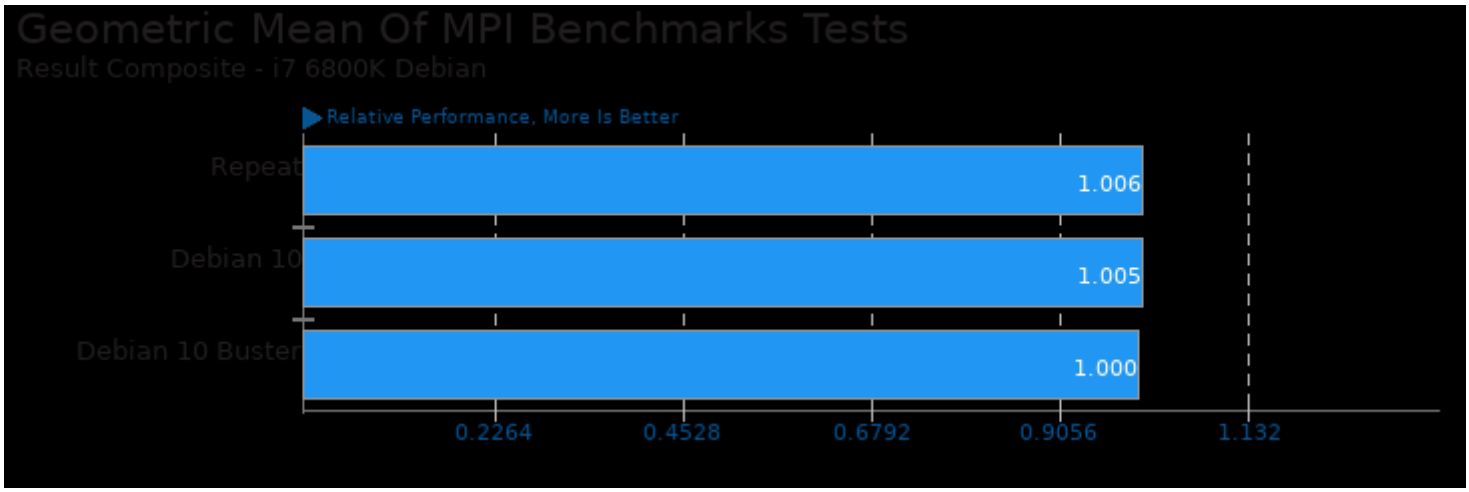
Geometric mean based upon tests: pts/libraw, pts/webp and pts/dcraw



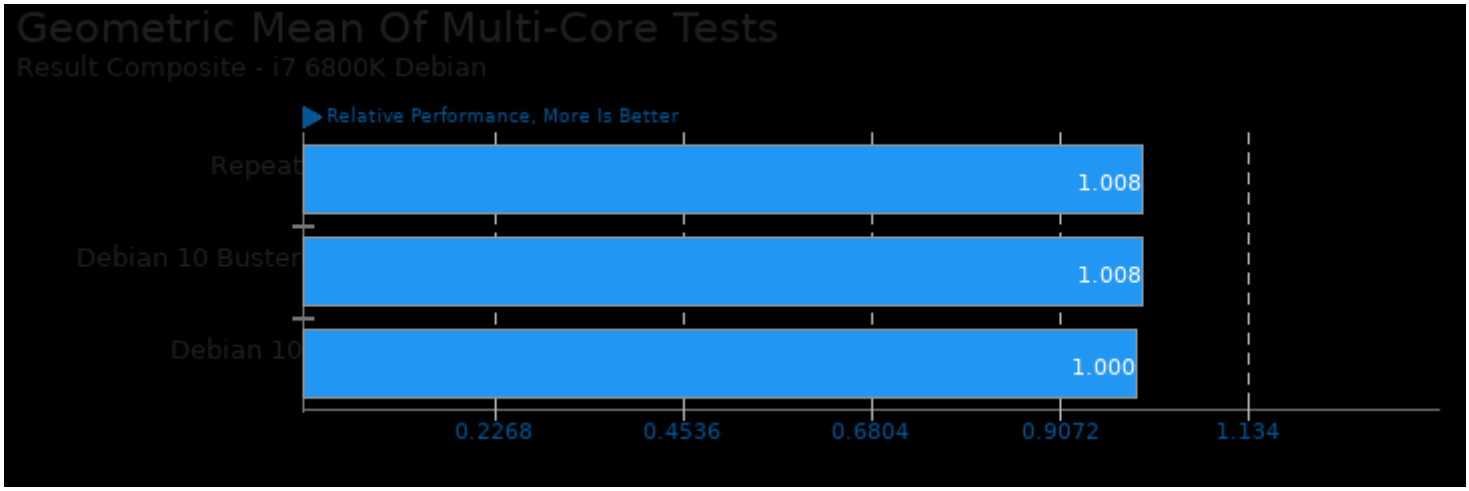
Geometric mean based upon tests: pts/mnn, pts/ncnn, pts/opencv and pts/tensorflow-lite



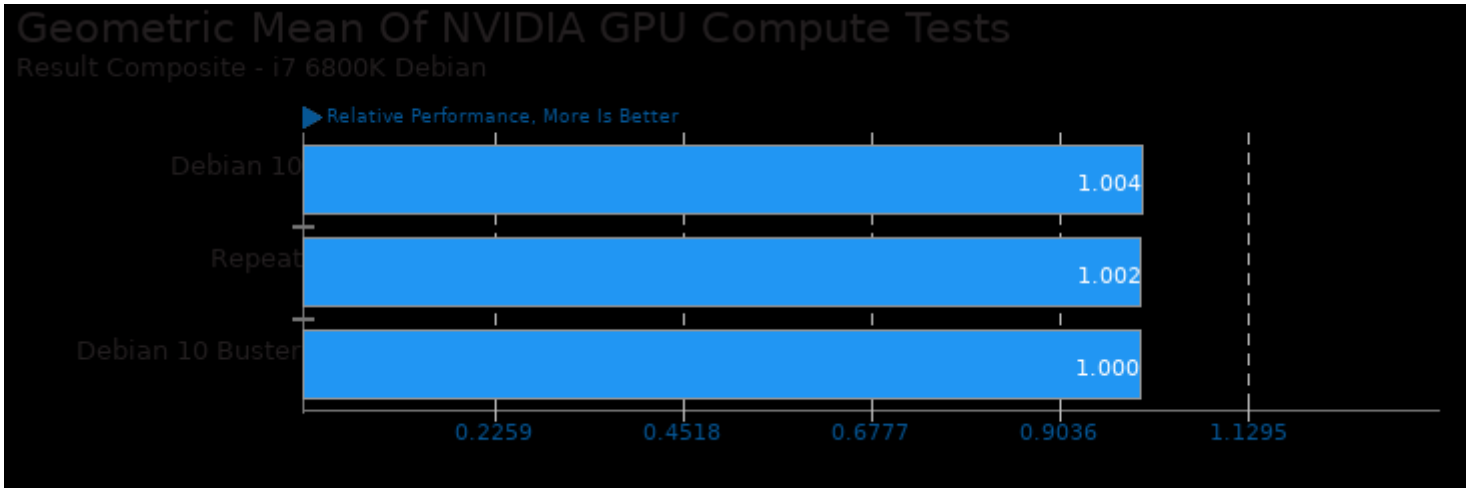
Geometric mean based upon tests: pts/namd, pts/lammps and pts/incompact3d



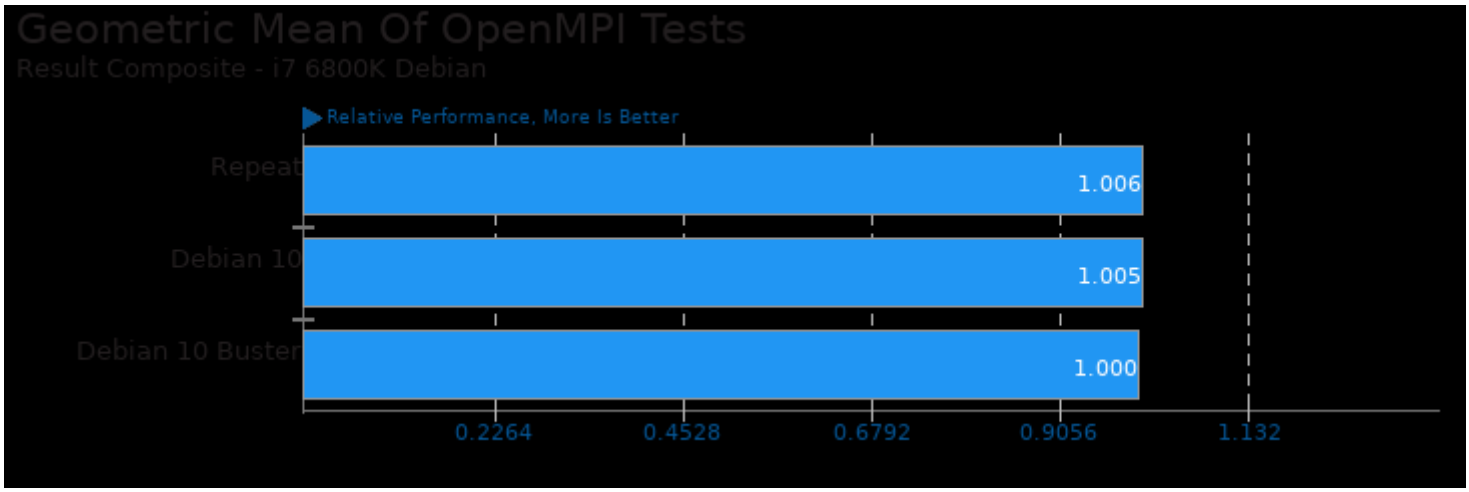
Geometric mean based upon tests: pts/lammps, pts/incompact3d, pts/gpaw and pts/mocassin



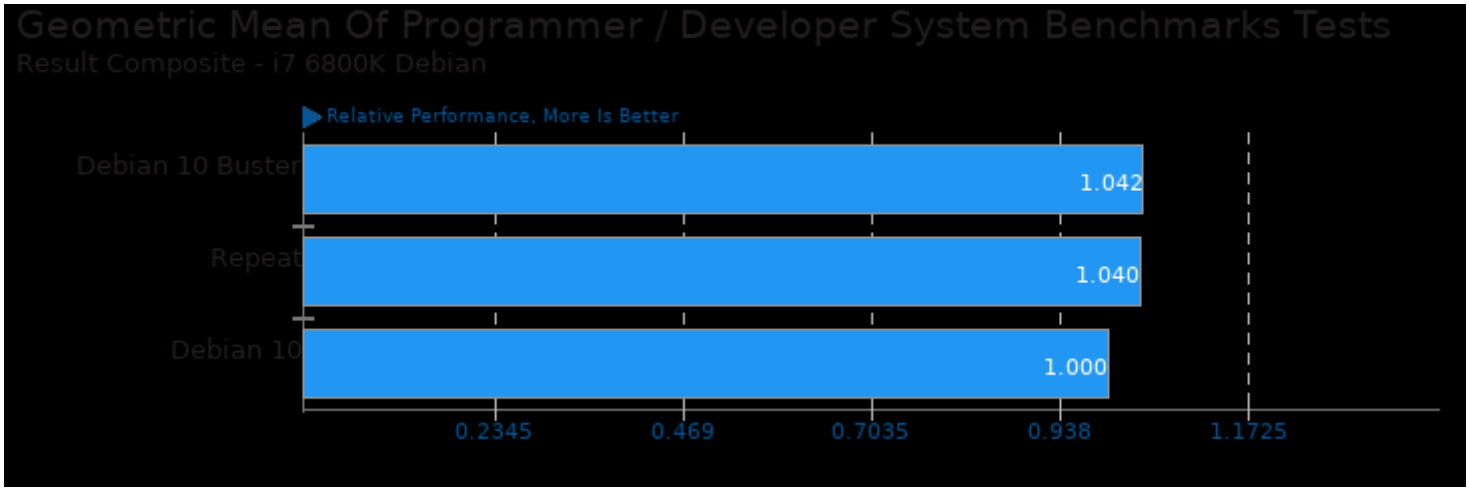
Geometric mean based upon tests: pts/blender, pts/aom-av1, pts/namd, pts/lammps, pts/compress-zstd and pts/build-llvm



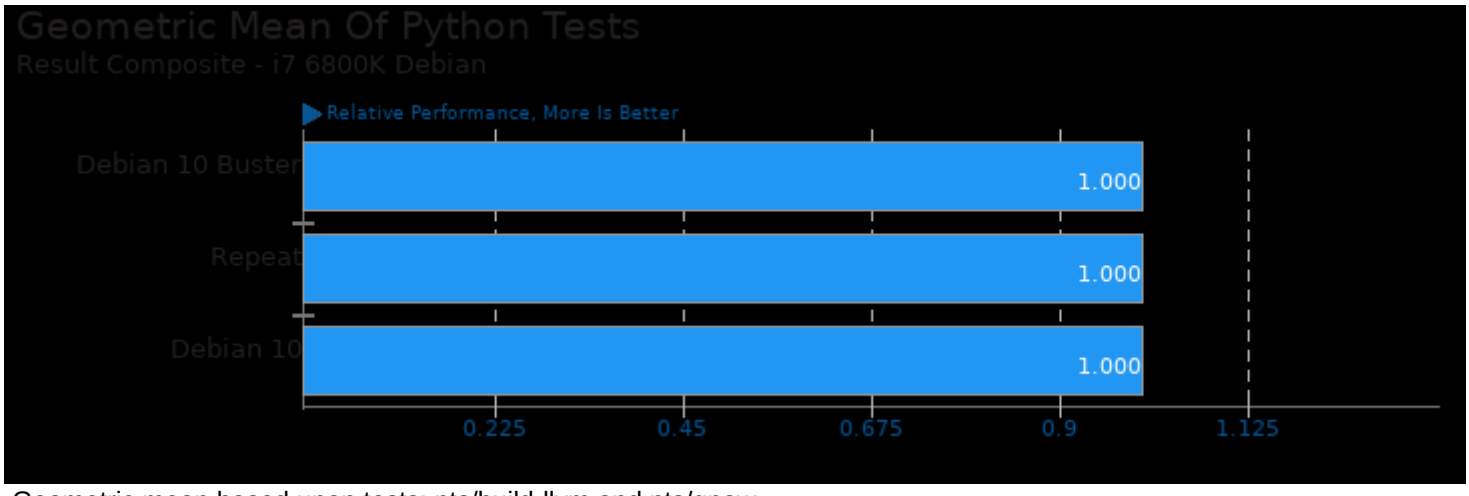
Geometric mean based upon tests: pts/blender and pts/ncnn



Geometric mean based upon tests: pts/incompact3d, pts/mocassin, pts/lammps and pts/gpaw

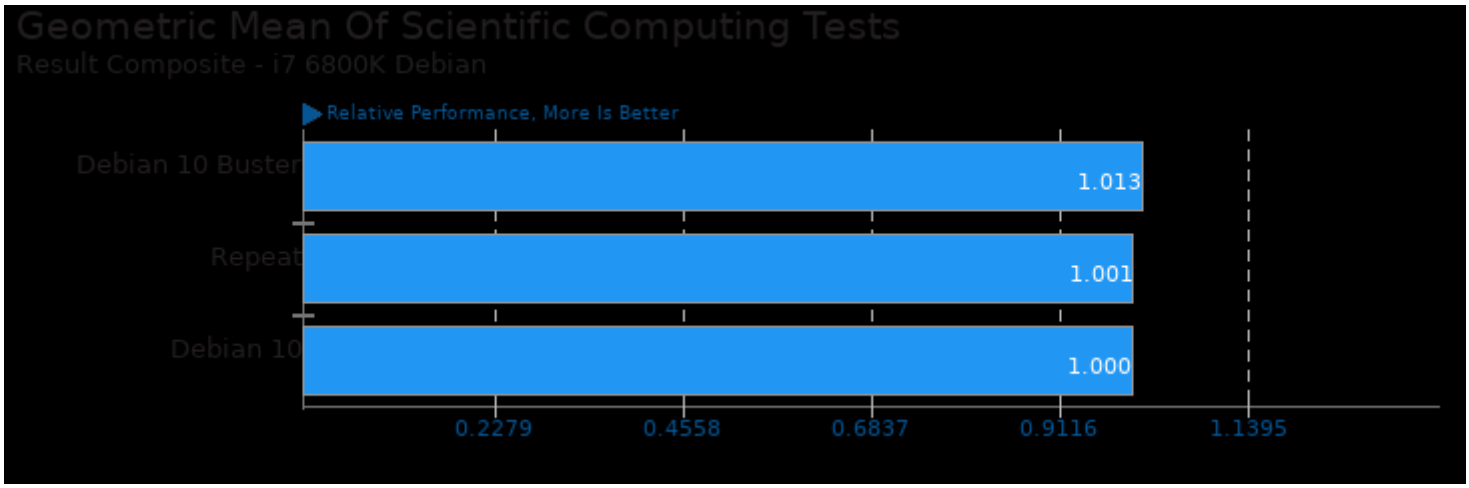


Geometric mean based upon tests: pts/compress-zstd and pts/build-llvm

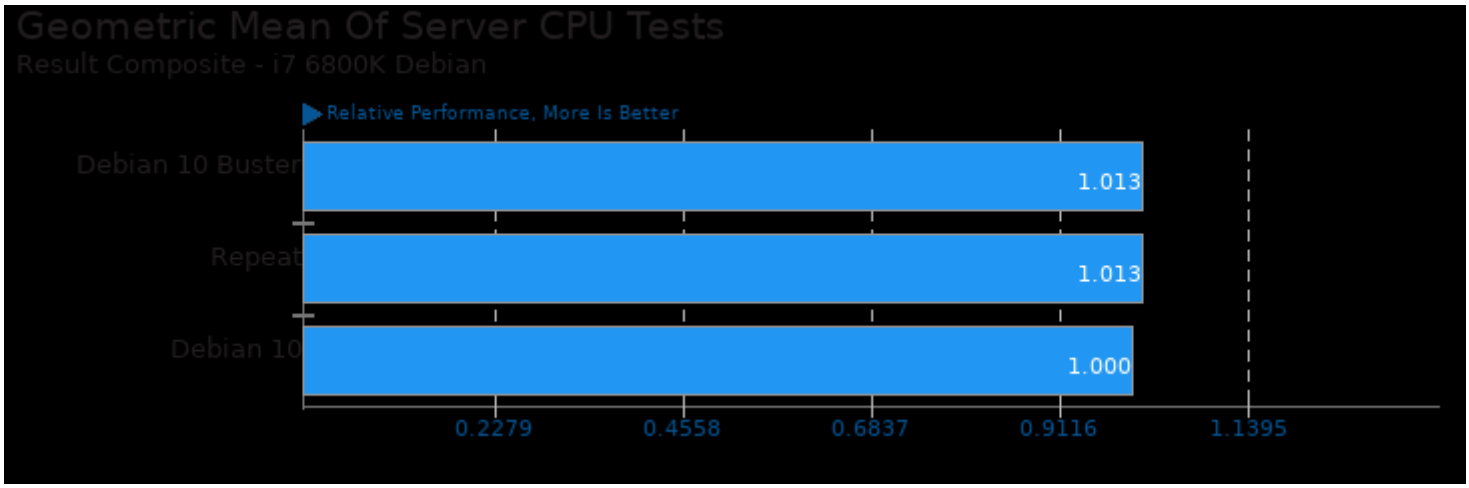


Geometric mean based upon tests: pts/build-llvm and pts/gpaw

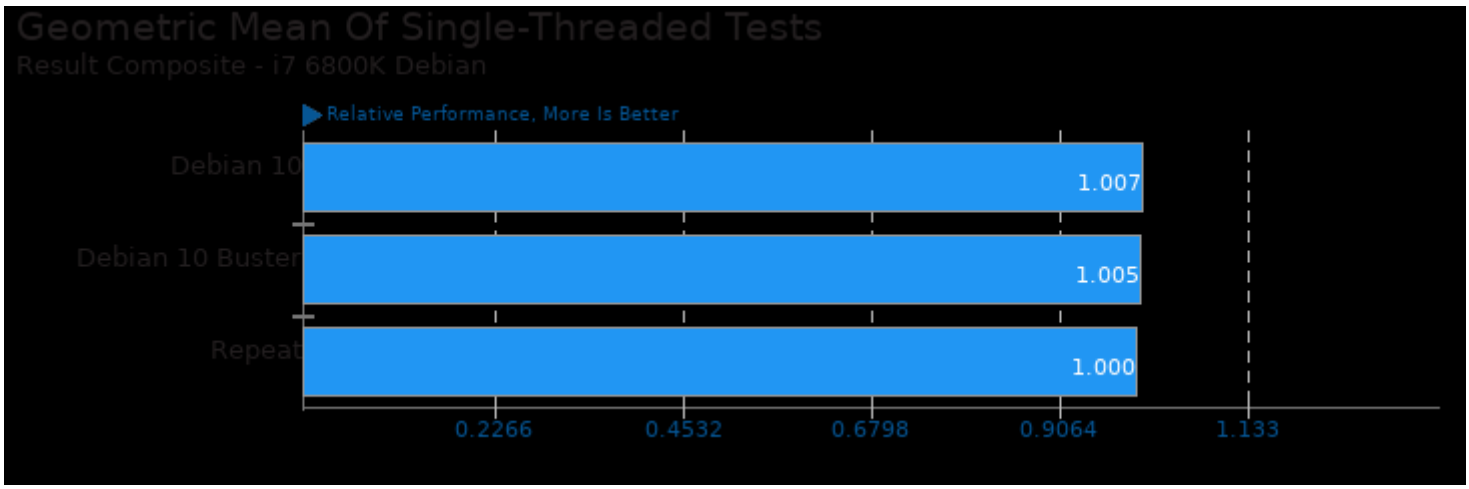
i7 6800K Debian



Geometric mean based upon tests: pts/namd, pts/lammps, pts/incompact3d, pts/gpaw, pts/mocassin and pts/kripke



Geometric mean based upon tests: pts/namd, pts/build-llvm, pts/compress-zstd and pts/blender



Geometric mean based upon tests: pts/dcraw and pts/espeak

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 20:47.