

www.phoronix-test-suite.com

Core i7 1065G7 Ozapft

Intel Core i7-1065G7 testing with a Dell 06CDVY (1.0.9 BIOS) and Intel Iris Plus G7 3GB on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

Core i7 1065G7 had the most wins, coming in first place for 63% of the tests.

Based on the geometric mean of all complete results, the fastest (Core i7 1065G7) was 1.004x the speed of the slowest (c2). c3 was 0.997x the speed of Core i7 1065G7 and c2 was 0.998x the speed of c3.

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

Kripke at 1.03x
NCNN (Target: CPU - Model: mobilenetv2_yolov3) at 1.019x
NCNN (Target: CPU - Model: resnet18_int8) at 1.012x
Incompact3D (Input: Cylinder) at 1.012x
NCNN (Target: CPU - Model: alexnet) at 1.009x
NCNN (Target: CPU - Model: mnasnet) at 1.008x
NCNN (Target: CPU - Model: squeezenet_int8) at 1.008x
LAMMPS Molecular Dynamics Simulator (Model: 20k Atoms) at 1.008x
NCNN (Target: CPU - Model: mobilenet_v3) at 1.008x

Monte Carlo Simulations of Ionised Nebulae (Input: Dust 2D tau100.0) at 1.008x.

Test Systems:

Core i7 1065G7

c2

c3

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

OS: Ubuntu 20.04, Kernel: 5.9.0-050900rc1daily20200819-generic (x86_64) 20200818, Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 4.6 Mesa 20.0.4, Vulkan: 1.2.131, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1200

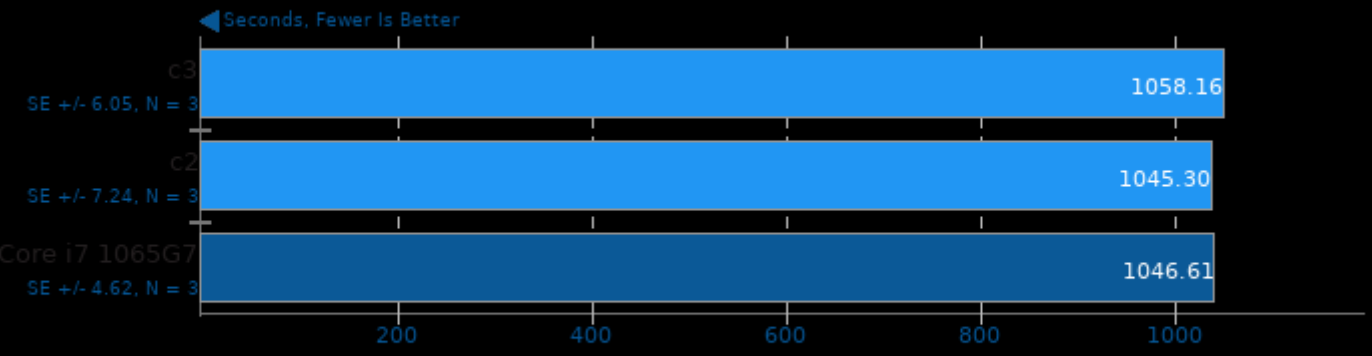
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x78
Python Notes: Python 3.8.2
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

	Core i7 1065G7	c2	c3
Incompact3D - Cylinder (sec)	1047	**1045**	**1058**
Normalized	99.88%	100%	98.78%
Standard Deviation	0.8%	1.2%	1%
Monte Carlo Simulations of Ionised Nebulae - Dust 2D tau100.0 (sec)	**391**	393	**394**
Normalized	100%	99.49%	99.24%
Standard Deviation	0.3%		0.1%
LAMMPS Molecular Dynamics Simulator - 20k Atoms (ns/day)	**2.147**	2.141	**2.130**
Normalized	100%	99.72%	99.21%
Standard Deviation	0.2%	0.1%	0.3%
LAMMPS Molecular Dynamics Simulator - Rhodopsin Protein (ns/day)	**2.592**	2.611	**2.644**
Normalized	98.03%	98.75%	100%
Standard Deviation	11.4%	10.8%	11.5%
GPAW - Carbon Nanotube (sec)	**717.393**	715.448	**715.117**

Normalized	99.68%	99.95%	100%
Standard Deviation	1.1%	0.3%	0.1%
Mobile Neural Network - SqueezeNetV1.0	12.252	**12.239**	**12.260**
Normalized	99.89%	100%	99.83%
Standard Deviation	1.3%	1.3%	1.4%
Mobile Neural Network - resnet-v2-50 (ms)	**58.495**	58.592	**58.605**
Normalized	100%	99.83%	99.81%
Standard Deviation	1%	0.9%	0.8%
Mobile Neural Network - MobileNetV2_224	**5.213**	**5.230**	5.223
Normalized	100%	99.67%	99.81%
Standard Deviation	17.3%	16.5%	17.3%
Mobile Neural Network - mobilenet-v1-1.0	9.414	**9.404**	**9.424**
Normalized	99.89%	100%	99.79%
Standard Deviation	0.4%	0.2%	0.3%
Mobile Neural Network - inception-v3 (ms)	**71.730**	71.725	**71.633**
Normalized	99.86%	99.87%	100%
Standard Deviation	1%	1%	0.9%
NCNN - CPU - squeezenet_int8 (ms)	**20.42**	20.56	**20.59**
Normalized	100%	99.32%	99.17%
Standard Deviation	5.2%	5.3%	5.3%
NCNN - CPU - mobilenet_v3 (ms)	**7.52**	7.56	**7.58**
Normalized	100%	99.47%	99.21%
Standard Deviation	0.4%	0.9%	0.9%
NCNN - CPU - squeezenet (ms)	**5.76**	5.79	**5.80**
Normalized	100%	99.48%	99.31%
Standard Deviation	0.3%	0.4%	1.1%
NCNN - CPU - mnasnet (ms)	**8.29**	8.31	**8.36**
Normalized	100%	99.76%	99.16%
Standard Deviation	0.3%	0.5%	0.5%
NCNN - CPU - blazeface (ms)	2.40	2.40	2.40
Standard Deviation	0.9%	0.5%	0.9%
NCNN - CPU - googlenet_int8 (ms)	**68.90**	69.15	**69.27**
Normalized	100%	99.64%	99.47%
Standard Deviation	0.2%	0.1%	0.1%
NCNN - CPU - vgg16_int8 (ms)	236.47	**235.78**	**236.83**
Normalized	99.71%	100%	99.56%
Standard Deviation	0.1%	0.2%	0.2%
NCNN - CPU - resnet18_int8 (ms)	**43.55**	43.69	**44.09**
Normalized	100%	99.68%	98.78%
Standard Deviation	0.2%	0.1%	2.3%
NCNN - CPU - alexnet (ms)	**20.45**	20.49	**20.63**
Normalized	100%	99.8%	99.13%
Standard Deviation	0.7%	0.5%	0.8%
NCNN - CPU - resnet50_int8 (ms)	**147.82**	**160.00**	148.33
Normalized	100%	92.39%	99.66%
Standard Deviation	0.2%	22.1%	0.1%
NCNN - CPU - mobilenetv2_yolov3 (ms)	**32.83**	33.04	**33.45**
Normalized	100%	99.36%	98.15%
Standard Deviation	0.5%	1.5%	1.9%
Kripke (Throughput FoM)	**11495004**	11695187	**11840141**
Normalized	97.09%	98.78%	100%
Standard Deviation	5%	2.2%	4.6%

Incompact3D 2020-09-17

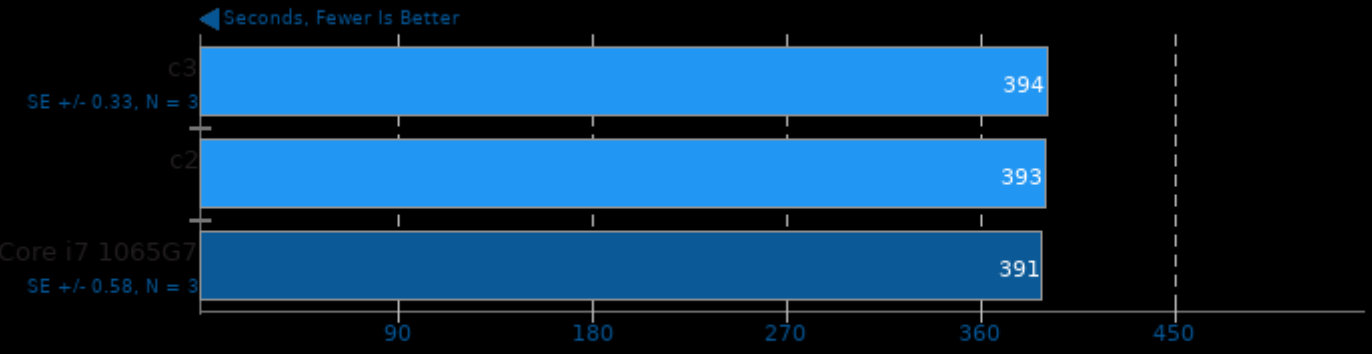
Input: Cylinder



1. (F9X) gfortran options: -cpp -funroll-loops -floop-optimize -fcray-pointer -fbacktrace -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

Monte Carlo Simulations of Ionised Nebulae 2019-03-24

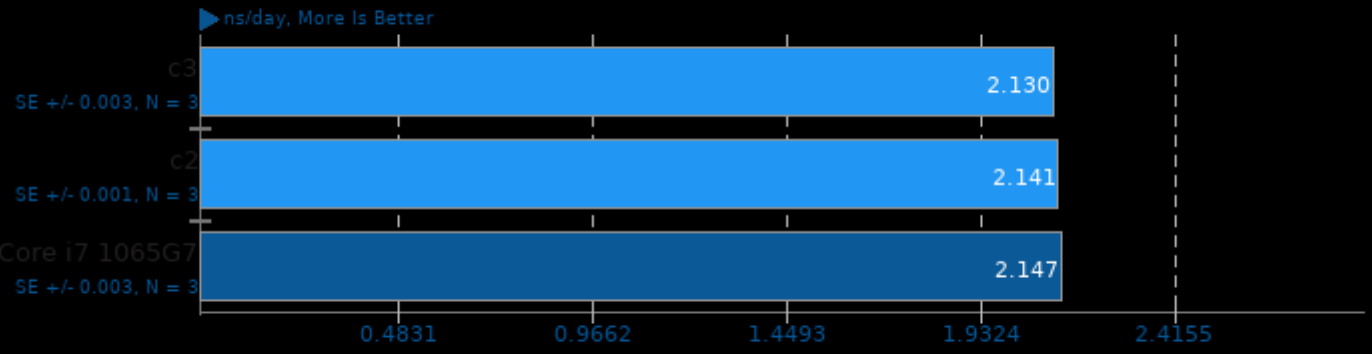
Input: Dust 2D tau100.0



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

LAMMPS Molecular Dynamics Simulator 24Aug2020

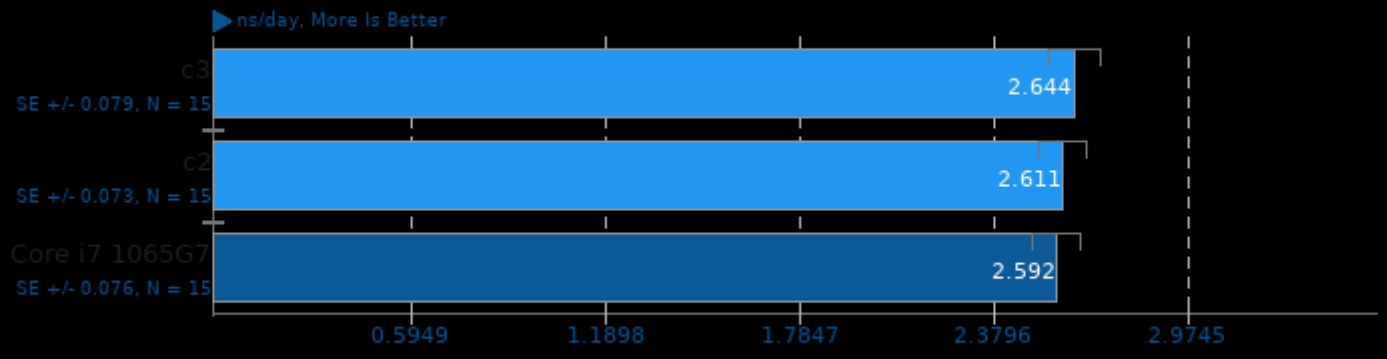
Model: 20k Atoms



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

LAMMPS Molecular Dynamics Simulator 24Aug2020

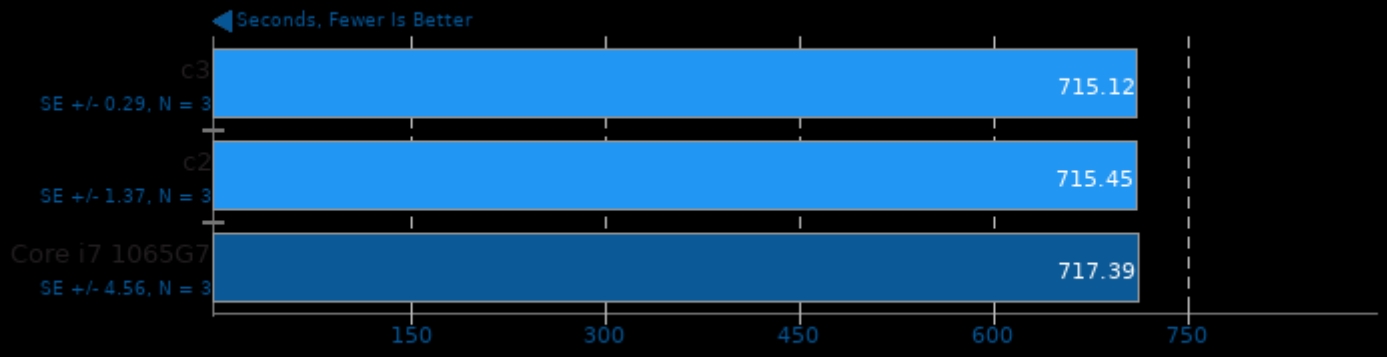
Model: Rhodopsin Protein



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

GPAW 20.1

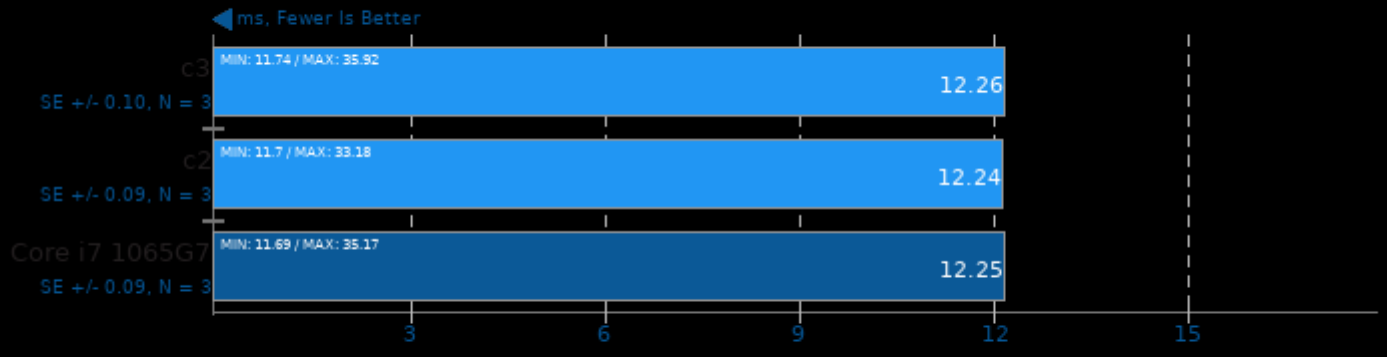
Input: Carbon Nanotube



1. (CC) gcc options: -pthread -shared -fwrapv -O2 -lxc -lblas -lmpi

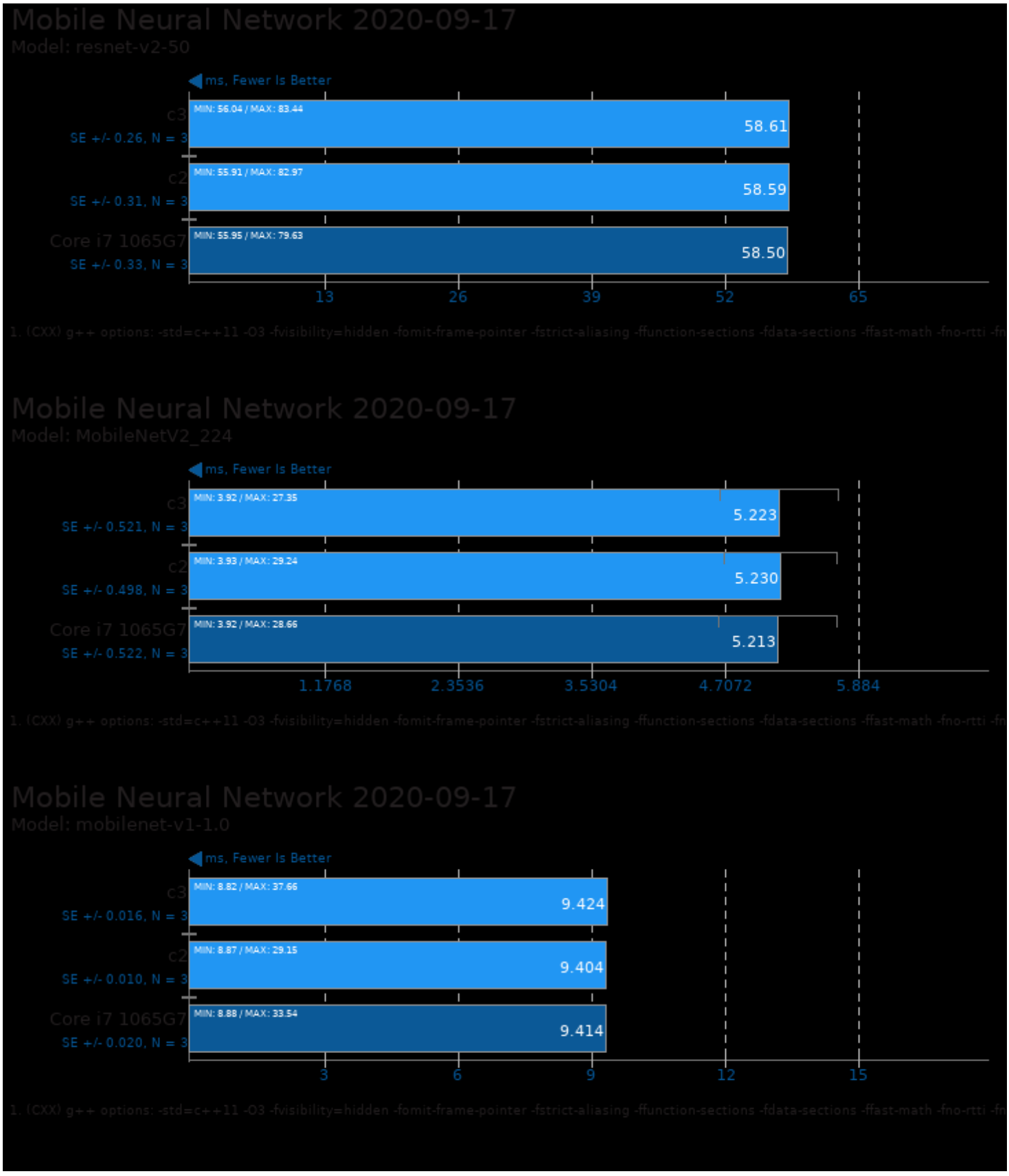
Mobile Neural Network 2020-09-17

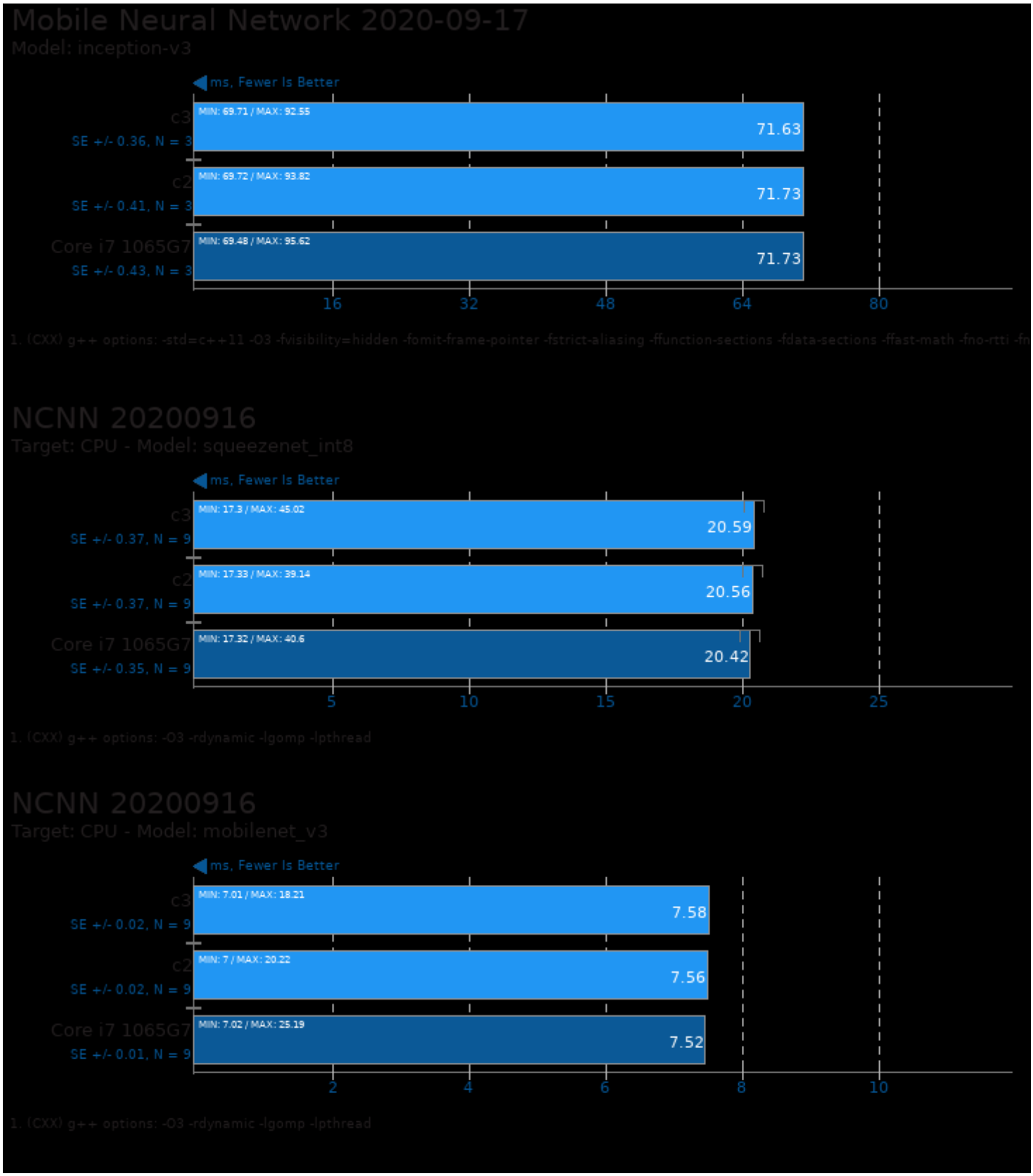
Model: SqueezeNetV1.0

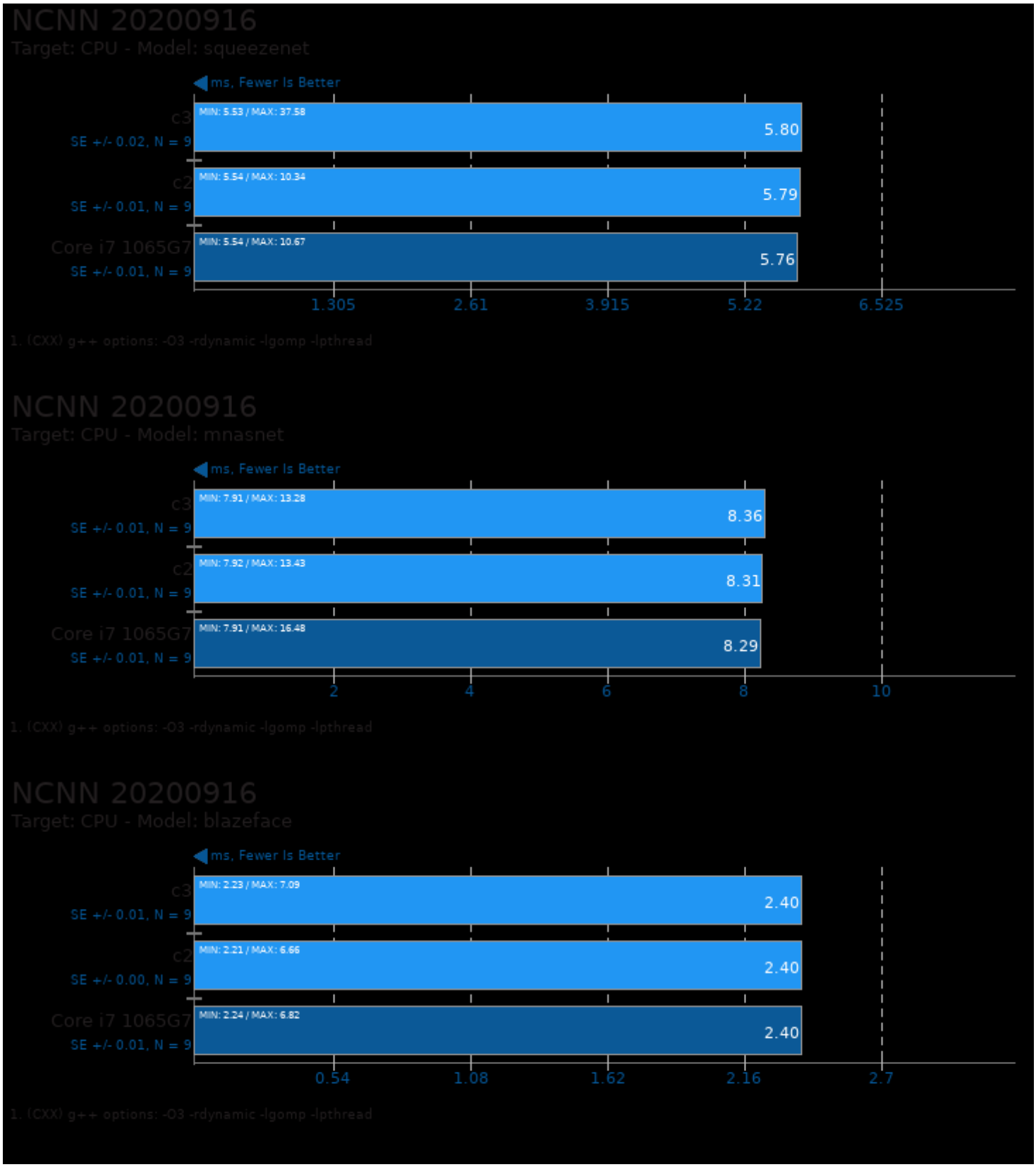


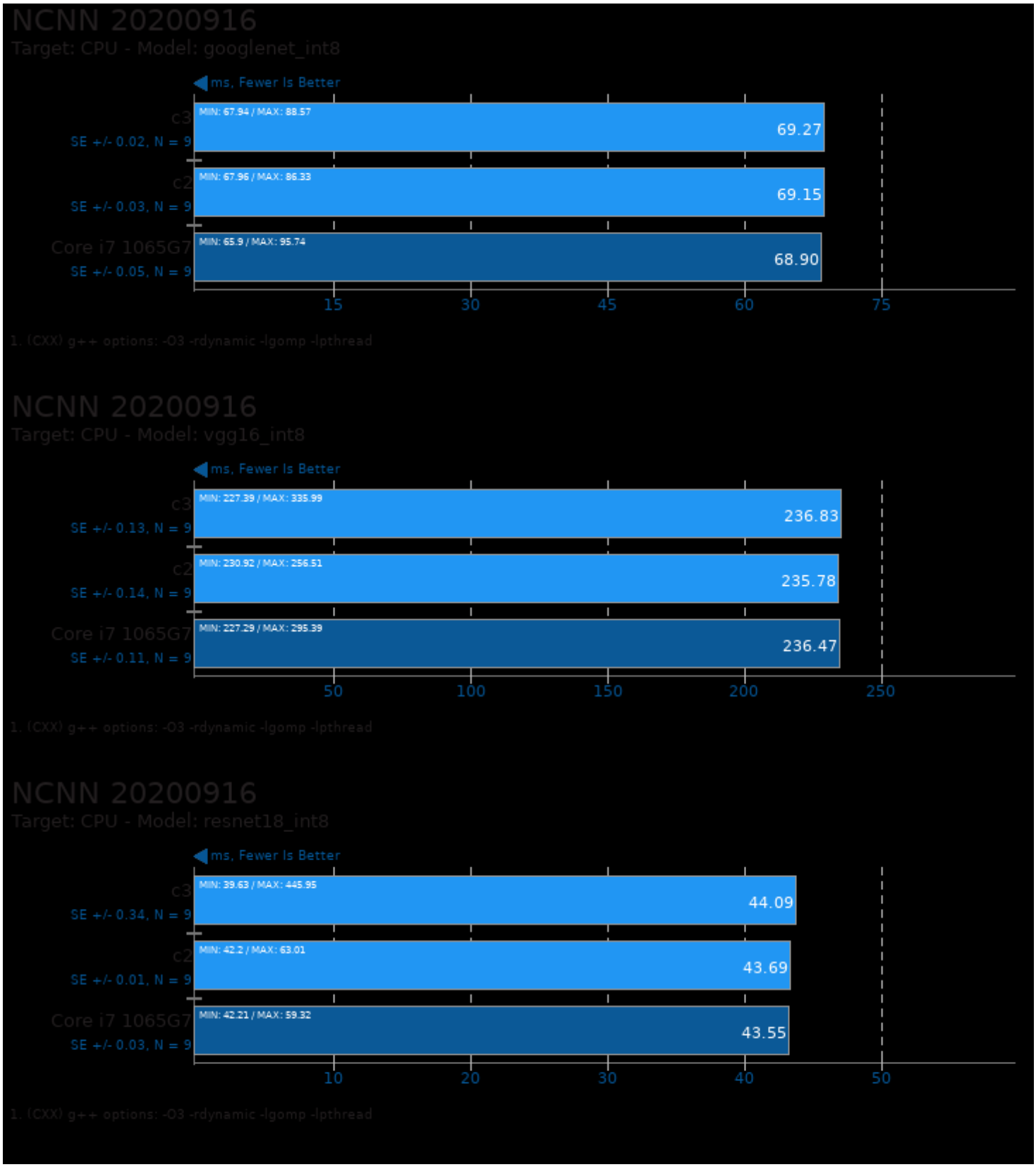
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fn

Core i7 1065G7 Ozapft

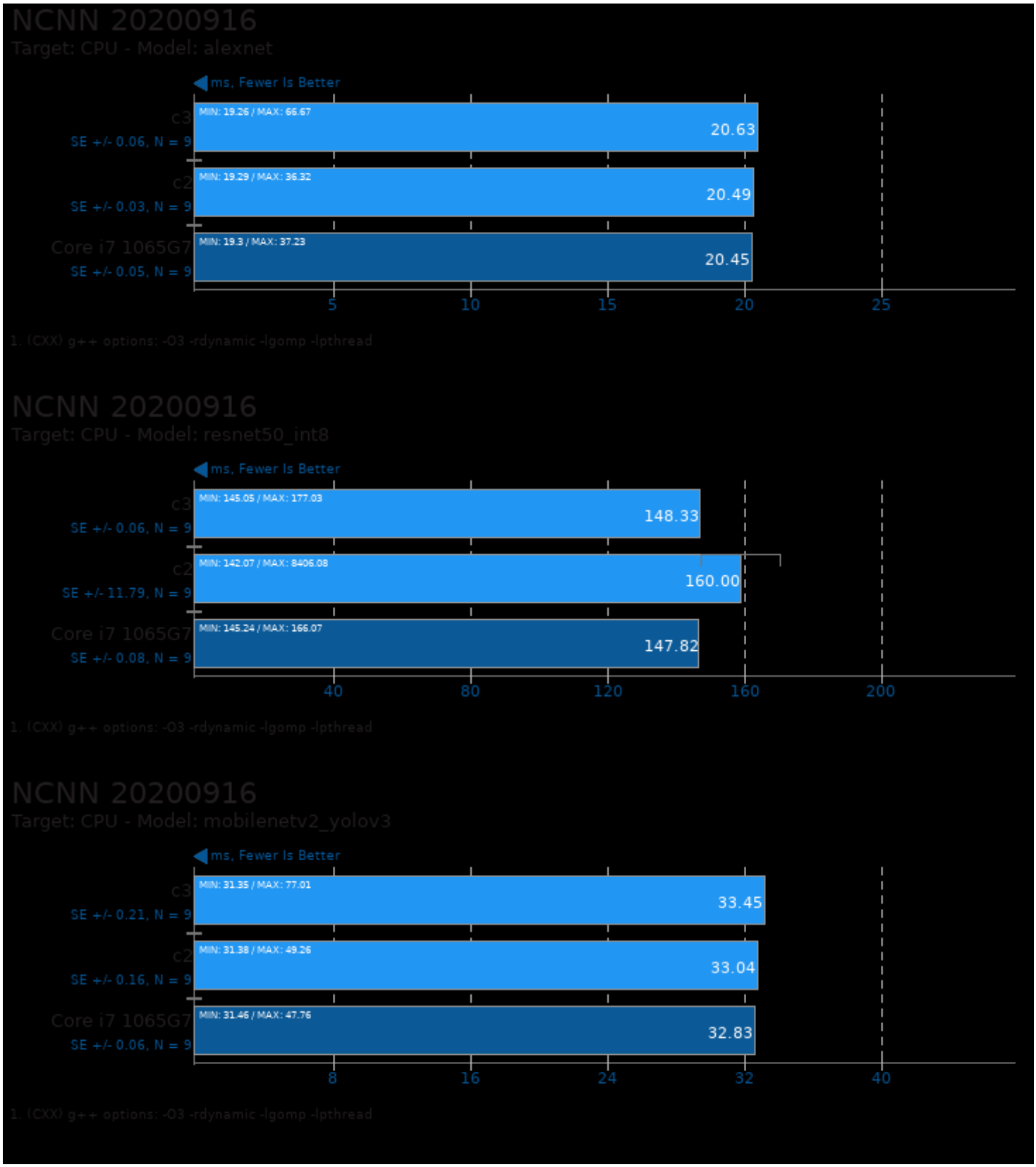



Mobile Neural Network 2020-09-17
Model: inception-v3
ms, Fewer Is Better
c3
SE +/- 0.36, N = 3
MIN: 69.71 / MAX: 92.55
71.63
c2
SE +/- 0.41, N = 3
MIN: 69.72 / MAX: 93.82
71.73
Core i7 1065G7
SE +/- 0.43, N = 3
MIN: 69.48 / MAX: 95.62
71.73
16
32
48
64
80
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv
NCNN 20200916
Target: CPU - Model: squeezenet_int8
ms, Fewer Is Better
c3
SE +/- 0.37, N = 9
MIN: 17.3 / MAX: 45.02
20.59
c2
SE +/- 0.37, N = 9
MIN: 17.33 / MAX: 39.14
20.56
Core i7 1065G7
SE +/- 0.35, N = 9
MIN: 17.32 / MAX: 40.6
20.42
5
10
15
20
25
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20200916
Target: CPU - Model: mobilenet_v3
ms, Fewer Is Better
c3
SE +/- 0.02, N = 9
MIN: 7.01 / MAX: 18.21
7.58
c2
SE +/- 0.02, N = 9
MIN: 7 / MAX: 20.22
7.56
Core i7 1065G7
SE +/- 0.01, N = 9
MIN: 7.02 / MAX: 25.19
7.52
2
4
6
8
10
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

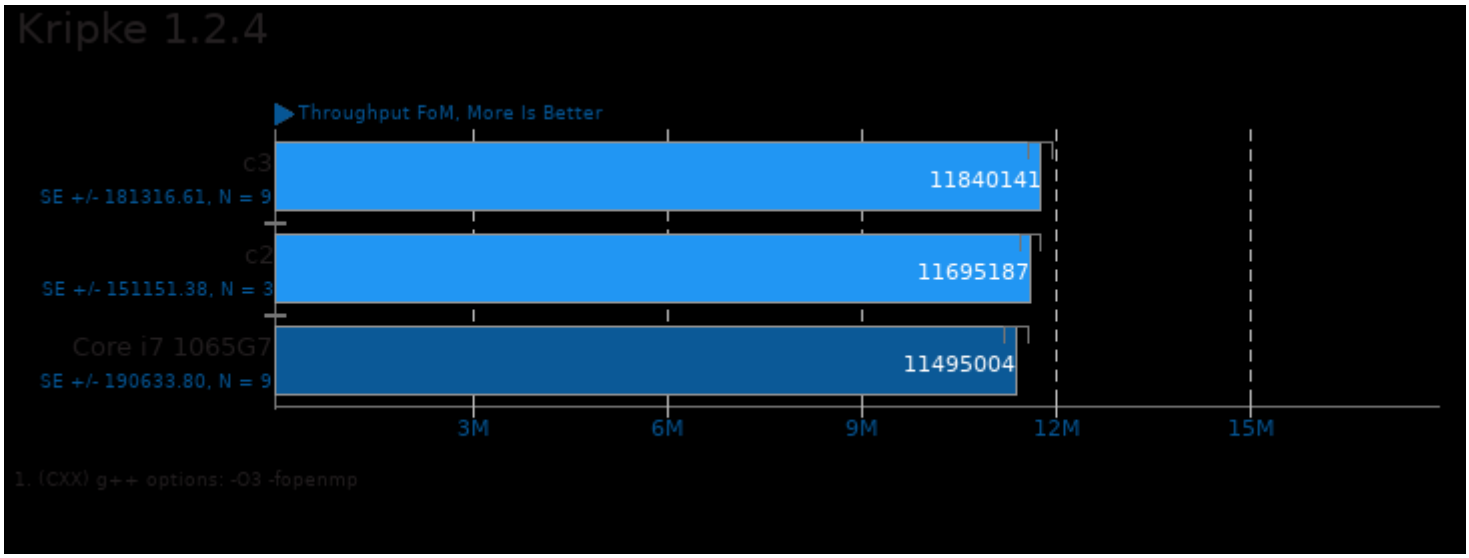

NCNN 20200916
Target: CPU - Model: squeezenet
ms, Fewer Is Better
c3
SE +/- 0.02, N = 9
MIN: 5.53 / MAX: 37.58
5.80
c2
SE +/- 0.01, N = 9
MIN: 5.54 / MAX: 10.34
5.79
Core i7 1065G7
SE +/- 0.01, N = 9
MIN: 5.54 / MAX: 10.67
5.76
1.305
2.61
3.915
5.22
6.525
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20200916
Target: CPU - Model: mnasnet
ms, Fewer Is Better
c3
SE +/- 0.01, N = 9
MIN: 7.91 / MAX: 13.28
8.36
c2
SE +/- 0.01, N = 9
MIN: 7.92 / MAX: 13.43
8.31
Core i7 1065G7
SE +/- 0.01, N = 9
MIN: 7.91 / MAX: 16.48
8.29
2
4
6
8
10
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20200916
Target: CPU - Model: blazeface
ms, Fewer Is Better
c3
SE +/- 0.01, N = 9
MIN: 2.23 / MAX: 7.09
2.40
c2
SE +/- 0.00, N = 9
MIN: 2.21 / MAX: 6.66
2.40
Core i7 1065G7
SE +/- 0.01, N = 9
MIN: 2.24 / MAX: 6.82
2.40
0.54
1.08
1.62
2.16
2.7
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread


NCNN 20200916
Target: CPU - Model: googlenet_int8
ms, Fewer Is Better
c3
MIN: 67.94 / MAX: 88.57
SE +/- 0.02, N = 9
69.27
c2
MIN: 67.96 / MAX: 86.33
SE +/- 0.03, N = 9
69.15
Core i7 1065G7
MIN: 65.9 / MAX: 95.74
SE +/- 0.05, N = 9
68.90
15
30
45
60
75
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20200916
Target: CPU - Model: vgg16_int8
ms, Fewer Is Better
c3
MIN: 227.39 / MAX: 335.99
SE +/- 0.13, N = 9
236.83
c2
MIN: 230.92 / MAX: 256.51
SE +/- 0.14, N = 9
235.78
Core i7 1065G7
MIN: 227.29 / MAX: 295.39
SE +/- 0.11, N = 9
236.47
50
100
150
200
250
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20200916
Target: CPU - Model: resnet18_int8
ms, Fewer Is Better
c3
MIN: 39.63 / MAX: 445.95
SE +/- 0.34, N = 9
44.09
c2
MIN: 42.2 / MAX: 63.01
SE +/- 0.01, N = 9
43.69
Core i7 1065G7
MIN: 42.21 / MAX: 59.32
SE +/- 0.03, N = 9
43.55
10
20
30
40
50
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

Core i7 1065G7 Ozapft



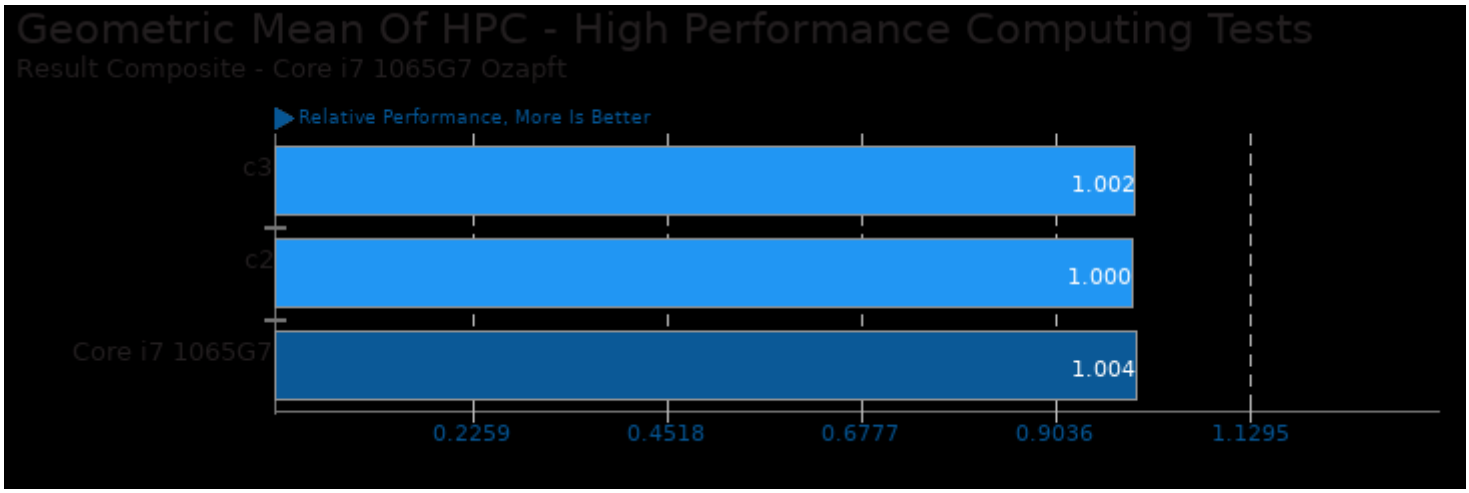
Core i7 1065G7 Ozapft



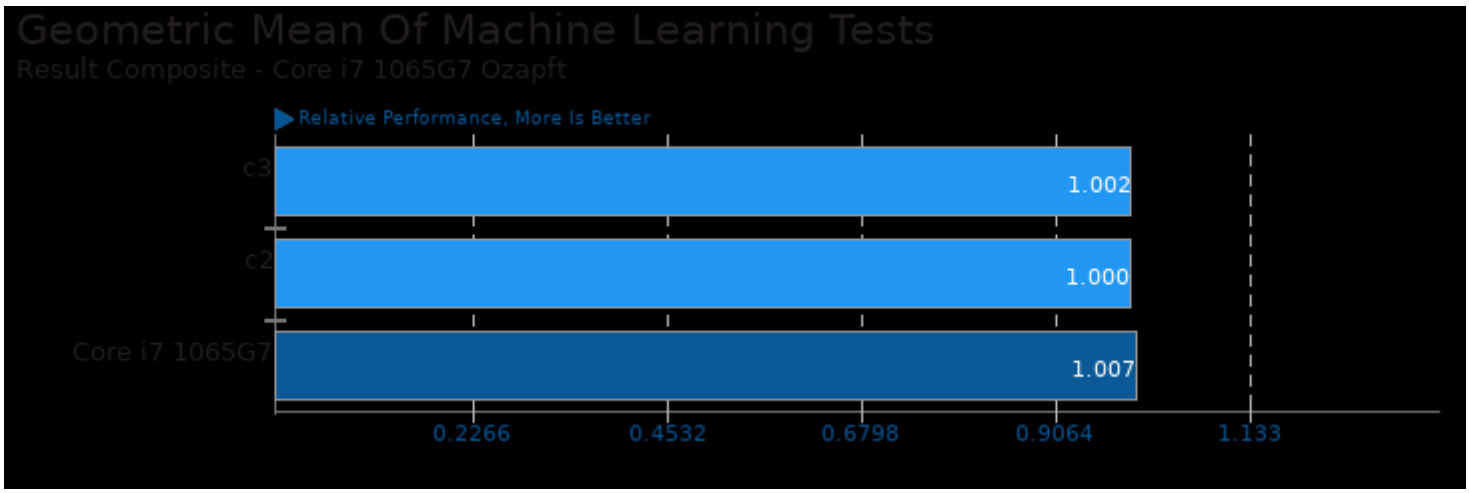
These geometric means are based upon test groupings / test suites for this result file.



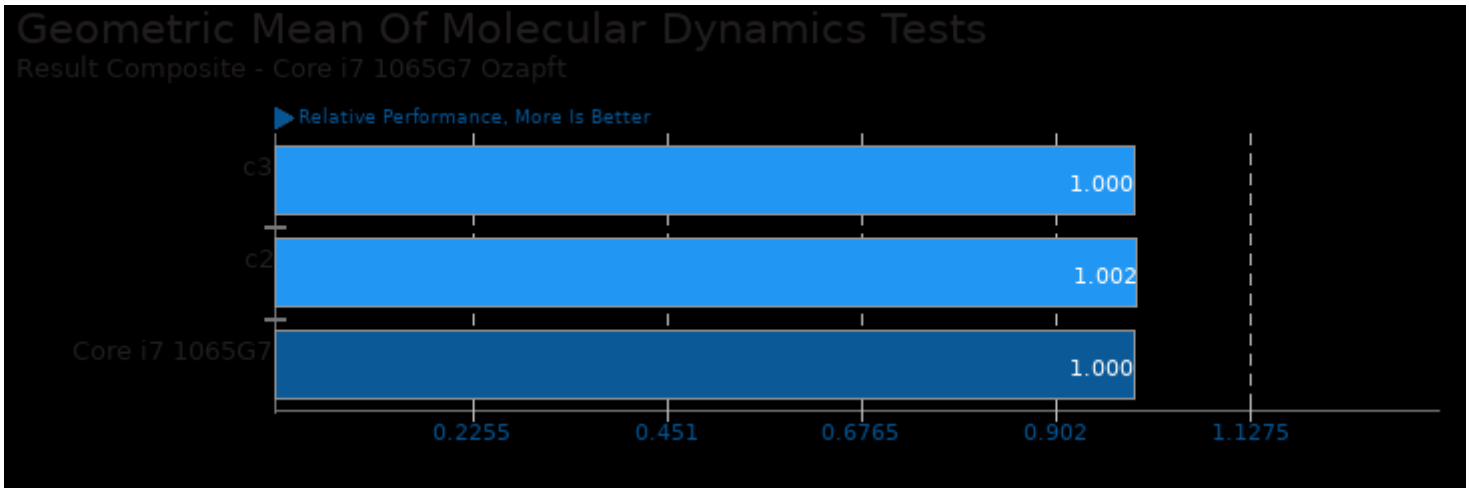
Geometric mean based upon tests: pts/incompact3d, pts/mocassin and pts/lammps



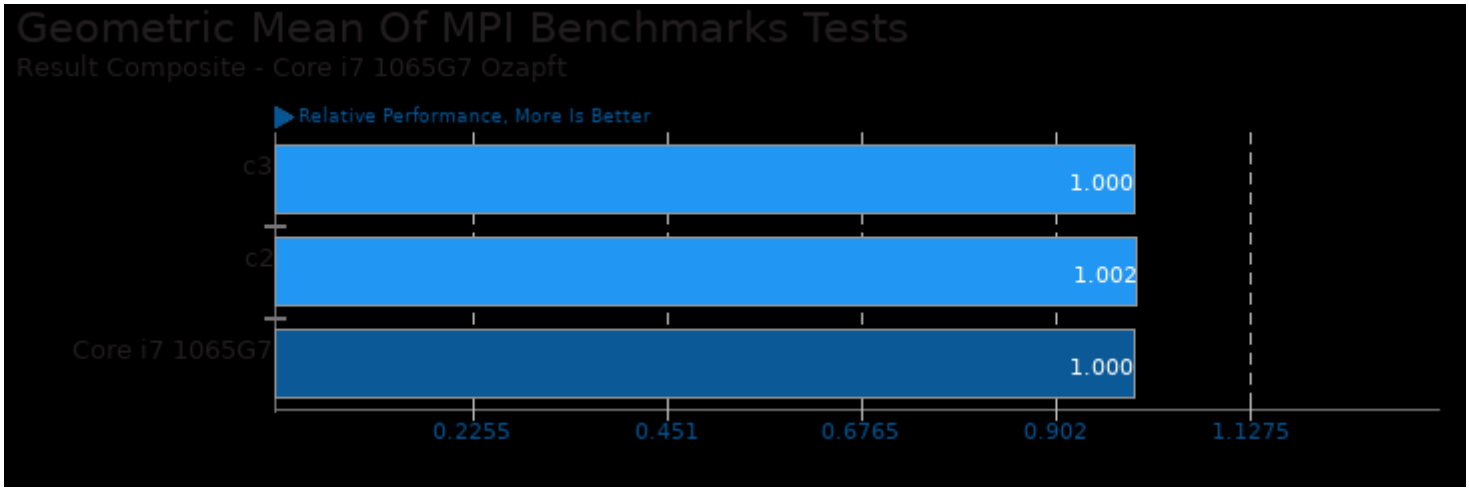
Geometric mean based upon tests: pts/lammps, pts/incompact3d, pts/gpaw, pts/mocassin, pts/kripke, pts/mnn and pts/ncnn



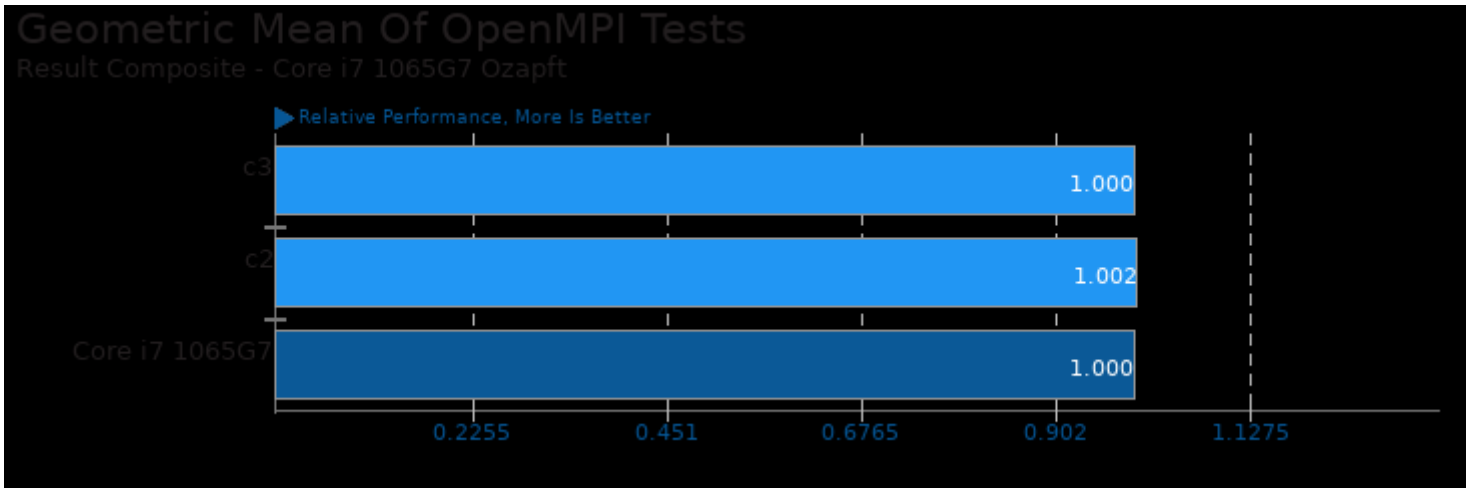
Geometric mean based upon tests: pts/mnn and pts/ncnn



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

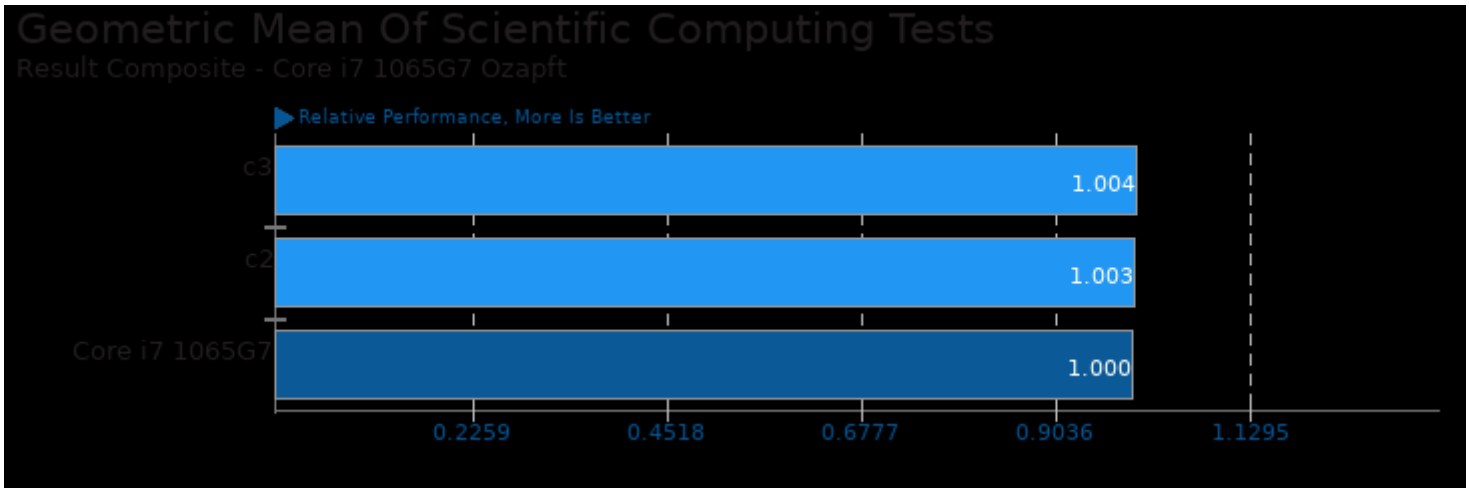


Geometric mean based upon tests: pts/lammps, pts/incompact3d, pts/gpaw and pts/mocassin



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

Core i7 1065G7 Ozapft



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

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 01:54.