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
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%
Kripke (Throughput FoM)	**11495004**	11695187	**11840141**
Normalized	97.09%	98.78%	100%
Standard Deviation	5%	2.2%	4.6%
Incompact3D - Cylinder (sec)	1047	**1045**	**1058**
Normalized	99.88%	100%	98.78%
Standard Deviation	0.8%	1.2%	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%
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%

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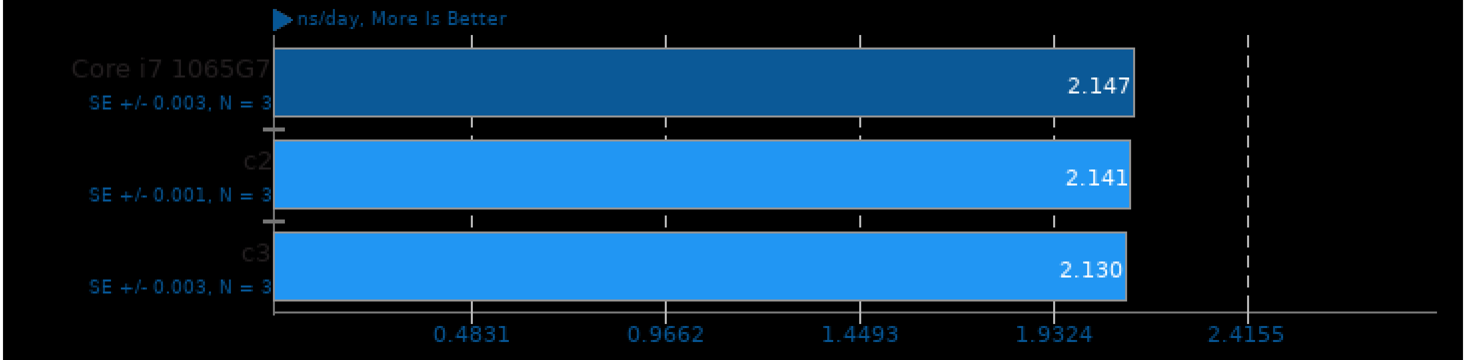
NCNN - CPU - alexnet (ms)	20.45	20.49	20.63
Normalized	100%	99.8%	99.13%
Standard Deviation	0.7%	0.5%	0.8%
NCNN - CPU - resnet18_int8 (ms)	43.55	43.69	44.09
Normalized	100%	99.68%	98.78%
Standard Deviation	0.2%	0.1%	2.3%
NCNN - CPU - vgg16_int8 (ms)	236.47	235.78	236.83
Normalized	99.71%	100%	99.56%
Standard Deviation	0.1%	0.2%	0.2%
NCNN - CPU - 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 - blazeface (ms)	2.40	2.40	2.40
Standard Deviation	0.9%	0.5%	0.9%
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 - squeezenet (ms)	5.76	5.79	5.80
Normalized	100%	99.48%	99.31%
Standard Deviation	0.3%	0.4%	1.1%
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_int8 (ms)	20.42	20.56	20.59
Normalized	100%	99.32%	99.17%
Standard Deviation	5.2%	5.3%	5.3%
GPAW - Carbon Nanotube (sec)	717.393	715.448	715.117
Normalized	99.68%	99.95%	100%
Standard Deviation	1.1%	0.3%	0.1%
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%
Mobile Neural Network - inception-v3 (ms)	71.730	71.725	71.633
Normalized	99.86%	99.87%	100%
Standard Deviation	1%	1%	0.9%
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 - 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 - 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 - SqueezeNetV1.0	12.252	12.239	12.260
Normalized	99.89%	100%	99.83%
Standard Deviation	1.3%	1.3%	1.4%
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%

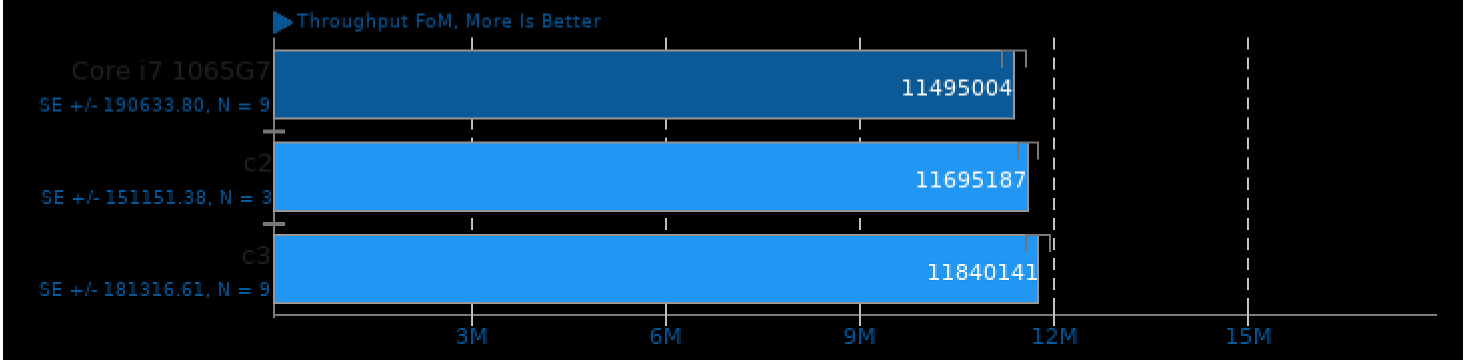
LAMMPS Molecular Dynamics Simulator 24Aug2020

Model: 20k Atoms



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

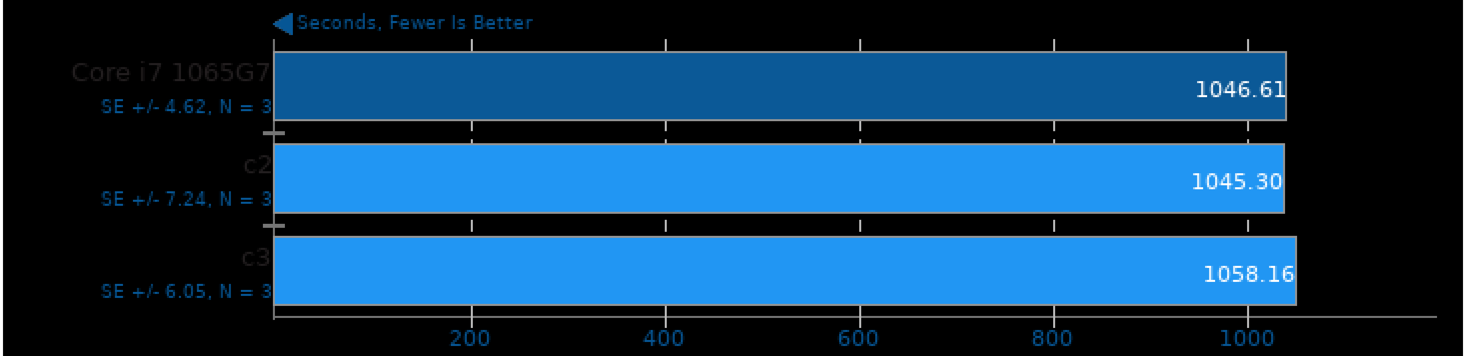
Kripke 1.2.4



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

Incompact3D 2020-09-17

Input: Cylinder



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

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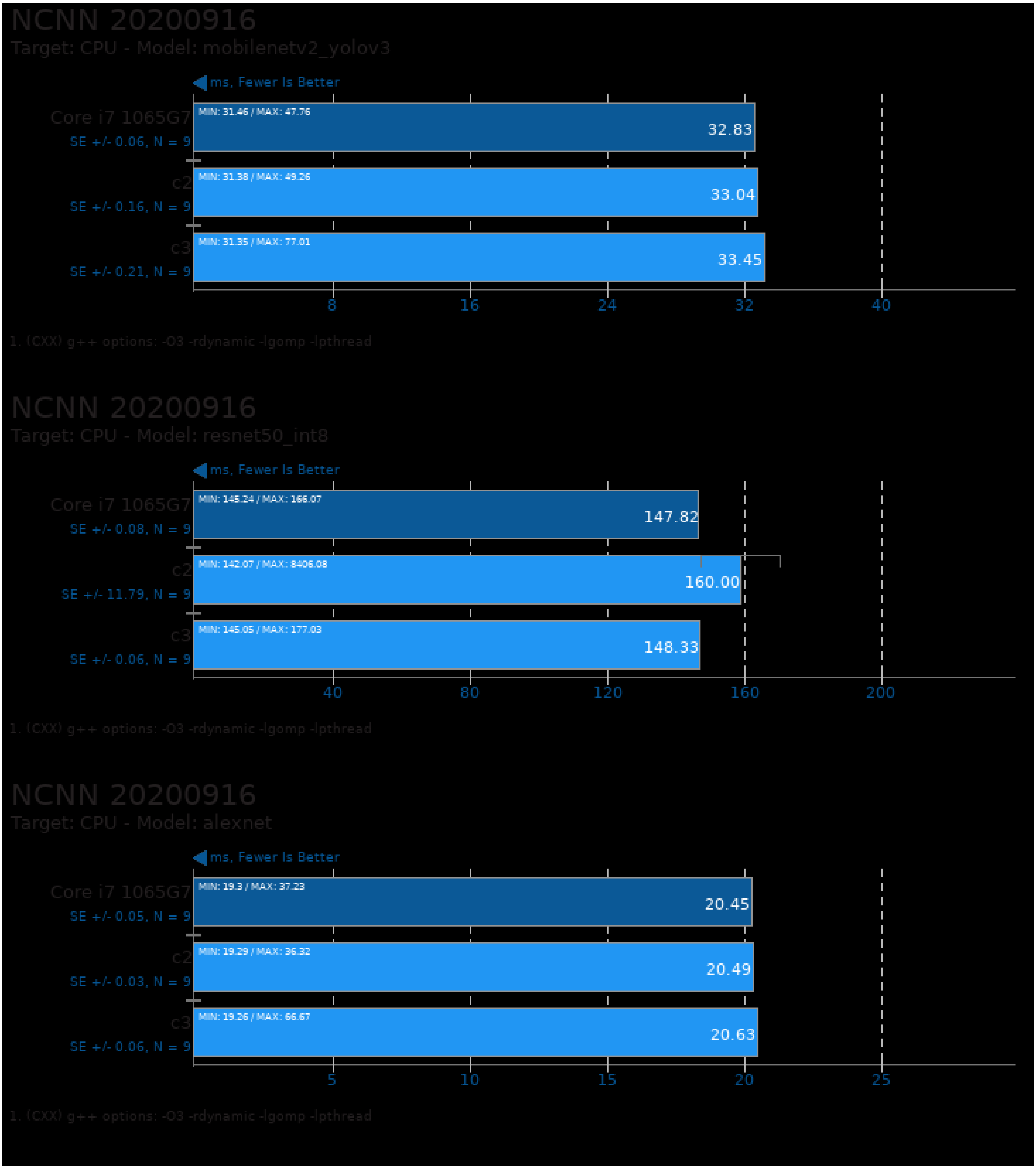
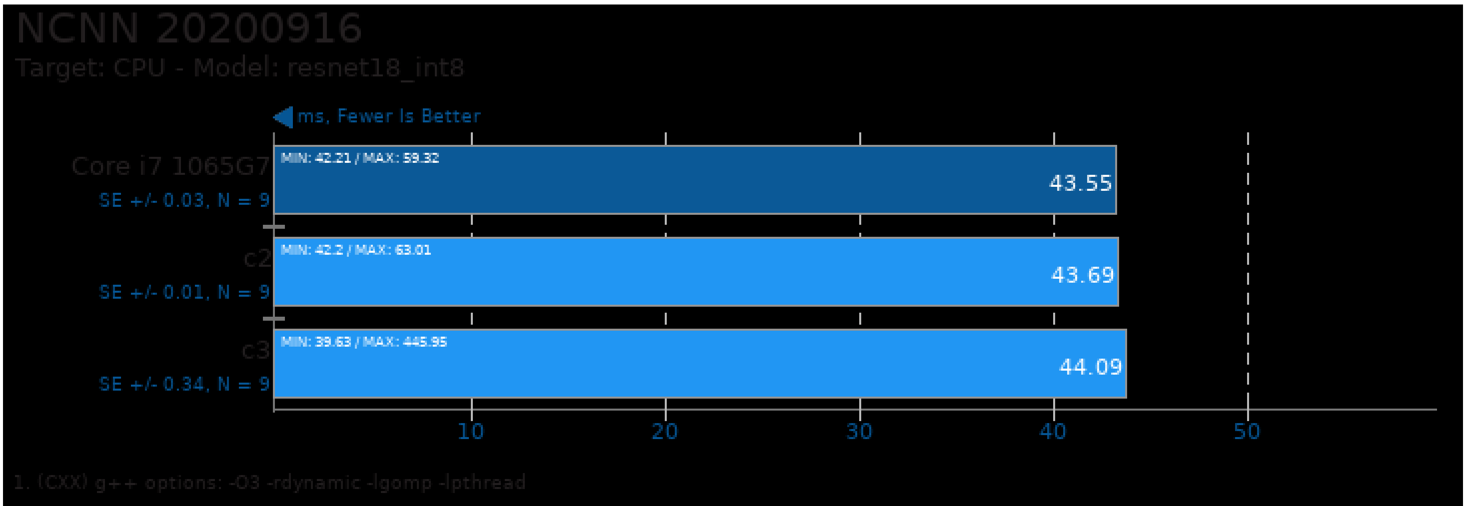
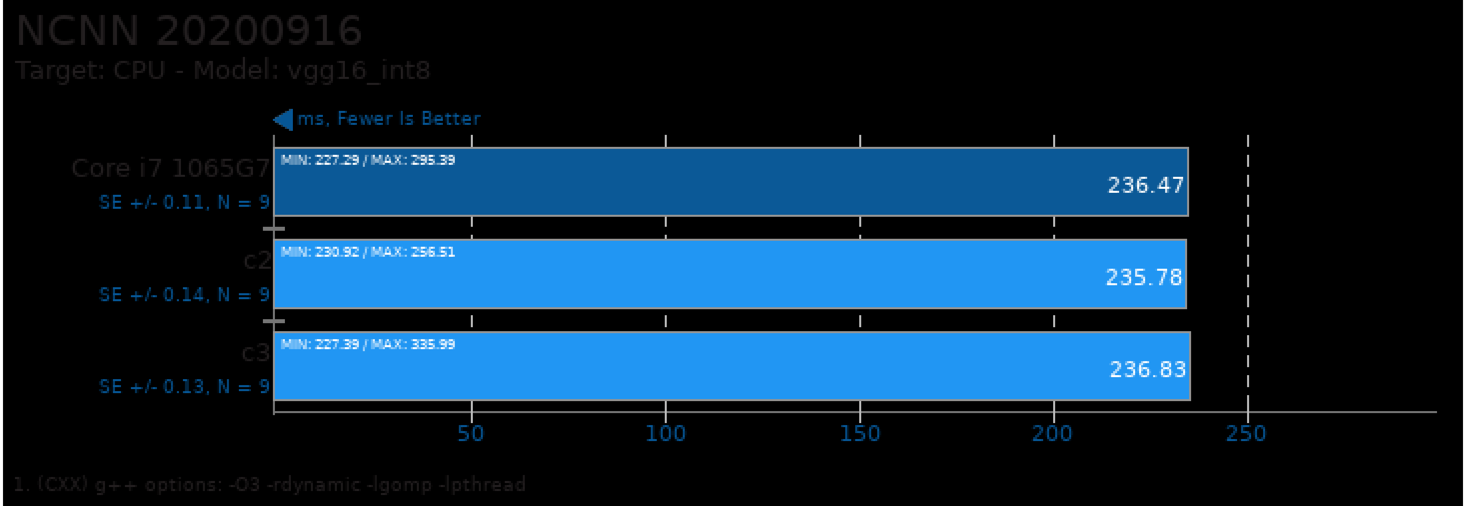
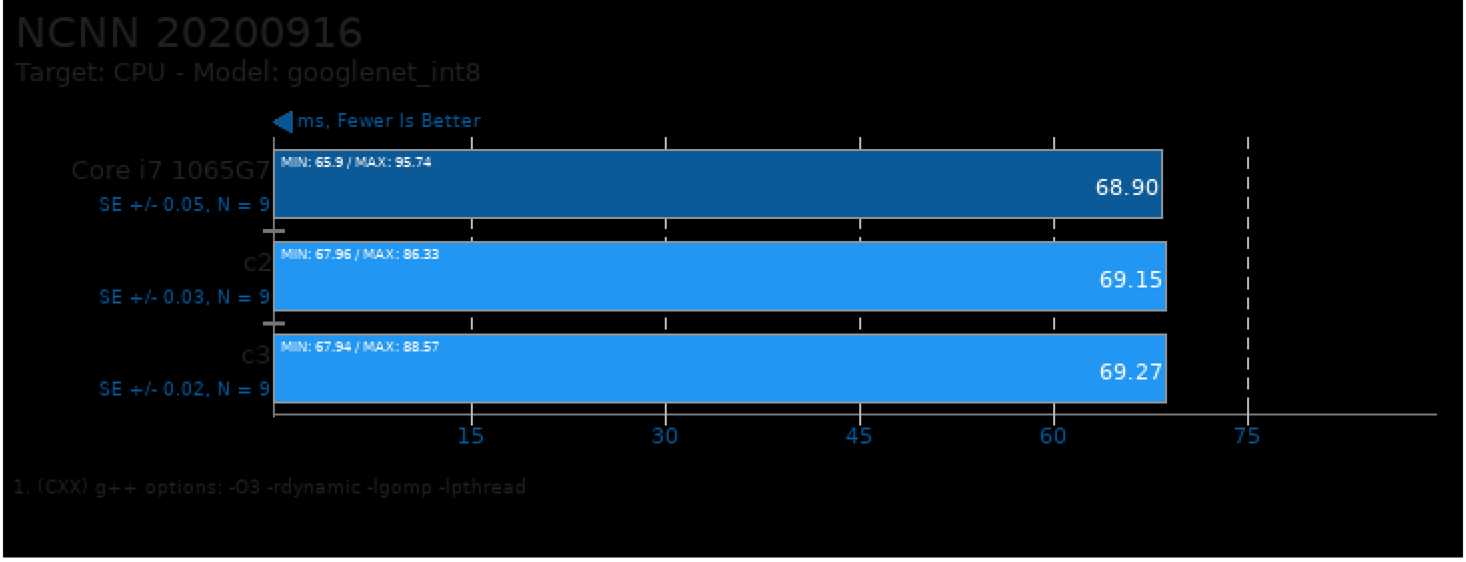
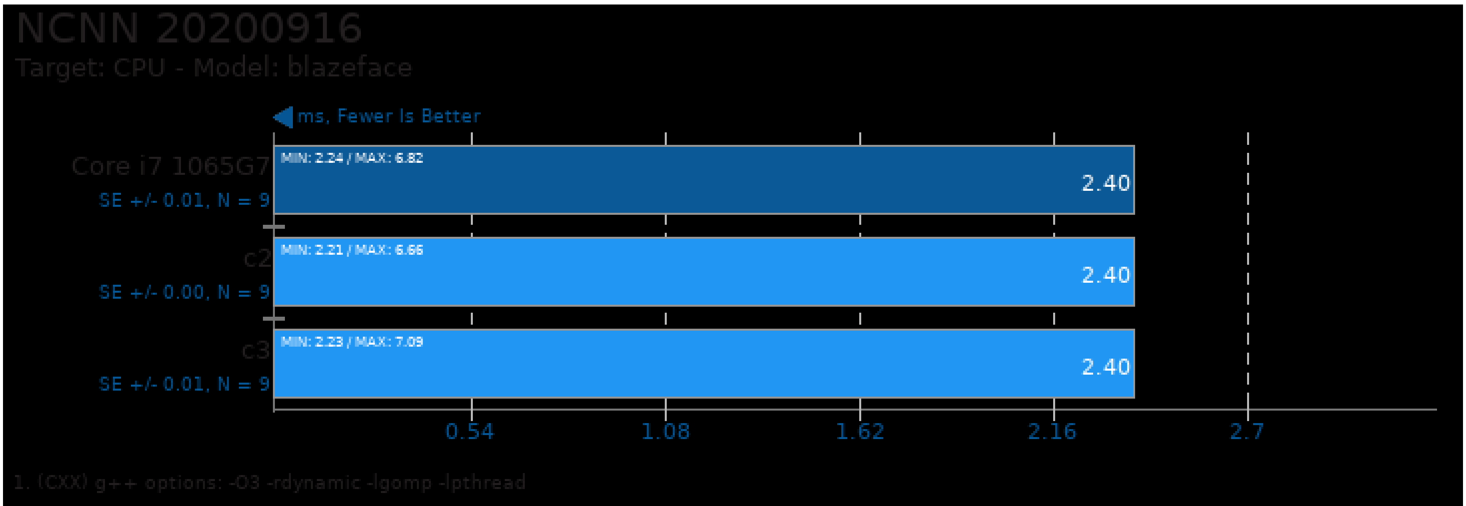
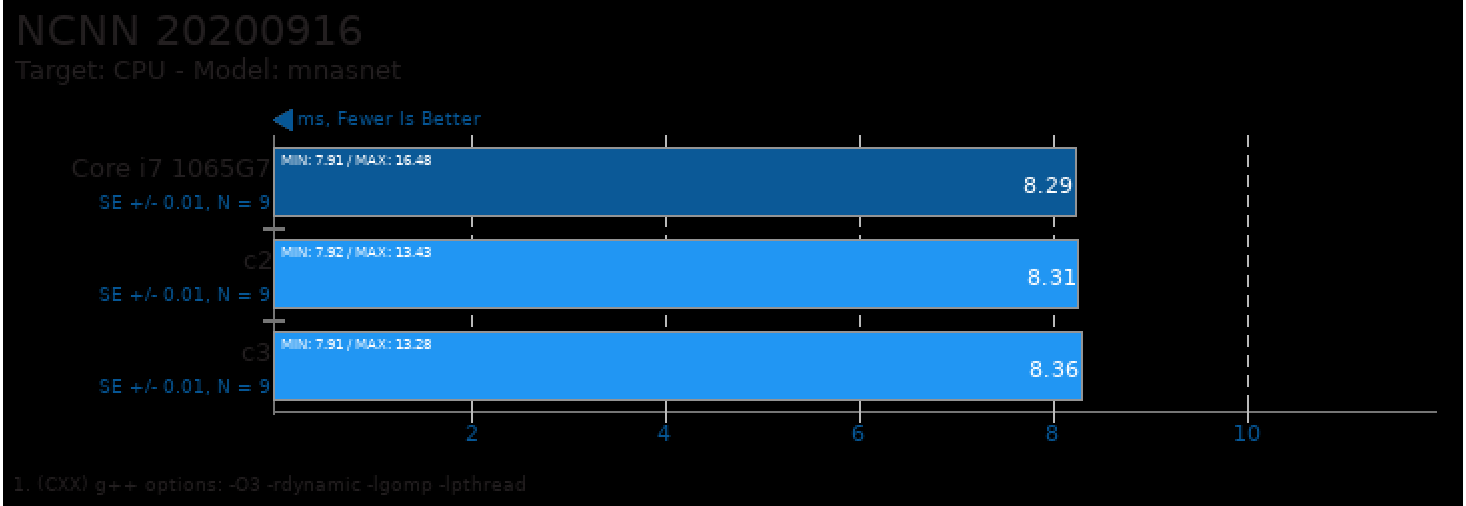


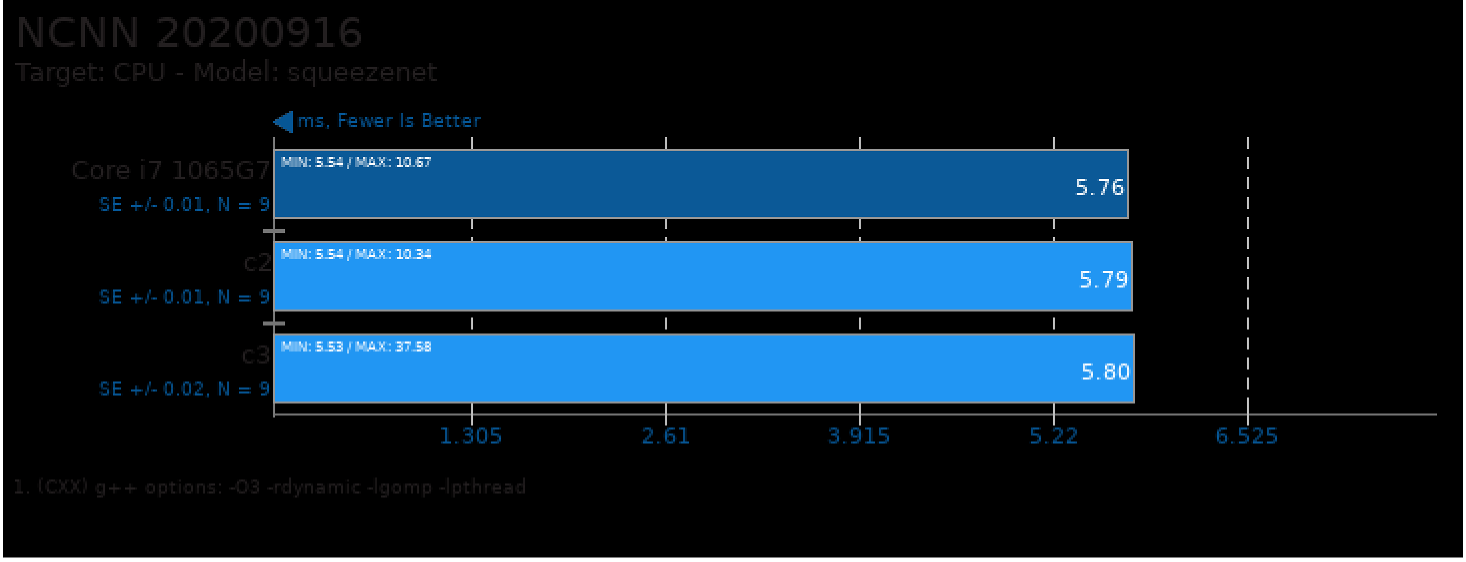

NCNN 20200916
Target: CPU - Model: resnet18_int8
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.03, N = 9
MIN: 42.21 / MAX: 59.32
43.55
c2
SE +/- 0.01, N = 9
MIN: 42.2 / MAX: 63.01
43.69
c3
SE +/- 0.34, N = 9
MIN: 39.63 / MAX: 445.95
44.09
10
20
30
40
50
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

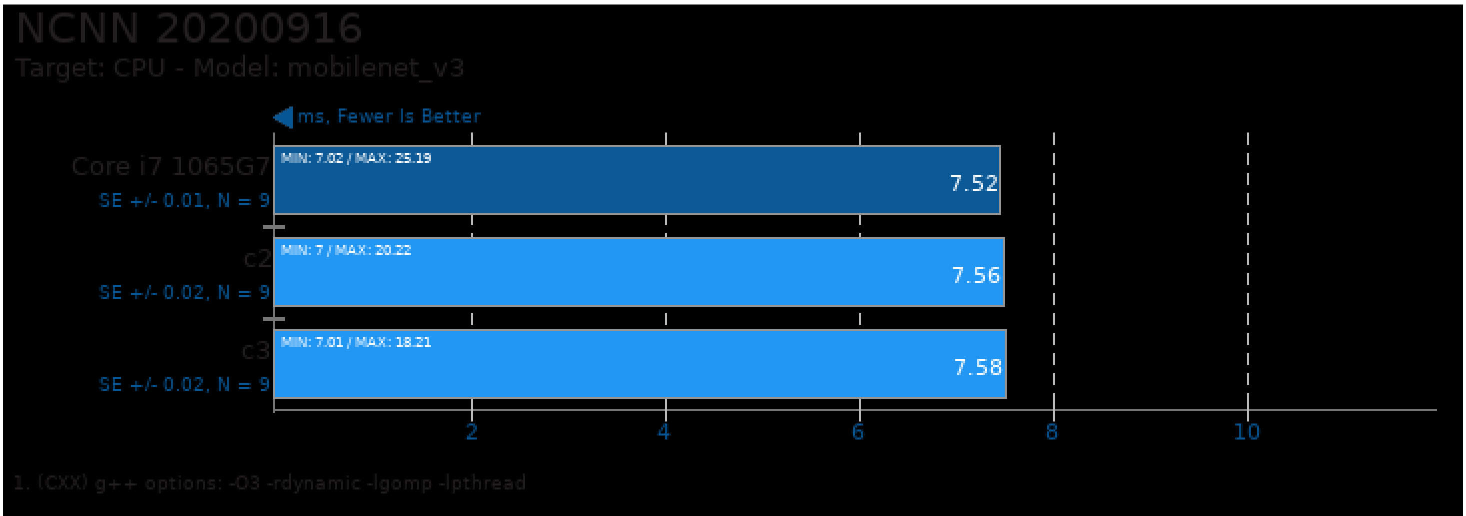

NCNN 20200916
Target: CPU - Model: vgg16_int8
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.11, N = 9
MIN: 227.29 / MAX: 295.39
236.47
c2
SE +/- 0.14, N = 9
MIN: 230.92 / MAX: 256.51
235.78
c3
SE +/- 0.13, N = 9
MIN: 227.39 / MAX: 335.99
236.83
50
100
150
200
250
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

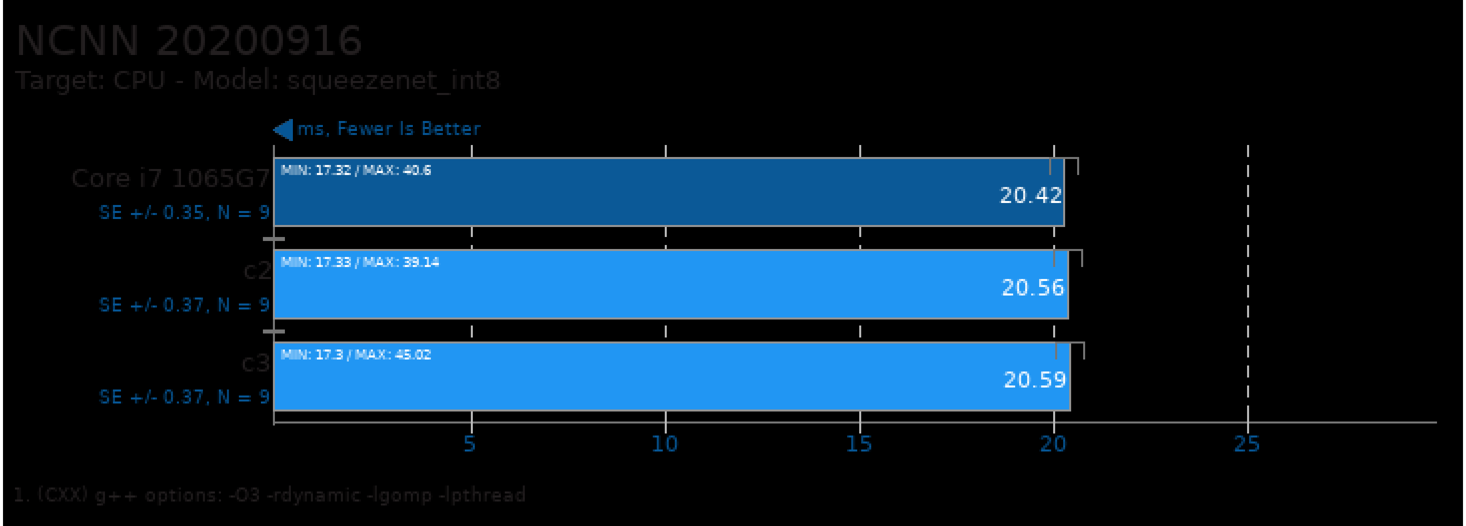

NCNN 20200916
Target: CPU - Model: googlenet_int8
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.05, N = 9
MIN: 65.9 / MAX: 95.74
68.90
c2
SE +/- 0.03, N = 9
MIN: 67.96 / MAX: 86.33
69.15
c3
SE +/- 0.02, N = 9
MIN: 67.94 / MAX: 88.57
69.27
15
30
45
60
75
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

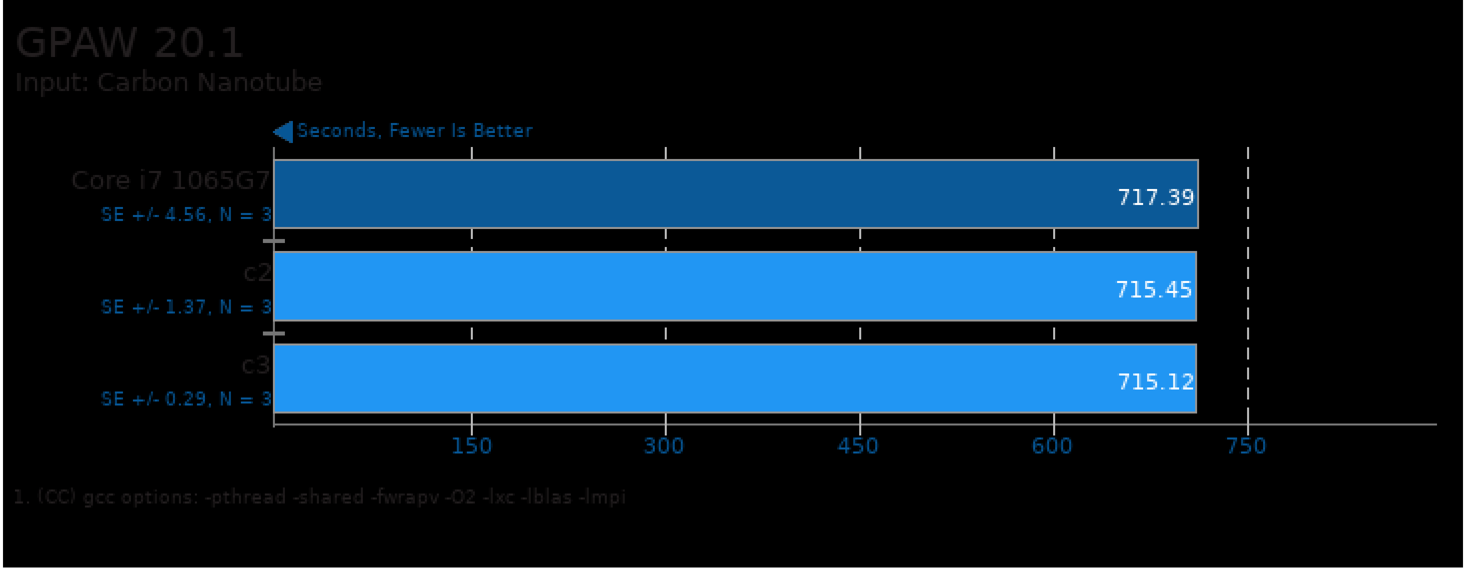

NCNN 20200916
Target: CPU - Model: blazeface
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.01, N = 9
MIN: 2.24 / MAX: 6.82
2.40
c2
SE +/- 0.00, N = 9
MIN: 2.21 / MAX: 6.66
2.40
c3
SE +/- 0.01, N = 9
MIN: 2.23 / MAX: 7.09
2.40
0.54
1.08
1.62
2.16
2.7
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

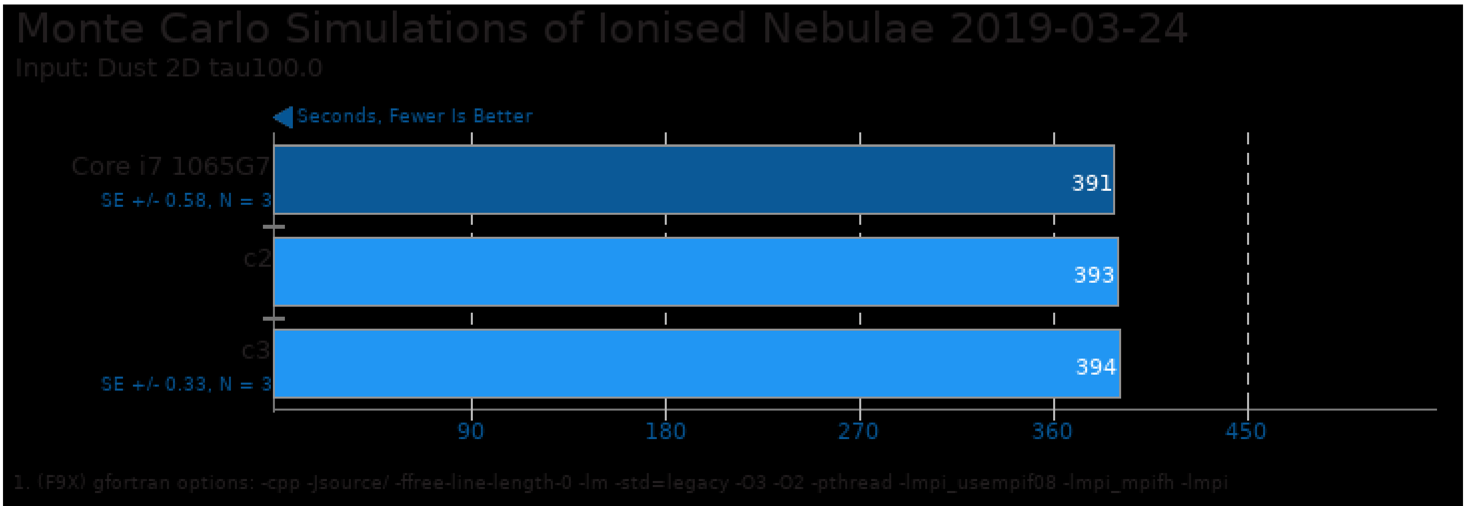

NCNN 20200916
Target: CPU - Model: mnasnet
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.01, N = 9
MIN: 7.91 / MAX: 16.48
8.29
c2
SE +/- 0.01, N = 9
MIN: 7.92 / MAX: 13.43
8.31
c3
SE +/- 0.01, N = 9
MIN: 7.91 / MAX: 13.28
8.36
2
4
6
8
10
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

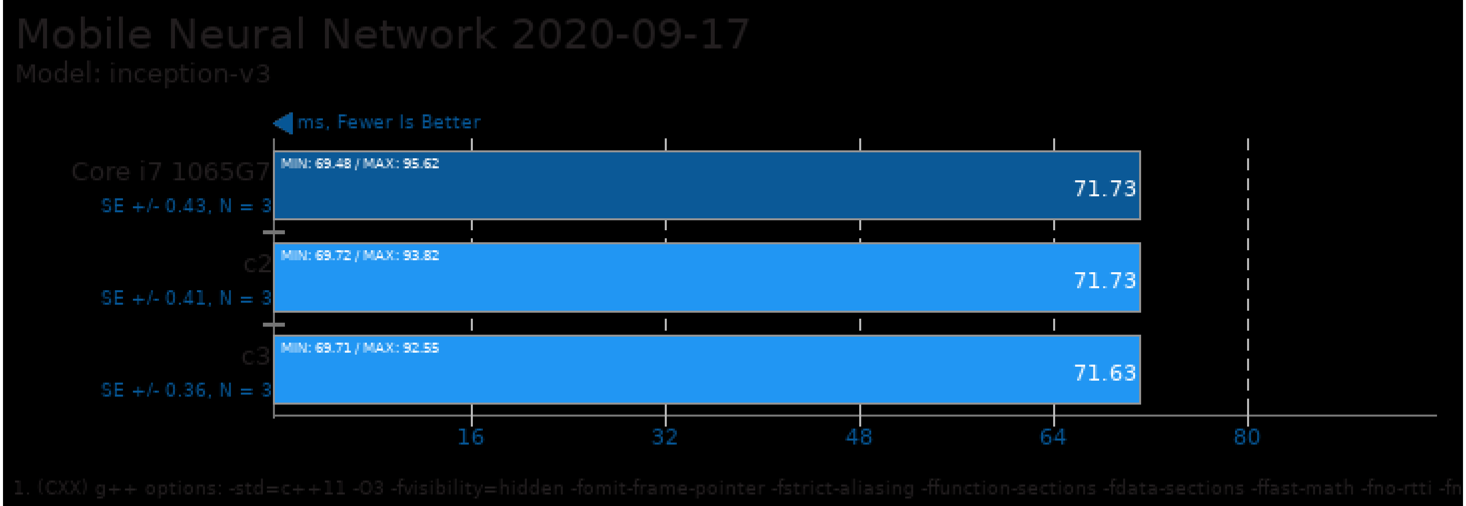

NCNN 20200916
Target: CPU - Model: squeezenet
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.01, N = 9
MIN: 5.54 / MAX: 10.67
5.76
c2
SE +/- 0.01, N = 9
MIN: 5.54 / MAX: 10.34
5.79
c3
SE +/- 0.02, N = 9
MIN: 5.53 / MAX: 37.58
5.80
1.305
2.61
3.915
5.22
6.525
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

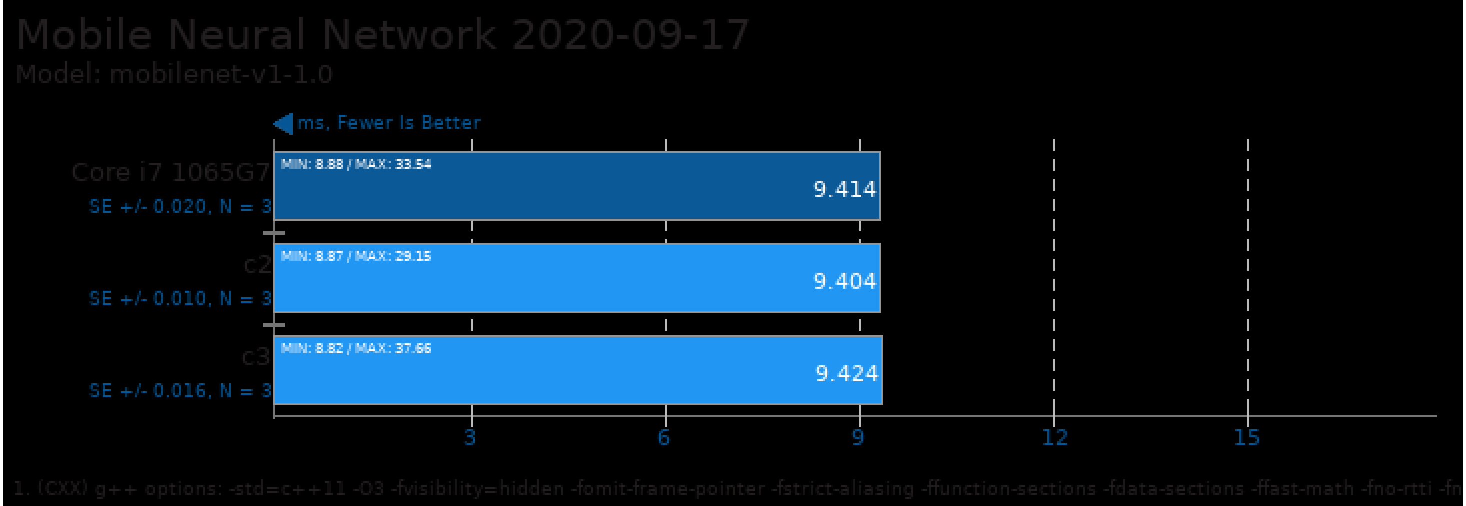

NCNN 20200916
Target: CPU - Model: mobilenet_v3
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.01, N = 9
MIN: 7.02 / MAX: 25.19
7.52
c2
SE +/- 0.02, N = 9
MIN: 7 / MAX: 20.22
7.56
c3
SE +/- 0.02, N = 9
MIN: 7.01 / MAX: 18.21
7.58
2
4
6
8
10
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread


NCNN 20200916
Target: CPU - Model: squeezenet_int8
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.35, N = 9
MIN: 17.32 / MAX: 40.6
20.42
c2
SE +/- 0.37, N = 9
MIN: 17.33 / MAX: 39.14
20.56
c3
SE +/- 0.37, N = 9
MIN: 17.3 / MAX: 45.02
20.59
5
10
15
20
25
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

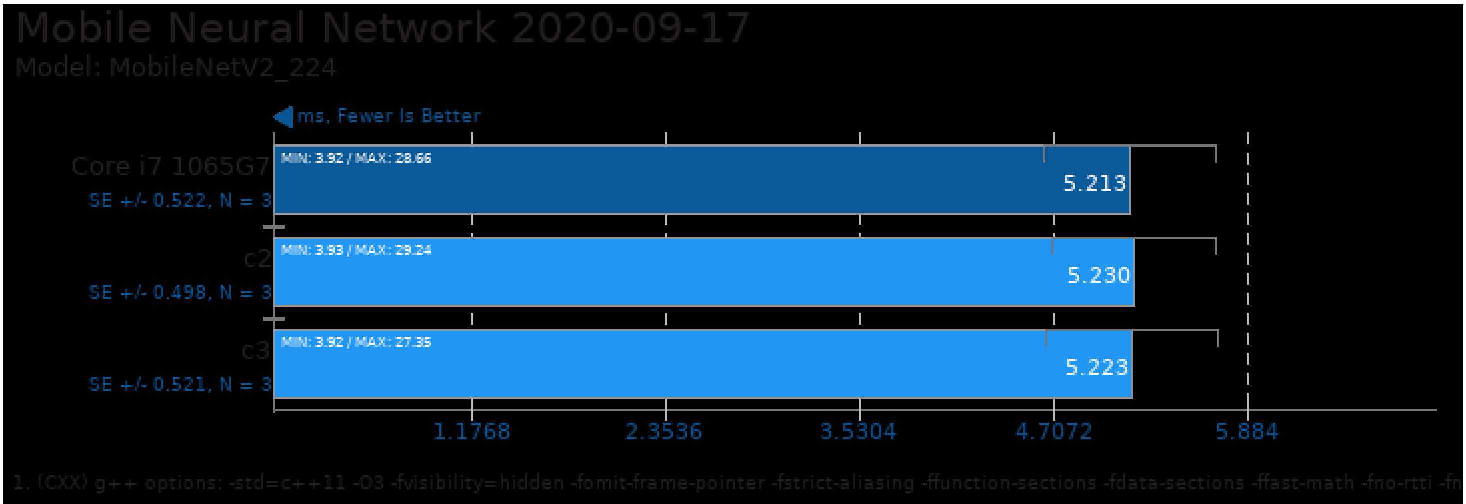

GPAW 20.1
Input: Carbon Nanotube
Seconds, Fewer Is Better
Core i7 1065G7
SE +/- 4.56, N = 3
717.39
c2
SE +/- 1.37, N = 3
715.45
c3
SE +/- 0.29, N = 3
715.12
150
300
450
600
750
1. (CC) gcc options: -pthread -shared -fwrapv -O2 -lxc -lblas -lmpi

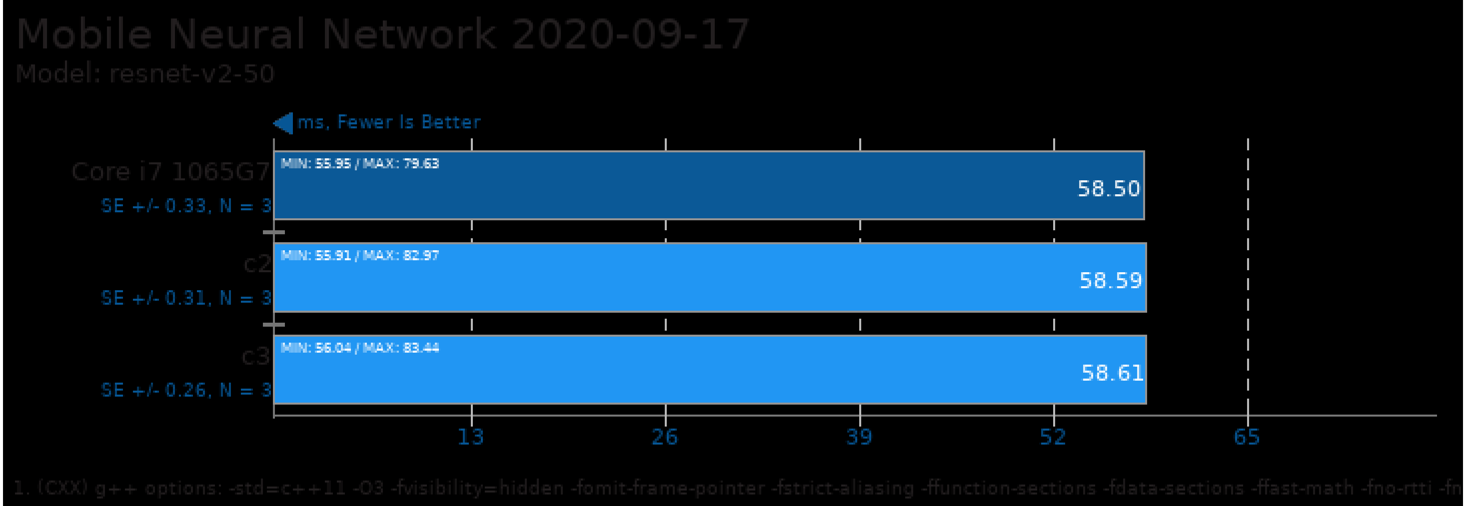

Monte Carlo Simulations of Ionised Nebulae 2019-03-24
Input: Dust 2D tau100.0
Seconds, Fewer Is Better
Core i7 1065G7
SE +/- 0.58, N = 3
391
c2
393
c3
SE +/- 0.33, N = 3
394
90
180
270
360
450
1. (F9X) gfortran options: -cpp -Jsource/ -ffree-line-length-0 -lm -std=legacy -O3 -O2 -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

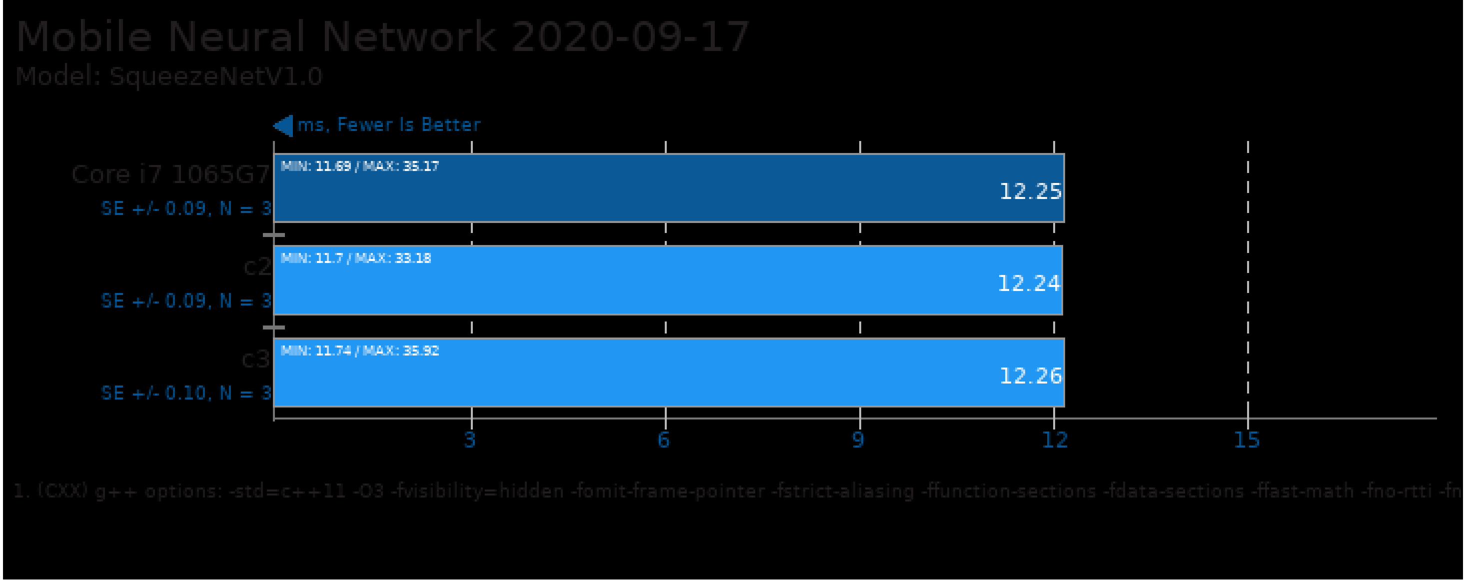

Mobile Neural Network 2020-09-17
Model: inception-v3
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.43, N = 3
MIN: 69.48 / MAX: 95.62
71.73
c2
SE +/- 0.41, N = 3
MIN: 69.72 / MAX: 93.82
71.73
c3
SE +/- 0.36, N = 3
MIN: 69.71 / MAX: 92.55
71.63
16
32
48
64
80
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fn


Mobile Neural Network 2020-09-17
Model: mobilenet-v1-1.0
ms, Fewer Is Better
Core i7 1065G7
SE +/- 0.020, N = 3
MIN: 8.88 / MAX: 33.54
9.414
c2
SE +/- 0.010, N = 3
MIN: 8.87 / MAX: 29.15
9.404
c3
SE +/- 0.016, N = 3
MIN: 8.82 / MAX: 37.66
9.424
3
6
9
12
15
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fn

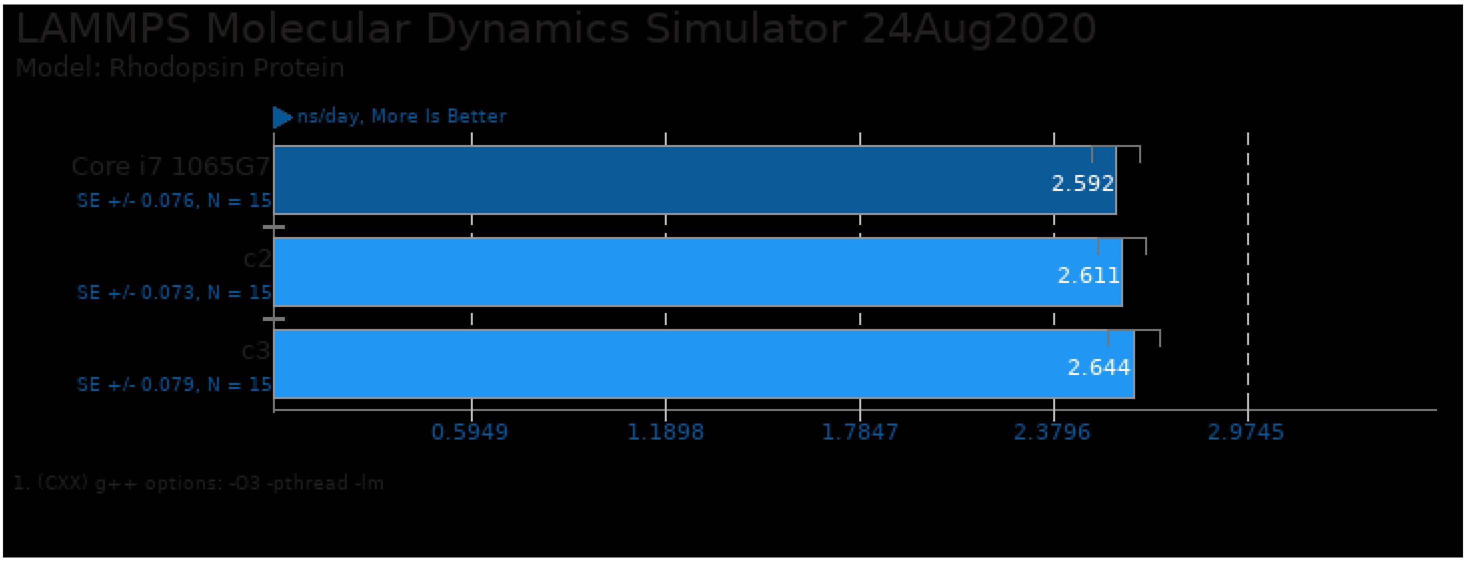
Core i7 1065G7 Ozapft





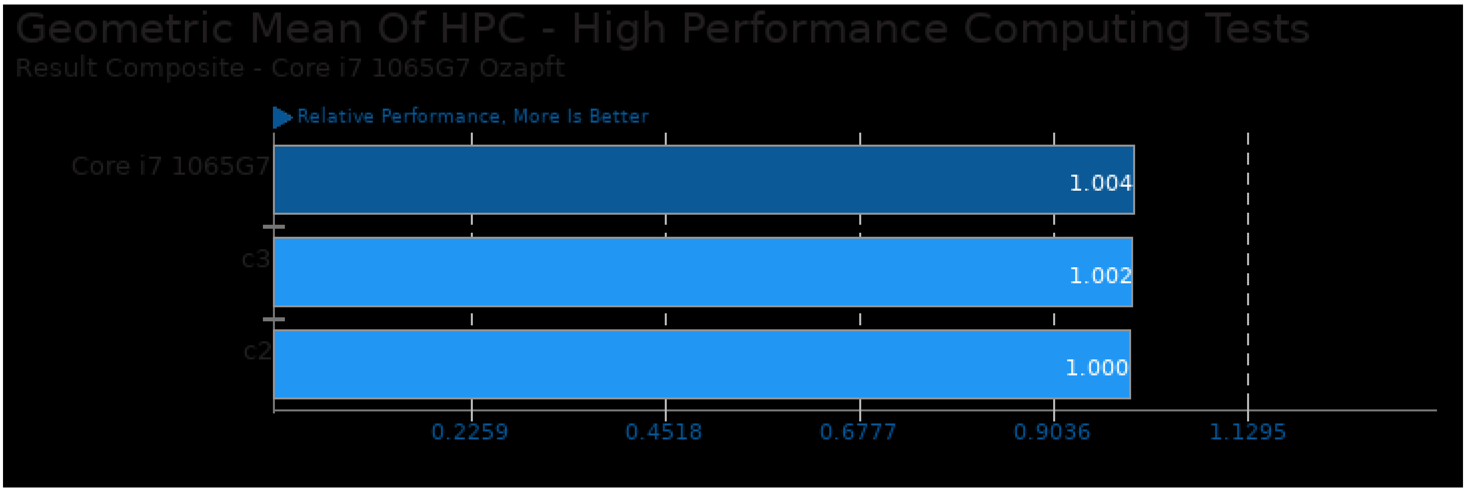


Core i7 1065G7 Ozapft

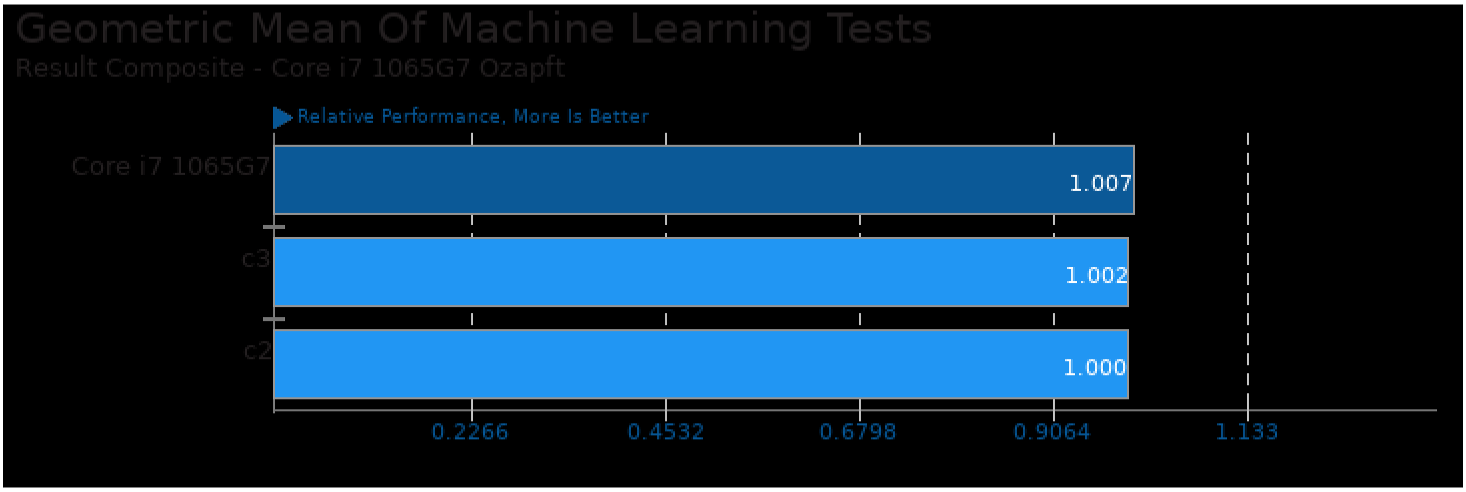


These geometric means are based upon test groupings / test suites for this result file.

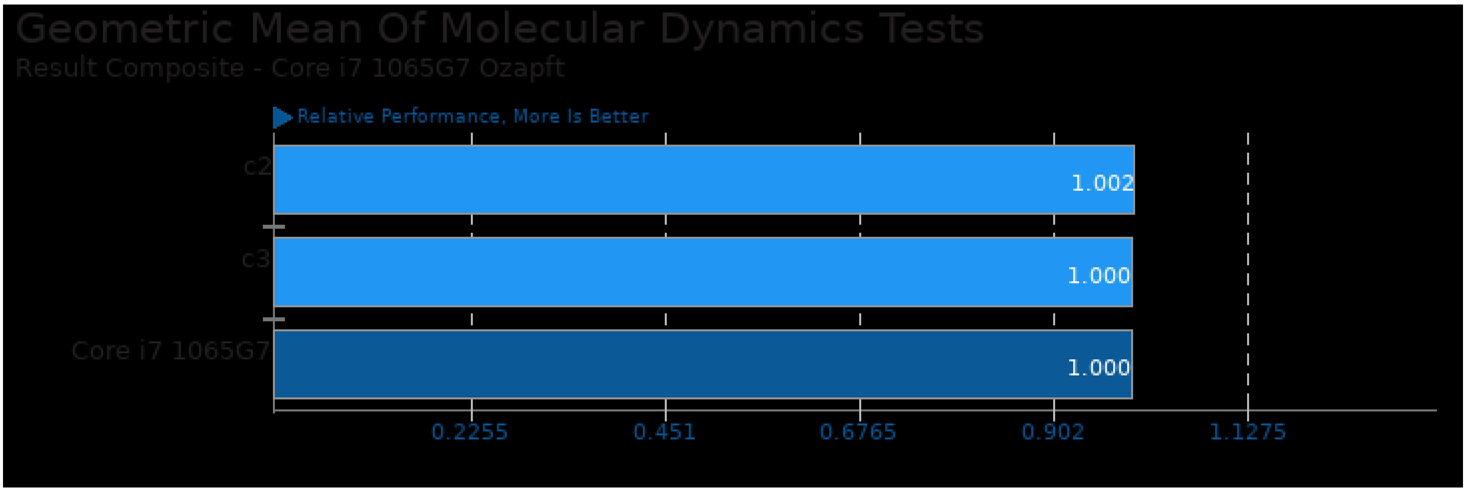
Geometric mean based upon tests: pts/lammps, pts/incompact3d and pts/mocassin



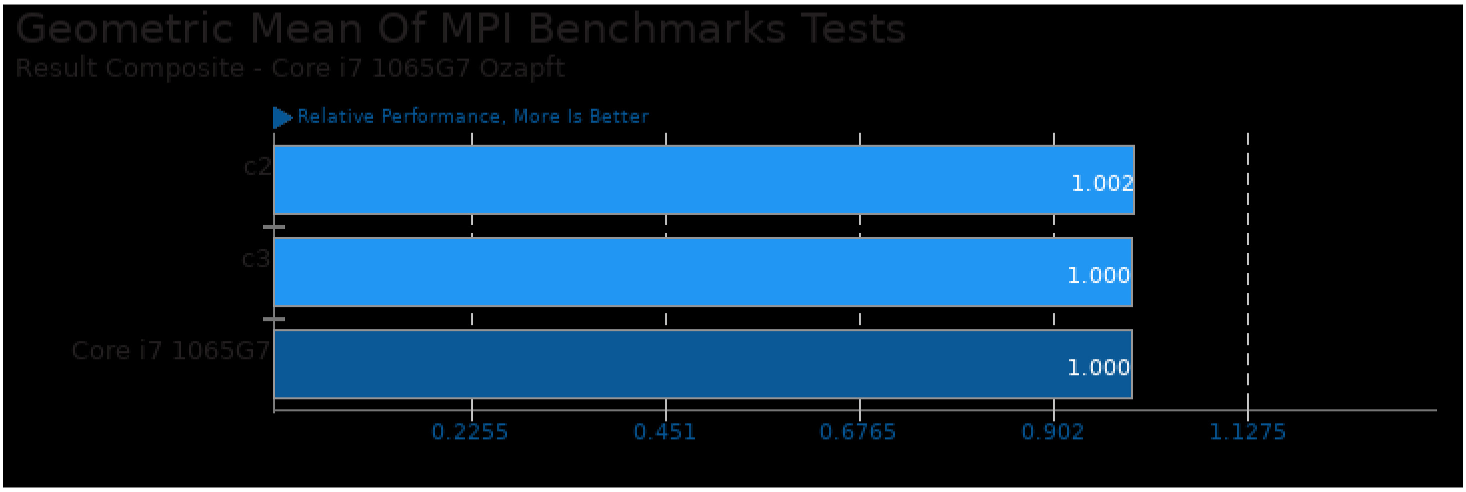
Geometric mean based upon tests: pts/lammps, pts/incompact3d, pts/gpaw, pts/mocassin, pts/kripke, pts/mnn and pts/ncnn



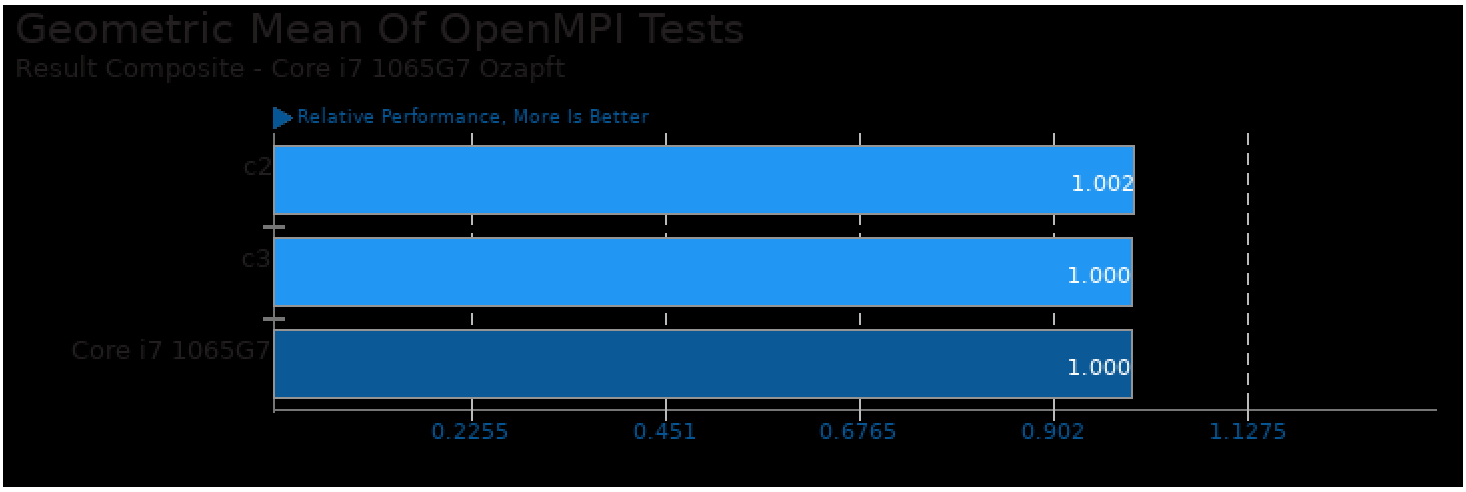
Geometric mean based upon tests: pts/mnn and pts/ncnn



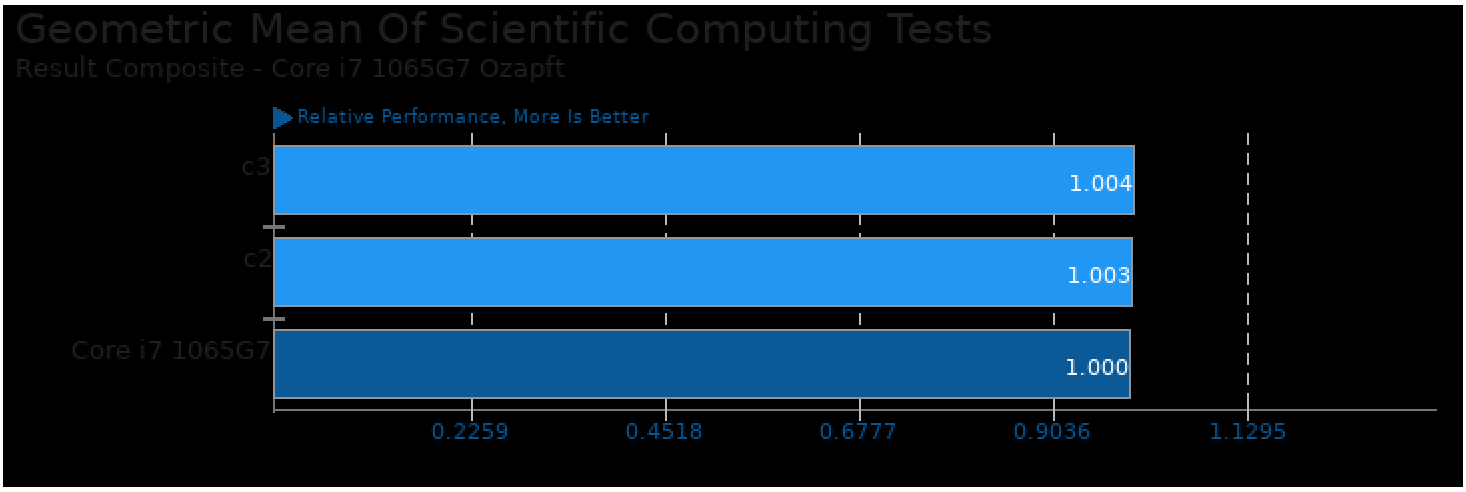
Geometric mean based upon tests: pts/lammps and pts/incompact3d



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



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



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 05:14.