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## Core i7 4960X

Intel Core i7-4960X testing with a MSI X79MA-GD45 (MS-7738) v1.0 (V3.8 BIOS) and AMD FirePro V4800 1GB on Ubuntu 20.10 via the Phoronix Test Suite.

### Automated Executive Summary

*Run 1 had the most wins, coming in first place for 36% of the tests.*

*Based on the geometric mean of all complete results, the fastest (Run 2) was 1.006x the speed of the slowest (Run 3). Run 1 was 0.996x the speed of Run 2 and Run 3 was 0.998x the speed of Run 1.*

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

*oneDNN (Harness: IP Shapes 3D - Data Type: f32 - Engine: CPU) at 1.097x*

*CLOMP (Static OMP Speedup) at 1.077x*

*oneDNN (Harness: IP Shapes 3D - Data Type: u8s8f32 - Engine: CPU) at 1.062x*

*NCNN (Target: CPU - Model: blazeface) at 1.024x*

*yquake2 (Renderer: Software CPU - Resolution: 1920 x 1080) at 1.023x*

*yquake2 (Renderer: OpenGL 1.x - Resolution: 1920 x 1080) at 1.022x*

*oneDNN (Harness: Convolution Batch Shapes Auto - Data Type: u8s8f32 - Engine: CPU) at 1.021x*

*NCNN (Target: CPU - Model: regnety\_400m) at 1.02x*

*NCNN (Target: CPU - Model: squeezenet\_ssdlite) at 1.015x*

oneDNN (Harness: Recurrent Neural Network Training - Data Type: f32 - Engine: CPU) at 1.014x.

## Test Systems:

### Run 1

### Run 2

### Run 3

Processor: Intel Core i7-4960X @ 4.00GHz (6 Cores / 12 Threads), Motherboard: MSI X79MA-GD45 (MS-7738) v1.0 (V3.8 BIOS), Chipset: Intel Xeon E7 v2/Xeon, Memory: 8GB, Disk: VisionTek 240GB, Graphics: AMD FirePro V4800 1GB, Audio: Realtek ALC892, Monitor: DELL S2409W, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 20.10, Kernel: 5.8.0-29-generic (x86\_64), Desktop: GNOME Shell 3.38.1, Display Server: X Server 1.20.9, Display Driver: modesetting 1.20.9, OpenGL: 3.3 Mesa 20.2.1 (LLVM 11.0.0), Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

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,objc++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc-auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/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\_cpufreq ondemand - CPU Microcode: 0x42e

Graphics Notes: GLAMOR

Python Notes: Python 3.8.6

Security Notes: itlb\_multihit: KVM: Mitigation of VMX unsupported + I1tf: Mitigation of PTE Inversion + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec\_store\_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre\_v1: Mitigation of usercopy/swapsgs barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS\_FW STIBP: conditional RSB filling + srbd: Not affected + tsx\_async\_abort: Not affected

	Run 1	Run 2	Run 3
yquake2 - OpenGL 1.x - 1920 x 1080 (FPS)	431.1	423.3	422.0
Normalized	100%	98.19%	97.89%
Standard Deviation	2.7%	1.8%	2.8%
yquake2 - OpenGL 3.x - 1920 x 1080 (FPS)	241.9	242.8	241.0
Normalized	99.63%	100%	99.26%
Standard Deviation	0.4%	0.2%	0.4%
yquake2 - Software CPU - 1920 x 1080 (FPS)	91.1	93.1	93.2
Normalized	97.75%	99.89%	100%
Standard Deviation	3.1%	0.1%	0.1%
GLmark2 - 1920 x 1080 (Score)	868	868	868
CLOMP - Static OMP Speedup (Speedup)	1.4	1.4	1.3
Normalized	100%	100%	92.86%
Standard Deviation	3.8%	3%	0%

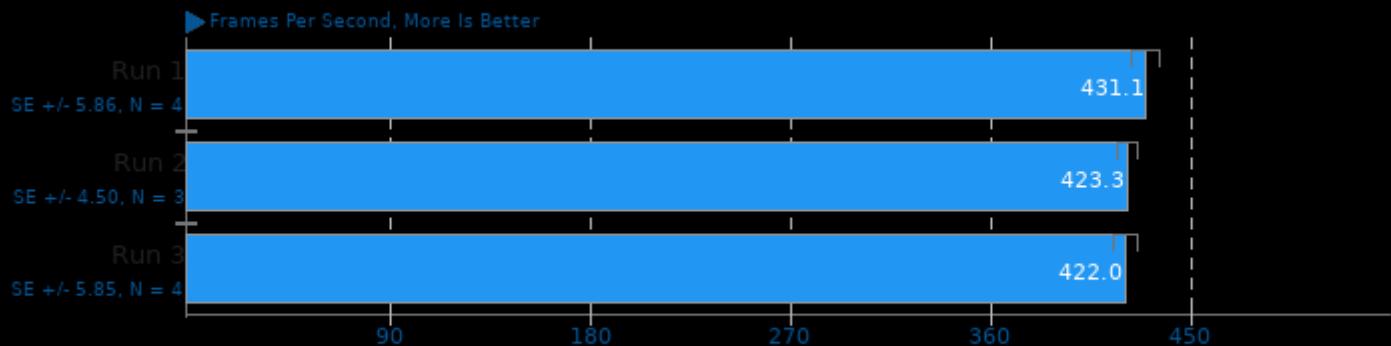
<b>Timed HMMer Search - P.D.S (sec)</b>	147.571	<b>147.817</b>	<b>147.519</b>
Normalized	99.96%	99.8%	100%
Standard Deviation	0.1%	0.1%	0.1%
<b>simdjson - Kostya (GB/s)</b>	0.43	0.43	0.43
Standard Deviation	0%	0%	0%
<b>simdjson - LargeRand (GB/s)</b>	0.32	0.32	0.32
Standard Deviation	0%	0%	0%
<b>simdjson - PartialTweets (GB/s)</b>	0.48	0.48	0.48
Standard Deviation	0%	0%	0%
<b>simdjson - DistinctUserID (GB/s)</b>	0.49	0.49	0.49
Standard Deviation	0%	0%	0%
<b>oneDNN - IP Shapes 1D - f32 - CPU (ms)</b>	<b>14.4465</b>	14.3871	<b>14.3859</b>
Normalized	99.58%	99.99%	100%
Standard Deviation	0.1%	0.4%	0.3%
<b>oneDNN - IP Shapes 3D - f32 - CPU (ms)</b>	<b>17.2047</b>	17.3521	<b>18.8761</b>
Normalized	100%	99.15%	91.15%
Standard Deviation	0.1%	0.3%	0.7%
<b>oneDNN - IP Shapes 1D - u8s8f32 - CPU (ms)</b>	9.22097	<b>9.22615</b>	<b>9.19382</b>
Normalized	99.71%	99.65%	100%
Standard Deviation	0.4%	0.4%	0.5%
<b>oneDNN - IP Shapes 3D - u8s8f32 - CPU (ms)</b>	4.34336	<b>4.33333</b>	<b>4.60333</b>
Normalized	99.77%	100%	94.13%
Standard Deviation	0.3%	0.7%	0.3%
<b>oneDNN - C.B.S.A - f32 - CPU (ms)</b>	40.5516	<b>40.7663</b>	<b>40.4907</b>
Normalized	99.85%	99.32%	100%
Standard Deviation	0.2%	0.3%	0%
<b>oneDNN - D.B.s - f32 - CPU (ms)</b>	<b>27.3974</b>	27.2912	<b>27.2620</b>
Normalized	99.51%	99.89%	100%
Standard Deviation	0.4%	0.2%	0.2%
<b>oneDNN - D.B.s - f32 - CPU (ms)</b>	<b>40.8296</b>	<b>40.7808</b>	40.8033
Normalized	99.88%	100%	99.94%
Standard Deviation	1.3%	0.2%	0.5%
<b>oneDNN - C.B.S.A - u8s8f32 - CPU (ms)</b>	<b>40.5993</b>	<b>39.7655</b>	40.5278
Normalized	97.95%	100%	98.12%
Standard Deviation	0.1%	0.3%	0.2%
<b>oneDNN - D.B.s - u8s8f32 - CPU (ms)</b>	20.9561	<b>18.0900</b>	<b>22.1065</b>
Normalized	86.32%	100%	81.83%
Standard Deviation	15.5%	0.2%	16.9%
<b>oneDNN - D.B.s - u8s8f32 - CPU (ms)</b>	<b>17.9950</b>	17.9799	<b>17.8384</b>
Normalized	99.13%	99.21%	100%
Standard Deviation	0.2%	0.1%	2.3%
<b>oneDNN - R.N.N.T - f32 - CPU (ms)</b>	<b>21994</b>	<b>22301</b>	21995
Normalized	100%	98.63%	100%
Standard Deviation	0.1%	3%	0.1%
<b>oneDNN - R.N.N.I - f32 - CPU (ms)</b>	<b>11748</b>	<b>11768</b>	11761
Normalized	100%	99.83%	99.89%
Standard Deviation	0.1%	0.1%	0.1%
<b>oneDNN - R.N.N.T - u8s8f32 - CPU (ms)</b>	21975	<b>21965</b>	<b>22029</b>
Normalized	99.95%	100%	99.71%
Standard Deviation	0%	0.1%	0.2%
<b>oneDNN - R.N.N.I - u8s8f32 - CPU (ms)</b>	<b>11751</b>	11766	<b>11783</b>
Normalized	100%	99.87%	99.73%
Standard Deviation	0.2%	0.2%	0.1%
<b>oneDNN - M.M.B.S.T - f32 - CPU (ms)</b>	<b>9.97070</b>	<b>9.99996</b>	9.99108
Normalized	100%	99.71%	99.8%

	Standard Deviation	0.4%	0.2%	0.3%
oneDNN - R.N.N.T - bf16bf16bf16 - CPU (ms)	21964	21983	21994	
	Normalized	100%	99.92%	99.86%
	Standard Deviation	0.1%	0.2%	0%
oneDNN - R.N.N.I - bf16bf16bf16 - CPU (ms)	11746	11753	11739	
	Normalized	99.94%	99.88%	100%
	Standard Deviation	0.1%	0.1%	0.1%
oneDNN - M.M.B.S.T - u8s8f32 - CPU (ms)	9.85368	9.56826	9.53110	
	Normalized	96.73%	99.61%	100%
	Standard Deviation	0.5%	6.4%	6.5%
Coremark - CoreMark Size 666 - I.P.S (Iterations/Sec)	196683	196638	196224	
	Normalized	100%	99.98%	99.77%
	Standard Deviation	1.1%	1%	1.1%
Timed FFmpeg Compilation - Time To Compile (sec)	114.331	115.030	114.631	
	Normalized	100%	99.39%	99.74%
	Standard Deviation	0.2%	0.2%	0.5%
Build2 - Time To Compile (sec)	325.896	323.470	324.432	
	Normalized	99.26%	100%	99.7%
	Standard Deviation	0.6%	0.7%	1%
Timed Eigen Compilation - Time To Compile (sec)	124.231	124.418	124.712	
	Normalized	100%	99.85%	99.61%
	Standard Deviation	0.1%	0.1%	0.1%
DeepSpeech - CPU (sec)	131.90236	131.39012	131.54672	
	Normalized	99.61%	100%	99.88%
	Standard Deviation	0.5%	0.1%	0.3%
Monkey Audio Encoding - WAV To APE (sec)	15.705	15.662	15.714	
	Normalized	99.73%	100%	99.67%
	Standard Deviation	0.7%	0.1%	0.3%
Opus Codec Encoding - WAV To Opus Encode (sec)	10.093	10.061	10.054	
	Normalized	99.61%	99.93%	100%
	Standard Deviation	0.9%	0.2%	0.1%
RNNoise (sec)	26.104	26.015	25.978	
	Normalized	99.52%	99.86%	100%
	Standard Deviation	0.7%	0.9%	0.6%
Node.js V8 Web Tooling Benchmark (runs/s)	6.80	6.79	6.79	
	Normalized	100%	99.85%	99.85%
	Standard Deviation	0.4%	0.3%	0.2%
Cryptsetup - PBKDF2-sha512 (Iterations/sec)	1288185	1286071	1273833	
	Normalized	100%	99.84%	98.89%
	Standard Deviation	0.3%	0.1%	1.7%
Cryptsetup - PBKDF2-whirlpool	492445	491213	488205	
	Normalized	100%	99.75%	99.14%
	Standard Deviation	0.3%	0.1%	1.1%
Cryptsetup - A.X.2.E (MiB/s)	1436	1427	1443	
	Normalized	99.49%	98.89%	100%
	Standard Deviation	0.6%	1.1%	0.2%
Cryptsetup - A.X.2.D (MiB/s)	1443	1435	1442	
	Normalized	100%	99.46%	99.9%
	Standard Deviation	0.1%	1.1%	0.4%
Cryptsetup - S.X.2.E (MiB/s)	332.0	334.2	334.0	
	Normalized	99.34%	100%	99.94%

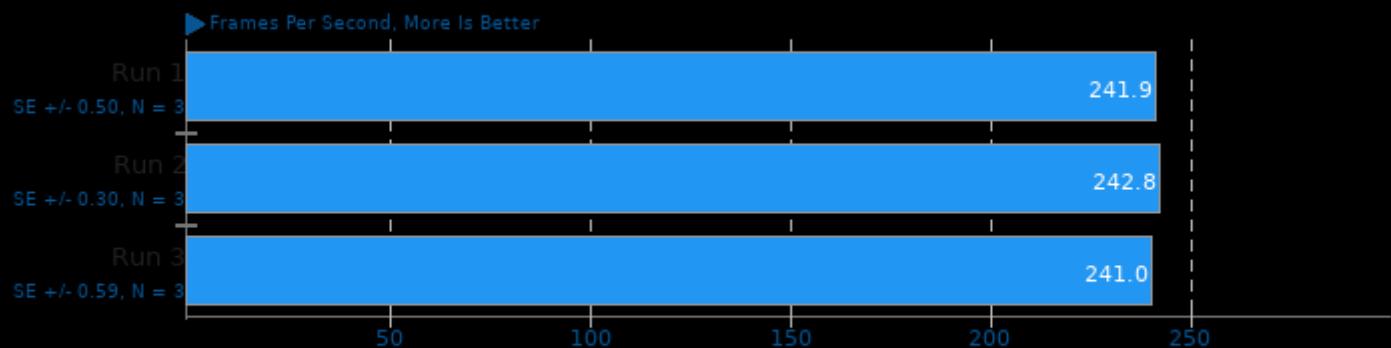
	Standard Deviation	0.6%	0.1%	0.2%
Cryptsetup - S.X.2.D (MiB/s)	314.4	315.8	315.3	
Normalized	99.56%	100%	99.84%	
Standard Deviation	0.3%	0.1%	0.3%	
Cryptsetup - T.X.2.E (MiB/s)	367.3	366.1	370.0	
Normalized	99.27%	98.95%	100%	
Standard Deviation	0.9%	2.3%	0.1%	
Cryptsetup - T.X.2.D (MiB/s)	370.4	372.0	371.2	
Normalized	99.57%	100%	99.78%	
Standard Deviation	0.2%	0.3%	0.1%	
Cryptsetup - A.X.5.E (MiB/s)	1164	1167	1170	
Normalized	99.44%	99.71%	100%	
Standard Deviation	0.6%	0.5%	0.4%	
Cryptsetup - A.X.5.D (MiB/s)	1159	1162	1163	
Normalized	99.64%	99.92%	100%	
Standard Deviation	0.1%	0.4%	0.4%	
Cryptsetup - S.X.5.E (MiB/s)	332.5	333.5	334.6	
Normalized	99.37%	99.67%	100%	
Standard Deviation	0.5%	0.4%	0.4%	
Cryptsetup - S.X.5.D (MiB/s)	314.9	315.3	316.2	
Normalized	99.59%	99.72%	100%	
Standard Deviation	0.3%	0.3%	0.6%	
Cryptsetup - T.X.5.E (MiB/s)	366.3	369.6	370.3	
Normalized	98.92%	99.81%	100%	
Standard Deviation	1.1%	0.3%	0.4%	
Cryptsetup - T.X.5.D (MiB/s)	368.1	370.5	372.4	
Normalized	98.85%	99.49%	100%	
Standard Deviation	0.4%	0.2%	0.4%	
SQLite Speedtest - Timed Time - Size 1,000 (sec)	89.847	90.557	90.402	
Normalized	100%	99.22%	99.39%	
Standard Deviation	0.5%	0.6%	0.5%	
NCNN - CPU - mobilenet (ms)	72.60	72.57	72.68	
Normalized	99.96%	100%	99.85%	
Standard Deviation	0.4%	0.4%	0.3%	
NCNN - CPU-v2-v2 - mobilenet-v2 (ms)	18.50	18.51	18.47	
Normalized	99.84%	99.78%	100%	
Standard Deviation	0.7%	0.7%	0.7%	
NCNN - CPU-v3-v3 - mobilenet-v3 (ms)	17.08	17.19	17.21	
Normalized	100%	99.36%	99.24%	
Standard Deviation	1.3%	0.2%	0.9%	
NCNN - CPU - shufflenet-v2 (ms)	13.08	13.02	12.96	
Normalized	99.08%	99.54%	100%	
Standard Deviation	0.5%	0.3%	0.9%	
NCNN - CPU - mnasnet (ms)	16.73	16.64	16.66	
Normalized	99.46%	100%	99.88%	
Standard Deviation	0.7%	0.7%	0.3%	
NCNN - CPU - efficientnet-b0 (ms)	28.47	28.24	28.26	
Normalized	99.19%	100%	99.93%	
Standard Deviation	0.5%	0.8%	0.6%	
NCNN - CPU - blazeface (ms)	3.37	3.36	3.29	
Normalized	97.63%	97.92%	100%	
Standard Deviation	1.4%	0.8%	2.7%	
NCNN - CPU - googlenet (ms)	76.20	75.87	76.59	
Normalized	99.57%	100%	99.06%	

	Standard Deviation	0.9%	0.6%	0.6%
NCNN - CPU - vgg16 (ms)	618.31	616.29	616.99	
	Normalized	99.67%	100%	99.89%
	Standard Deviation	0.4%	0.5%	0.1%
NCNN - CPU - resnet18 (ms)	74.96	75.21	74.82	
	Normalized	99.81%	99.48%	100%
	Standard Deviation	0.7%	0.3%	0.1%
NCNN - CPU - alexnet (ms)	39.88	39.78	39.84	
	Normalized	99.75%	100%	99.85%
	Standard Deviation	0.7%	0.3%	0.4%
NCNN - CPU - resnet50 (ms)	169.55	168.85	169.22	
	Normalized	99.59%	100%	99.78%
	Standard Deviation	0.4%	0.6%	0.5%
NCNN - CPU - yolov4-tiny (ms)	153.63	155.24	154.43	
	Normalized	100%	98.96%	99.48%
	Standard Deviation	0.2%	0.3%	0.5%
NCNN - CPU - squeezenet_ssd (ms)	79.18	79.45	80.33	
	Normalized	100%	99.66%	98.57%
	Standard Deviation	1.4%	1.1%	0.9%
NCNN - CPU - regnety_400m (ms)	27.61	28.01	28.15	
	Normalized	100%	98.57%	98.08%
	Standard Deviation	0.4%	1.2%	3.2%
WavPack Audio Encoding - WAV To WavPack (sec)	15.752	15.681	15.693	
	Normalized	99.55%	100%	99.92%
	Standard Deviation	0.2%	0.3%	0.1%
Unpacking Firefox - firefox-84.0.source.tar.xz	24.236	23.201	23.605	
(sec)	Normalized	95.73%	100%	98.29%
	Standard Deviation	8.9%	1.3%	2.9%

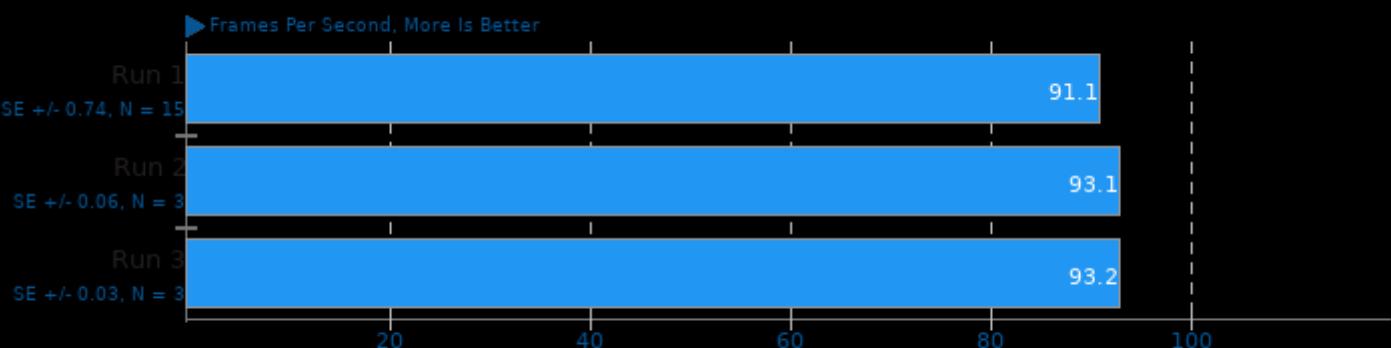
yquake2 7.45



1. (CC) gcc options: -lxml -ldl -rdynamic -shared -fSDLC -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mfpu

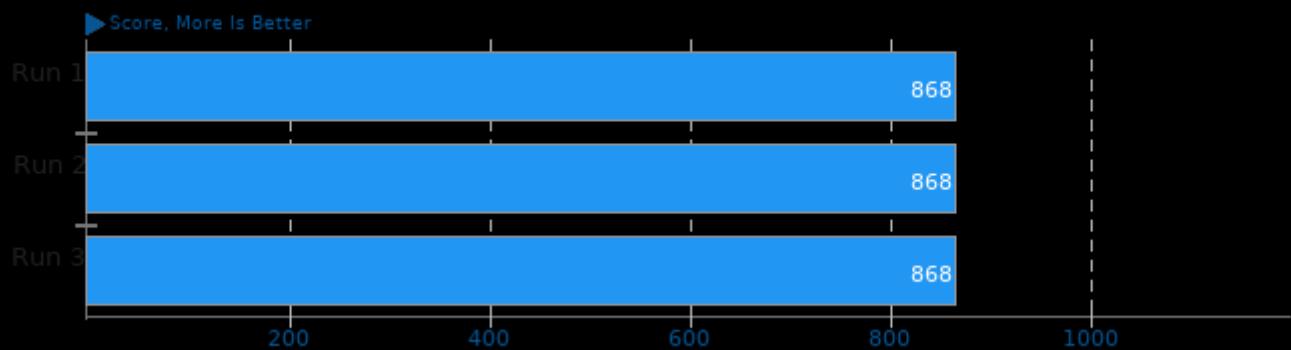


1. (CC) gcc options: -lxml -ldl -rdynamic -shared -fSDLC -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mfpu

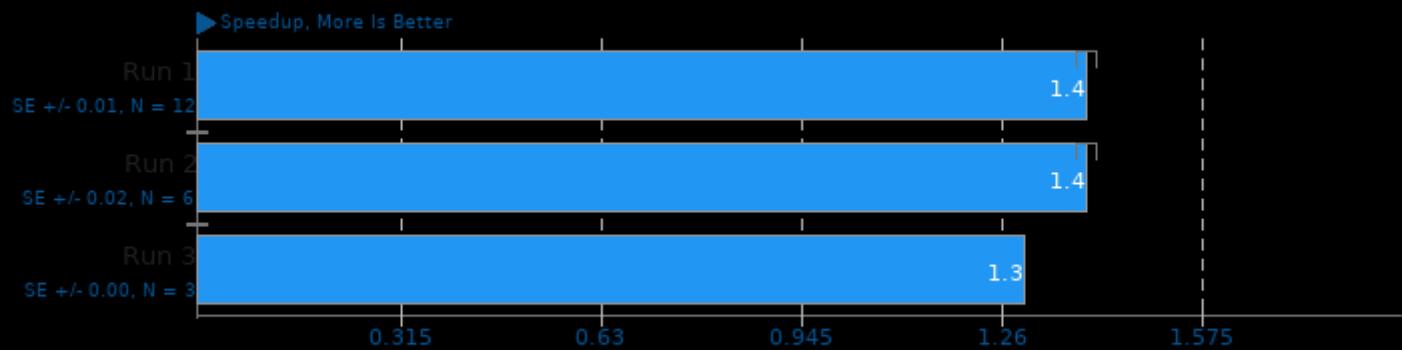


**GLmark2 2020.04**

Resolution: 1920 x 1080

**CLOMP 1.2**

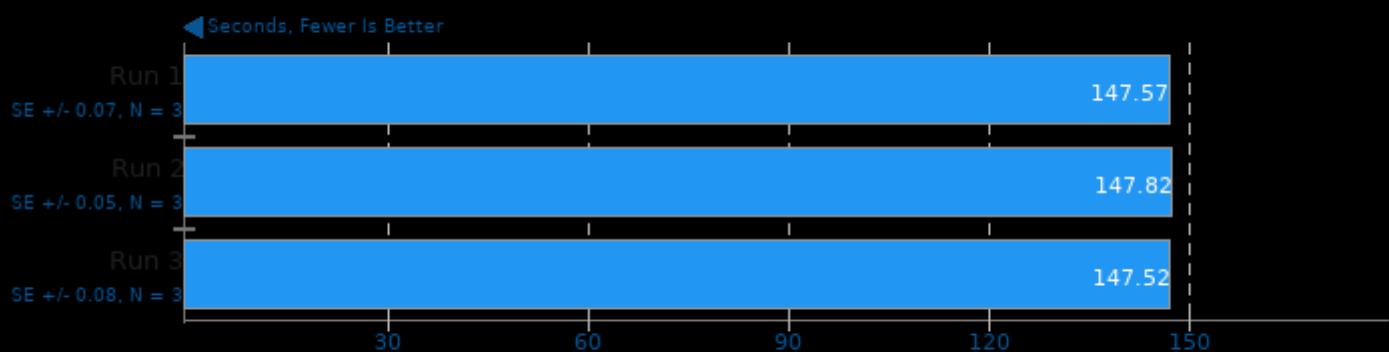
Static OMP Speedup



1. (CC) gcc options: -fopenmp -O3 -lm

**Timed HMMer Search 3.3.1**

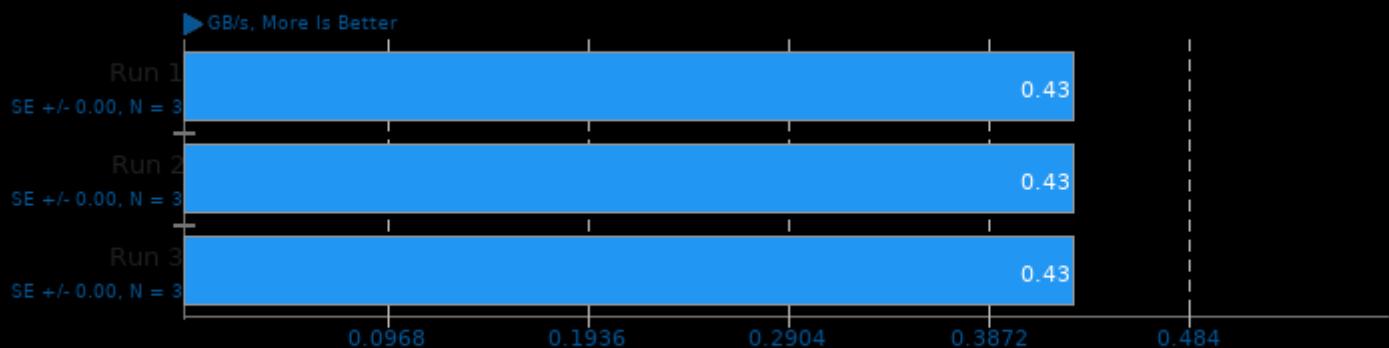
Pfam Database Search



1. (CC) gcc options: -O3 -pthread -lhmmer -leasel -lm

**simdjson 0.7.1**

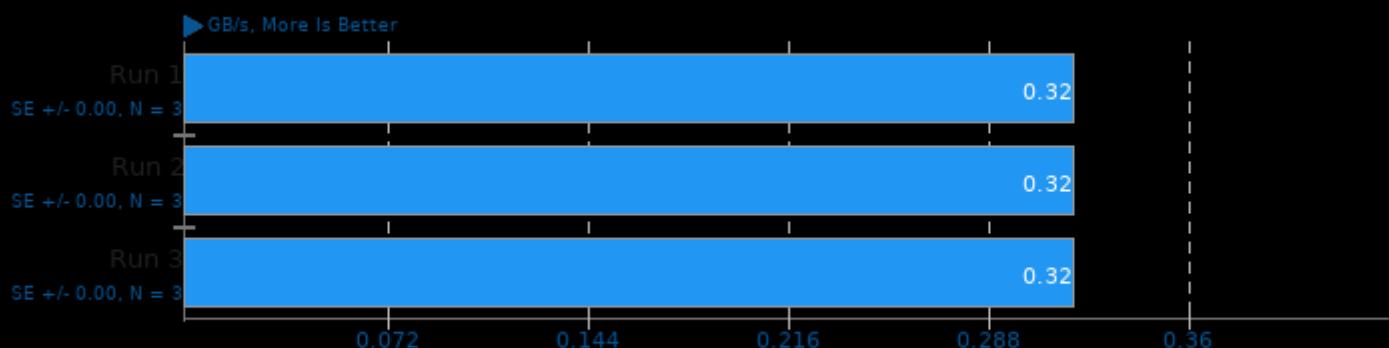
Throughput Test: Kostya



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

**simdjson 0.7.1**

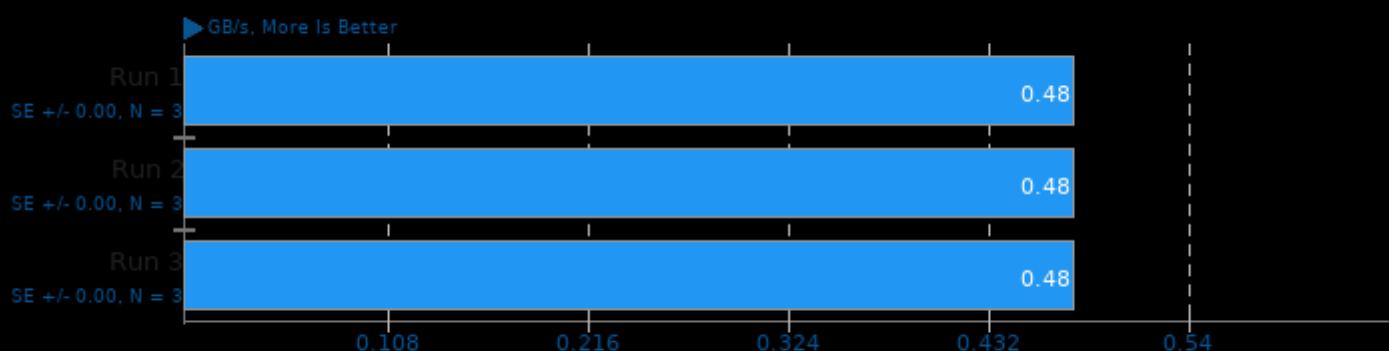
Throughput Test: LargeRandom



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

**simdjson 0.7.1**

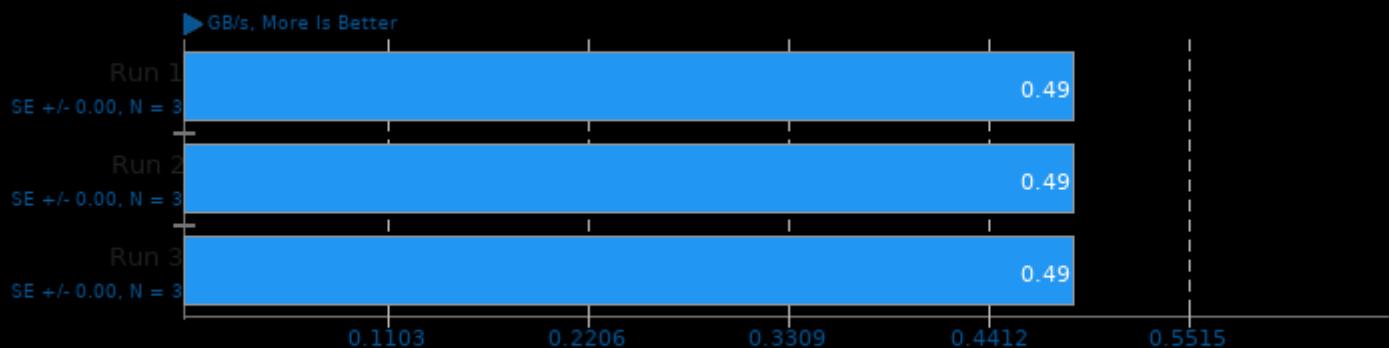
Throughput Test: PartialTweets



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

## simdjson 0.7.1

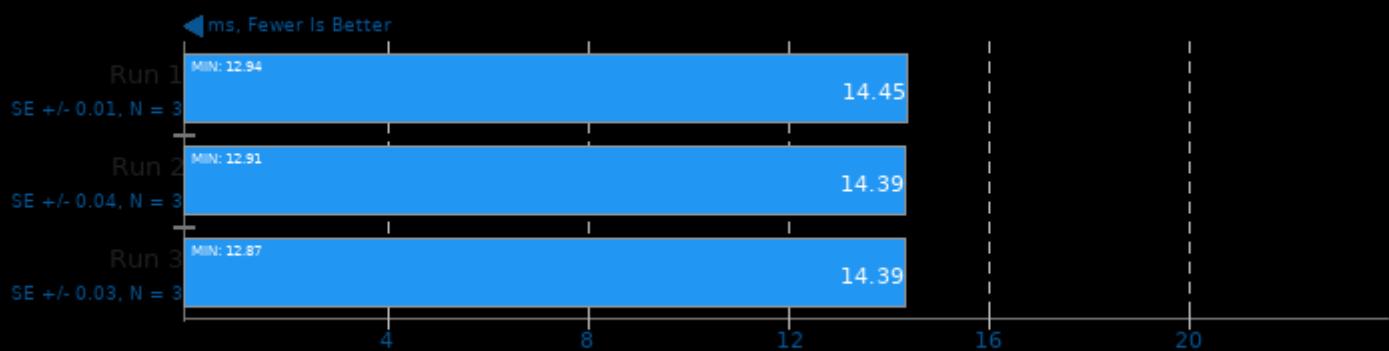
Throughput Test: DistinctUserID



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

## oneDNN 2.0

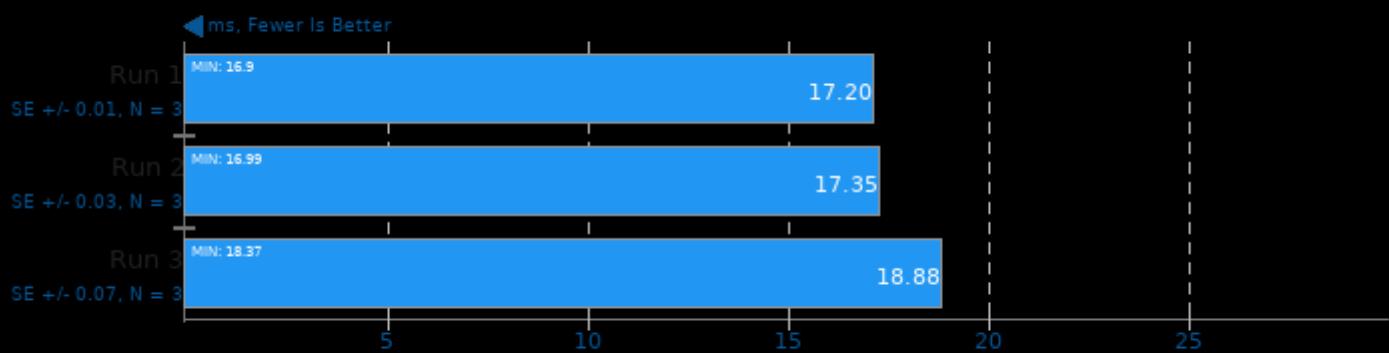
Harness: IP Shapes 1D - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -pthread

## oneDNN 2.0

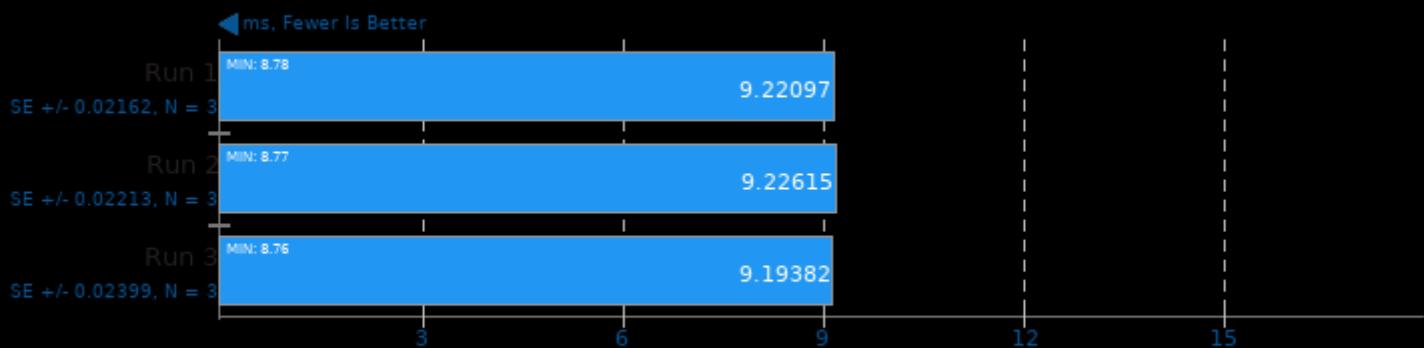
Harness: IP Shapes 3D - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -pthread

## oneDNN 2.0

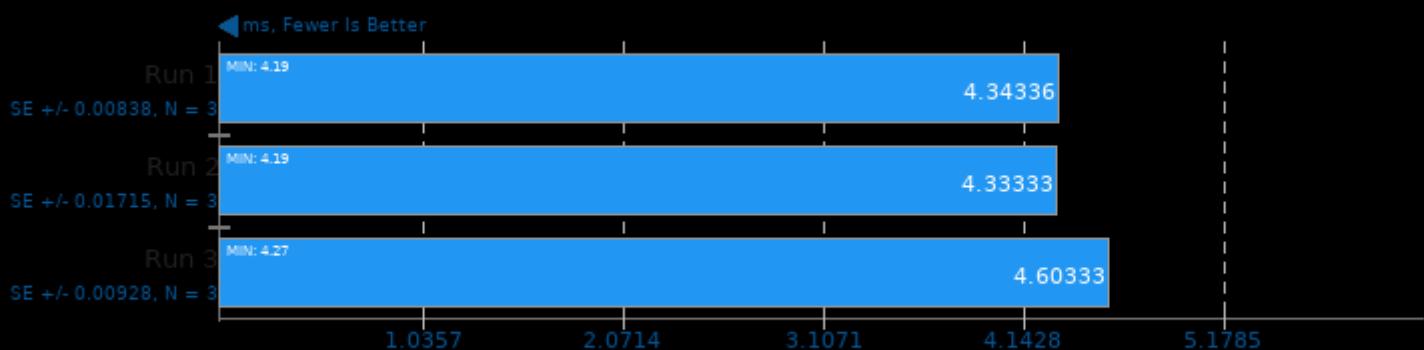
Harness: IP Shapes 1D - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

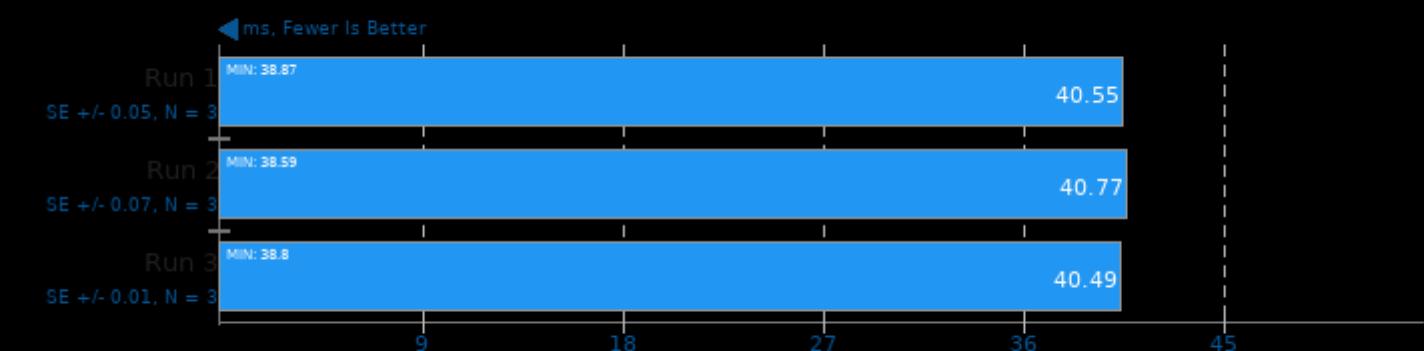
Harness: IP Shapes 3D - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

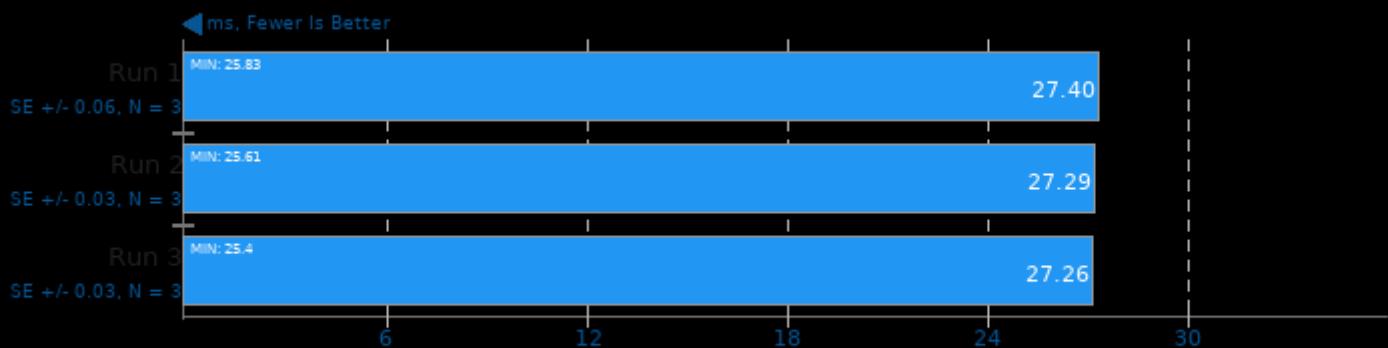
Harness: Convolution Batch Shapes Auto - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

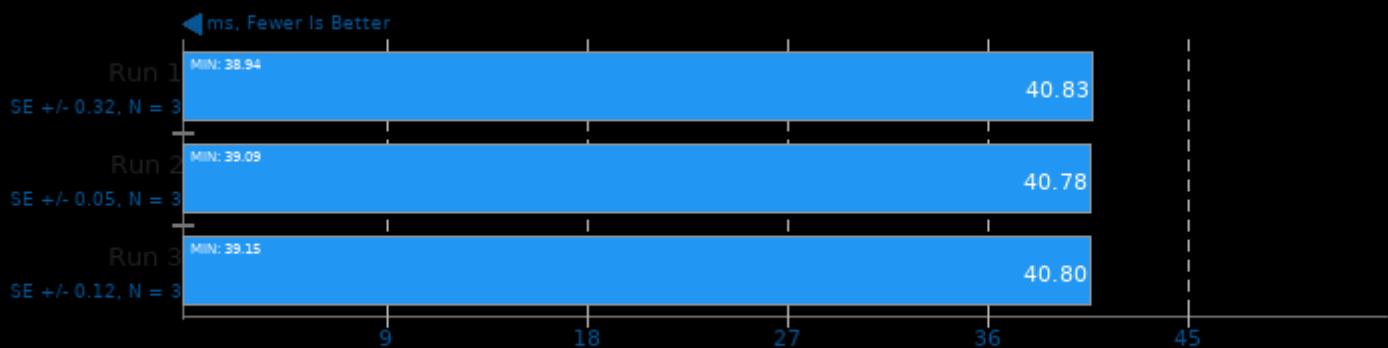
Harness: Deconvolution Batch shapes\_1d - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

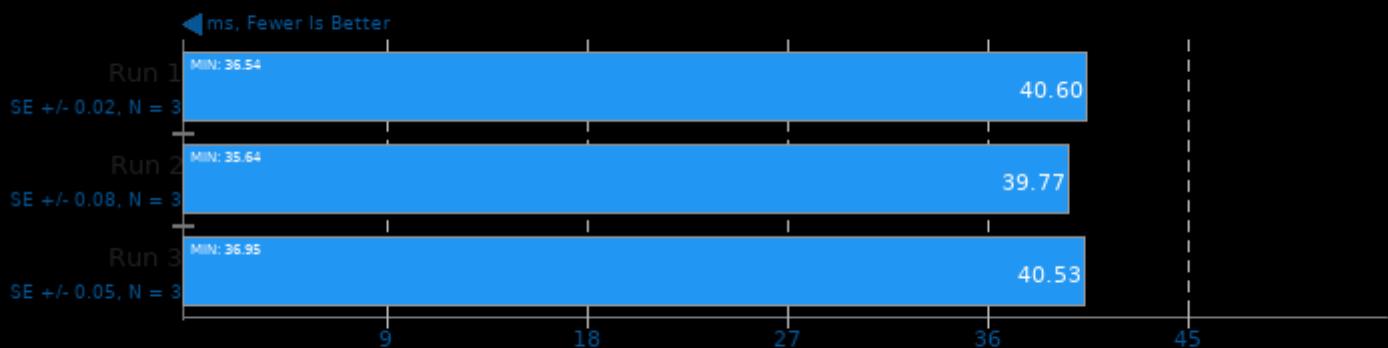
Harness: Deconvolution Batch shapes\_3d - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

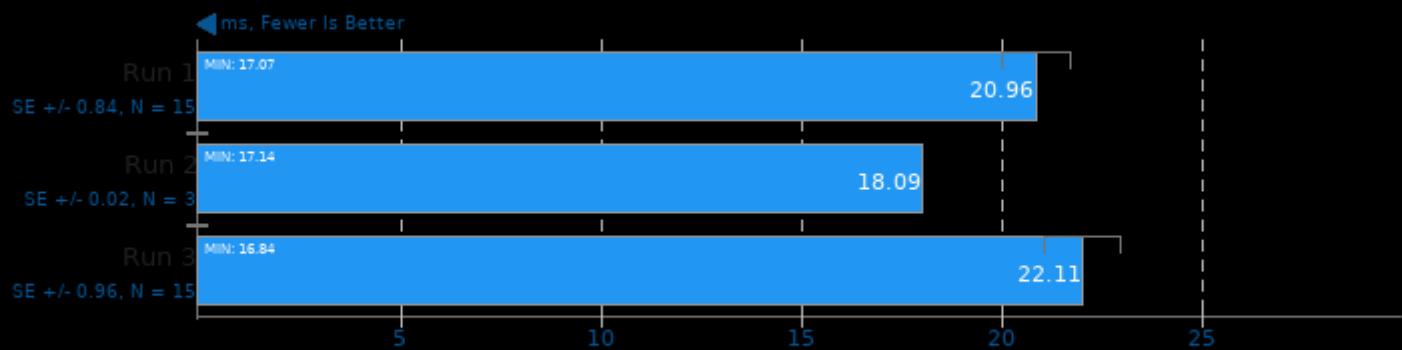
Harness: Convolution Batch Shapes Auto - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

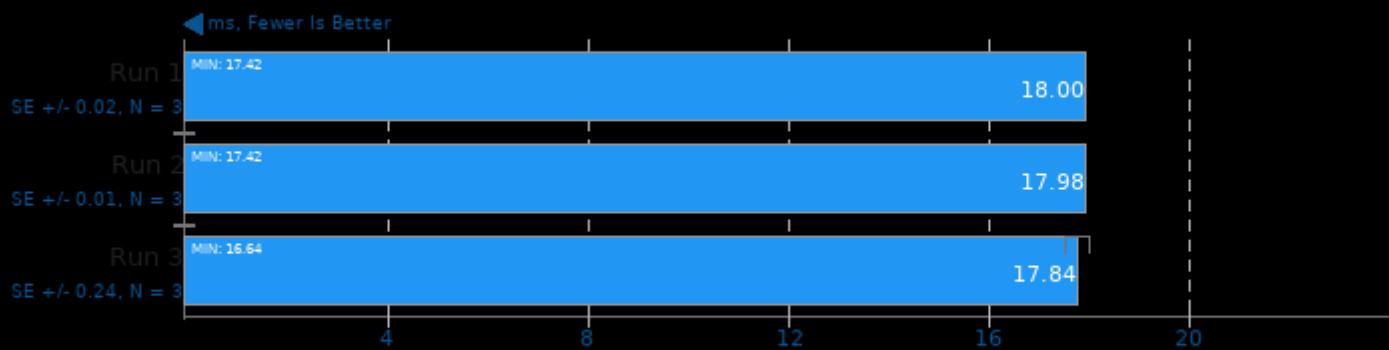
Harness: Deconvolution Batch shapes\_1d - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

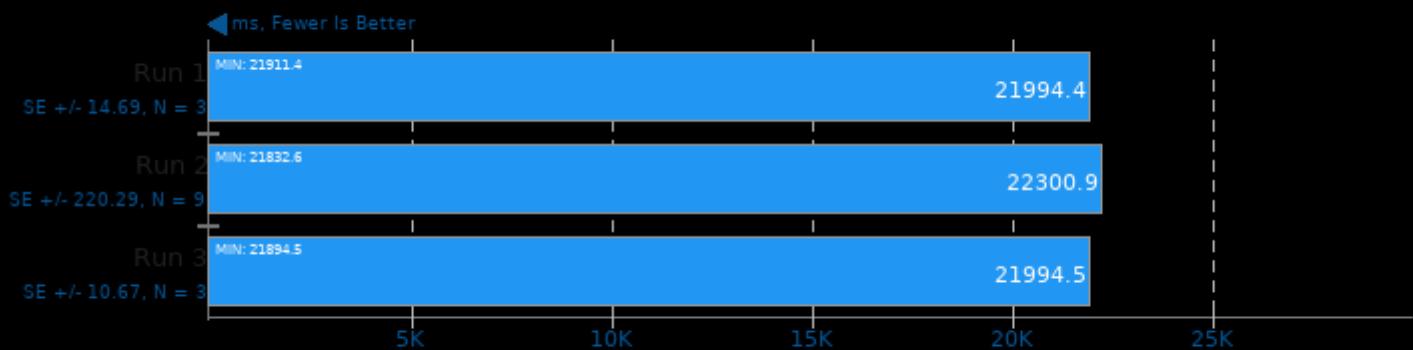
Harness: Deconvolution Batch shapes\_3d - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

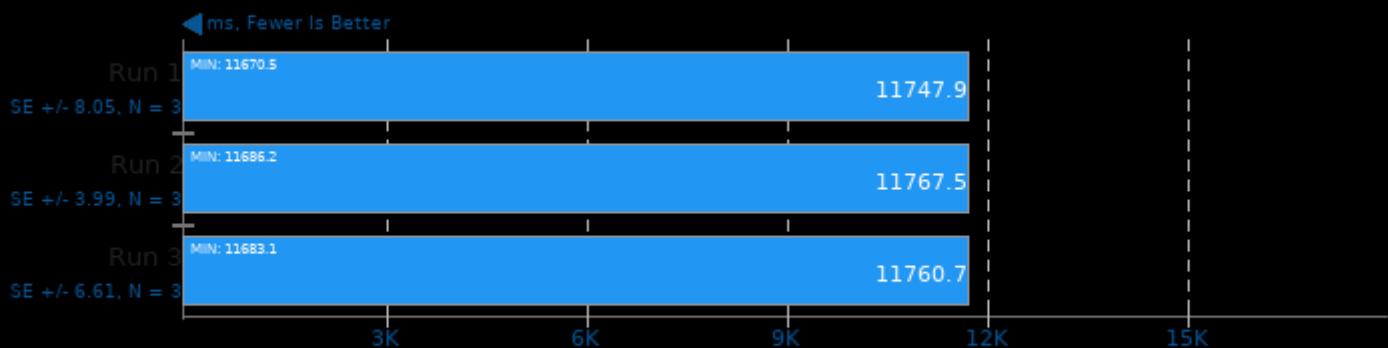
Harness: Recurrent Neural Network Training - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

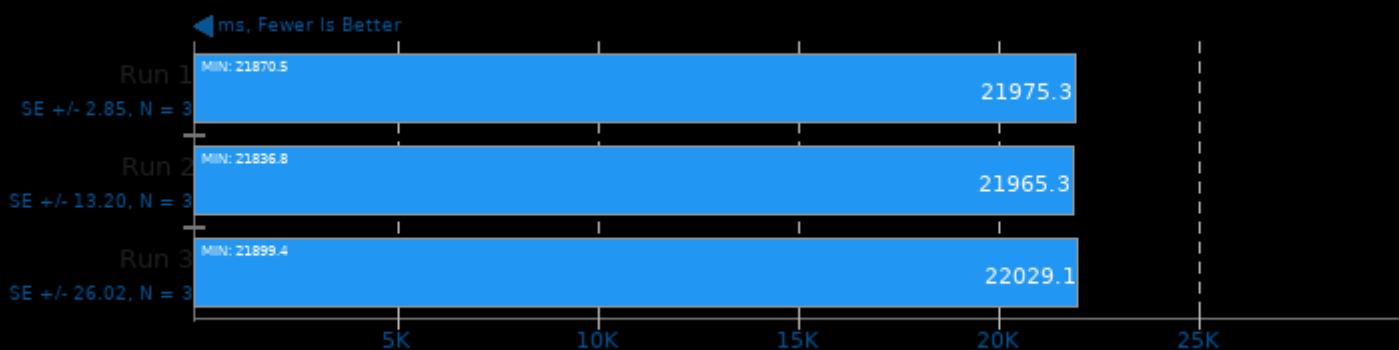
Harness: Recurrent Neural Network Inference - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

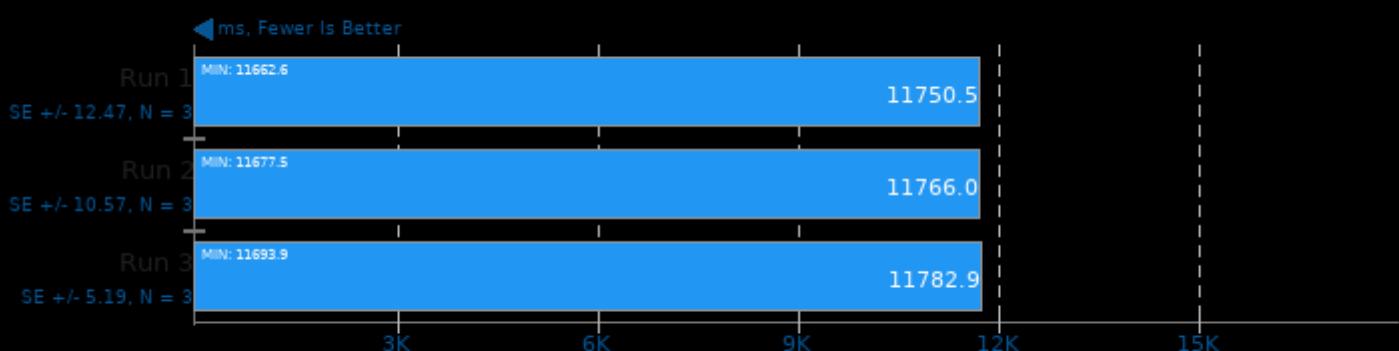
Harness: Recurrent Neural Network Training - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

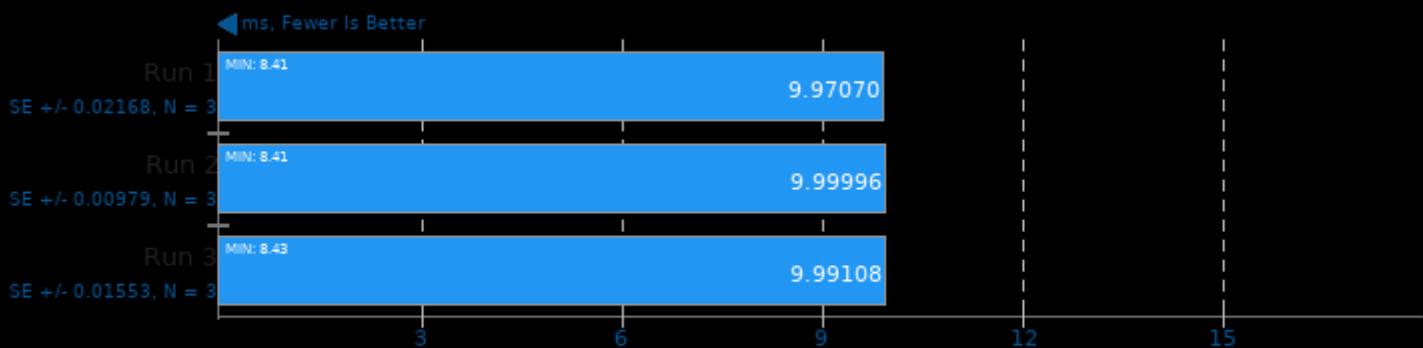
Harness: Recurrent Neural Network Inference - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

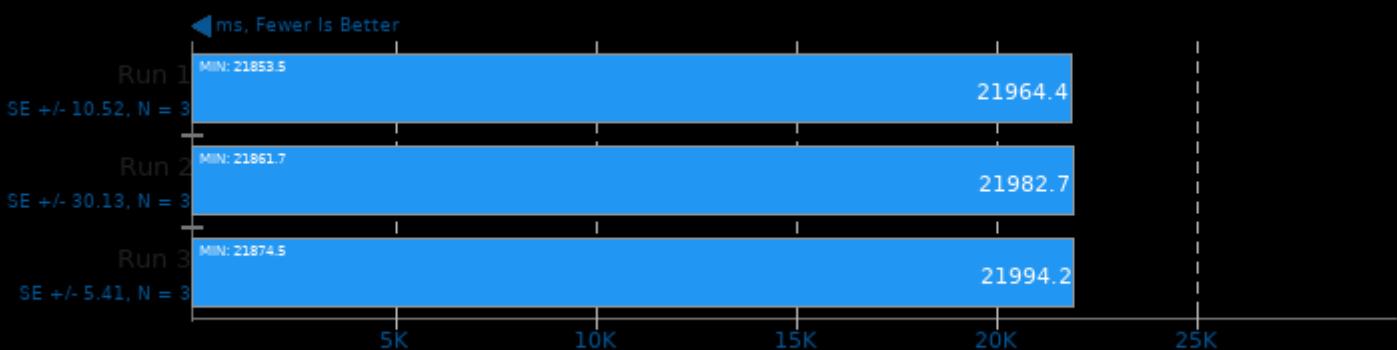
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

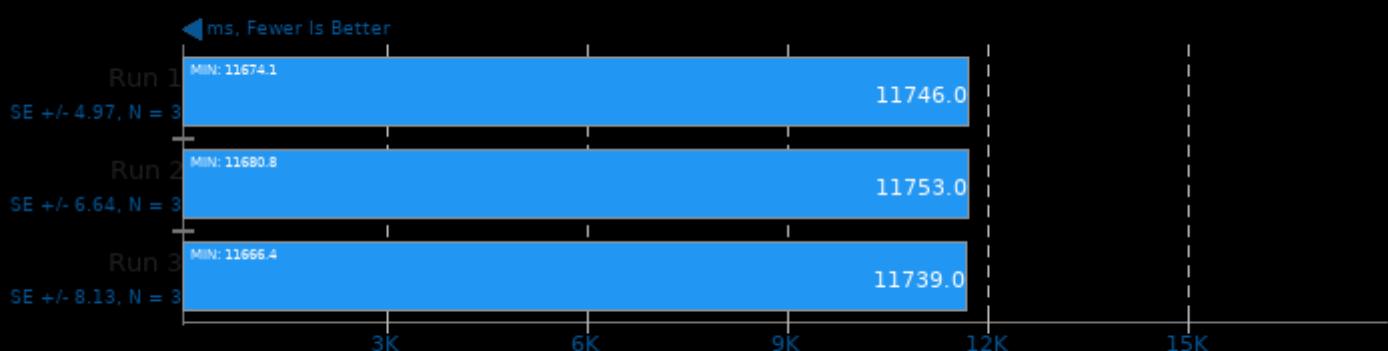
Harness: Recurrent Neural Network Training - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

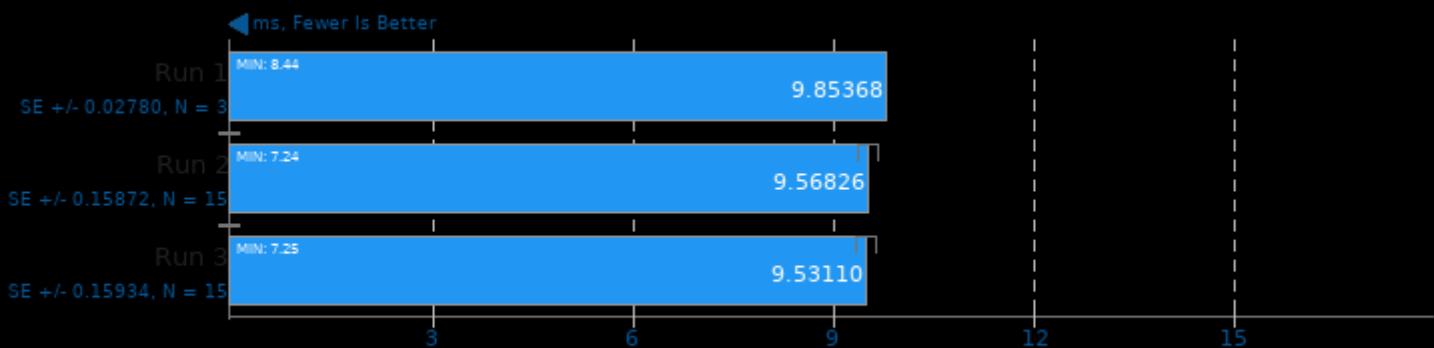
Harness: Recurrent Neural Network Inference - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## oneDNN 2.0

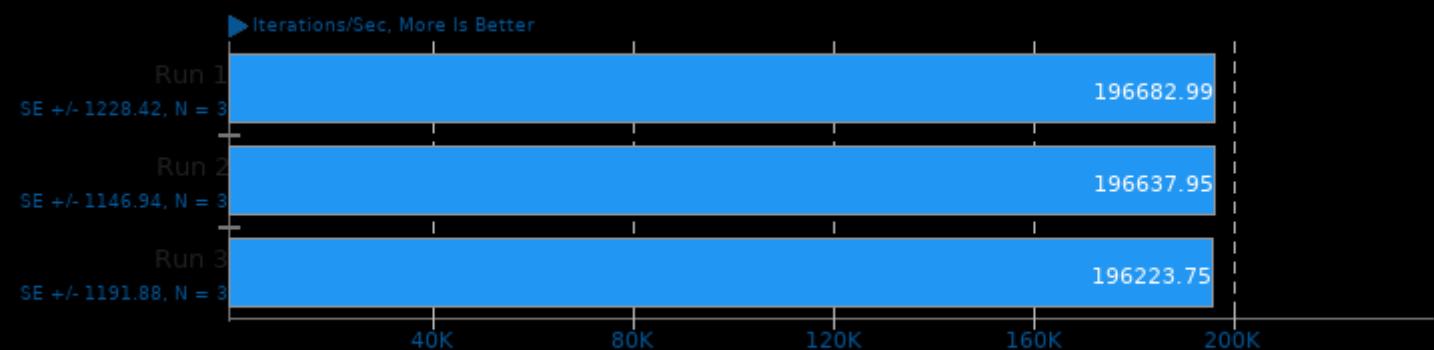
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

## Coremark 1.0

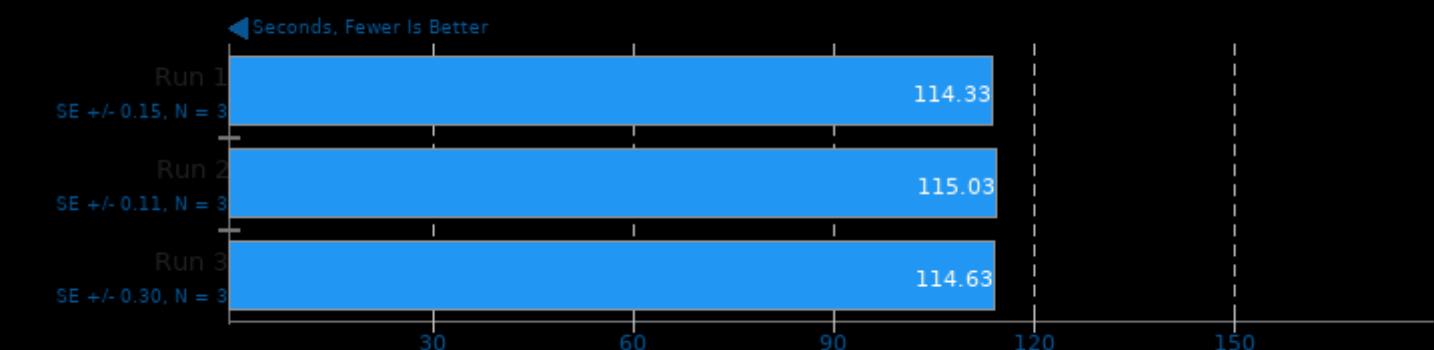
CoreMark Size 666 - Iterations Per Second



1. (CC) gcc options: -O2 -fPIE -pie

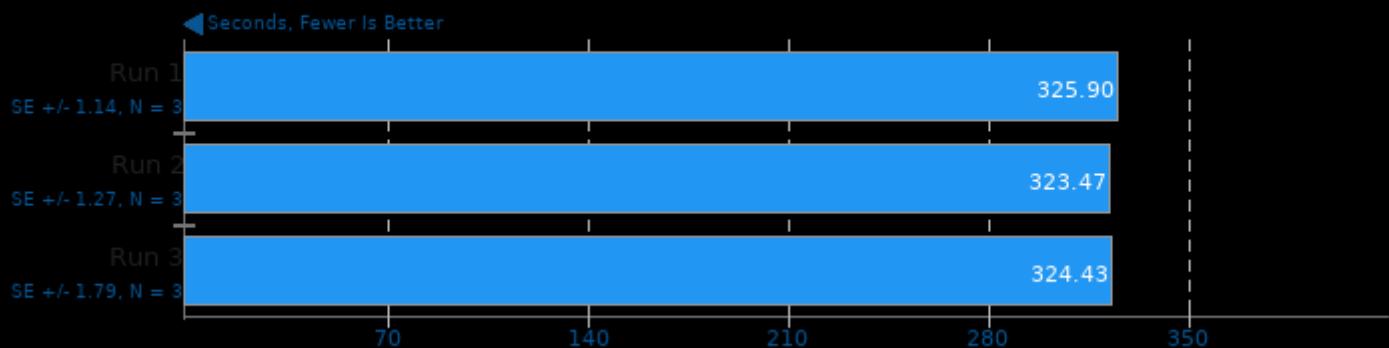
## Timed FFmpeg Compilation 4.2.2

Time To Compile

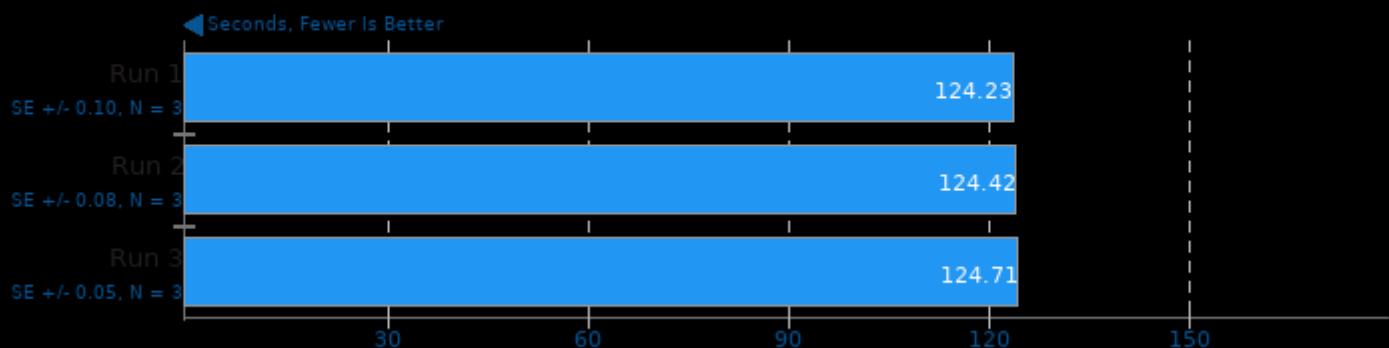


**Build2 0.13**

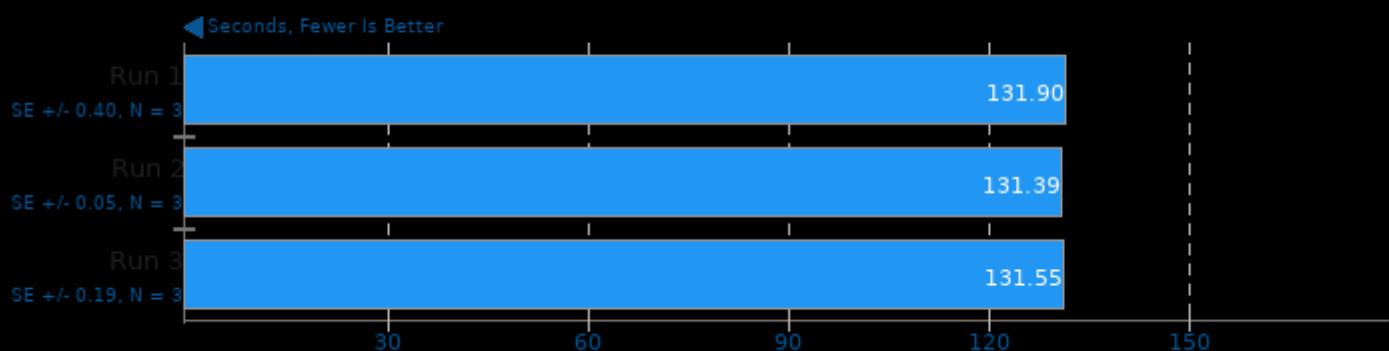
Time To Compile

**Timed Eigen Compilation 3.3.9**

Time To Compile

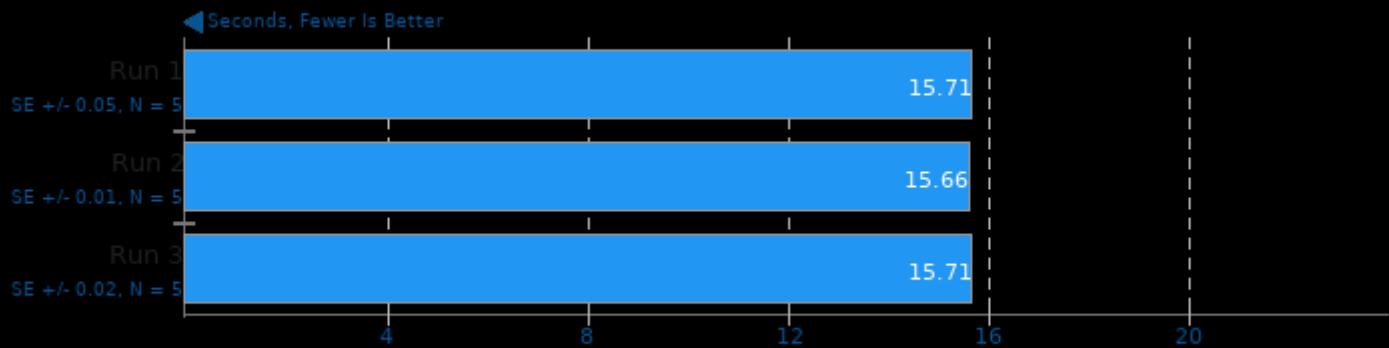
**DeepSpeech 0.6**

Acceleration: CPU



## Monkey Audio Encoding 3.99.6

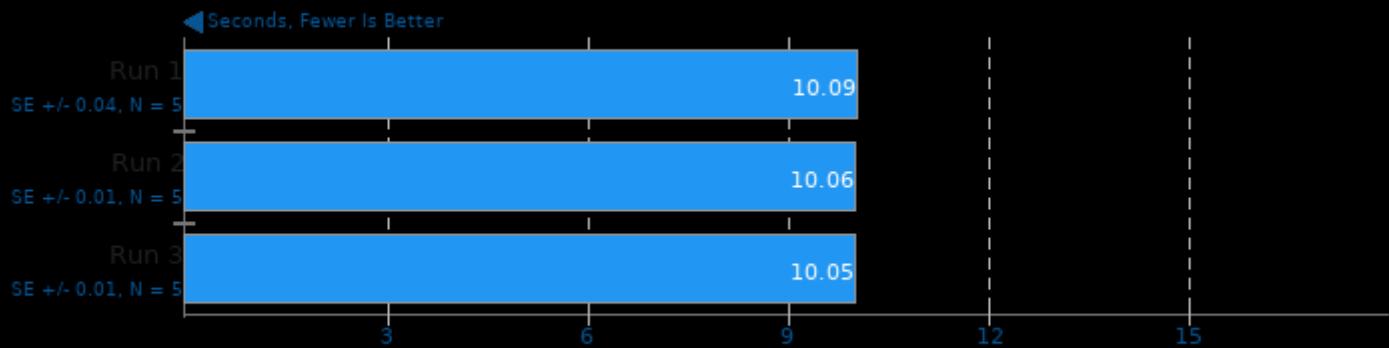
WAV To APE



1. (CXX) g++ options: -O3 -pedantic -rdynamic -lrt

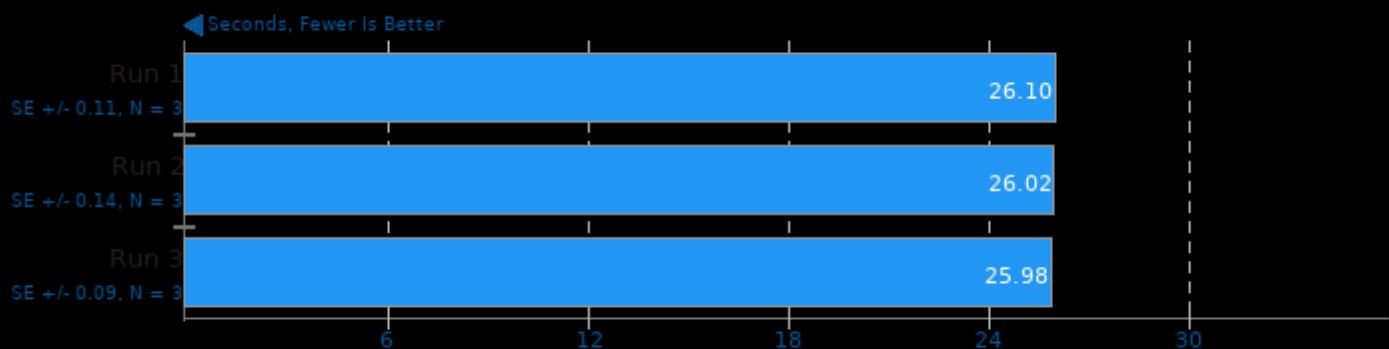
## Opus Codec Encoding 1.3.1

WAV To Opus Encode



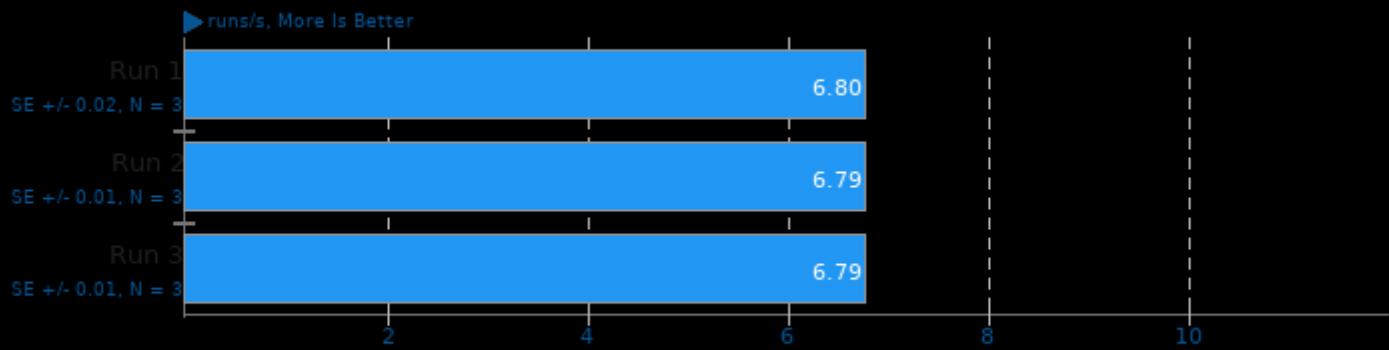
1. (CXX) g++ options: -fvisibility=hidden -logg -lm

## RNNoise 2020-06-28



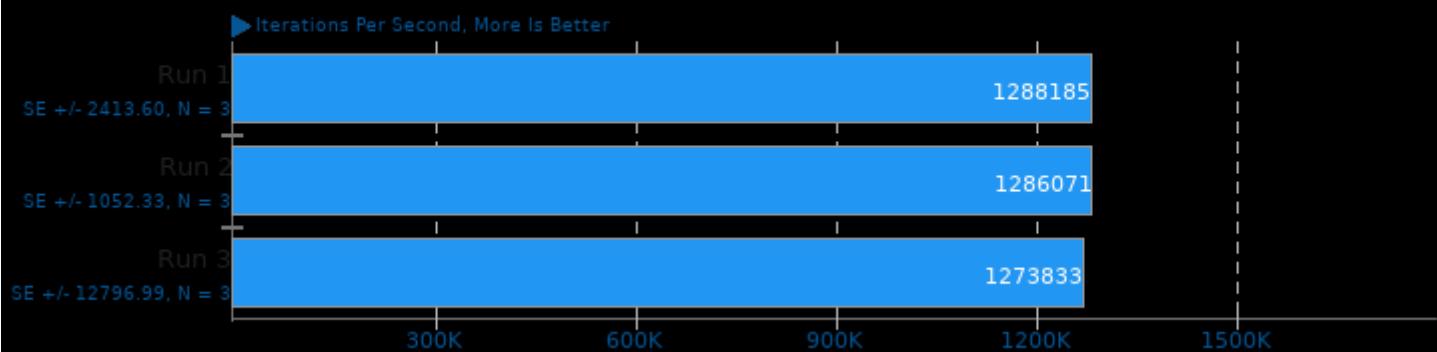
1. (CC) gcc options: -O2 -pedantic -fvisibility=hidden

## Node.js V8 Web Tooling Benchmark

1. Nodejs  
v12.18.2

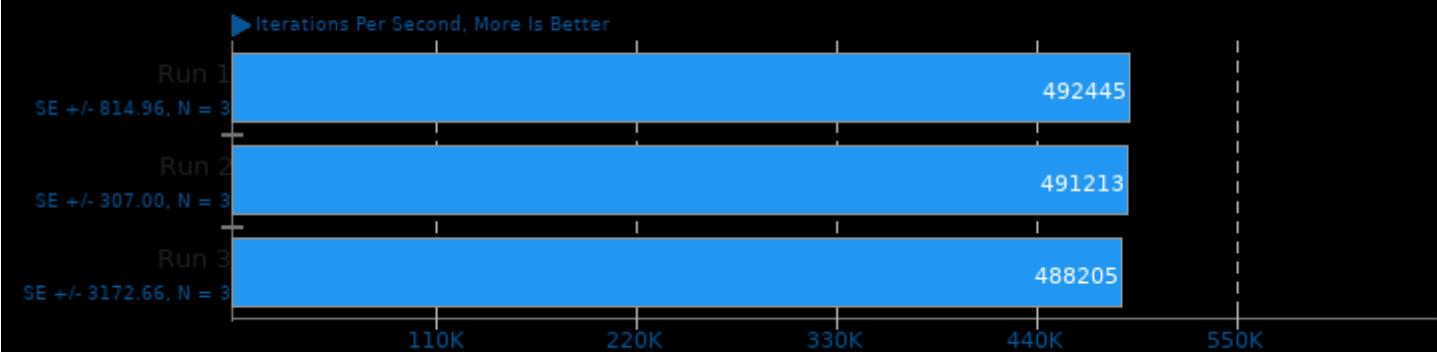
## Cryptsetup

PBKDF2-sha512



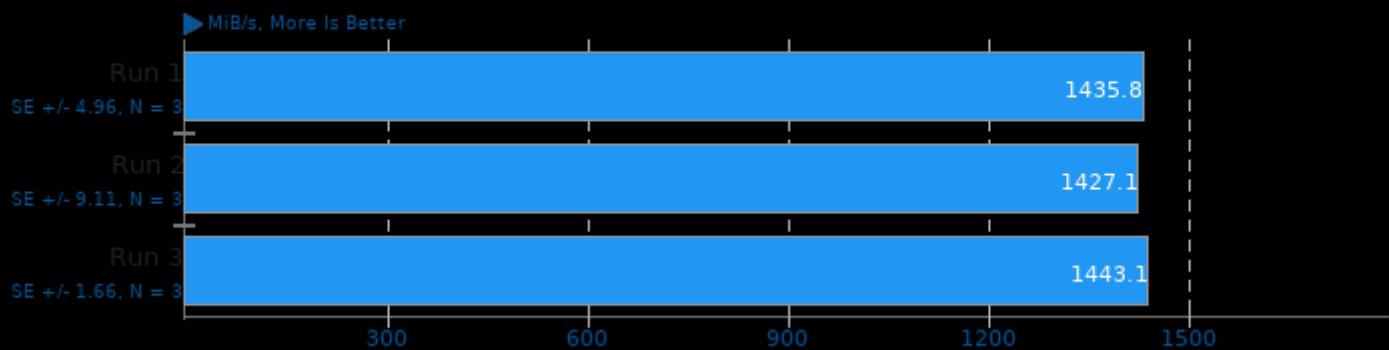
## Cryptsetup

PBKDF2-whirlpool



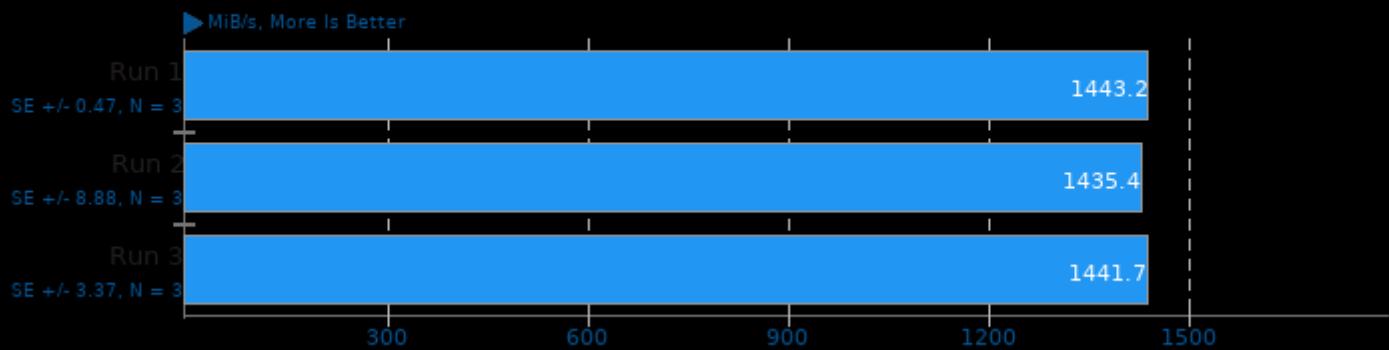
## Cryptsetup

AES-XTS 256b Encryption



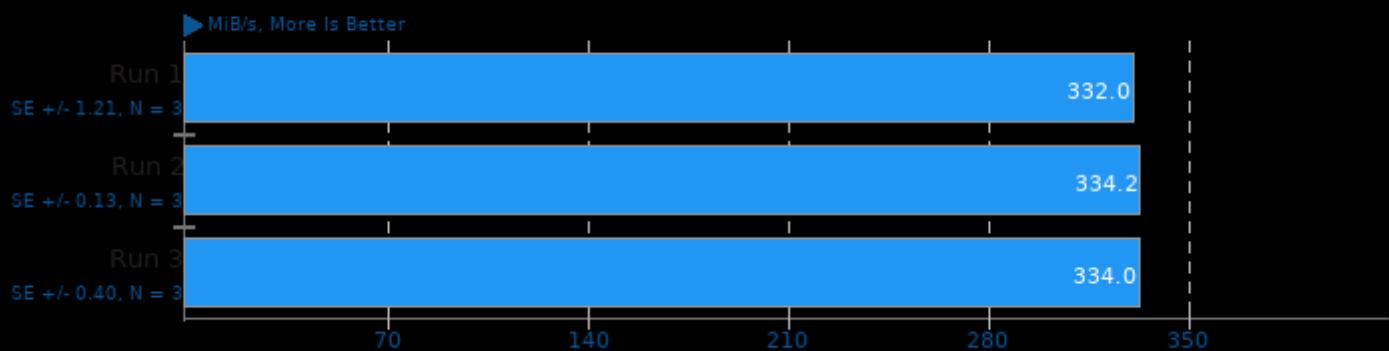
## Cryptsetup

AES-XTS 256b Decryption



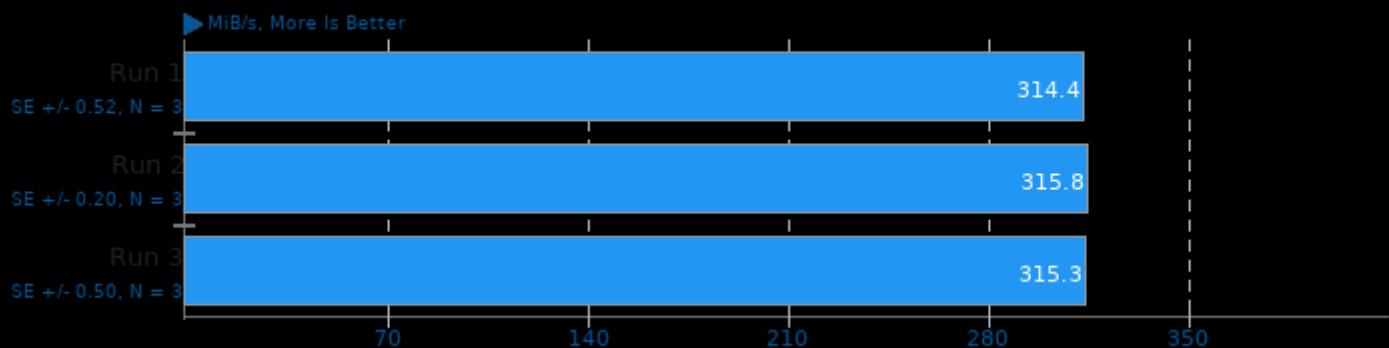
## Cryptsetup

Serpent-XTS 256b Encryption



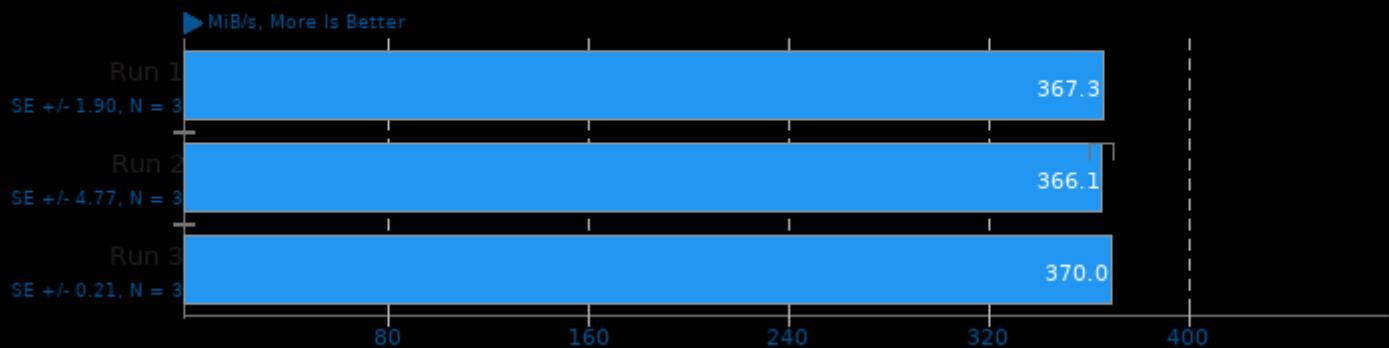
## Cryptsetup

Serpent-XTS 256b Decryption



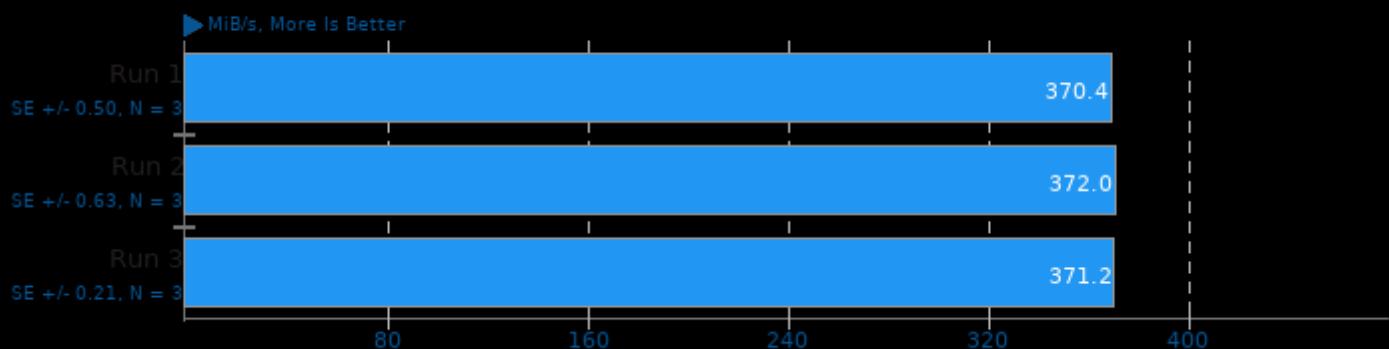
## Cryptsetup

Twofish-XTS 256b Encryption



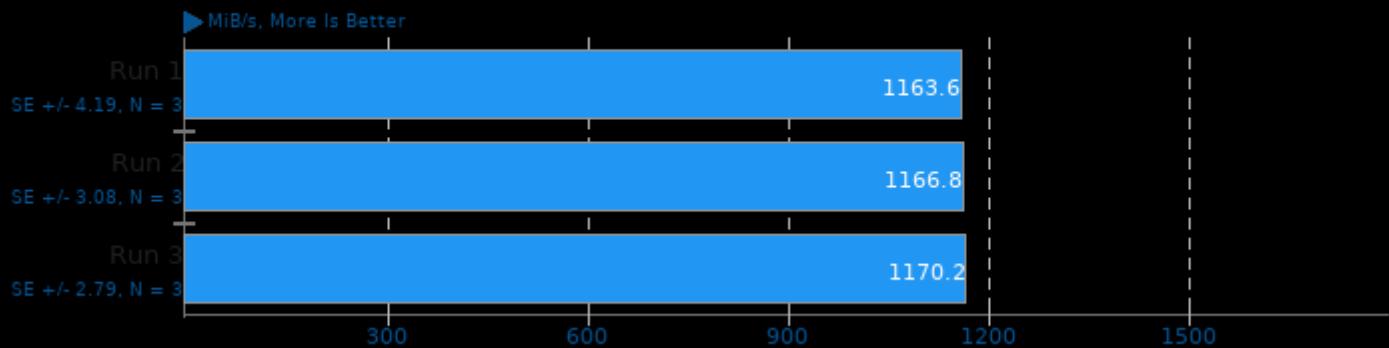
## Cryptsetup

Twofish-XTS 256b Decryption



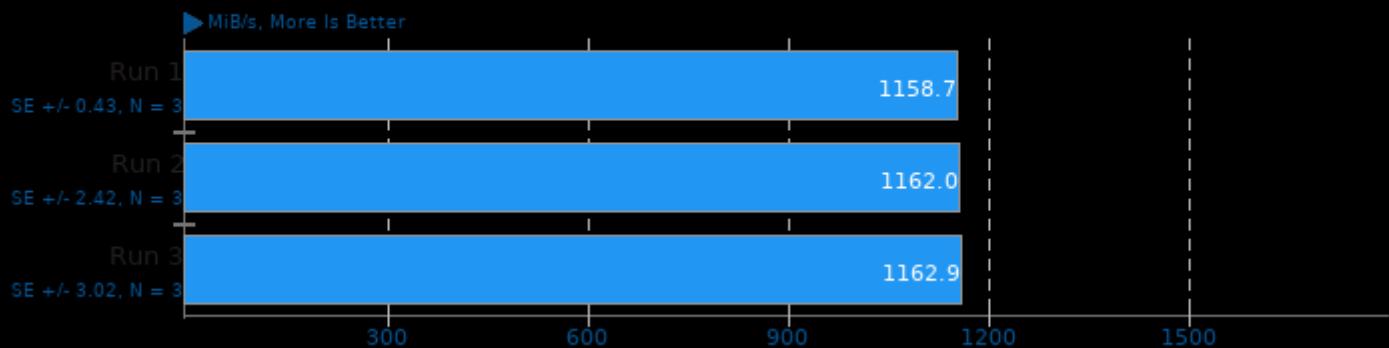
## Cryptsetup

AES-XTS 512b Encryption



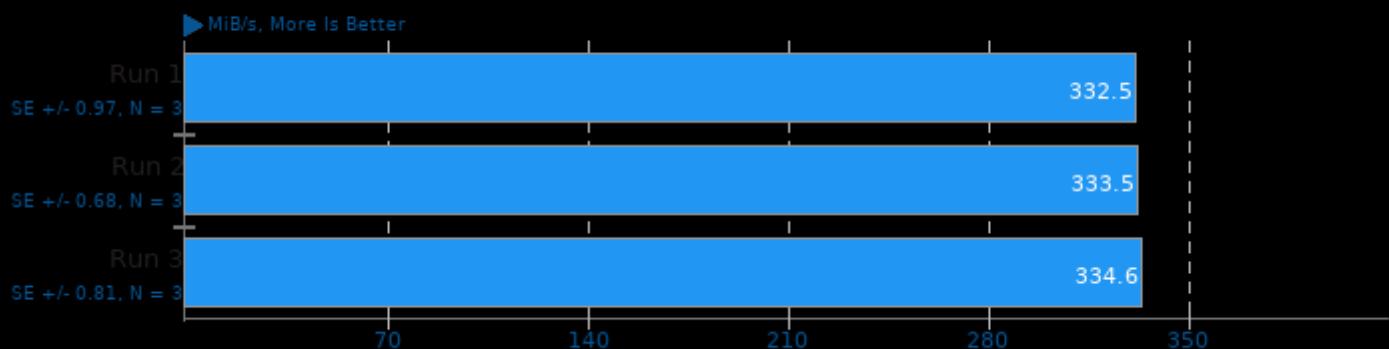
## Cryptsetup

AES-XTS 512b Decryption



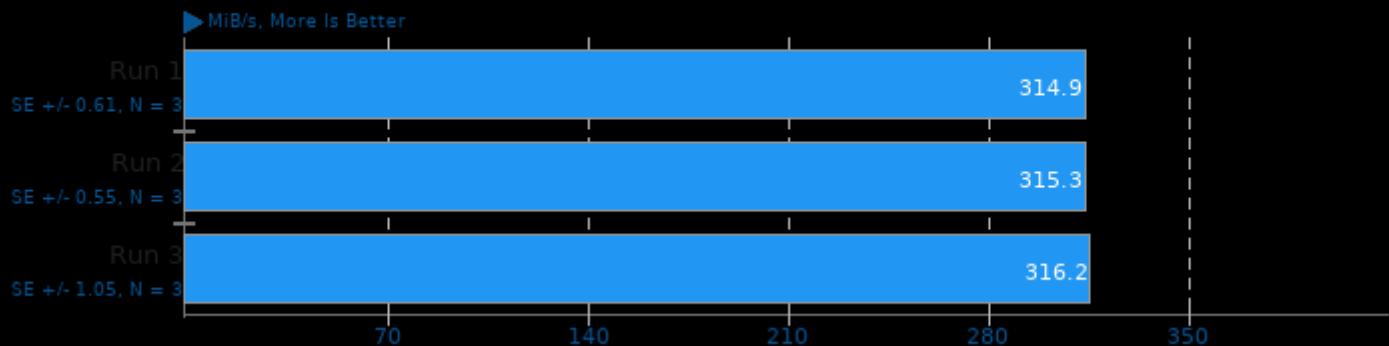
## Cryptsetup

Serpent-XTS 512b Encryption



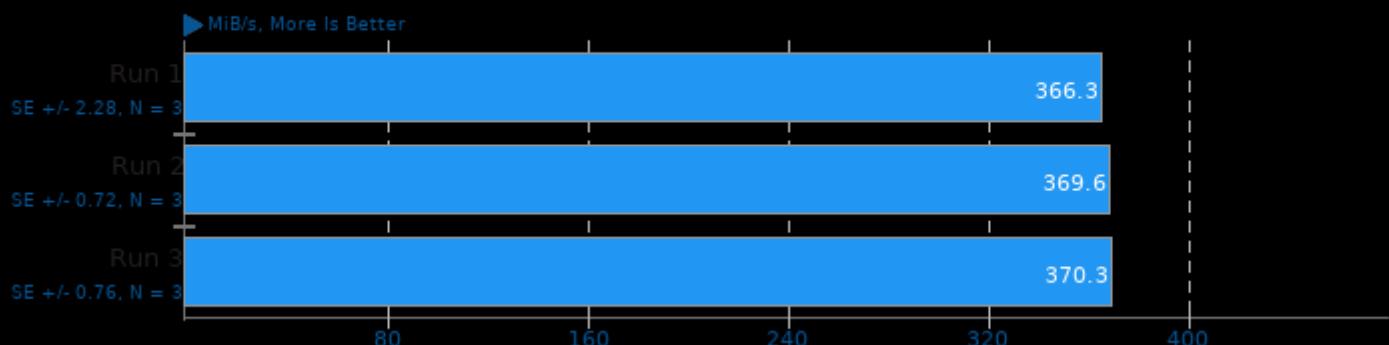
## Cryptsetup

Serpent-XTS 512b Decryption



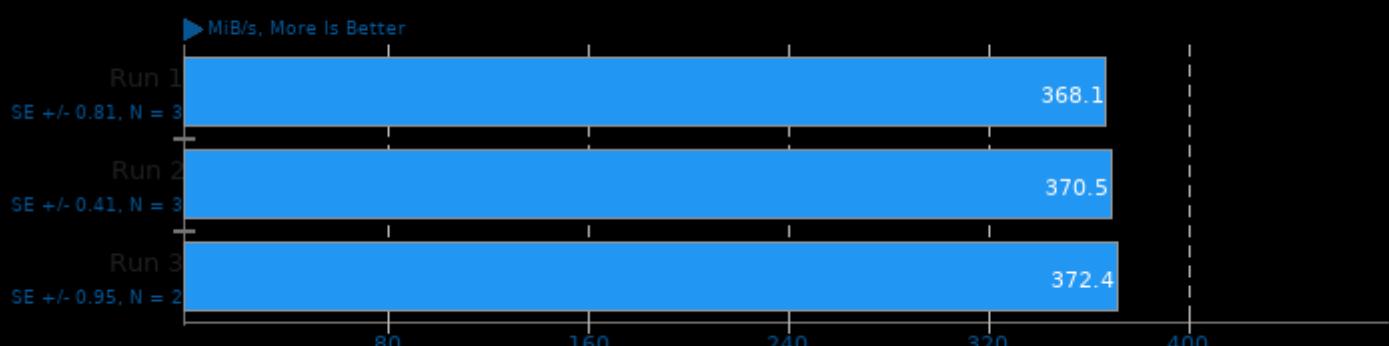
## Cryptsetup

Twofish-XTS 512b Encryption



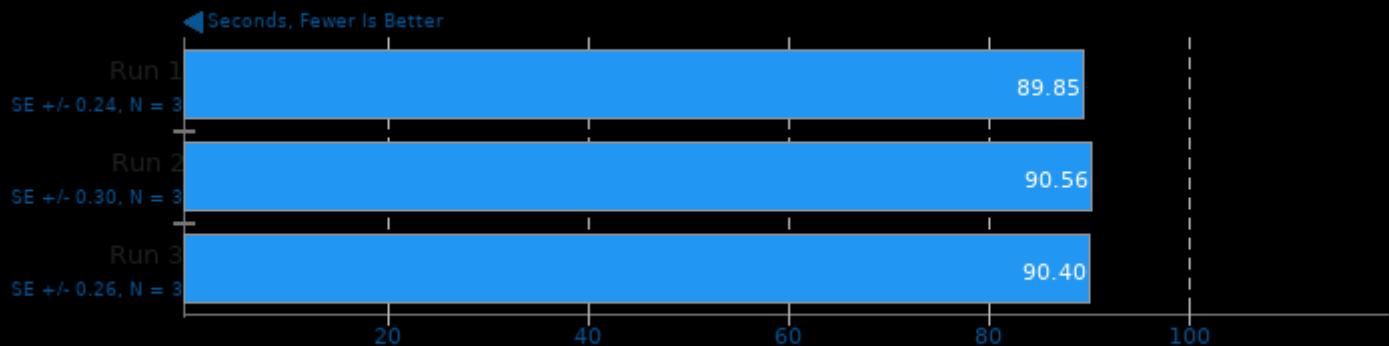
## Cryptsetup

Twofish-XTS 512b Decryption



## SQLite Speedtest 3.30

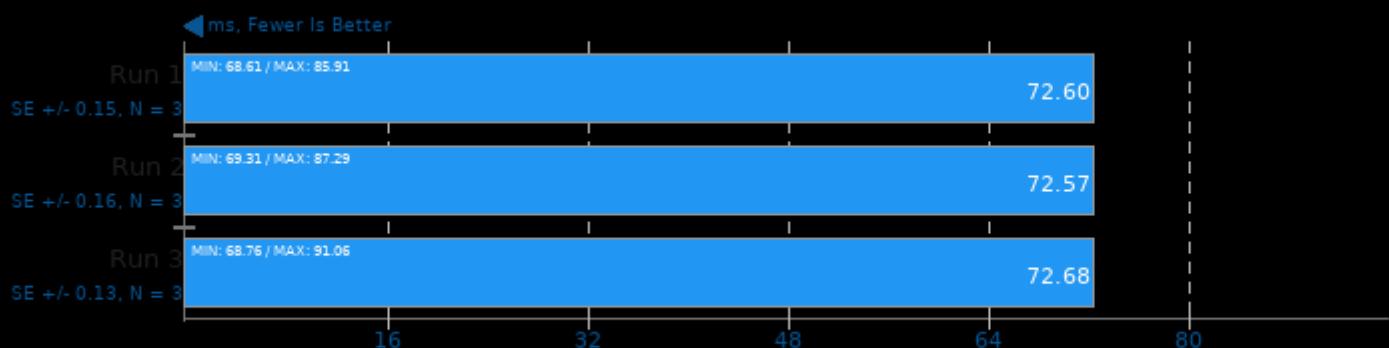
Timed Time - Size 1,000



1. (CC) gcc options: -O2 -ldl -lz -lpthread

## NCNN 20201218

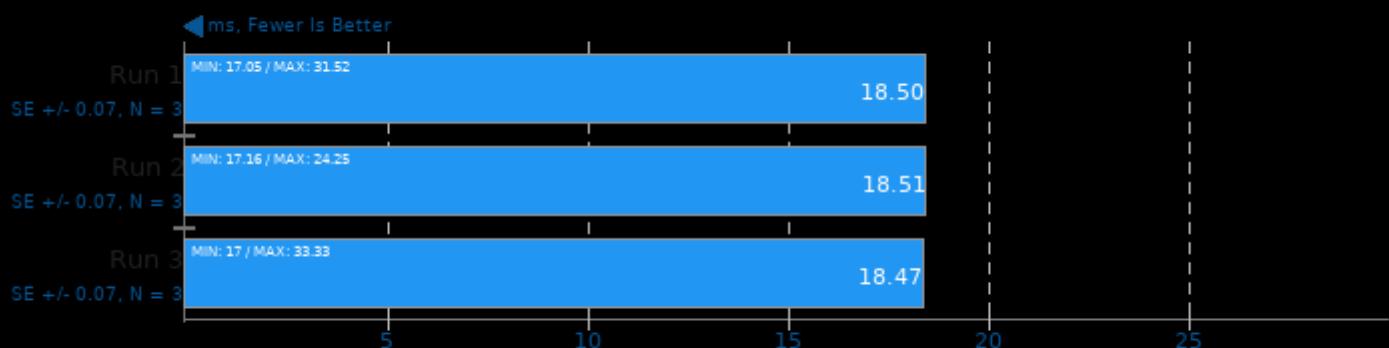
Target: CPU - Model: mobilenet



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

## NCNN 20201218

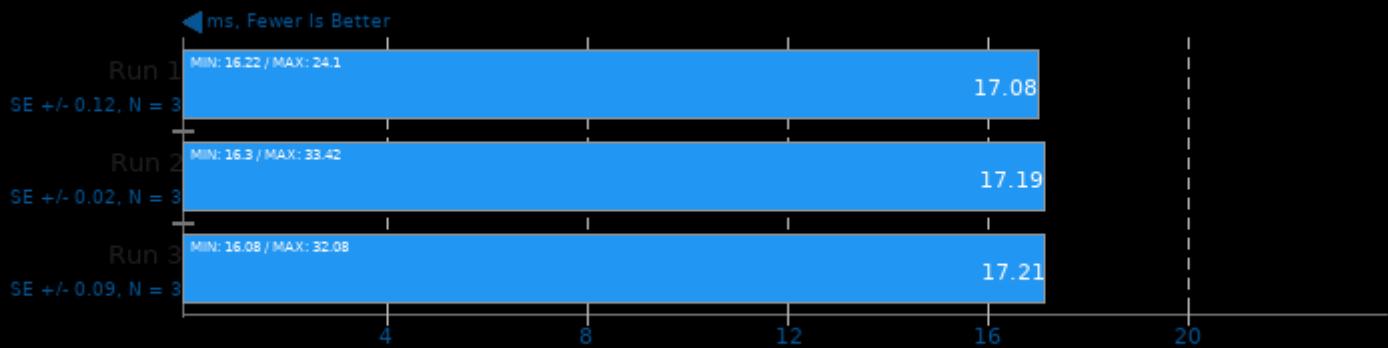
Target: CPU-v2-v2 - Model: mobilenet-v2



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

**NCNN 20201218**

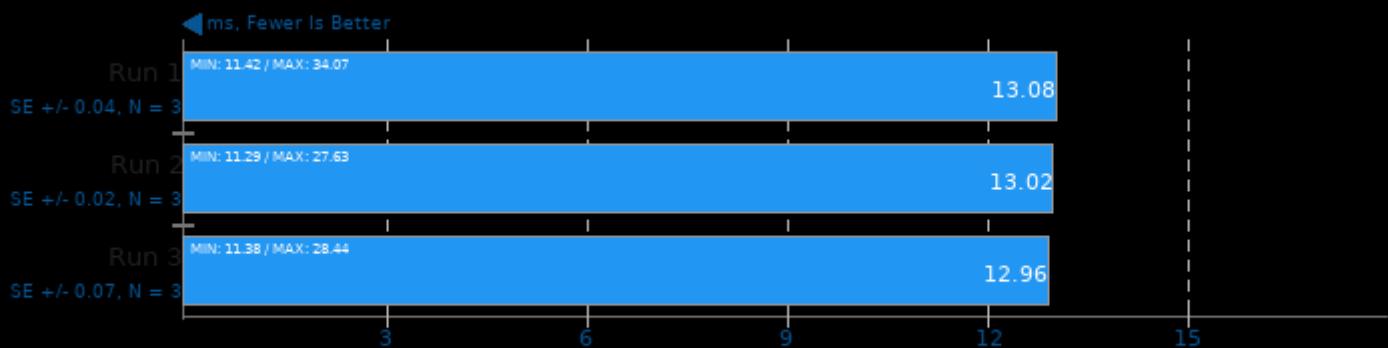
Target: CPU-v3-v3 - Model: mobilenet-v3



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

**NCNN 20201218**

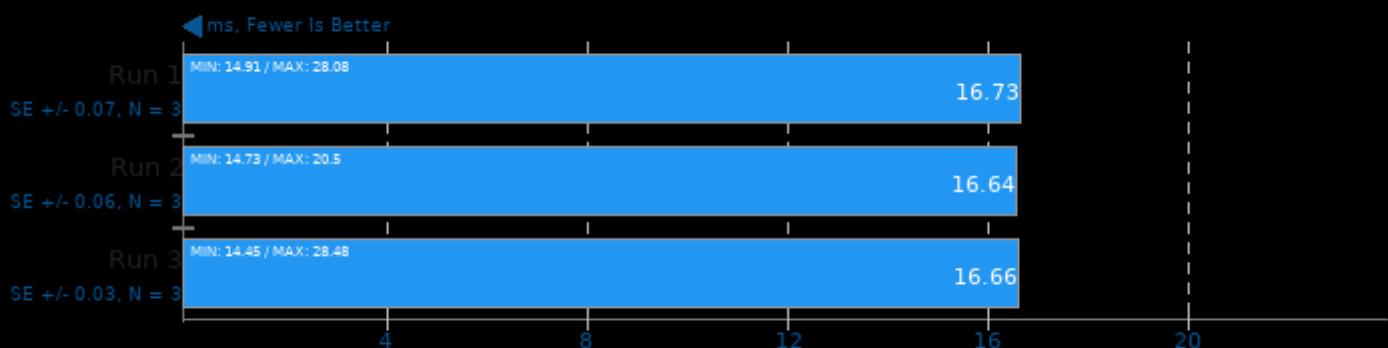
Target: CPU - Model: shufflenet-v2



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

**NCNN 20201218**

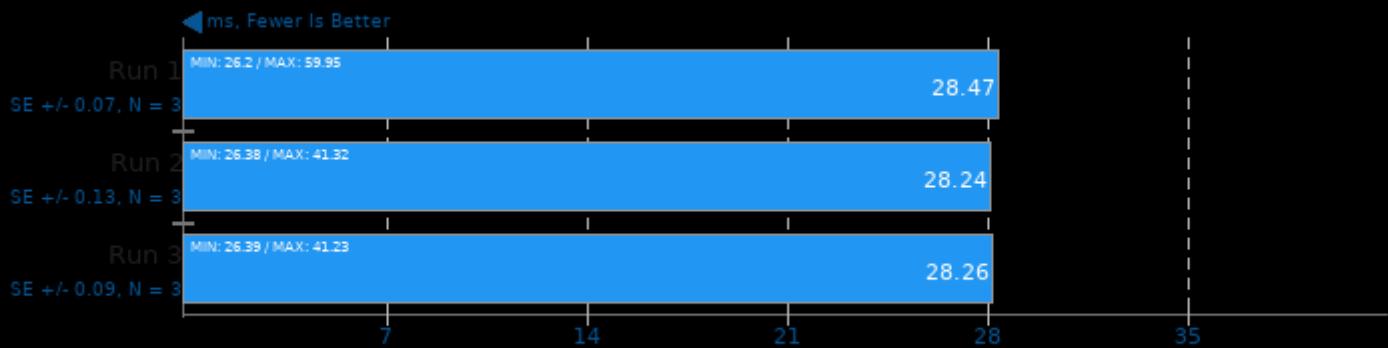
Target: CPU - Model: mnasnet



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

**NCNN 20201218**

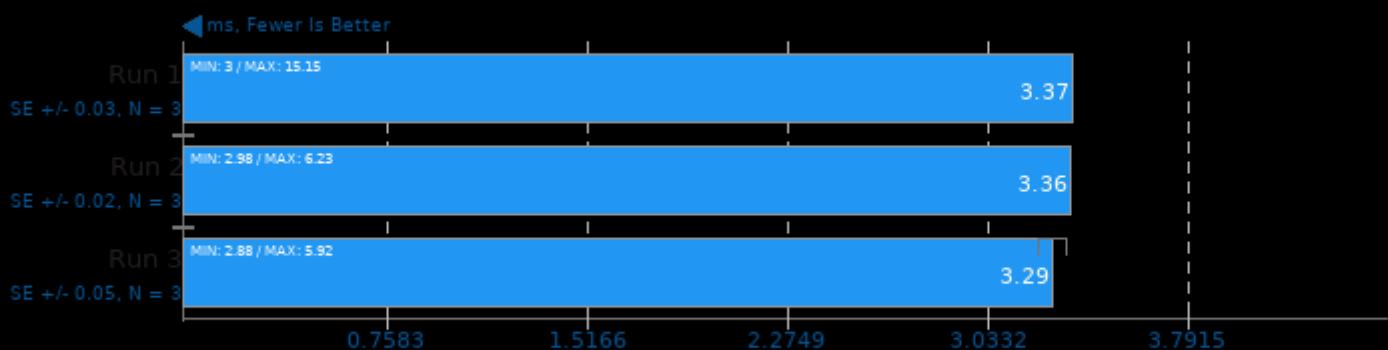
Target: CPU - Model: efficientnet-b0



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

**NCNN 20201218**

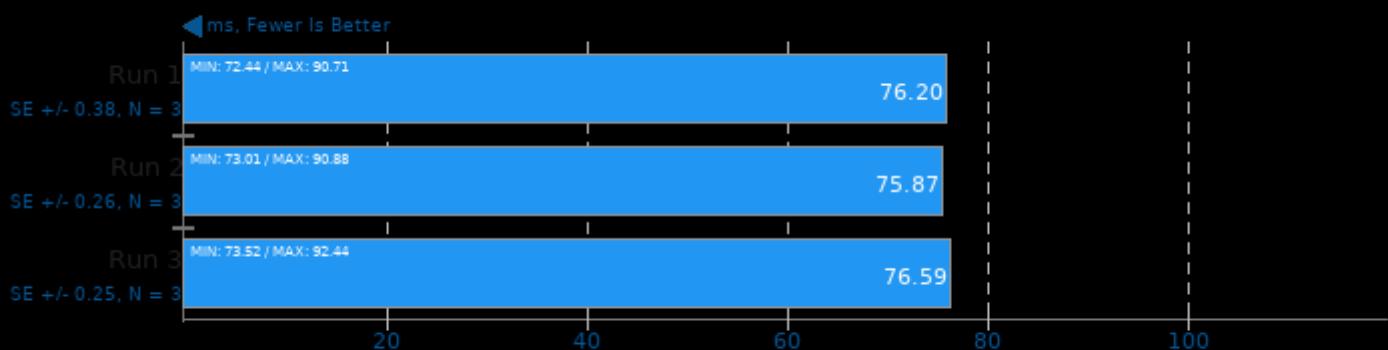
Target: CPU - Model: blazeface



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

**NCNN 20201218**

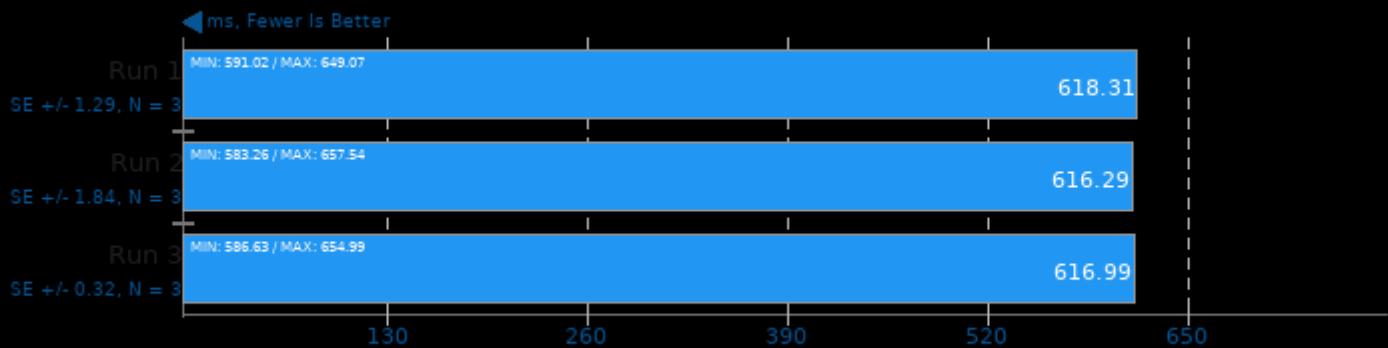
Target: CPU - Model: googlenet



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

**NCNN 20201218**

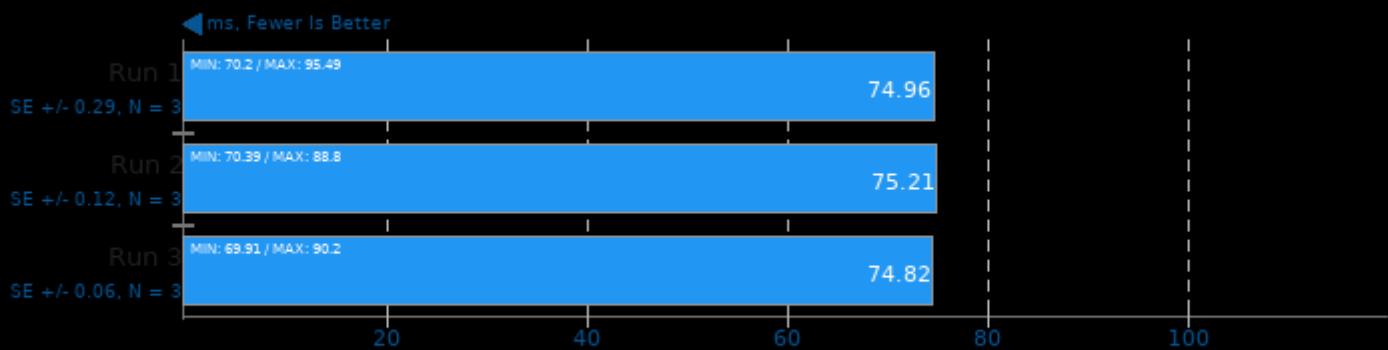
Target: CPU - Model: vgg16



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

**NCNN 20201218**

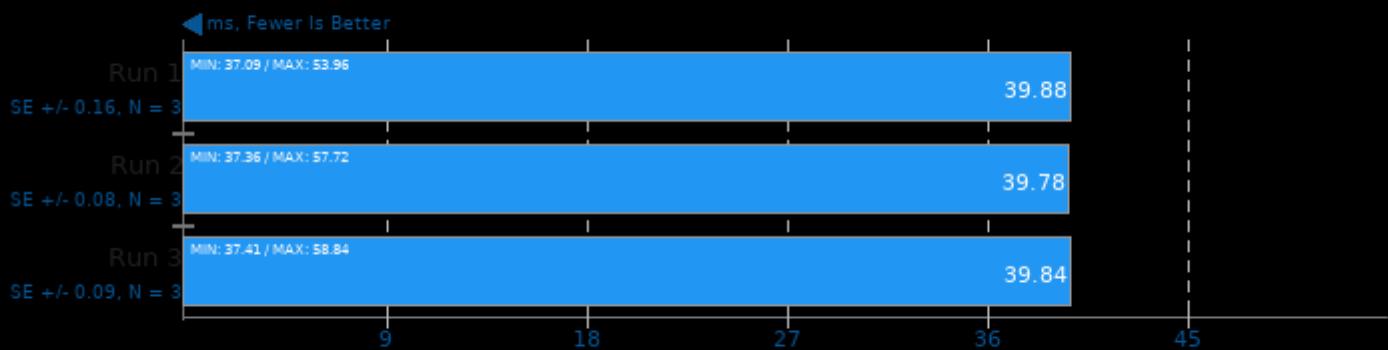
Target: CPU - Model: resnet18



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

**NCNN 20201218**

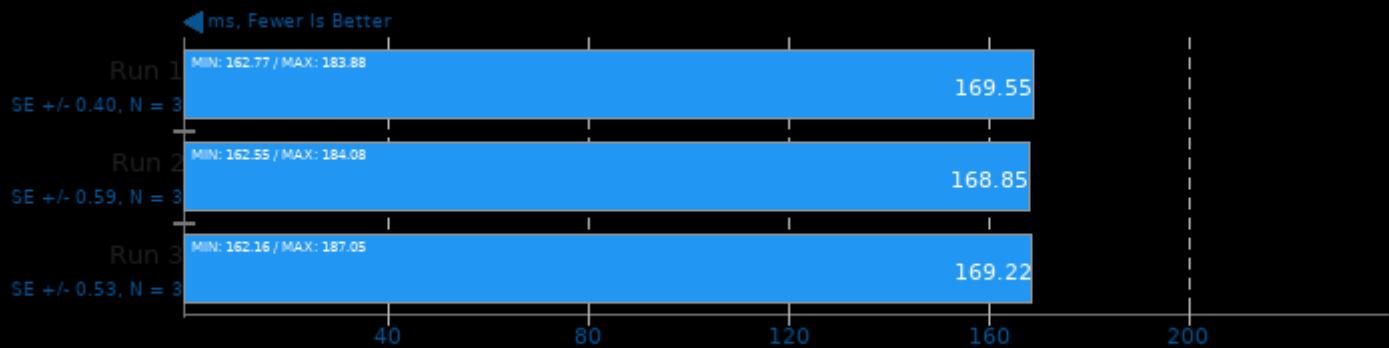
Target: CPU - Model: alexnet



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

**NCNN 20201218**

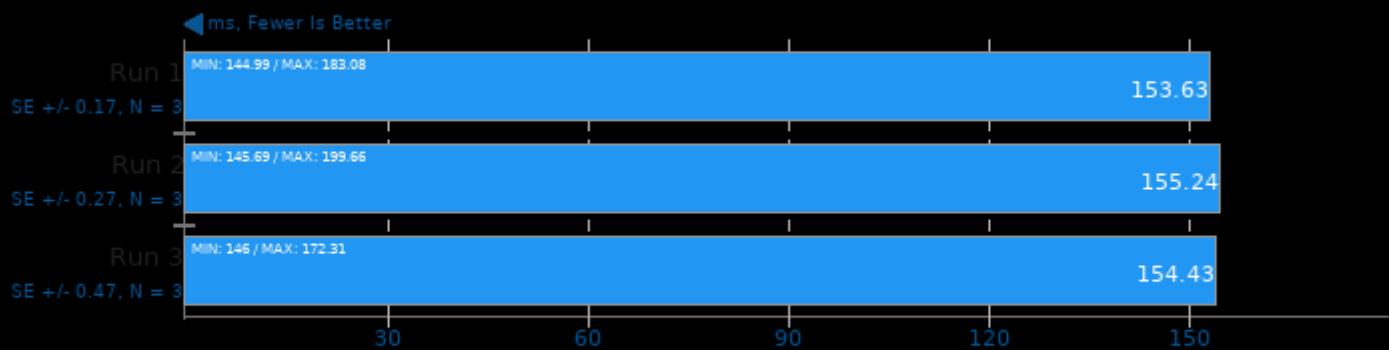
Target: CPU - Model: resnet50



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

**NCNN 20201218**

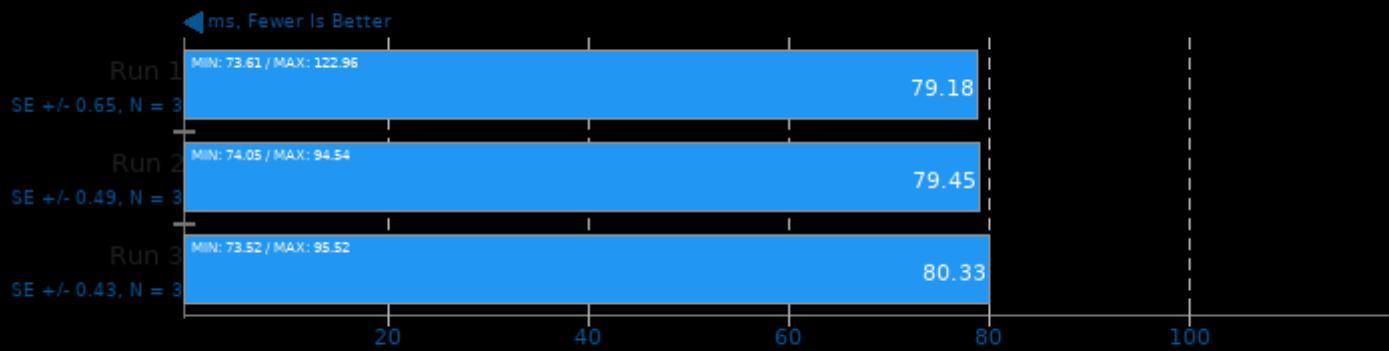
Target: CPU - Model: yolov4-tiny



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

**NCNN 20201218**

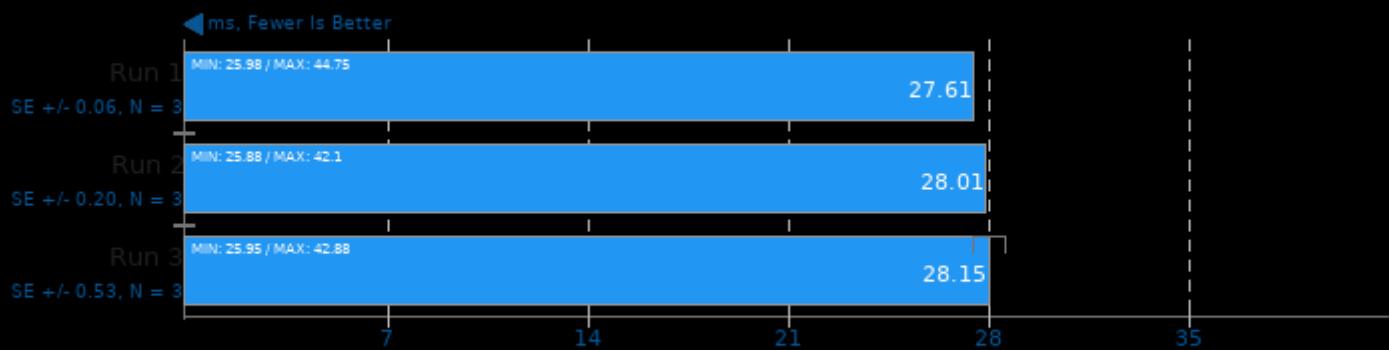
Target: CPU - Model: squeezezenet\_ssdl



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

## NCNN 20201218

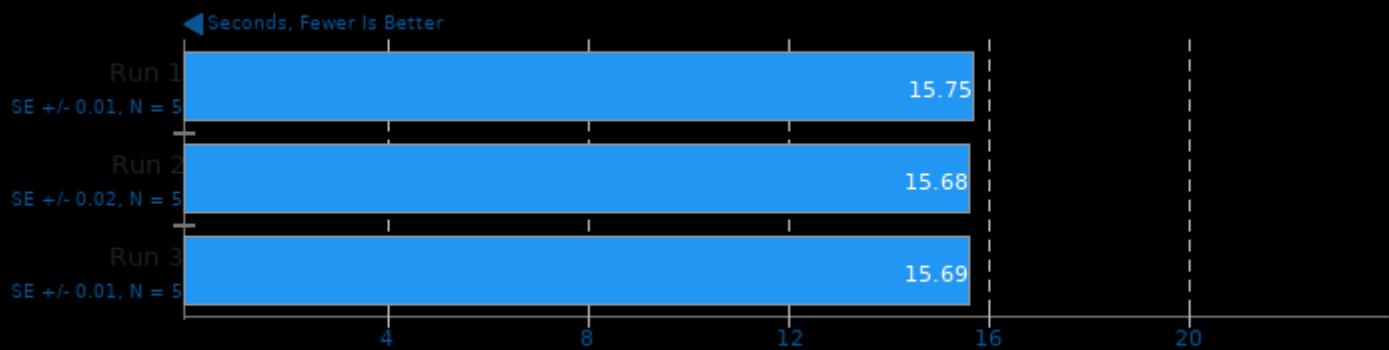
Target: CPU - Model: regnety\_400m



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

## WavPack Audio Encoding 5.3

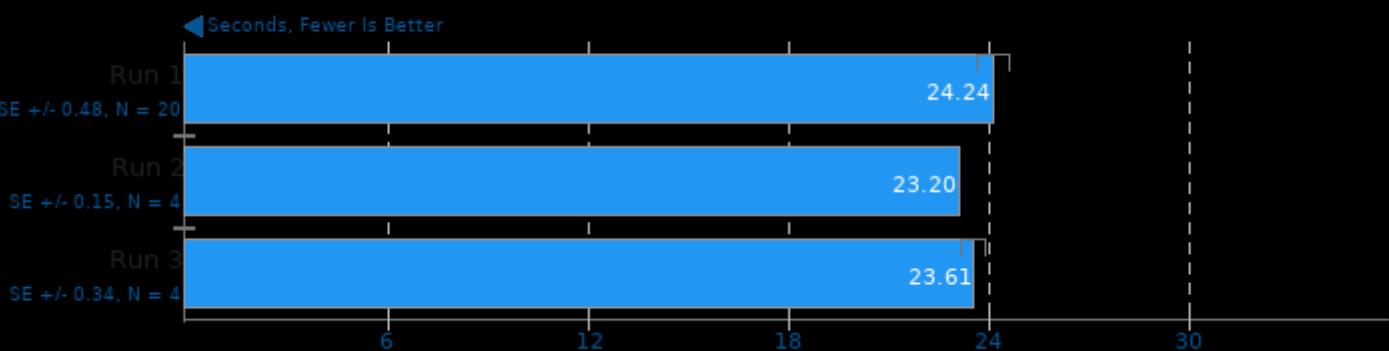
WAV To WavPack



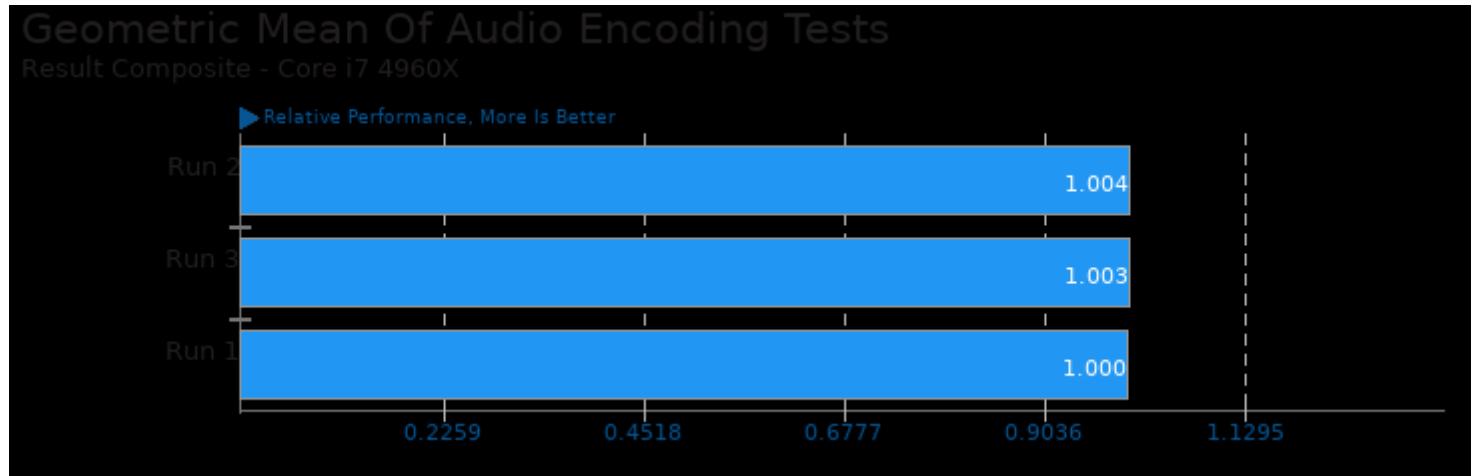
1. (CXX) g++ options: -rdynamic

## Unpacking Firefox 84.0

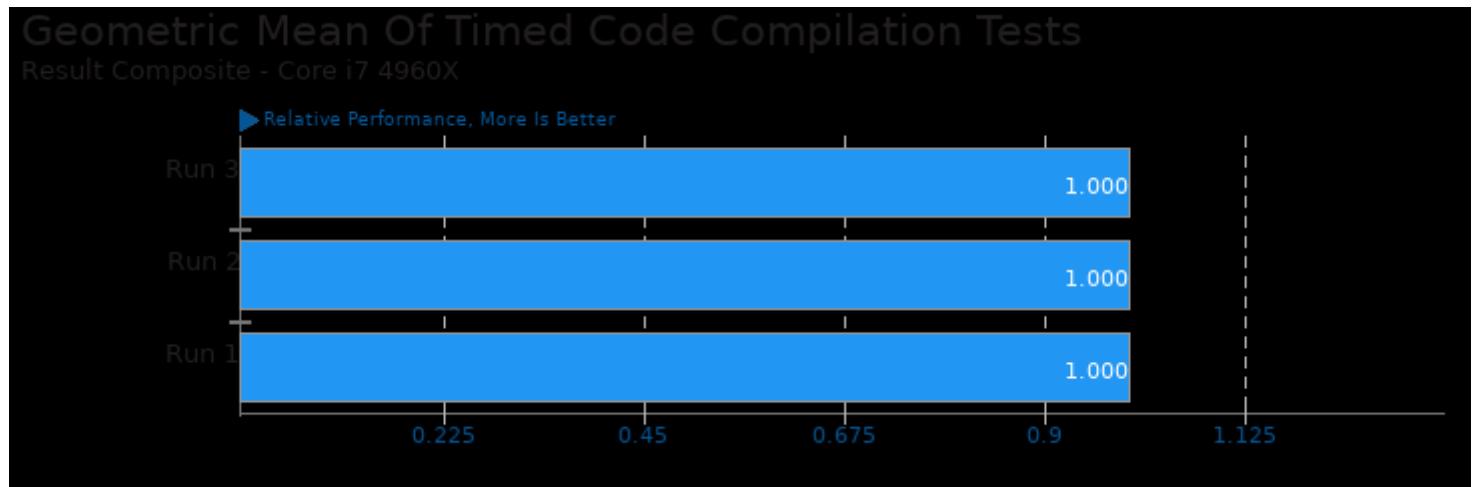
Extracting: firefox-84.0.source.tar.xz



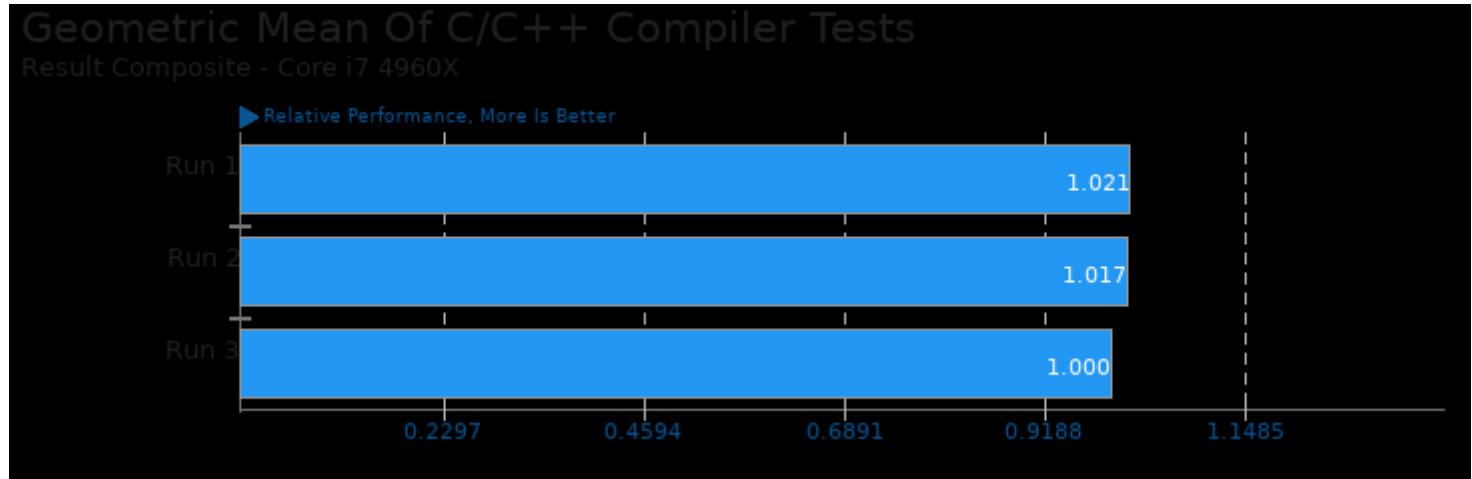
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/encode-ape, pts/encode-wavpack and pts/encode-opus



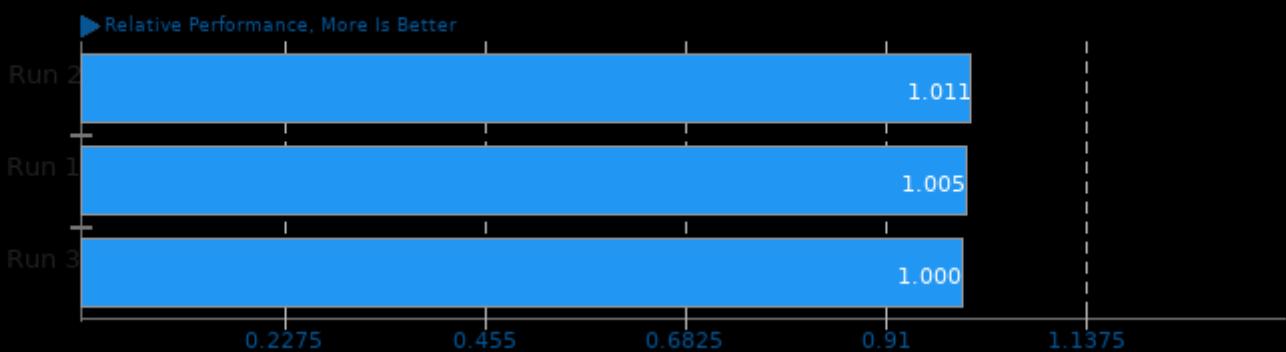
Geometric mean based upon tests: pts/build-eigen, pts/build-ffmpeg and pts/build2



Geometric mean based upon tests: pts/hammer, pts/sqlite-speedtest, pts/clomp and pts/build-ffmpeg

## Geometric Mean Of CPU Massive Tests

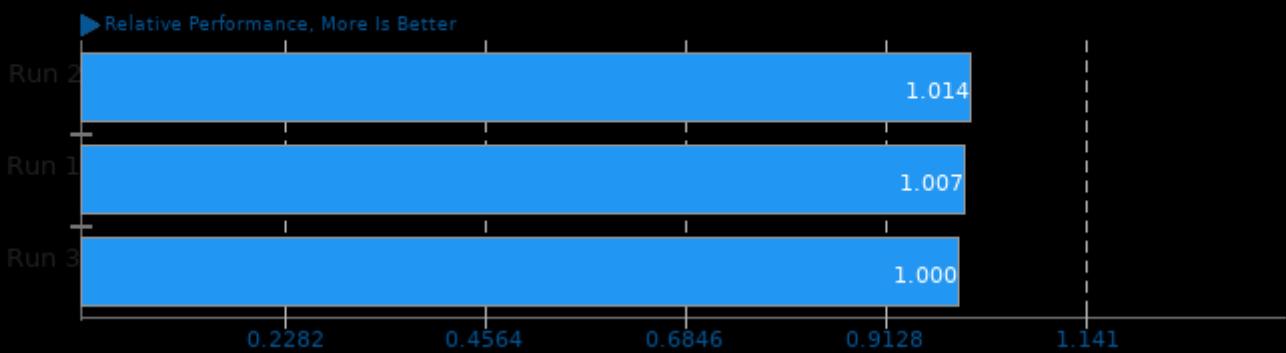
Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/hammer, pts/onednn, system/cryptsetup and pts/clomp

## Geometric Mean Of Creator Workloads Tests

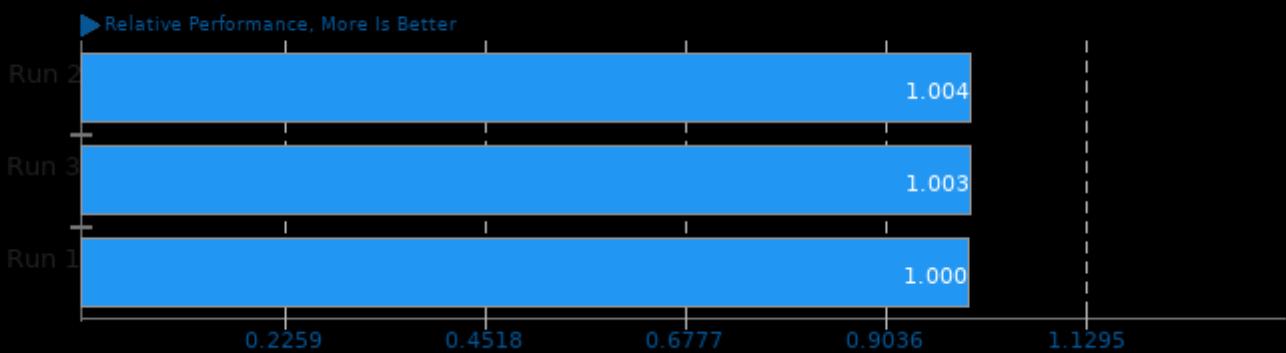
Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/encode-ape, pts/encode-wavpack, pts/encode-opus, pts/onednn, pts/deepspeech and pts/rnnoise

## Geometric Mean Of Encoding Tests

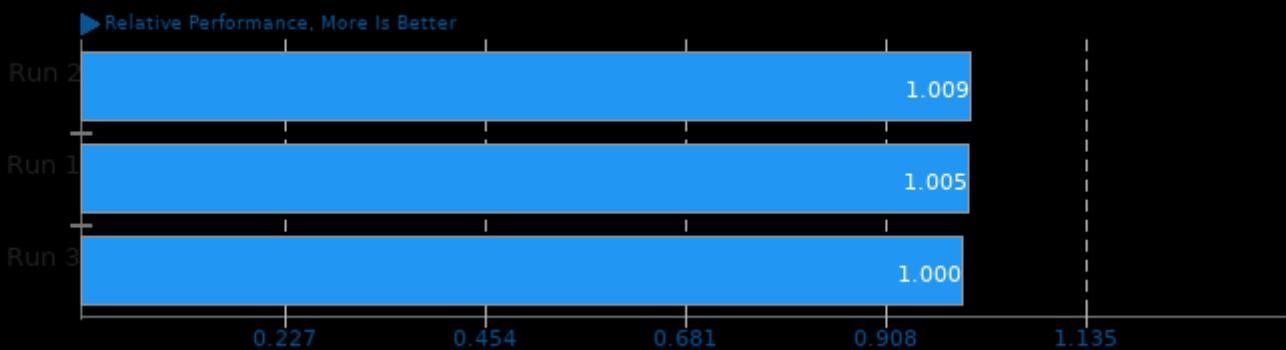
Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/encode-ape, pts/encode-wavpack and pts/encode-opus

## Geometric Mean Of HPC - High Performance Computing Tests

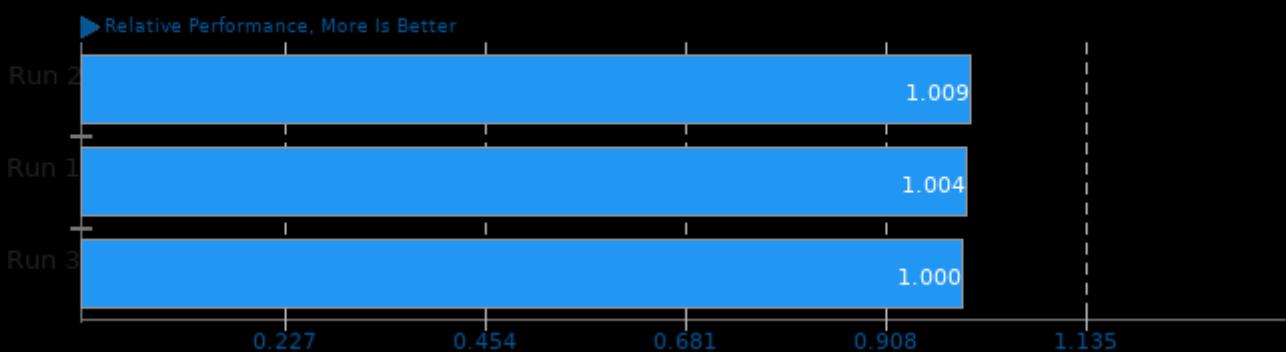
Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/hmmer, pts/ncnn, pts/deepspeech, pts/rnnoise and pts/onnednn

## Geometric Mean Of Machine Learning Tests

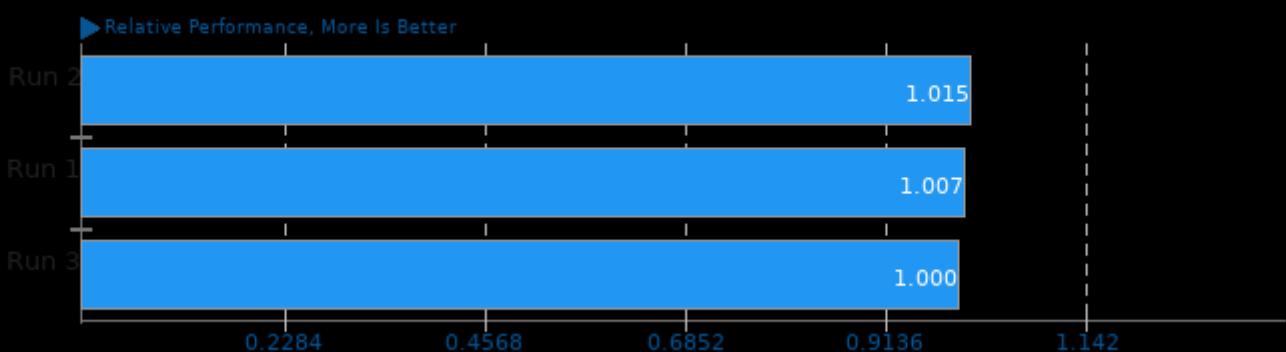
Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/ncnn, pts/deepspeech, pts/rnnoise and pts/onnednn

## Geometric Mean Of Multi-Core Tests

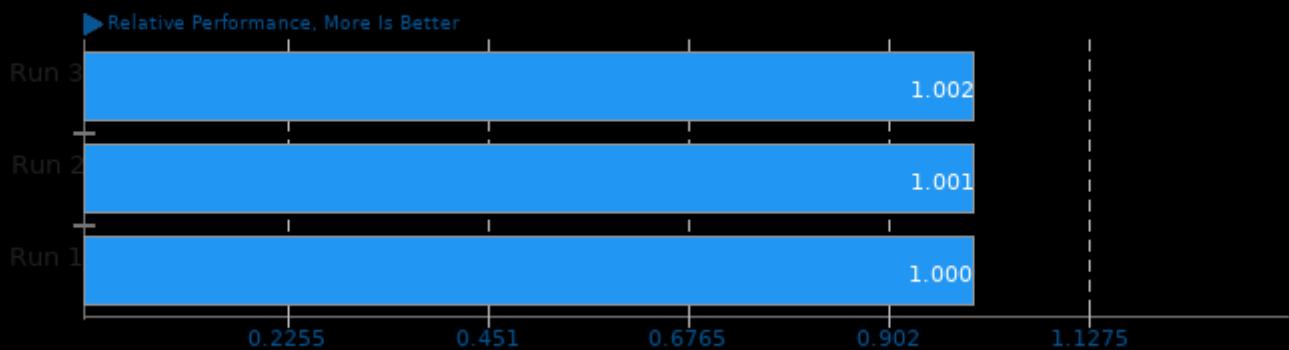
Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/coremark, pts/onnednn, pts/build-eigen, pts/build-ffmpeg and pts/build2

**Geometric Mean Of Programmer / Developer System Benchmarks Tests**

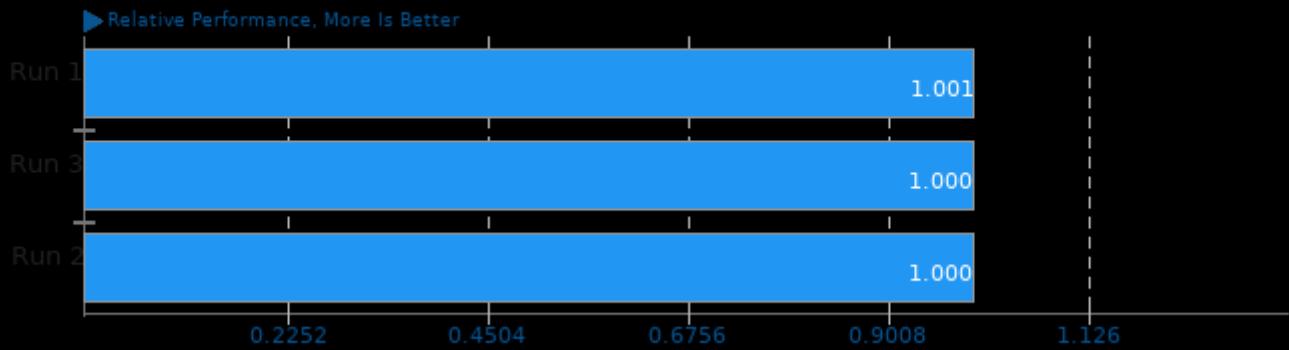
Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/simdjson, pts/sqlite-speedtest, pts/node-web-tooling, system/cryptsetup, pts/build-eigen, pts/build-ffmpeg and pts/build2

**Geometric Mean Of Server Tests**

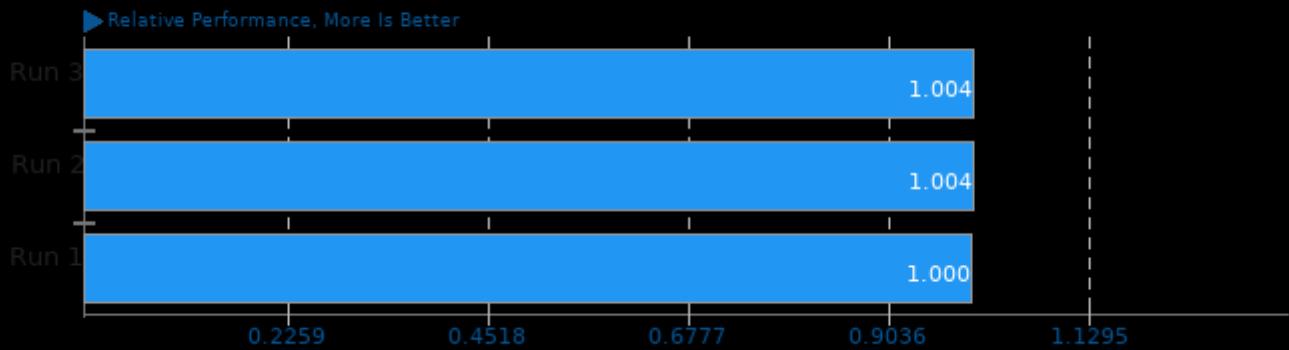
Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/simdjson, pts/node-web-tooling and pts/sqlite-speedtest

**Geometric Mean Of Speech Tests**

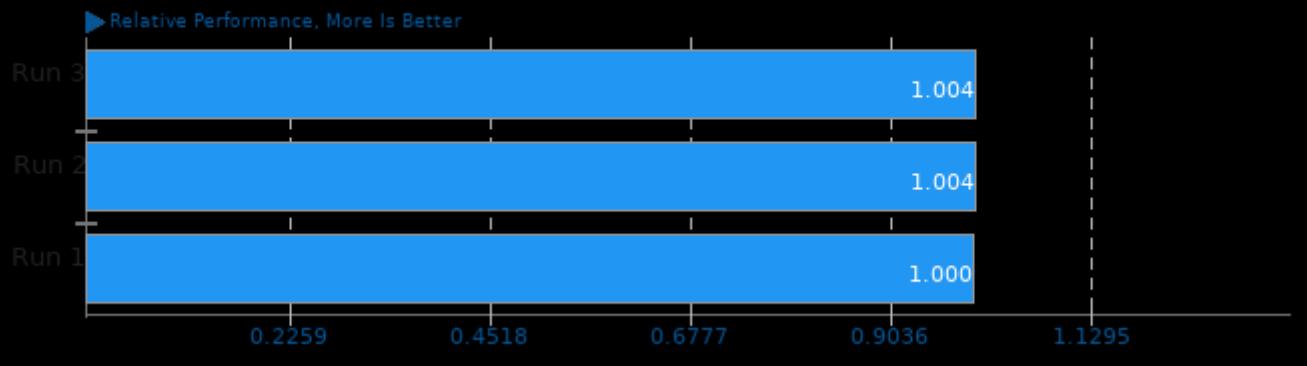
Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/deepspeech and pts/rnnoise

**Geometric Mean Of Telephony Tests**

Result Composite - Core i7 4960X



Geometric mean based upon tests: pts/deepspeech and pts/rnnoise

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 12:48.*