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3800xt 2022

AMD Ryzen 7 3800XT 8-Core testing with a MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0 (1.MS BIOS) and Sapphire AMD Radeon HD 4650 on Debian 11 via the Phoronix Test Suite.

Automated Executive Summary

b had the most wins, coming in first place for 60% of the tests.

Based on the geometric mean of all complete results, the fastest (b) was 1.003x the speed of the slowest (a).

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

SVT-AV1 (Encoder Mode: Preset 12 - Input: Bosphorus 4K) at 1.637x
oneDNN (Harness: Deconvolution Batch shapes_1d - Data Type: f32 - Engine: CPU) at 1.546x
oneDNN (Harness: IP Shapes 3D - Data Type: u8s8f32 - Engine: CPU) at 1.103x
CockroachDB (Workload: KV, 60% Reads - Concurrency: 128) at 1.07x
Numenta Anomaly Benchmark (Detector: Bayesian Changepoint) at 1.069x
oneDNN (Harness: Matrix Multiply Batch Shapes Transformer - Data Type: u8s8f32 - Engine: CPU) at 1.063x
SVT-AV1 (Encoder Mode: Preset 8 - Input: Bosphorus 4K) at 1.055x
SVT-AV1 (Encoder Mode: Preset 13 - Input: Bosphorus 4K) at 1.041x
oneDNN (Harness: Deconvolution Batch shapes_3d - Data Type: f32 - Engine: CPU) at 1.04x
Kvazaar (Video Input: Bosphorus 1080p - Video Preset: Slow) at 1.039x.

Test Systems:

a

b

Processor: AMD Ryzen 7 3800XT 8-Core @ 5.58GHz (8 Cores / 16 Threads), Motherboard: MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0 (1.MS BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 128GB INTEL SSDPEKKW128G7, Graphics: Sapphire AMD Radeon HD 4650, Audio: AMD RV710/730, Network: Intel I211

OS: Debian 11, Kernel: 5.10.0-20-amd64 (x86_64), Display Server: X Server 1.20.11, Compiler: GCC 10.2.1 20210110, File-System: ext4, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-Km9U7s/gcc-10-10.2.1/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-Km9U7s/gcc-10-10.2.1/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-build-config=bootstrap-lto-lean --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: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021
Python Notes: Python 3.9.2
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Mitigation of untrained return thunk; SMT enabled with STIBP protection + 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 Retpolines IBPB: conditional STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

	a	b
Kvazaar - Bosphorus 4K - Slow (FPS)	**8.26**	**8.36**
Normalized	98.8%	100%
Standard Deviation		0.2%
Kvazaar - Bosphorus 4K - Medium (FPS)	**8.51**	**8.58**
Normalized	99.18%	100%
Standard Deviation		0.2%
Kvazaar - Bosphorus 1080p - Slow (FPS)	**39.26**	**40.78**
Normalized	96.27%	100%
Standard Deviation		0.4%
Kvazaar - Bosphorus 1080p - Medium (FPS)	**43.01**	**42.44**
Normalized	100%	98.67%
Standard Deviation		0.4%
Kvazaar - Bosphorus 4K - Very Fast (FPS)	**21.54**	**21.62**
Normalized	99.63%	100%
Standard Deviation		0.2%
Kvazaar - Bosphorus 4K - Super Fast (FPS)	**26.3**	**26.48**
Normalized	99.32%	100%
Standard Deviation		0.1%
Kvazaar - Bosphorus 4K - Ultra Fast (FPS)	**34.89**	**35.16**
Normalized	99.23%	100%
Standard Deviation		0.5%
Kvazaar - Bosphorus 1080p - Very Fast (FPS)	**87.52**	**87.09**
Normalized	100%	99.51%
Standard Deviation		0.4%

Kvazaar - Bosphorus 1080p - Super Fast (FPS)	**112.75**	**113.18**
Normalized	99.62%	100%
Standard Deviation		0.2%
Kvazaar - Bosphorus 1080p - Ultra Fast (FPS)	**151.11**	**150.04**
Normalized	100%	99.29%
Standard Deviation		0.6%
SVT-AV1 - Preset 4 - Bosphorus 4K (FPS)	**2.406**	**2.437**
Normalized	98.73%	100%
Standard Deviation		1%
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)	**27.504**	**29.005**
Normalized	94.83%	100%
Standard Deviation		2.7%
SVT-AV1 - Preset 12 - Bosphorus 4K (FPS)	**52.342**	**85.678**
Normalized	61.09%	100%
Standard Deviation		1.4%
SVT-AV1 - Preset 13 - Bosphorus 4K (FPS)	**88.682**	**92.351**
Normalized	96.03%	100%
Standard Deviation		1.1%
SVT-AV1 - Preset 4 - Bosphorus 1080p (FPS)	**7.118**	**7.154**
Normalized	99.5%	100%
Standard Deviation		0.2%
SVT-AV1 - Preset 8 - Bosphorus 1080p (FPS)	**80.353**	**81.775**
Normalized	98.26%	100%
Standard Deviation		0.9%
SVT-AV1 - Preset 12 - Bosphorus 1080p (FPS)	**332.206**	**331.283**
Normalized	100%	99.72%
Standard Deviation		1.1%
SVT-AV1 - Preset 13 - Bosphorus 1080p (FPS)	**326.961**	**324.200**
Normalized	100%	99.16%
Standard Deviation		2.4%
uvg266 - Bosphorus 4K - Slow (FPS)	4.89	4.89
Standard Deviation		0.4%
uvg266 - Bosphorus 4K - Medium (FPS)	**5.56**	**5.61**
Normalized	99.11%	100%
Standard Deviation		0.2%
uvg266 - Bosphorus 1080p - Slow (FPS)	**25.64**	**25.72**
Normalized	99.69%	100%
Standard Deviation		0.1%
uvg266 - Bosphorus 1080p - Medium (FPS)	**29.13**	**29.15**
Normalized	99.93%	100%
Standard Deviation		0.1%
uvg266 - Bosphorus 4K - Very Fast (FPS)	**17.38**	**17.40**
Normalized	99.89%	100%
Standard Deviation		0.1%
uvg266 - Bosphorus 4K - Super Fast (FPS)	**17.11**	**17.13**
Normalized	99.88%	100%
Standard Deviation		0.4%
uvg266 - Bosphorus 4K - Ultra Fast (FPS)	**20.23**	**20.28**
Normalized	99.75%	100%
Standard Deviation		0.3%
uvg266 - Bosphorus 1080p - Very Fast (FPS)	**76.79**	**76.57**
Normalized	100%	99.71%
Standard Deviation		0.2%
uvg266 - Bosphorus 1080p - Super Fast (FPS)	**76.14**	**76.74**
Normalized	99.22%	100%

Standard Deviation		0.4%
uvg266 - Bosphorus 1080p - Ultra Fast (FPS)	90.85	90.49
Normalized	100%	99.6%
Standard Deviation		0.2%
OpenVKL - vklBenchmark ISPC (Items / Sec)	112	113
Normalized	99.12%	100%
Standard Deviation		0.5%
OpenVKL - v.S (Items / Sec)	71	71
Standard Deviation		0.8%
Timed Linux Kernel Compilation - defconfig (sec)	93.76	92.552
Normalized	98.71%	100%
Standard Deviation		1%
Timed Linux Kernel Compilation - allmodconfig (sec)	1233	1227
Normalized	99.53%	100%
oneDNN - IP Shapes 1D - f32 - CPU (ms)	4.35662	4.38473
Normalized	100%	99.36%
oneDNN - IP Shapes 3D - f32 - CPU (ms)	8.50102	8.50948
Normalized	100%	99.9%
oneDNN - IP Shapes 1D - u8s8f32 - CPU (ms)	2.40327	2.39955
Normalized	99.85%	100%
oneDNN - IP Shapes 3D - u8s8f32 - CPU (ms)	2.43709	2.20914
Normalized	90.65%	100%
oneDNN - C.B.S.A - f32 - CPU (ms)	22.2073	22.1875
Normalized	99.91%	100%
oneDNN - D.B.s - f32 - CPU (ms)	6.18817	9.56548
Normalized	100%	64.69%
oneDNN - D.B.s - f32 - CPU (ms)	6.54911	6.80945
Normalized	100%	96.18%
oneDNN - C.B.S.A - u8s8f32 - CPU (ms)	19.8792	19.8947
Normalized	100%	99.92%
oneDNN - D.B.s - u8s8f32 - CPU (ms)	3.55555	3.47193
Normalized	97.65%	100%
oneDNN - D.B.s - u8s8f32 - CPU (ms)	4.45035	4.47465
Normalized	100%	99.46%
oneDNN - R.N.N.T - f32 - CPU (ms)	3769	3835
Normalized	100%	98.26%
oneDNN - R.N.N.I - f32 - CPU (ms)	2559	2619
Normalized	100%	97.7%
oneDNN - R.N.N.T - u8s8f32 - CPU (ms)	3815	3763
Normalized	98.64%	100%
oneDNN - R.N.N.I - u8s8f32 - CPU (ms)	2546	2516
Normalized	98.82%	100%
oneDNN - M.M.B.S.T - f32 - CPU (ms)	4.89083	4.91143
Normalized	100%	99.58%
oneDNN - R.N.N.T - bf16bf16bf16 - CPU (ms)	3758	3741
Normalized	99.55%	100%
oneDNN - R.N.N.I - bf16bf16bf16 - CPU (ms)	2554	2537
Normalized	99.34%	100%
oneDNN - M.M.B.S.T - u8s8f32 - CPU (ms)	1.30173	1.22425
Normalized	94.05%	100%
CockroachDB - MoVR - 128 (ops/s)	457.2	474.2
Normalized	96.42%	100%
CockroachDB - KV, 10% Reads - 128 (ops/s)	29187	29209
Normalized	99.93%	100%

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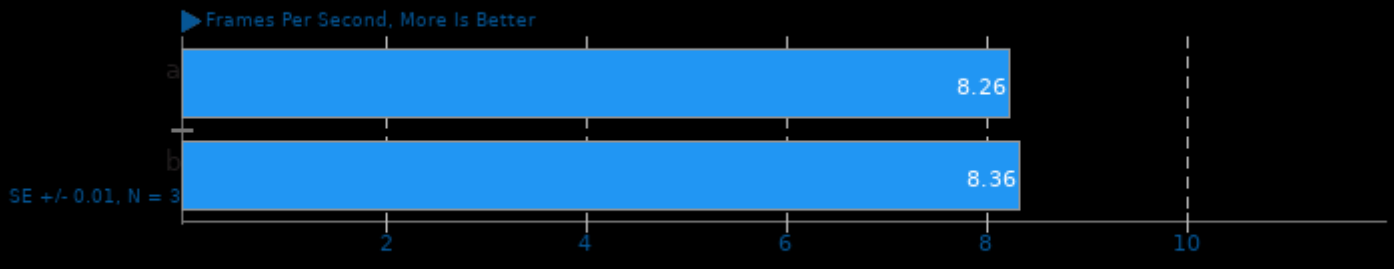
CockroachDB - KV, 50% Reads - 128 (ops/s)	33938	34426
Normalized	98.58%	100%
CockroachDB - KV, 60% Reads - 128 (ops/s)	38089	35583
Normalized	100%	93.42%
CockroachDB - KV, 95% Reads - 128 (ops/s)	47829	48135
Normalized	99.36%	100%
Blender - BMW27 - CPU-Only (sec)	150.25	149.38
Normalized	99.42%	100%
Blender - Fishy Cat - CPU-Only (sec)	188.89	189.11
Normalized	100%	99.88%
Blender - Pabellon Barcelona - CPU-Only (sec)	476.71	478.41
Normalized	100%	99.64%
OpenVINO - F.D.F - CPU (FPS)	1.75	1.73
Normalized	100%	98.86%
OpenVINO - F.D.F - CPU (ms)	2843	2851
Normalized	100%	99.72%
OpenVINO - P.D.F - CPU (FPS)	1.16	1.16
OpenVINO - P.D.F - CPU (ms)	4275	4274
Normalized	99.98%	100%
OpenVINO - P.D.F - CPU (FPS)	1.16	1.12
Normalized	100%	96.55%
OpenVINO - P.D.F - CPU (ms)	4280	4330
Normalized	100%	98.85%
OpenVINO - V.D.F - CPU (FPS)	141.13	141.54
Normalized	99.71%	100%
OpenVINO - V.D.F - CPU (ms)	35.41	35.3
Normalized	99.69%	100%
OpenVINO - F.D.F.I - CPU (FPS)	2.22	2.22
OpenVINO - F.D.F.I - CPU (ms)	2212	2211
Normalized	99.95%	100%
OpenVINO - V.D.F.I - CPU (FPS)	184.9	185.24
Normalized	99.82%	100%
OpenVINO - V.D.F.I - CPU (ms)	27.03	26.98
Normalized	99.82%	100%
OpenVINO - W.P.D.F - CPU (FPS)	160.57	161.7
Normalized	99.3%	100%
OpenVINO - W.P.D.F - CPU (ms)	31.12	30.9
Normalized	99.29%	100%
OpenVINO - M.T.E.T.D.F - CPU (FPS)	20.48	20.53
Normalized	99.76%	100%
OpenVINO - M.T.E.T.D.F - CPU (ms)	243.92	243.41
Normalized	99.79%	100%
OpenVINO - W.P.D.F.I - CPU (FPS)	218.4	218.48
Normalized	99.96%	100%
OpenVINO - W.P.D.F.I - CPU (ms)	45.77	45.75
Normalized	99.96%	100%
OpenVINO - P.V.B.D.F - CPU (FPS)	237.45	236.51
Normalized	100%	99.6%
OpenVINO - P.V.B.D.F - CPU (ms)	21.04	21.13
Normalized	100%	99.57%
OpenVINO - A.G.R.R.0.F - CPU (FPS)	5381	5384
Normalized	99.96%	100%
OpenVINO - A.G.R.R.0.F - CPU (ms)	1.85	1.85

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OpenVINO - A.G.R.R.0.F.I - CPU (FPS)	**5632**	**5664**
Normalized	99.43%	100%
OpenVINO - A.G.R.R.0.F.I - CPU (ms)	**1.77**	**1.76**
Normalized	99.44%	100%
Numenta Anomaly Benchmark - KNN CAD (sec)	**187.236**	**187.206**
Normalized	99.98%	100%
Numenta Anomaly Benchmark - Relative Entropy	**16.744**	**16.163**
Normalized	96.53%	100%
Numenta Anomaly Benchmark - Windowed Gaussian (sec)	**8.251**	**8.373**
Normalized	100%	98.54%
Numenta Anomaly Benchmark - Earthgecko Skyline	**113.003**	**113.431**
Normalized	100%	99.62%
Numenta Anomaly Benchmark - B.C (sec)	**30.216**	**32.301**
Normalized	100%	93.55%
Numenta Anomaly Benchmark - C.A.D.O (sec)	**46.042**	**46.945**
Normalized	100%	98.08%
BRL-CAD - V.P.M (VGR Performance Metric)	**139896**	**138909**
Normalized	100%	99.29%

Kvazaar 2.2

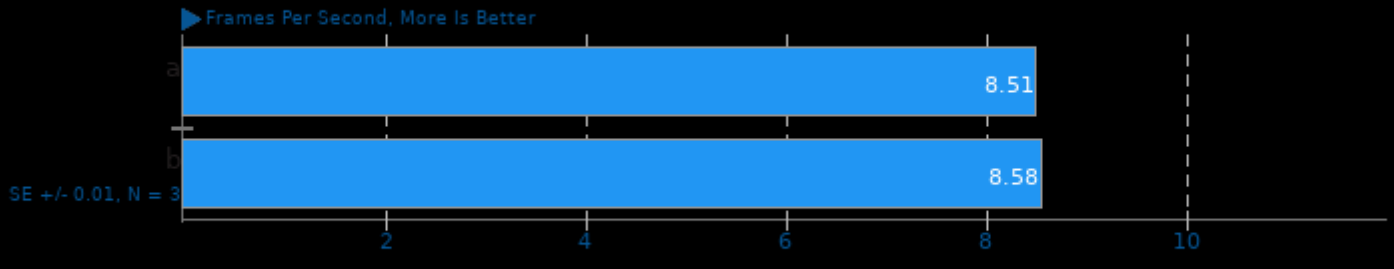
Video Input: Bosphorus 4K - Video Preset: Slow



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

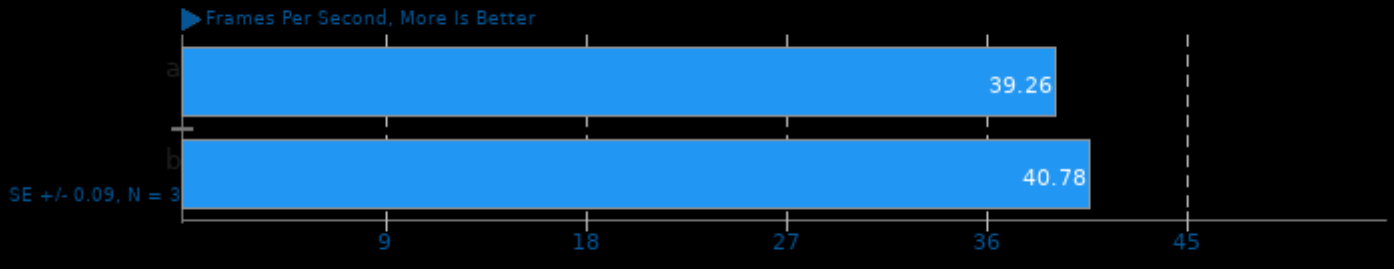
Video Input: Bosphorus 4K - Video Preset: Medium



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

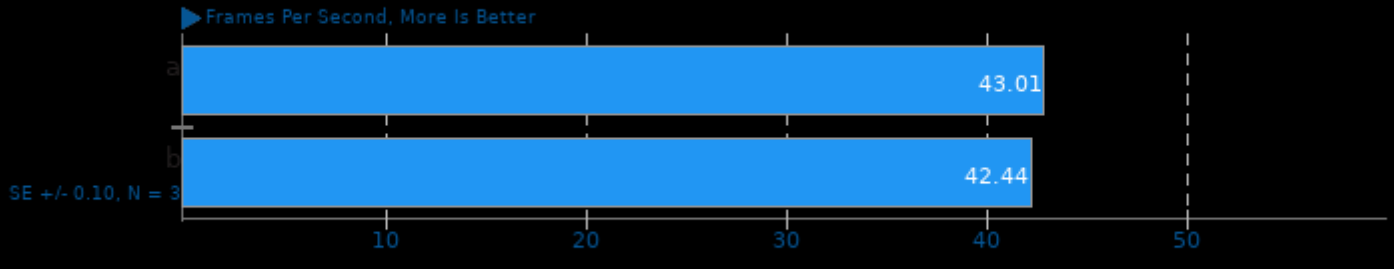
Video Input: Bosphorus 1080p - Video Preset: Slow



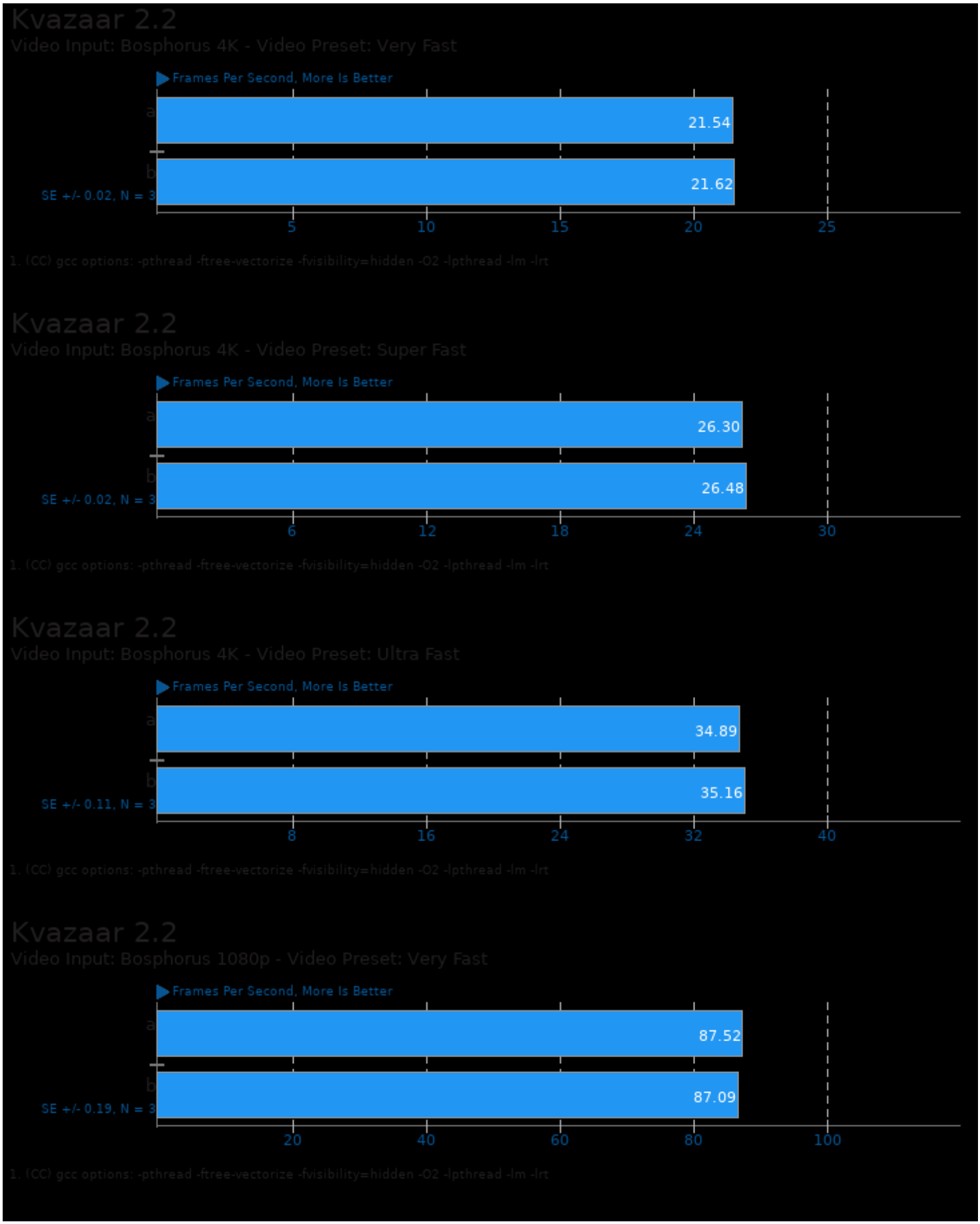
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

Video Input: Bosphorus 1080p - Video Preset: Medium

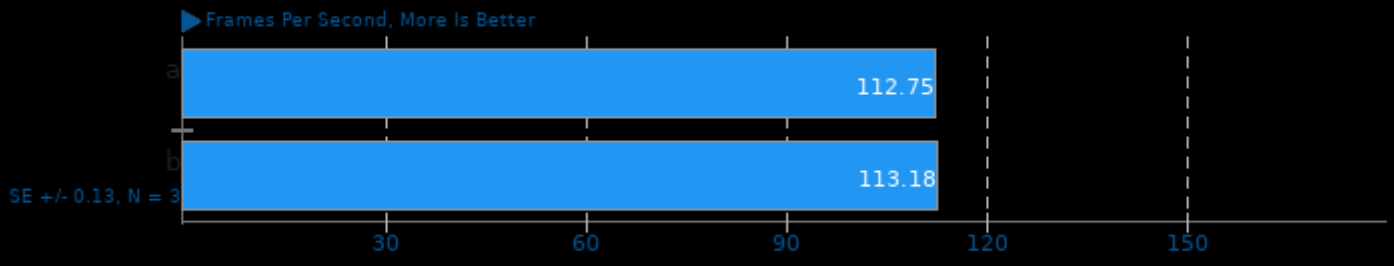


1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt


Kvazaar 2.2
Video Input: Bosphorus 4K - Video Preset: Very Fast
Frames Per Second, More Is Better
a
21.54
b
21.62
SE +/- 0.02, N = 3
5
10
15
20
25
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt
Kvazaar 2.2
Video Input: Bosphorus 4K - Video Preset: Super Fast
Frames Per Second, More Is Better
a
26.30
b
26.48
SE +/- 0.02, N = 3
6
12
18
24
30
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt
Kvazaar 2.2
Video Input: Bosphorus 4K - Video Preset: Ultra Fast
Frames Per Second, More Is Better
a
34.89
b
35.16
SE +/- 0.11, N = 3
8
16
24
32
40
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt
Kvazaar 2.2
Video Input: Bosphorus 1080p - Video Preset: Very Fast
Frames Per Second, More Is Better
a
87.52
b
87.09
SE +/- 0.19, N = 3
20
40
60
80
100
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

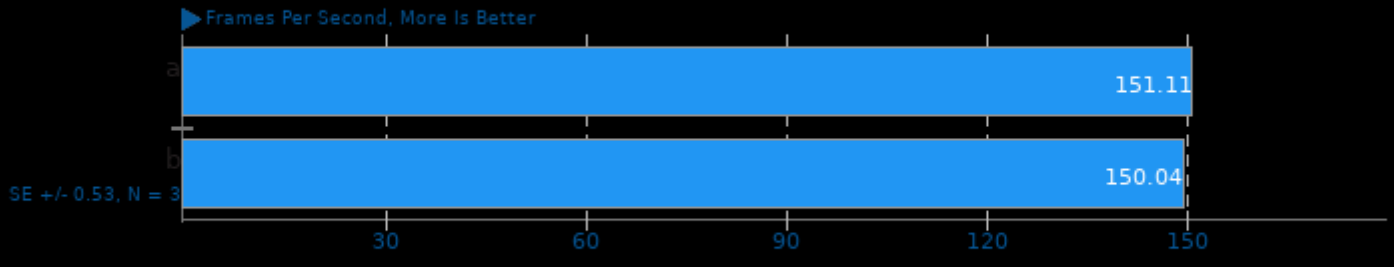
Video Input: Bosphorus 1080p - Video Preset: Super Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

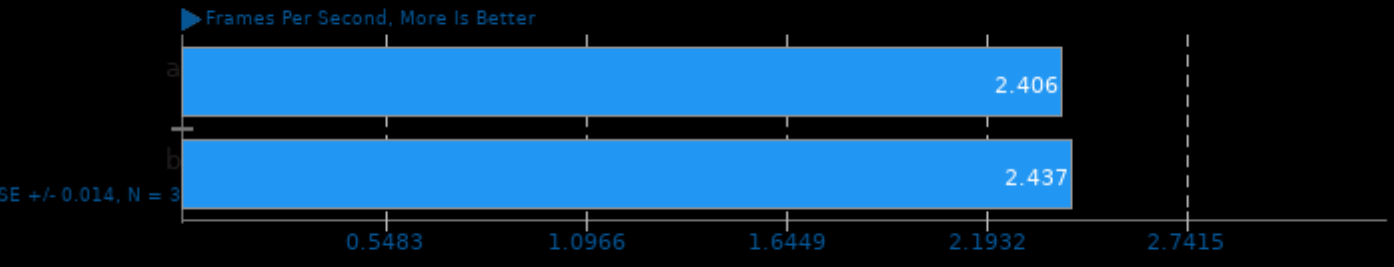
Video Input: Bosphorus 1080p - Video Preset: Ultra Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

SVT-AV1 1.4

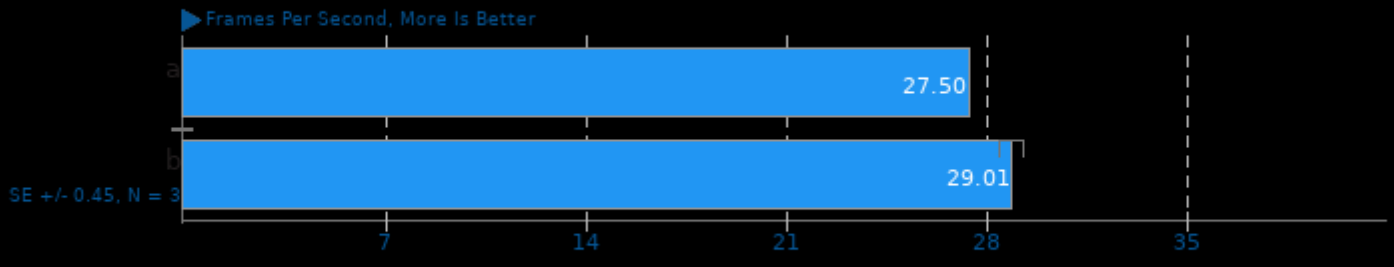
Encoder Mode: Preset 4 - Input: Bosphorus 4K



1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq

SVT-AV1 1.4

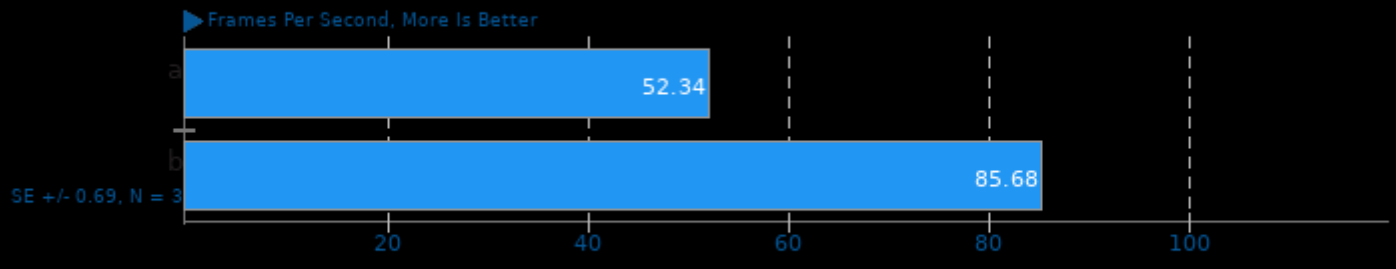
Encoder Mode: Preset 8 - Input: Bosphorus 4K



1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq

SVT-AV1 1.4

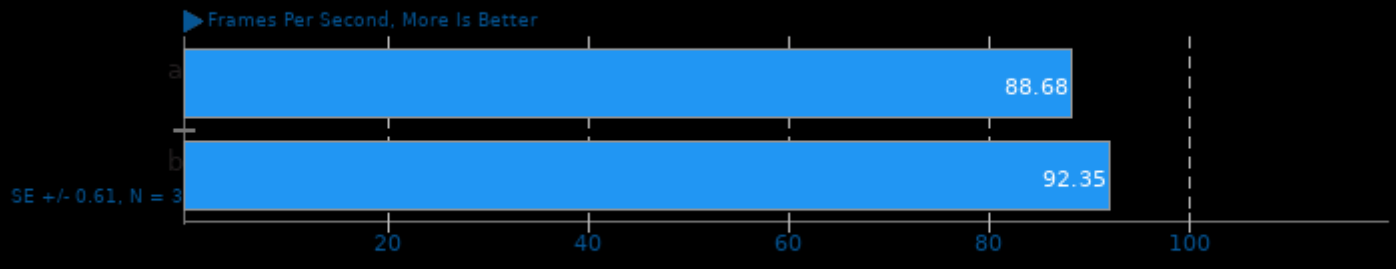
Encoder Mode: Preset 12 - Input: Bosphorus 4K



1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq

SVT-AV1 1.4

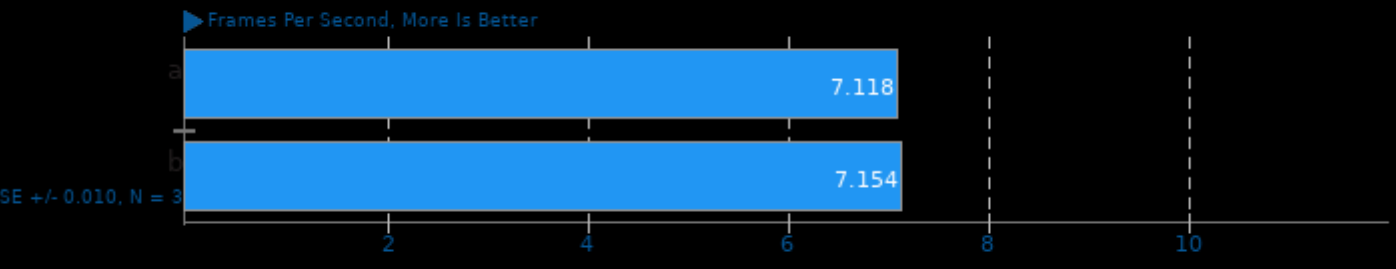
Encoder Mode: Preset 13 - Input: Bosphorus 4K



1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq

SVT-AV1 1.4

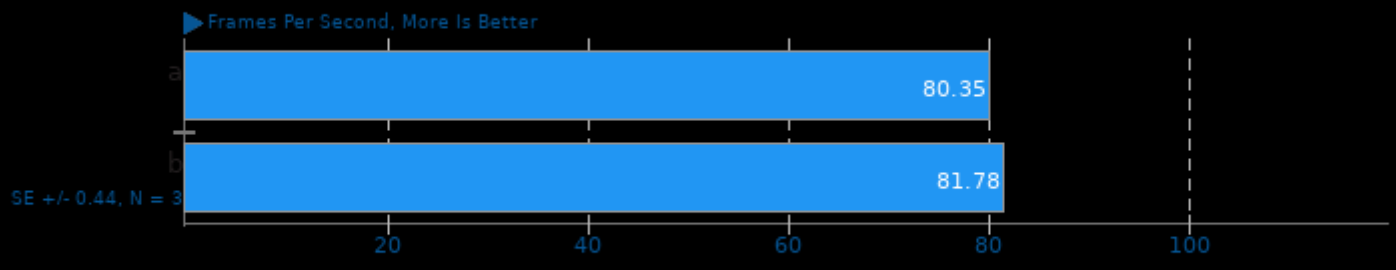
Encoder Mode: Preset 4 - Input: Bosphorus 1080p



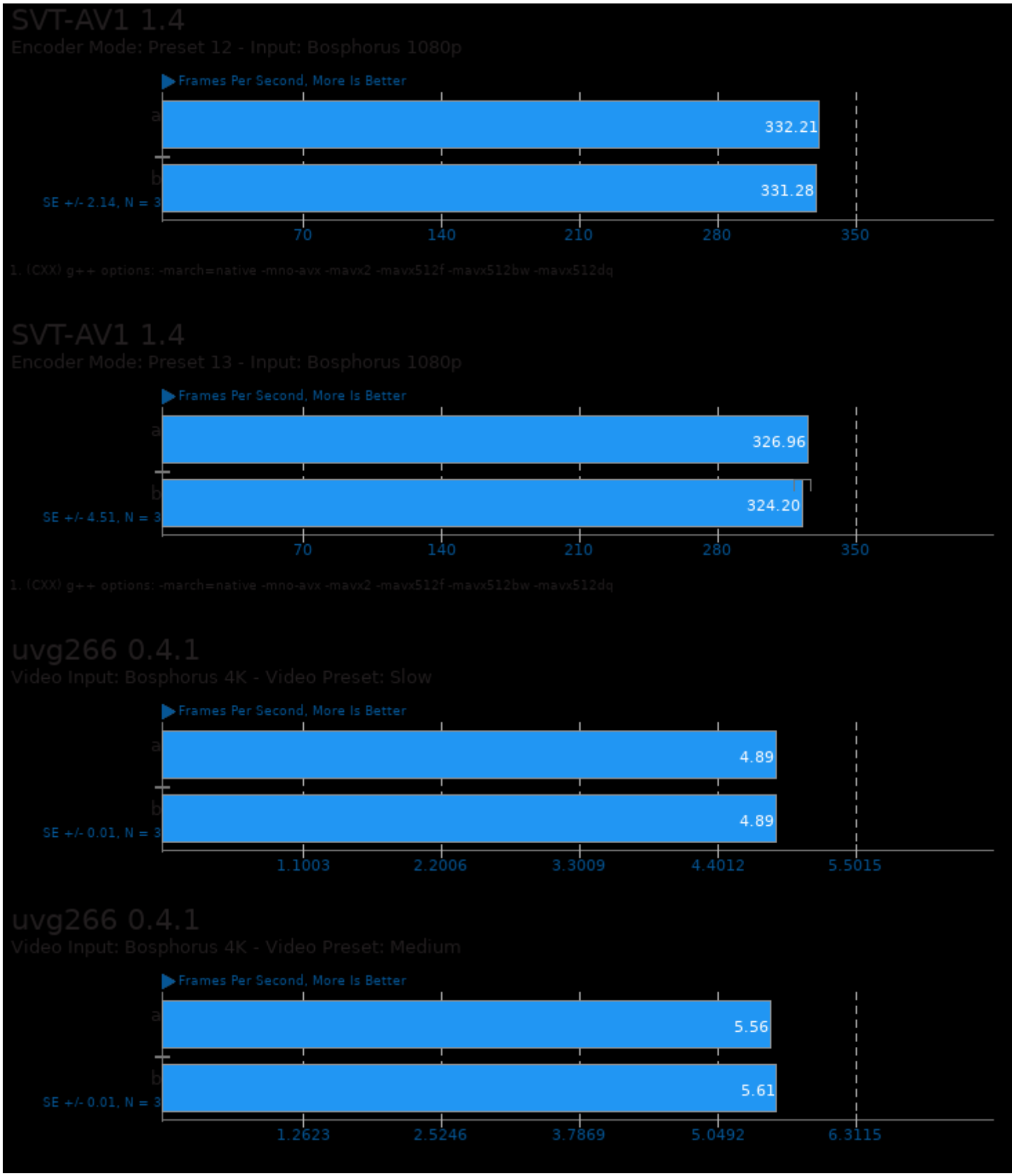
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq

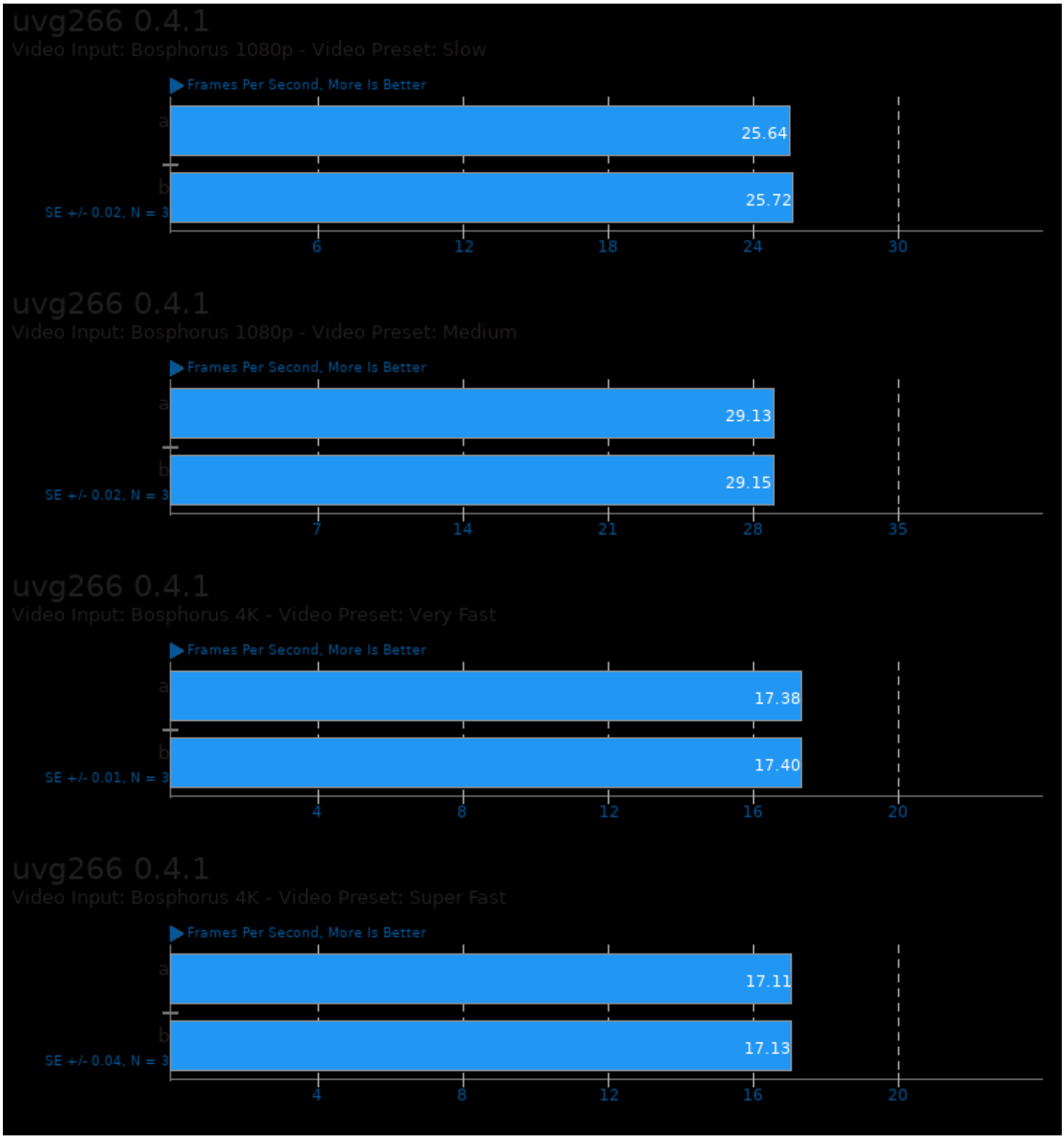
SVT-AV1 1.4

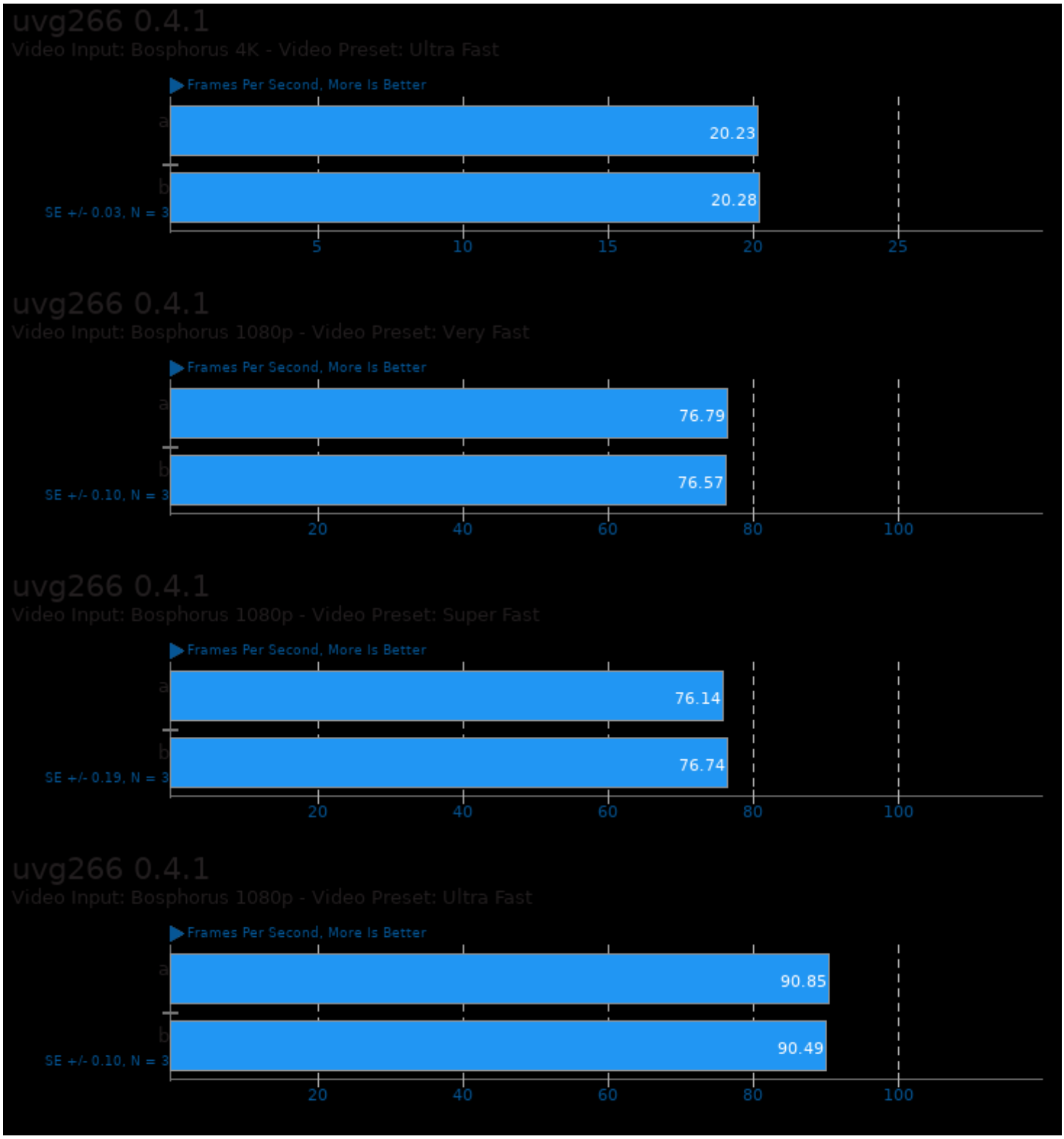
Encoder Mode: Preset 8 - Input: Bosphorus 1080p

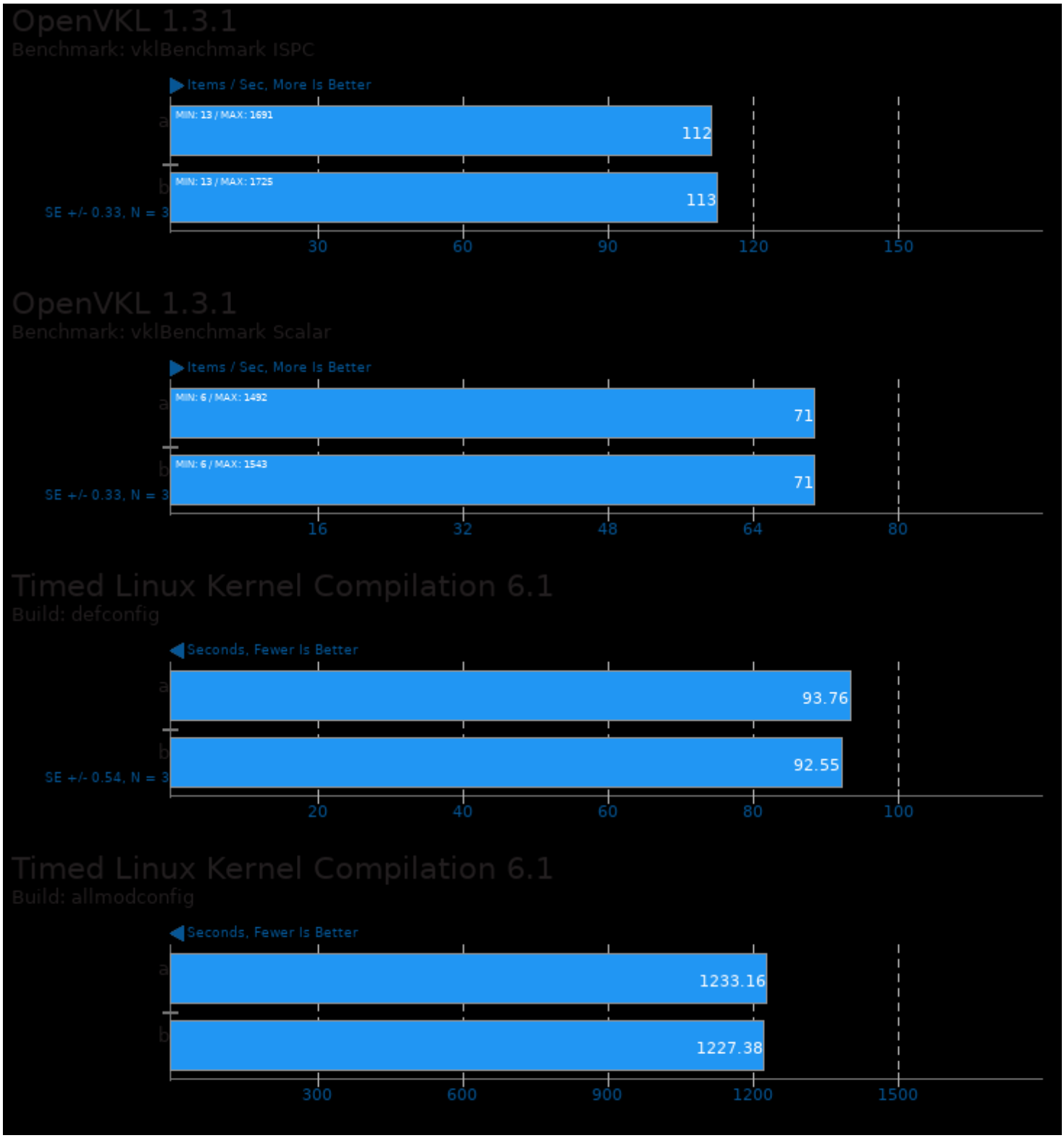


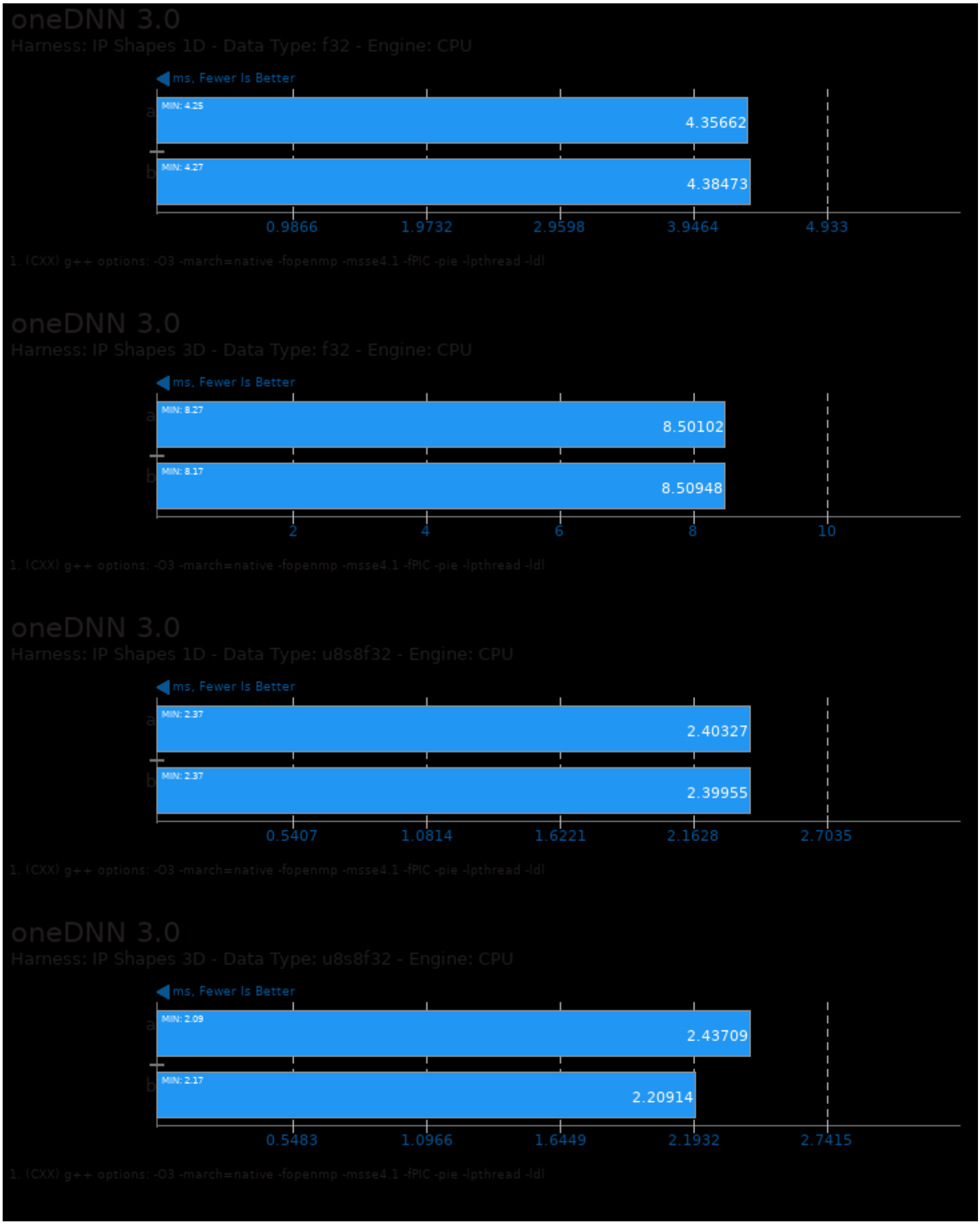
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq


SVT-AV1 1.4
Encoder Mode: Preset 12 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
a
332.21
b
331.28
SE +/- 2.14, N = 3
70
140
210
280
350
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq
SVT-AV1 1.4
Encoder Mode: Preset 13 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
a
326.96
b
324.20
SE +/- 4.51, N = 3
70
140
210
280
350
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq
uvg266 0.4.1
Video Input: Bosphorus 4K - Video Preset: Slow
Frames Per Second, More Is Better
a
4.89
b
4.89
SE +/- 0.01, N = 3
1.1003
2.2006
3.3009
4.4012
5.5015
uvg266 0.4.1
Video Input: Bosphorus 4K - Video Preset: Medium
Frames Per Second, More Is Better
a
5.56
b
5.61
SE +/- 0.01, N = 3
1.2623
2.5246
3.7869
5.0492
6.3115


uvg266 0.4.1
Video Input: Bosphorus 1080p - Video Preset: Slow
Frames Per Second, More Is Better
a
25.64
b
25.72
SE +/- 0.02, N = 3
6
12
18
24
30
uvg266 0.4.1
Video Input: Bosphorus 1080p - Video Preset: Medium
Frames Per Second, More Is Better
a
29.13
b
29.15
SE +/- 0.02, N = 3
7
14
21
28
35
uvg266 0.4.1
Video Input: Bosphorus 4K - Video Preset: Very Fast
Frames Per Second, More Is Better
a
17.38
b
17.40
SE +/- 0.01, N = 3
4
8
12
16
20
uvg266 0.4.1
Video Input: Bosphorus 4K - Video Preset: Super Fast
Frames Per Second, More Is Better
a
17.11
b
17.13
SE +/- 0.04, N = 3
4
8
12
16
20

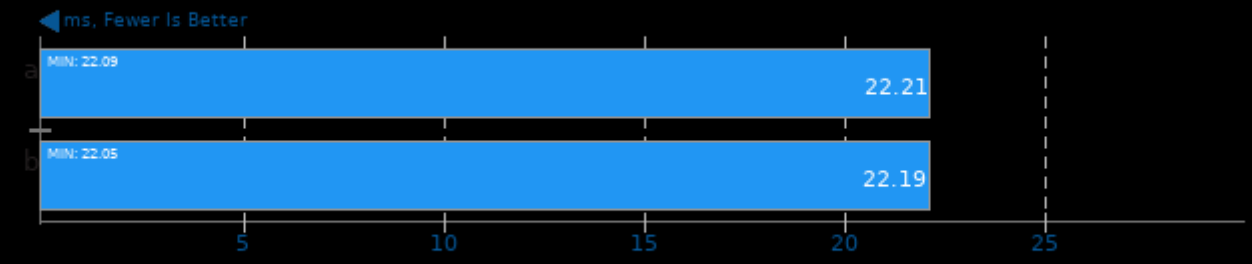

uvg266 0.4.1
Video Input: Bosphorus 4K - Video Preset: Ultra Fast
Frames Per Second, More Is Better
a
20.23
b
20.28
SE +/- 0.03, N = 3
5
10
15
20
25
uvg266 0.4.1
Video Input: Bosphorus 1080p - Video Preset: Very Fast
Frames Per Second, More Is Better
a
76.79
b
76.57
SE +/- 0.10, N = 3
20
40
60
80
100
uvg266 0.4.1
Video Input: Bosphorus 1080p - Video Preset: Super Fast
Frames Per Second, More Is Better
a
76.14
b
76.74
SE +/- 0.19, N = 3
20
40
60
80
100
uvg266 0.4.1
Video Input: Bosphorus 1080p - Video Preset: Ultra Fast
Frames Per Second, More Is Better
a
90.85
b
90.49
SE +/- 0.10, N = 3
20
40
60
80
100


OpenVKL 1.3.1
Benchmark: vklBenchmark ISPC
Items / Sec, More Is Better
a
MIN: 13 / MAX: 1691
112
b
MIN: 13 / MAX: 1725
113
SE +/- 0.33, N = 3
30
60
90
120
150
OpenVKL 1.3.1
Benchmark: vklBenchmark Scalar
Items / Sec, More Is Better
a
MIN: 6 / MAX: 1492
71
b
MIN: 6 / MAX: 1543
71
SE +/- 0.33, N = 3
16
32
48
64
80
Timed Linux Kernel Compilation 6.1
Build: defconfig
Seconds, Fewer Is Better
a
93.76
b
92.55
SE +/- 0.54, N = 3
20
40
60
80
100
Timed Linux Kernel Compilation 6.1
Build: allmodconfig
Seconds, Fewer Is Better
a
1233.16
b
1227.38
300
600
900
1200
1500


oneDNN 3.0
Harness: IP Shapes 1D - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
a
MIN: 4.25
4.35662
b
MIN: 4.27
4.38473
0.9866
1.9732
2.9598
3.9464
4.933
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 3.0
Harness: IP Shapes 3D - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
a
MIN: 8.27
8.50102
b
MIN: 8.17
8.50948
2
4
6
8
10
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 3.0
Harness: IP Shapes 1D - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
a
MIN: 2.37
2.40327
b
MIN: 2.37
2.39955
0.5407
1.0814
1.6221
2.1628
2.7035
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 3.0
Harness: IP Shapes 3D - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
a
MIN: 2.09
2.43709
b
MIN: 2.17
2.20914
0.5483
1.0966
1.6449
2.1932
2.7415
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

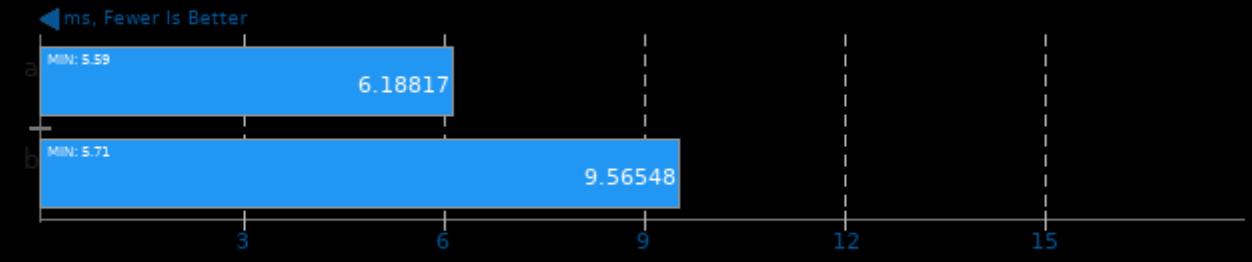
Harness: Convolution Batch Shapes Auto - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

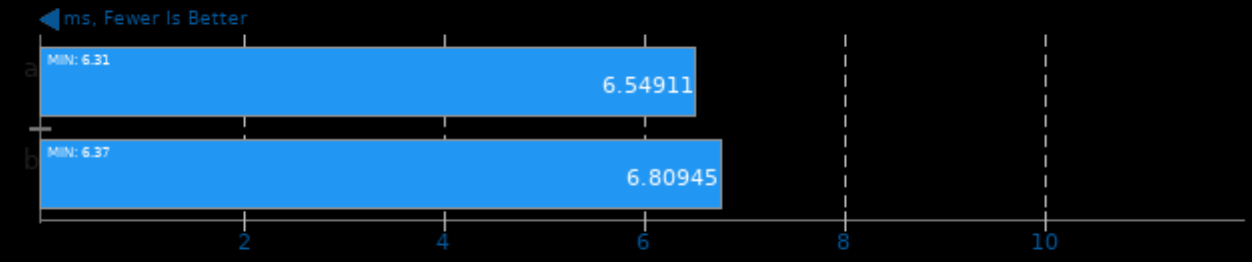
Harness: Deconvolution Batch shapes_1d - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

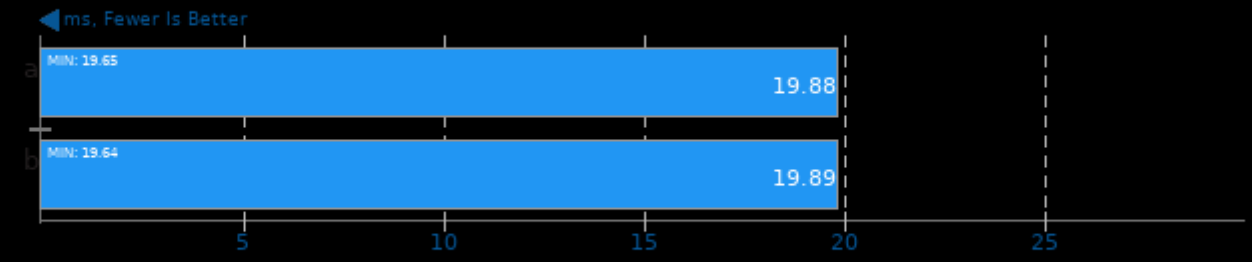
Harness: Deconvolution Batch shapes_3d - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

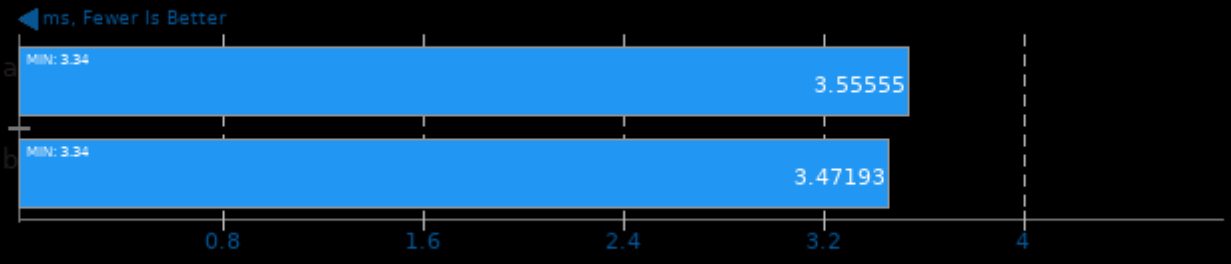
Harness: Convolution Batch Shapes Auto - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

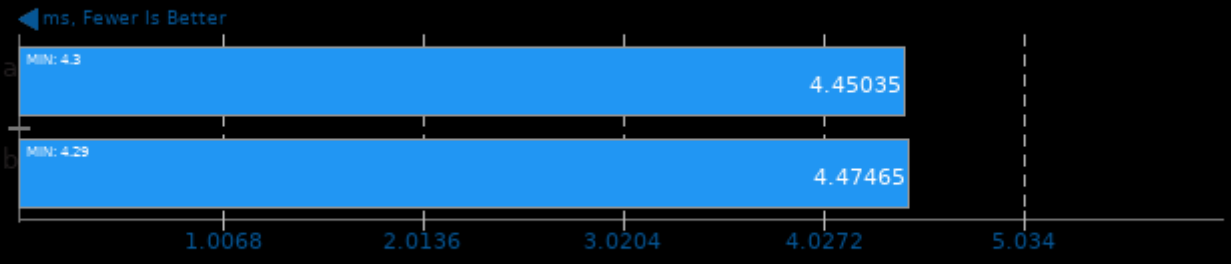
Harness: Deconvolution Batch shapes_1d - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

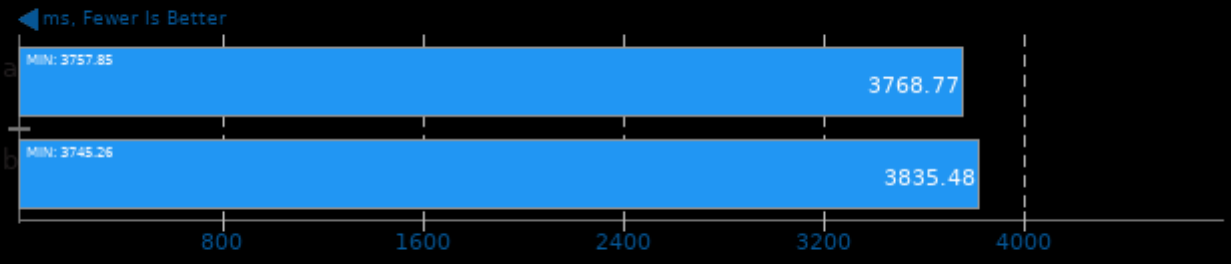
Harness: Deconvolution Batch shapes_3d - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

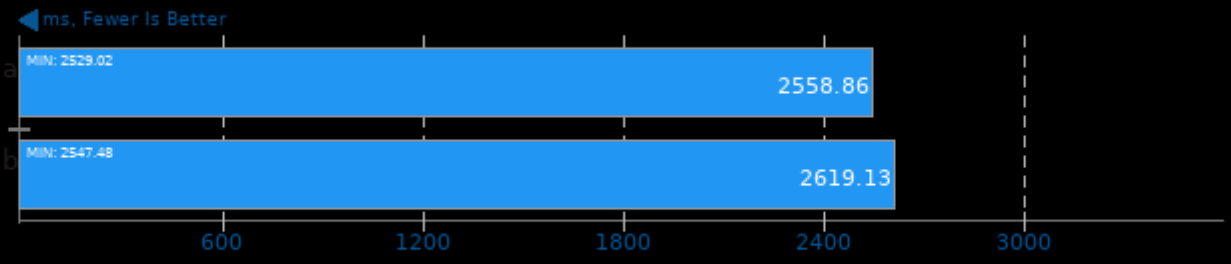
Harness: Recurrent Neural Network Training - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

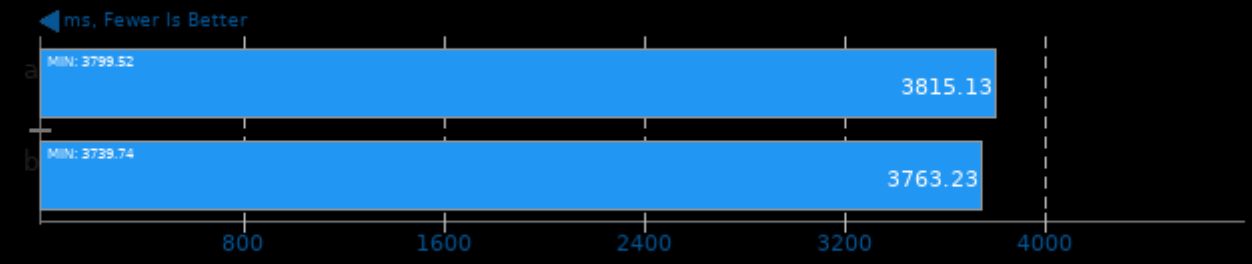
Harness: Recurrent Neural Network Inference - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

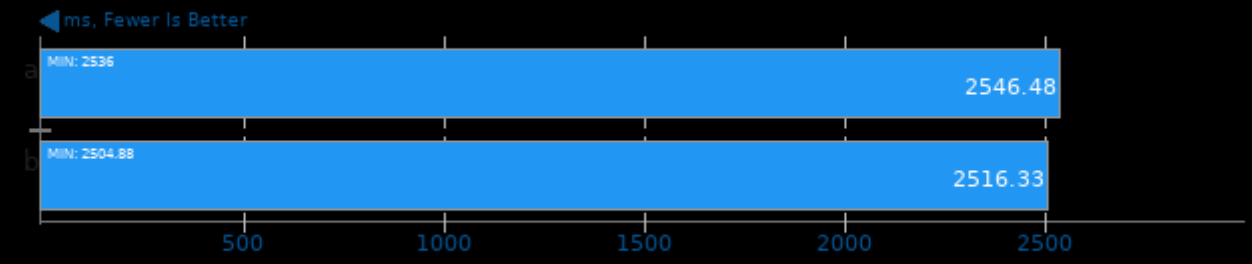
Harness: Recurrent Neural Network Training - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

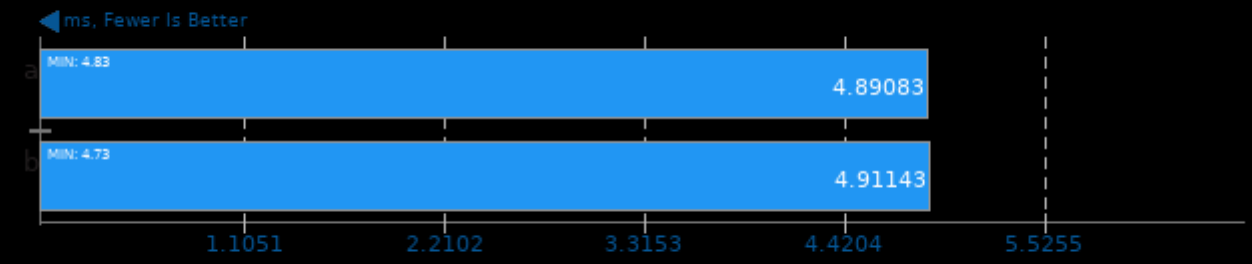
Harness: Recurrent Neural Network Inference - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

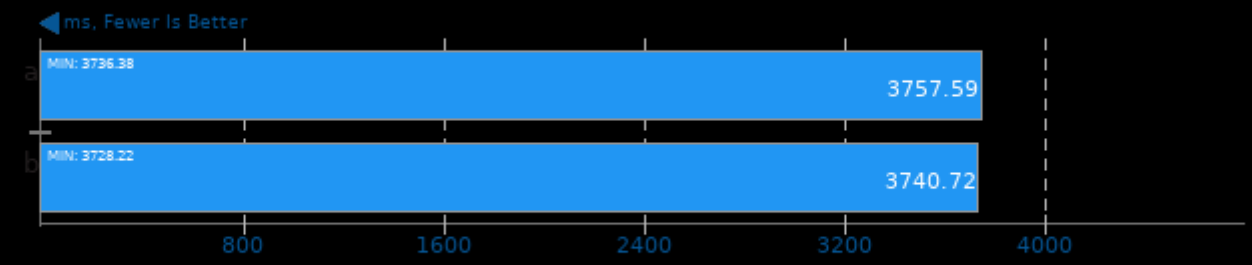
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

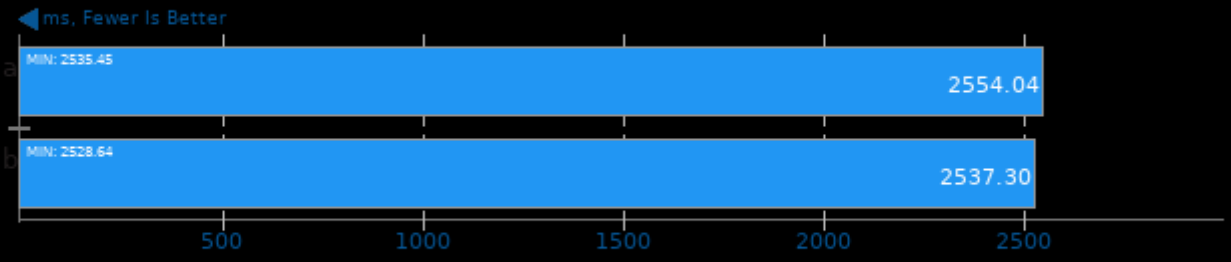
Harness: Recurrent Neural Network Training - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

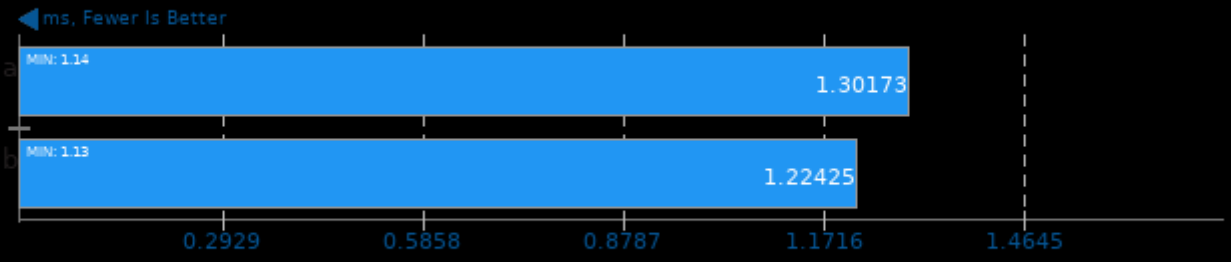
Harness: Recurrent Neural Network Inference - Data Type: bf16bf16bf16 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 3.0

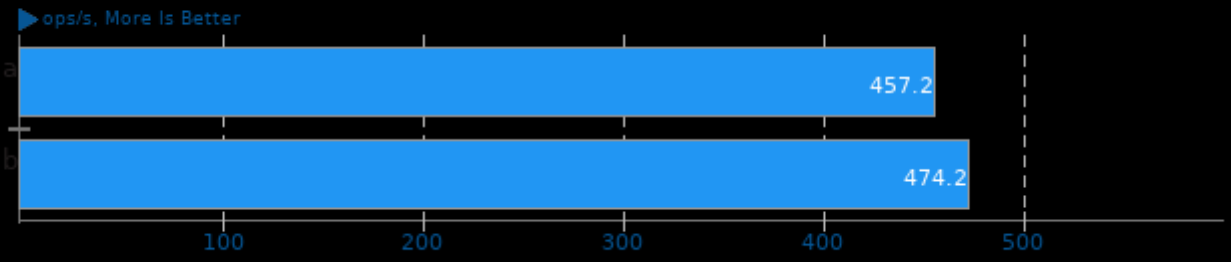
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: u8s8f32 - Engine: CPU



1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

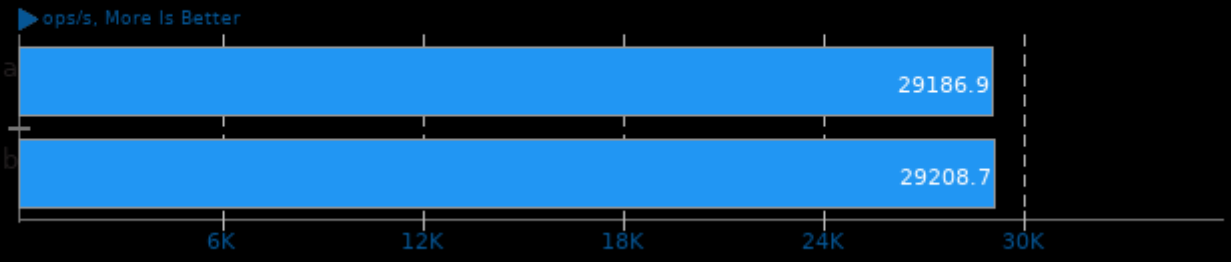
CockroachDB 22.2

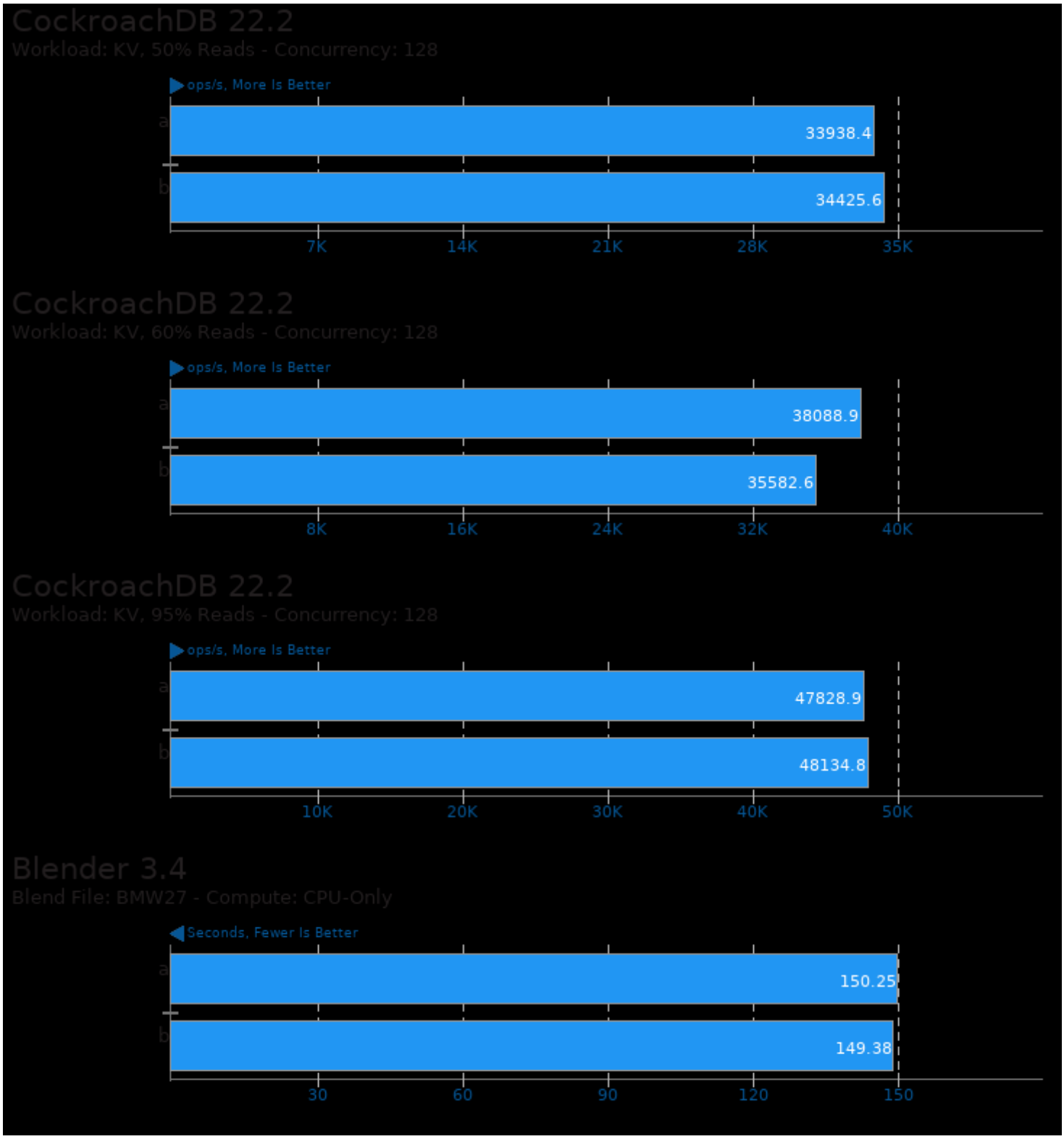
Workload: MoVR - Concurrency: 128



CockroachDB 22.2

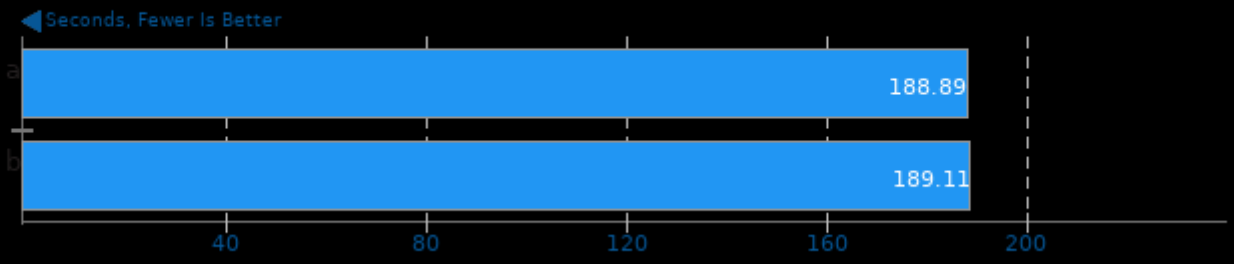
Workload: KV, 10% Reads - Concurrency: 128




CockroachDB 22.2
Workload: KV, 50% Reads - Concurrency: 128
ops/s, More Is Better
a
33938.4
b
34425.6
7K
14K
21K
28K
35K
CockroachDB 22.2
Workload: KV, 60% Reads - Concurrency: 128
ops/s, More Is Better
a
38088.9
b
35582.6
8K
16K
24K
32K
40K
CockroachDB 22.2
Workload: KV, 95% Reads - Concurrency: 128
ops/s, More Is Better
a
47828.9
b
48134.8
10K
20K
30K
40K
50K
Blender 3.4
Blend File: BMW27 - Compute: CPU-Only
Seconds, Fewer Is Better
a
150.25
b
149.38
30
60
90
120
150

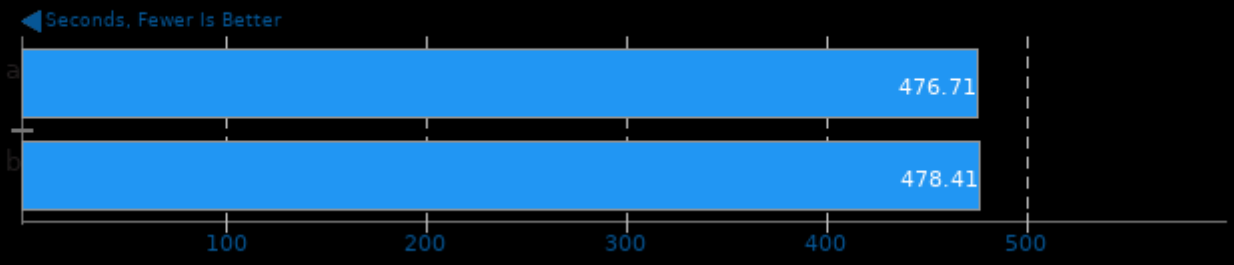
Blender 3.4

Blend File: Fishy Cat - Compute: CPU-Only



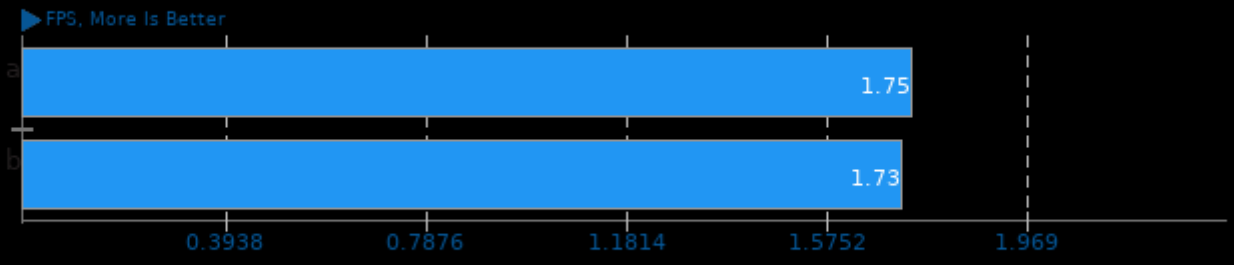
Blender 3.4

Blend File: Pabellon Barcelona - Compute: CPU-Only



OpenVINO 2022.3

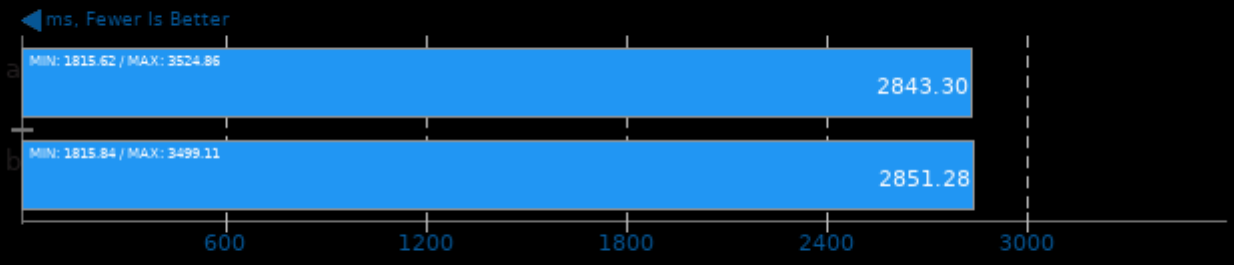
Model: Face Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

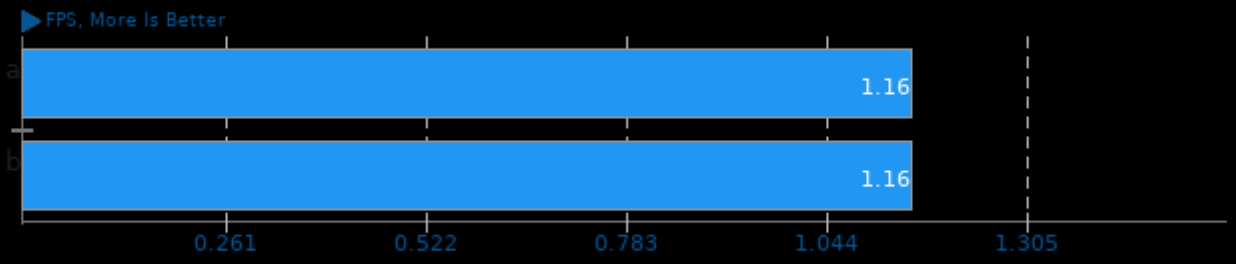
Model: Face Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

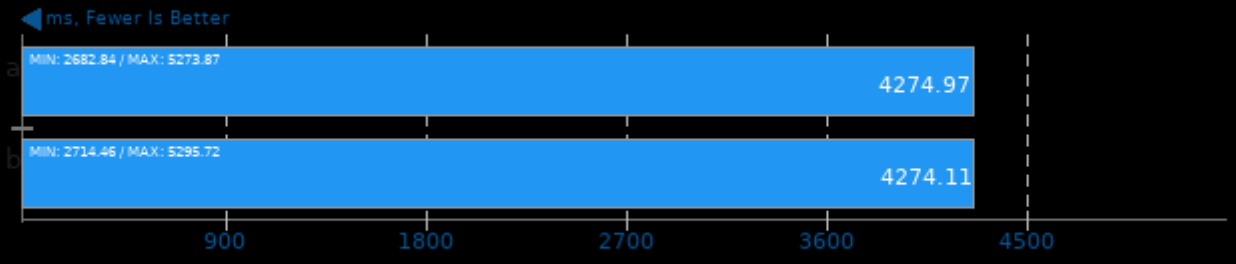
Model: Person Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

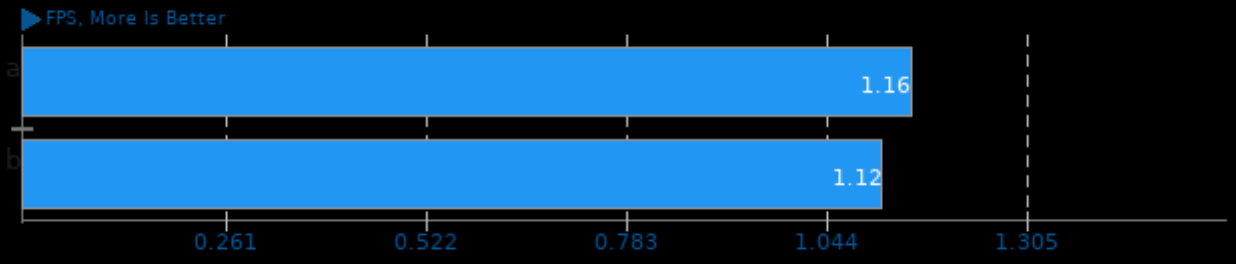
Model: Person Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

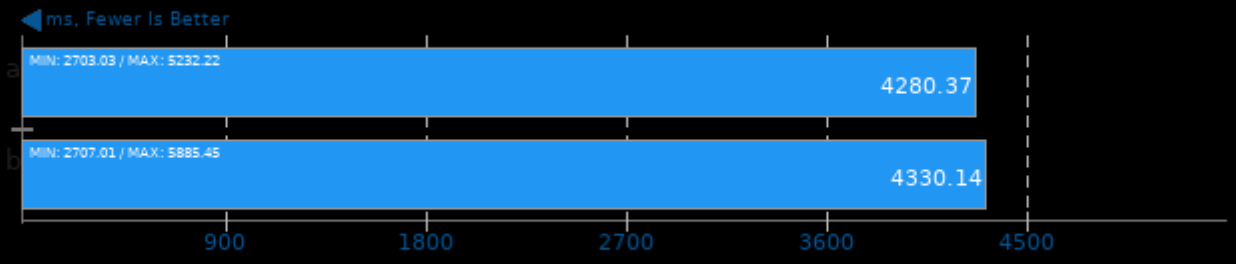
Model: Person Detection FP32 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

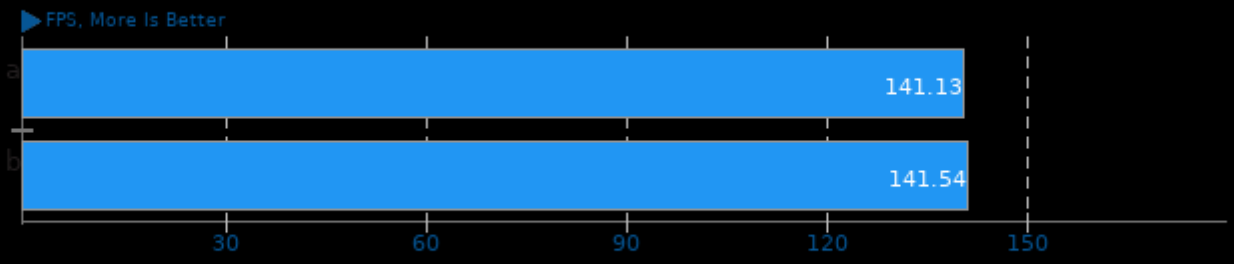
Model: Person Detection FP32 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

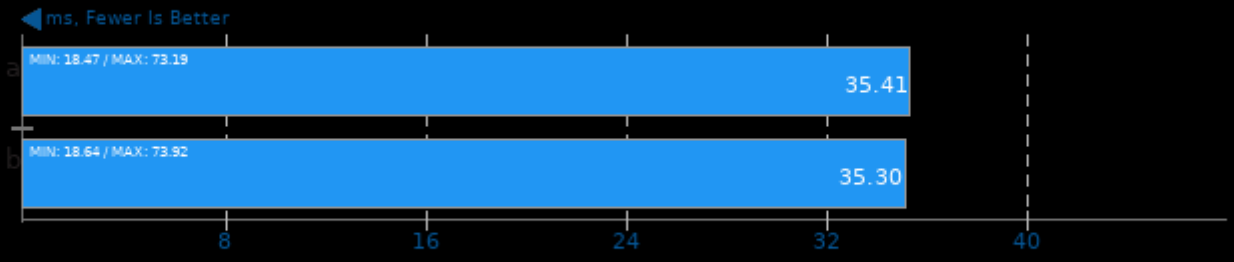
Model: Vehicle Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

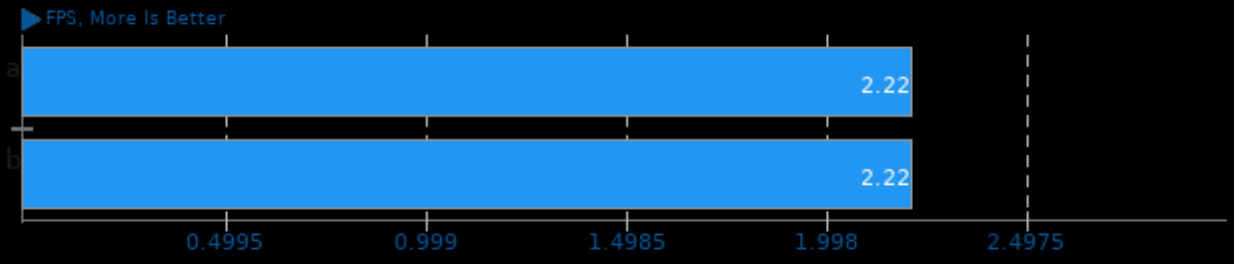
Model: Vehicle Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

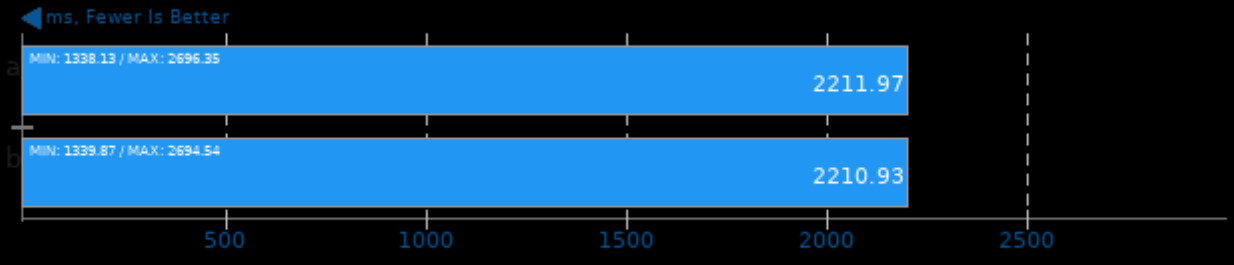
Model: Face Detection FP16-INT8 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

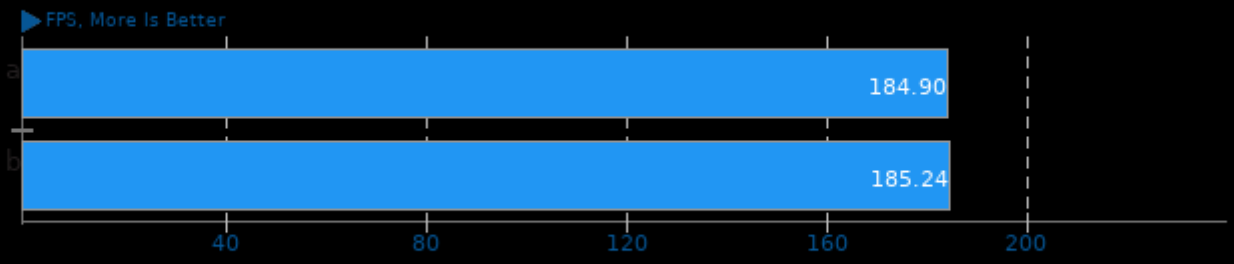
Model: Face Detection FP16-INT8 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

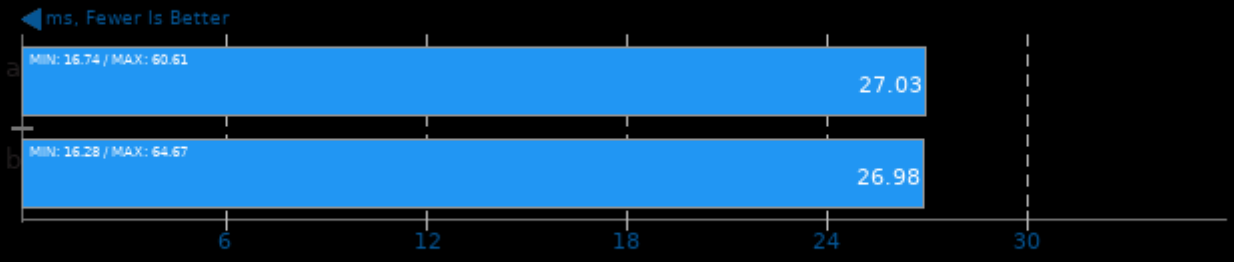
Model: Vehicle Detection FP16-INT8 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

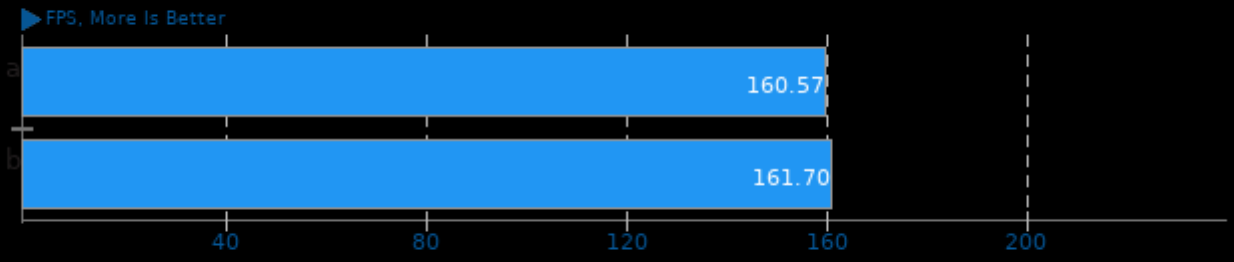
Model: Vehicle Detection FP16-INT8 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

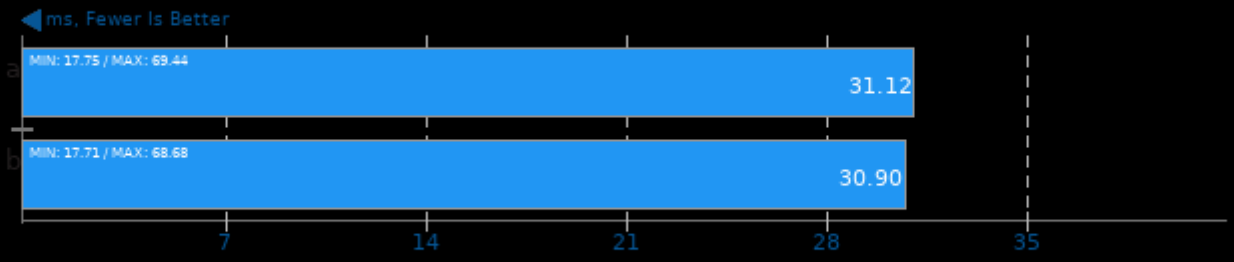
Model: Weld Porosity Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

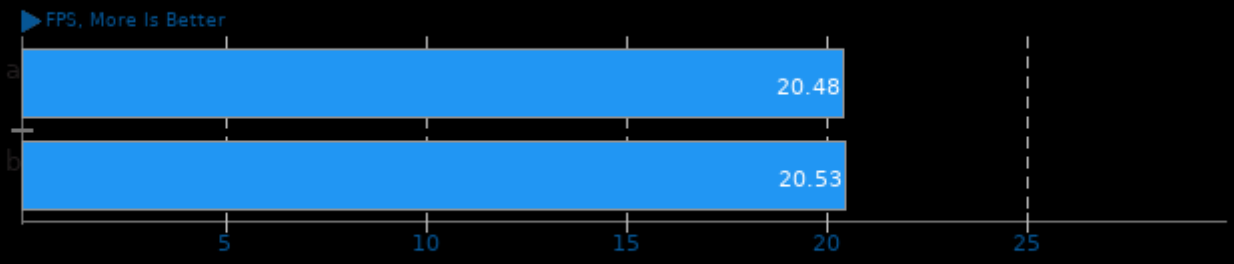
Model: Weld Porosity Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

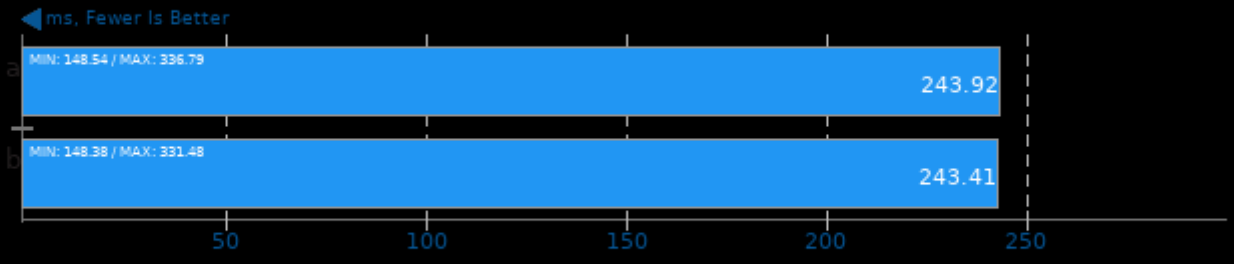
Model: Machine Translation EN To DE FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

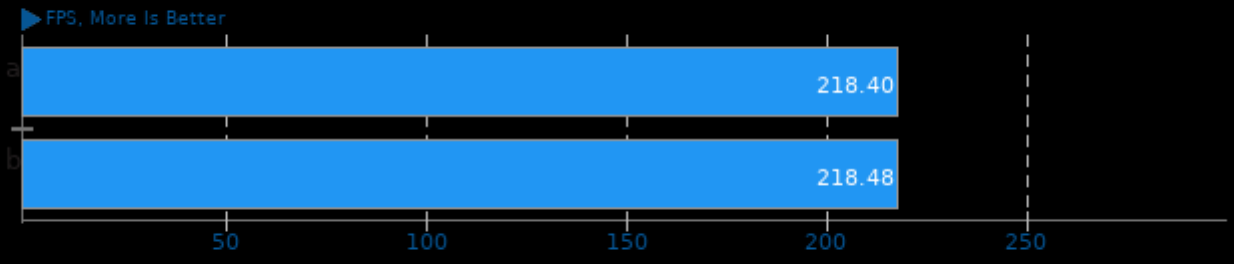
Model: Machine Translation EN To DE FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

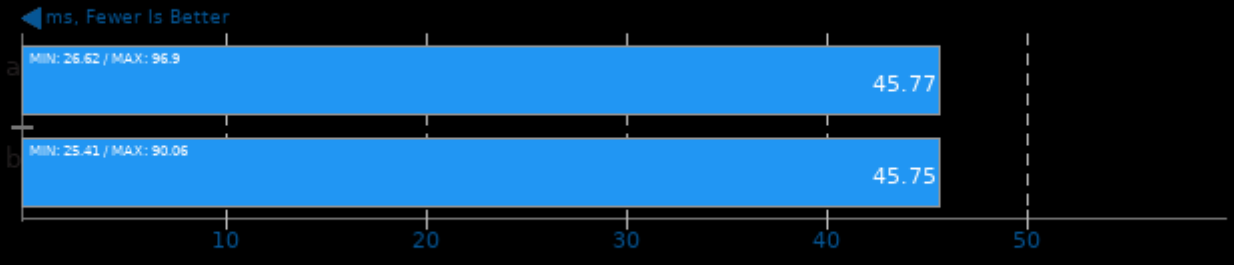
Model: Weld Porosity Detection FP16-INT8 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

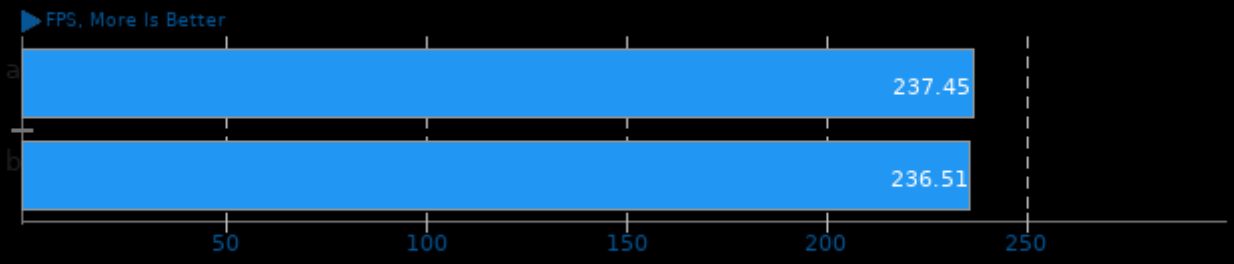
Model: Weld Porosity Detection FP16-INT8 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

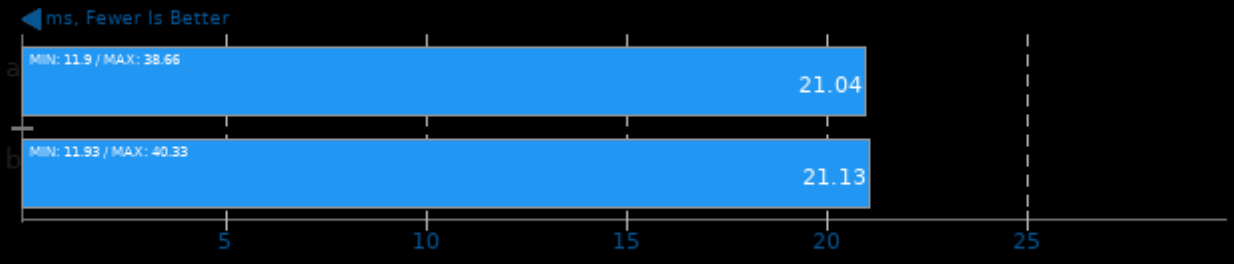
Model: Person Vehicle Bike Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

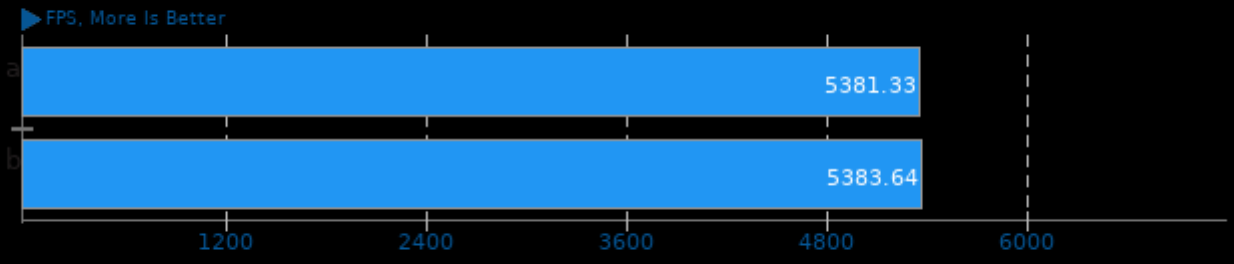
Model: Person Vehicle Bike Detection FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

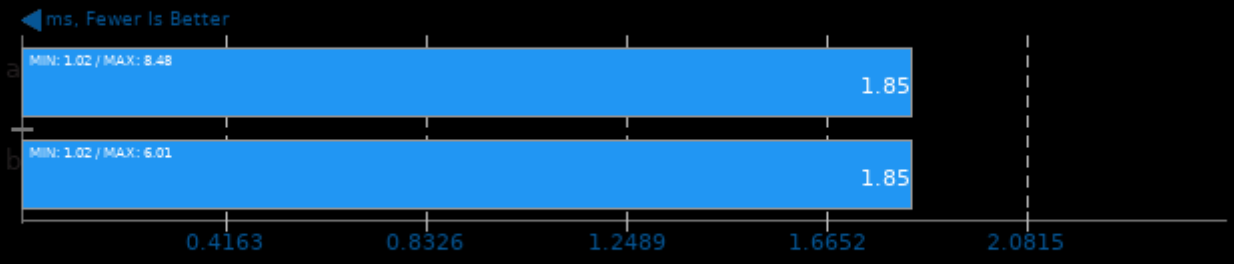
Model: Age Gender Recognition Retail 0013 FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

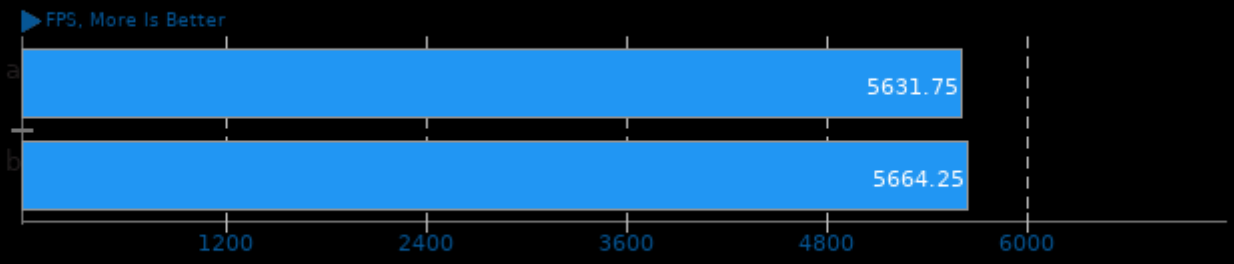
Model: Age Gender Recognition Retail 0013 FP16 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

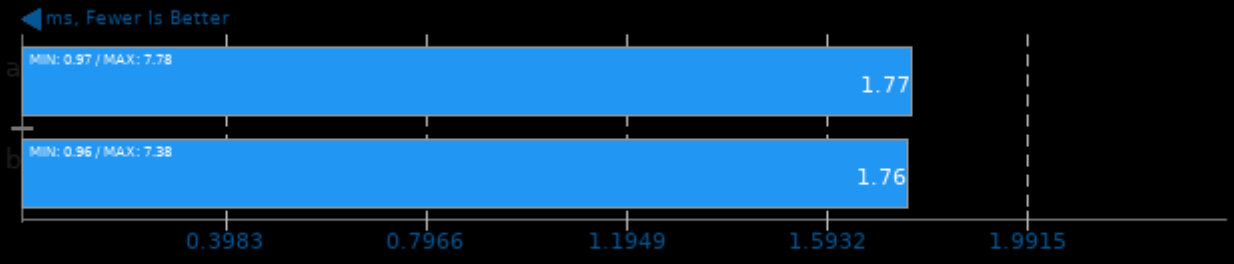
Model: Age Gender Recognition Retail 0013 FP16-INT8 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

OpenVINO 2022.3

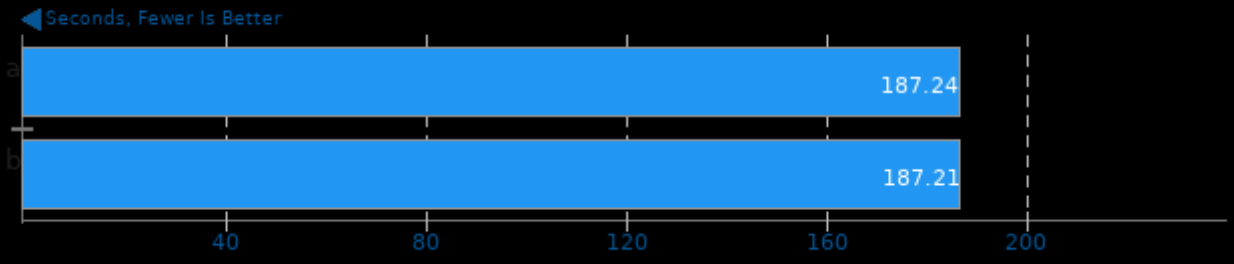
Model: Age Gender Recognition Retail 0013 FP16-INT8 - Device: CPU



1. (CXX) g++ options: -fPIC -fsigned-char -ffunction-sections -fdata-sections -O3 -fno-strict-overflow -fwrapv -shared

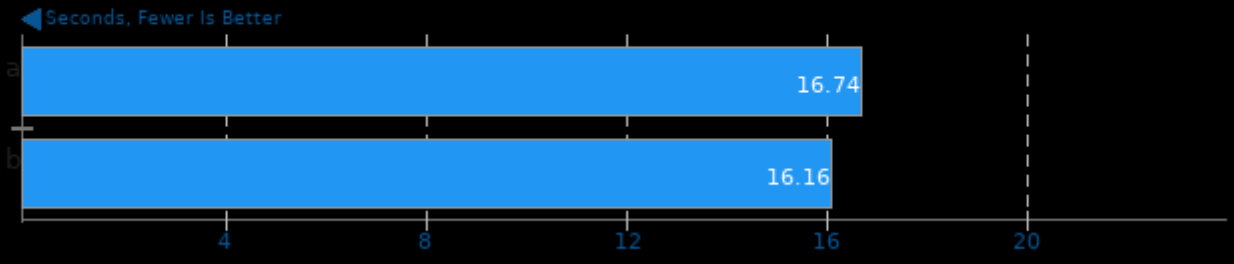
Numenta Anomaly Benchmark 1.1

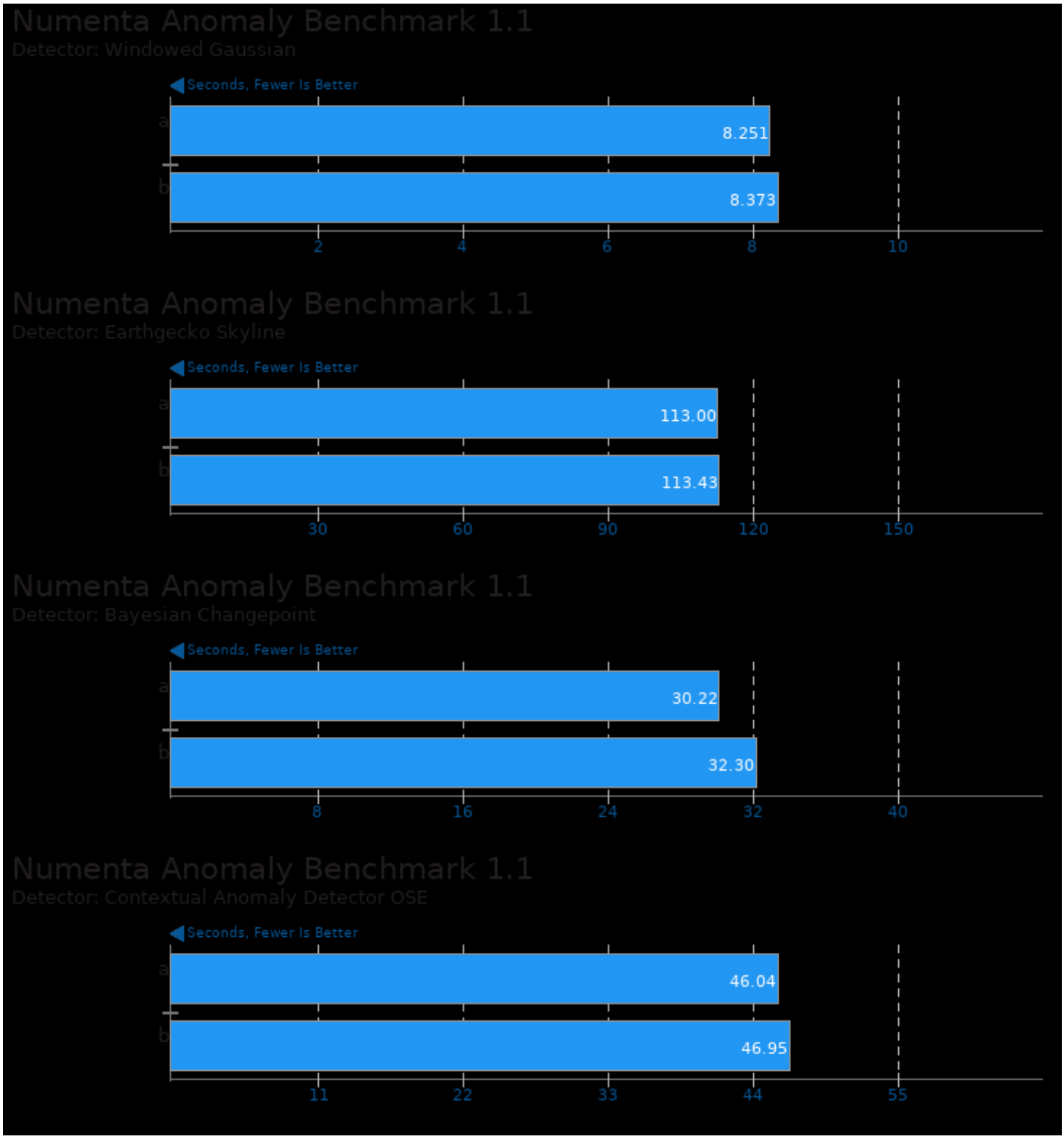
Detector: KNN CAD

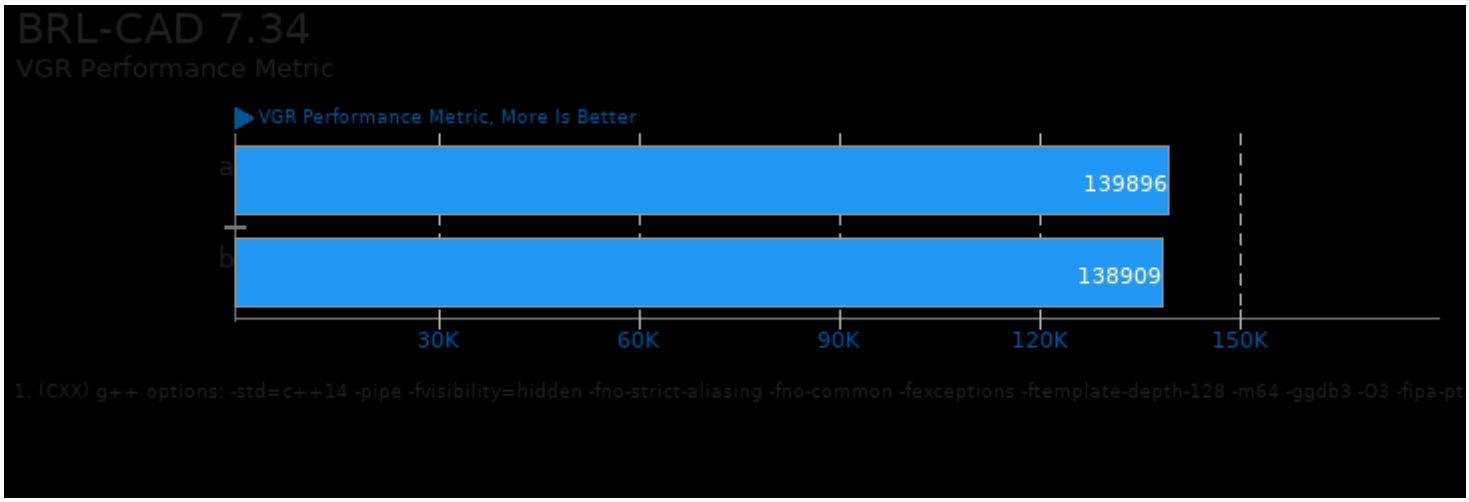


Numenta Anomaly Benchmark 1.1

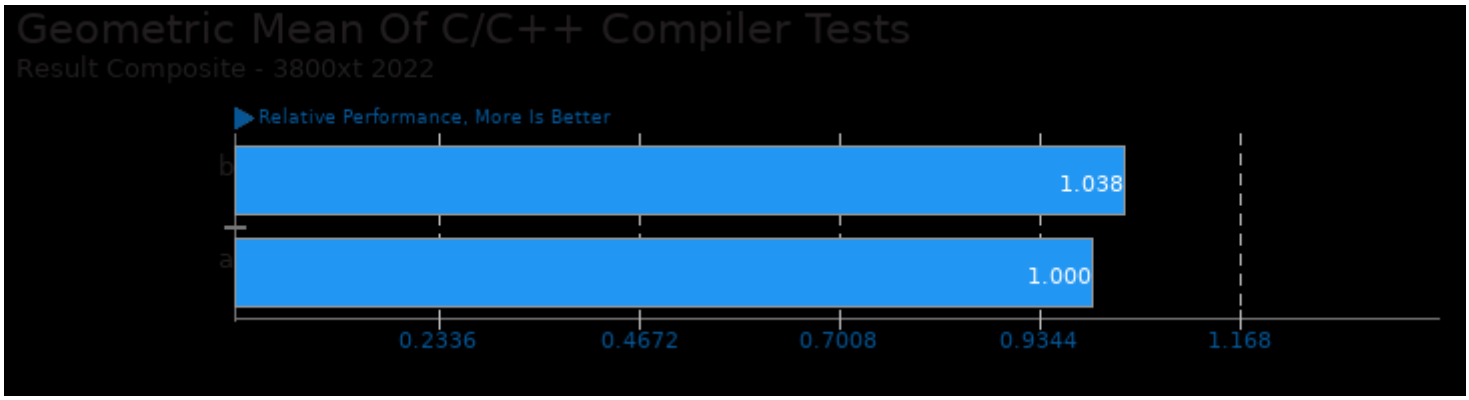
Detector: Relative Entropy



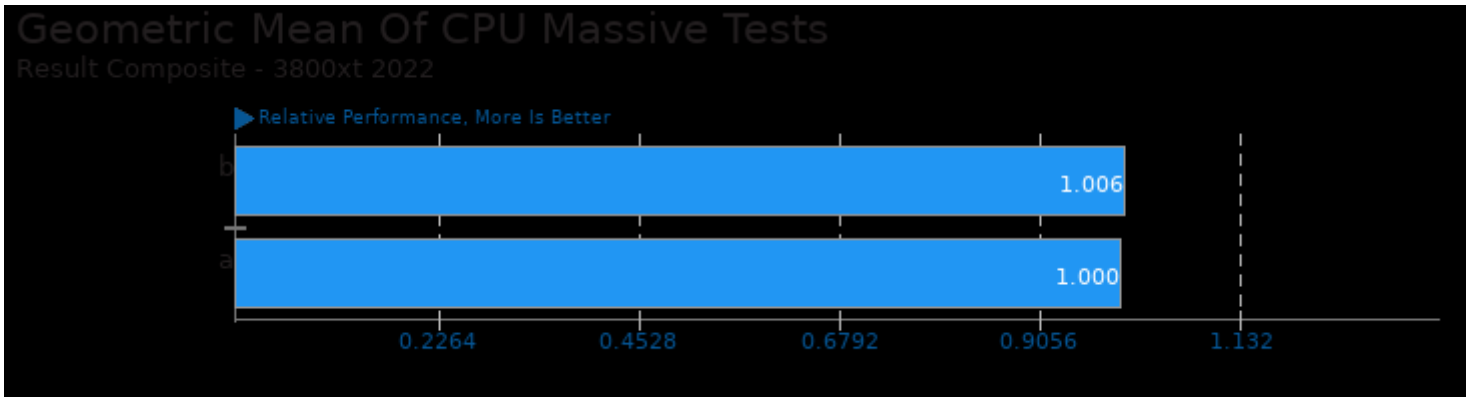

Numenta Anomaly Benchmark 1.1
Detector: Windowed Gaussian
Seconds, Fewer Is Better
a
8.251
b
8.373
2
4
6
8
10
Numenta Anomaly Benchmark 1.1
Detector: Earthgecko Skyline
Seconds, Fewer Is Better
a
113.00
b
113.43
30
60
90
120
150
Numenta Anomaly Benchmark 1.1
Detector: Bayesian Changepoint
Seconds, Fewer Is Better
a
30.22
b
32.30
8
16
24
32
40
Numenta Anomaly Benchmark 1.1
Detector: Contextual Anomaly Detector OSE
Seconds, Fewer Is Better
a
46.04
b
46.95
11
22
33
44
55


BRL-CAD 7.34
VGR Performance Metric
VGR Performance Metric, More Is Better
a
b
139896
138909
30K
60K
90K
120K
150K
1. (CXX) g++ options: -std=c++14 -pipe -fvisibility=hidden -fno-strict-aliasing -fno-common -fexceptions -ftemplate-depth-128 -m64 -ggdb3 -O3 -fipa-pt

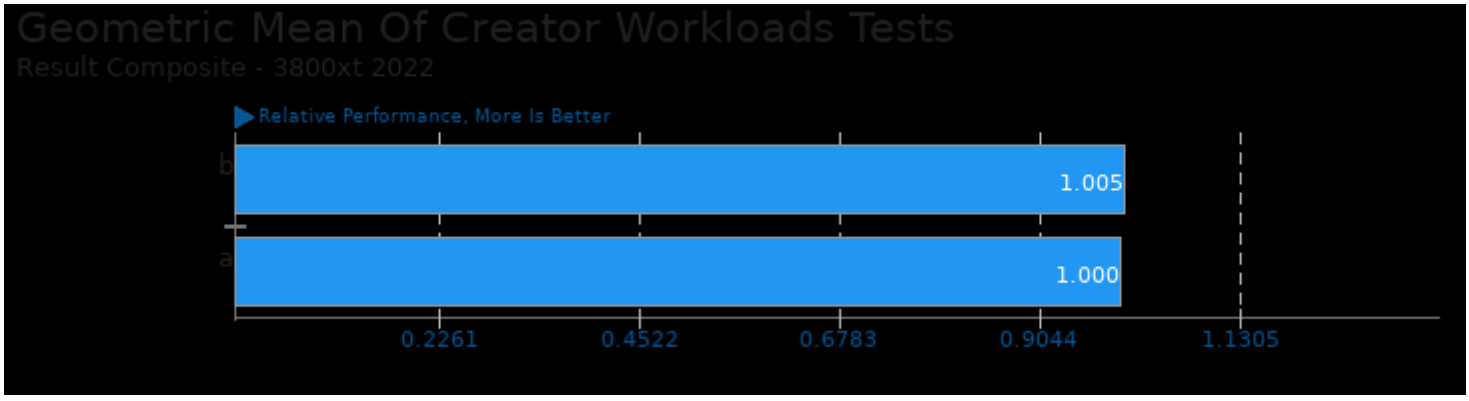
These geometric means are based upon test groupings / test suites for this result file.



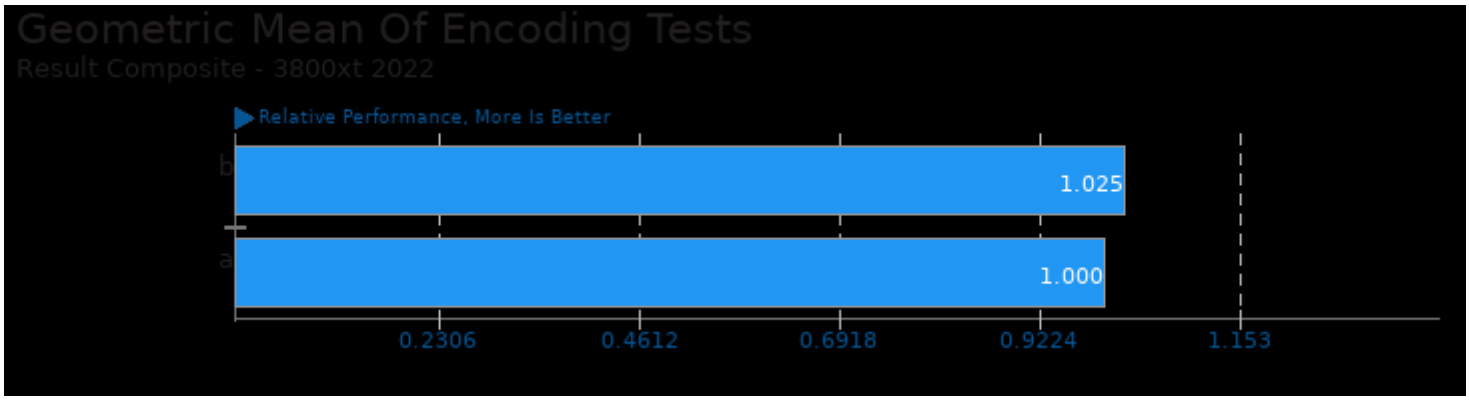
Geometric mean based upon tests: pts/kvazaar and pts/svt-av1



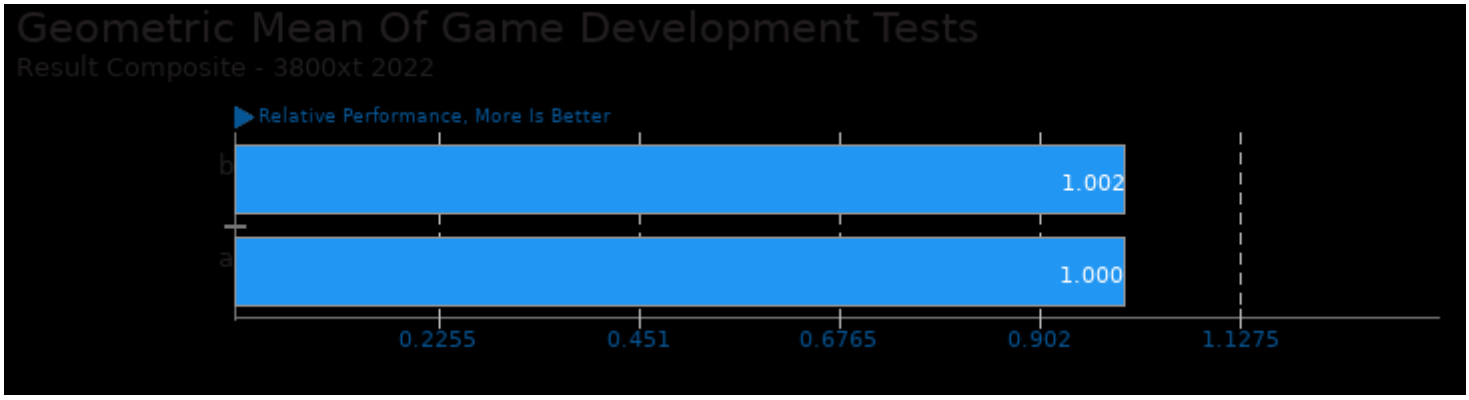
Geometric mean based upon tests: pts/brl-cad, pts/build-linux-kernel, pts/svt-av1, pts/onednn, pts/numenta-nab and pts/blender



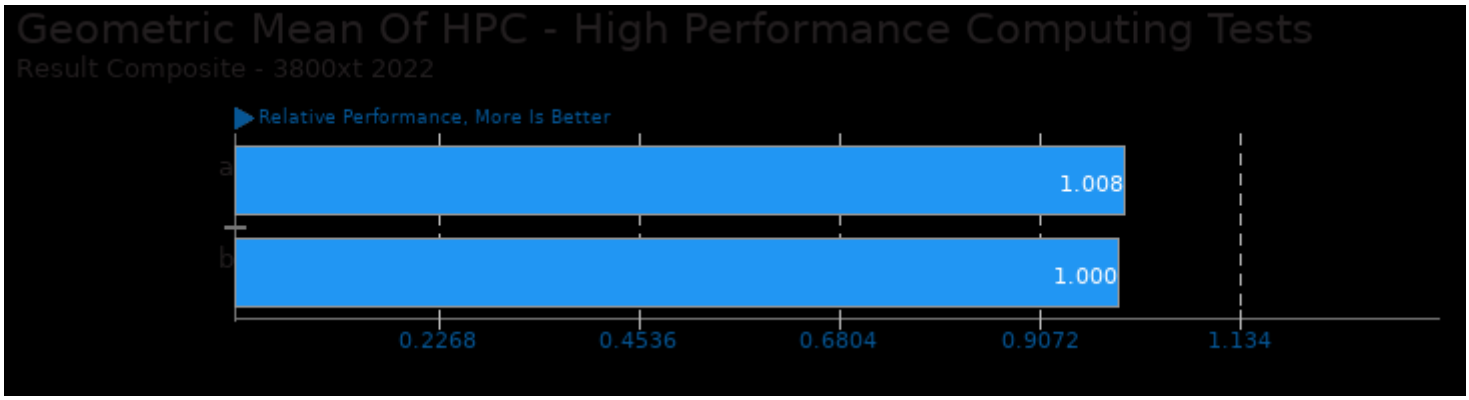
Geometric mean based upon tests: pts/blender, pts/kvazaar, pts/uvg266, pts/svt-av1, pts/onednn, pts/openvkl, pts/openvino and pts/brl-cad



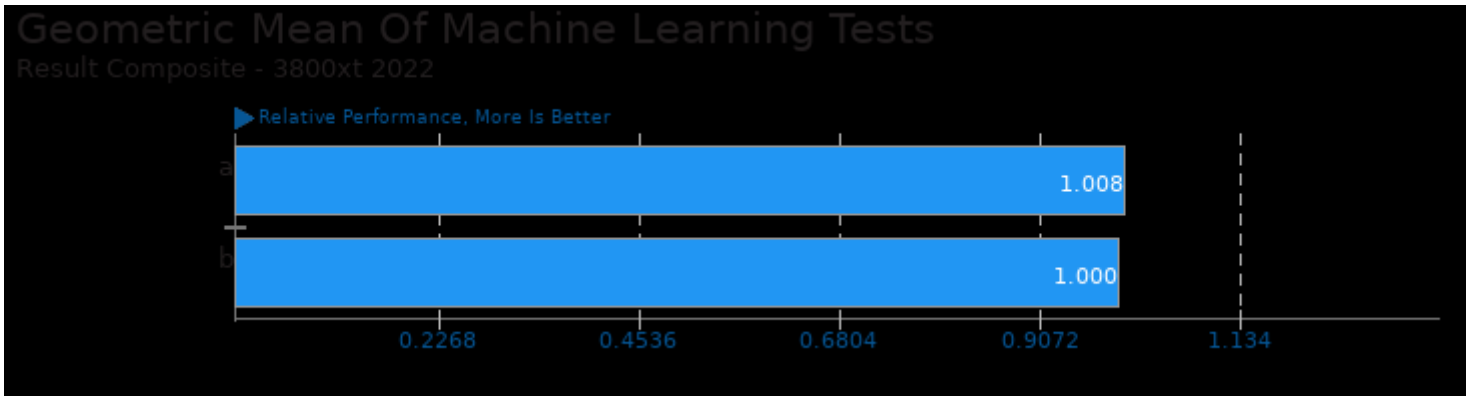
Geometric mean based upon tests: pts/kvazaar, pts/uvg266 and pts/svt-av1



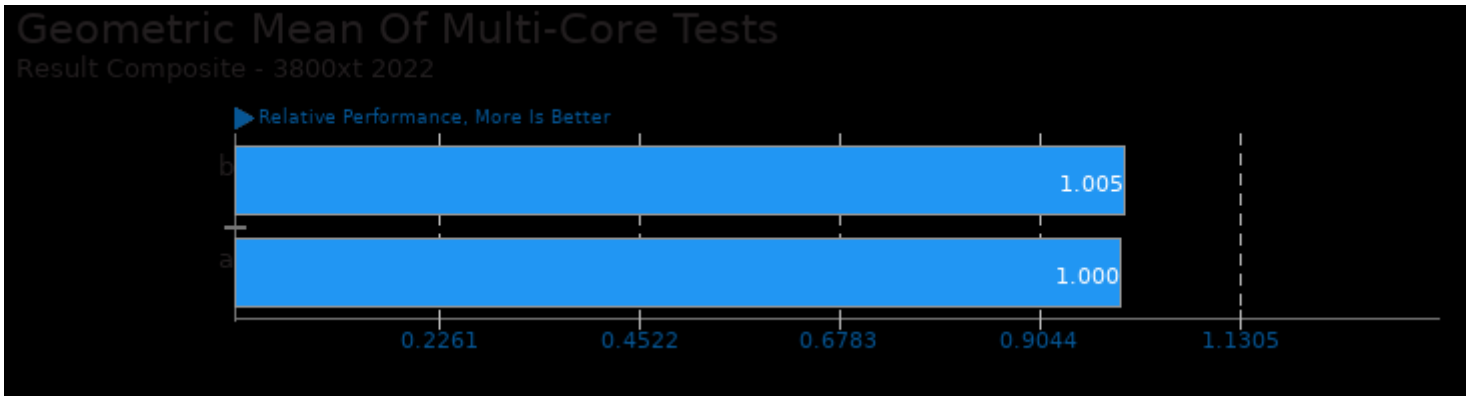
Geometric mean based upon tests: pts/blender and pts/openvkl



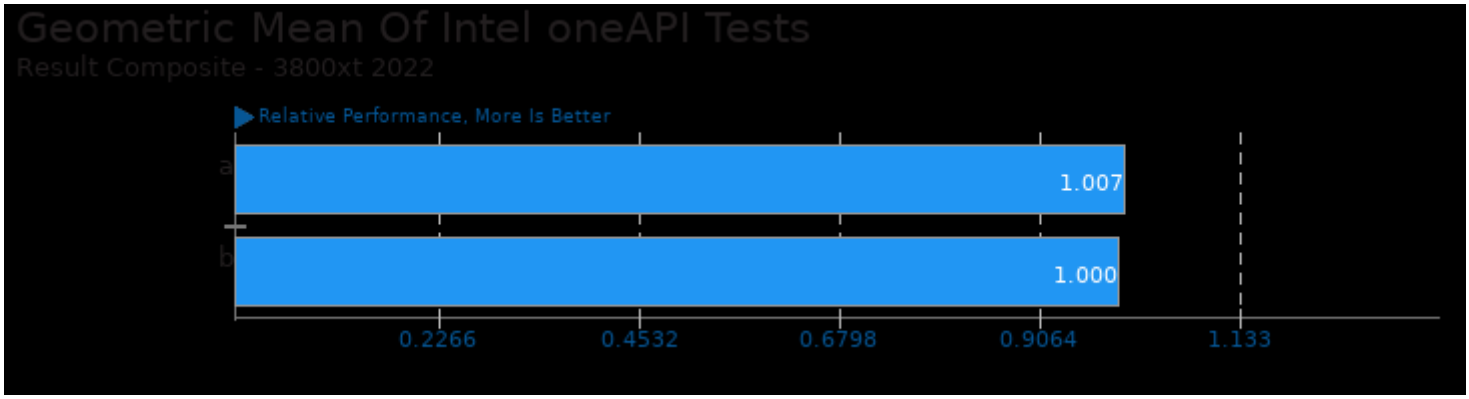
Geometric mean based upon tests: pts/numenta-nab, pts/onednn and pts/openvino



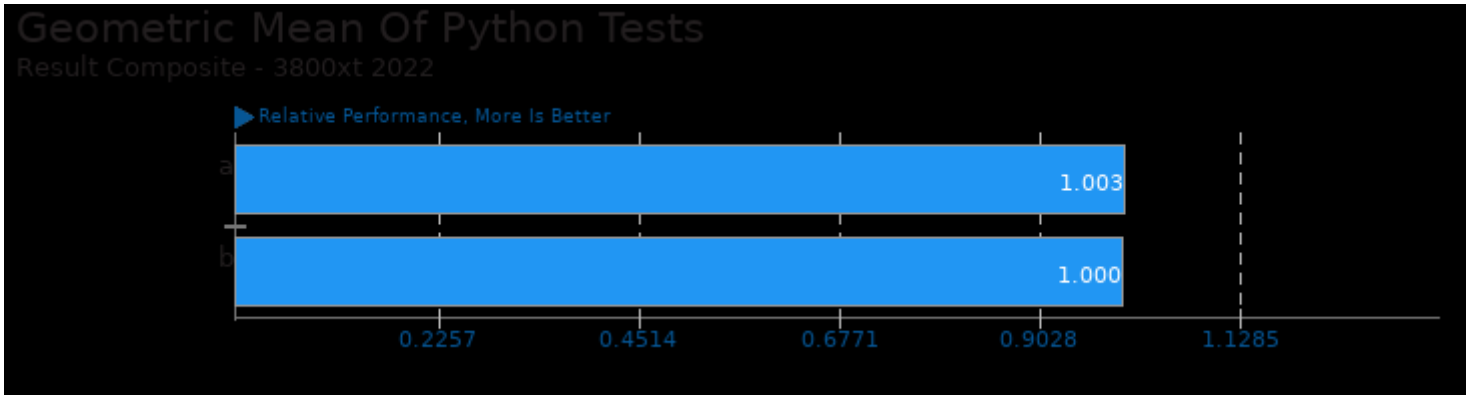
Geometric mean based upon tests: pts/numenta-nab, pts/onednn and pts/openvino



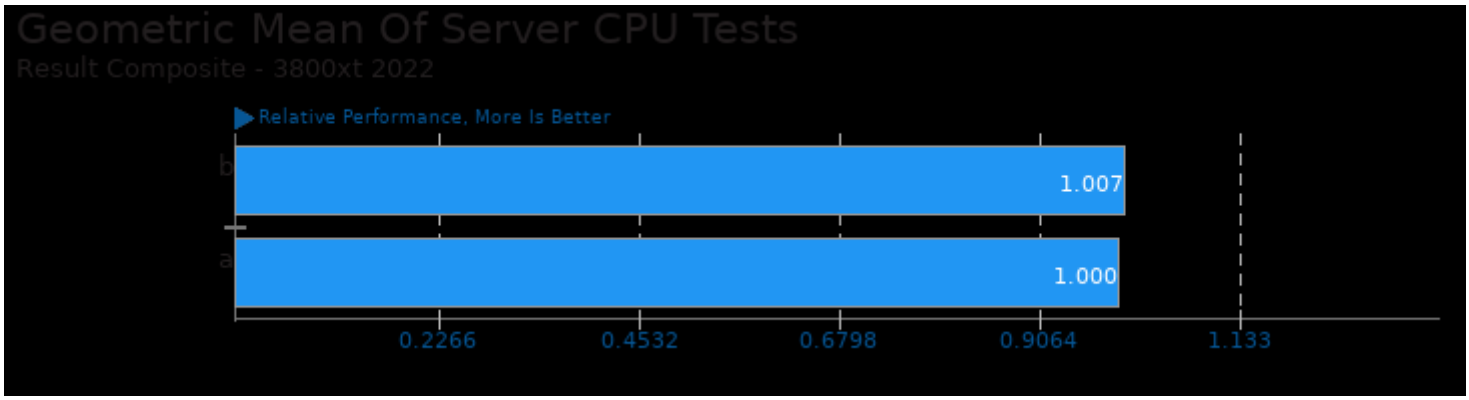
Geometric mean based upon tests: pts/blender, pts/kvazaar, pts/uvg266, pts/svt-av1, pts/onednn, pts/build-linux-kernel, pts/openvkl and pts/openvino



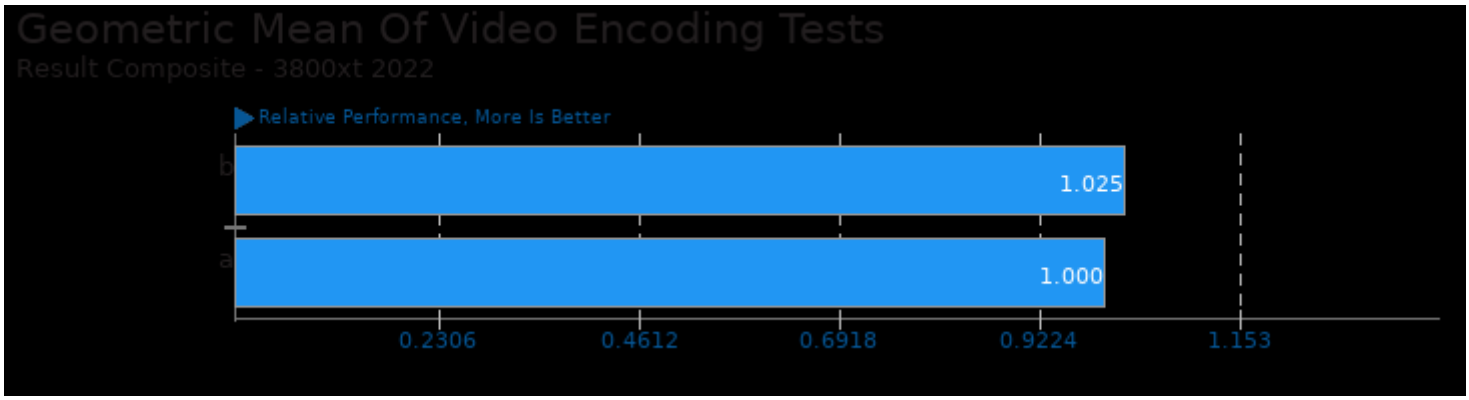
Geometric mean based upon tests: pts/onednn, pts/openvkl and pts/openvino



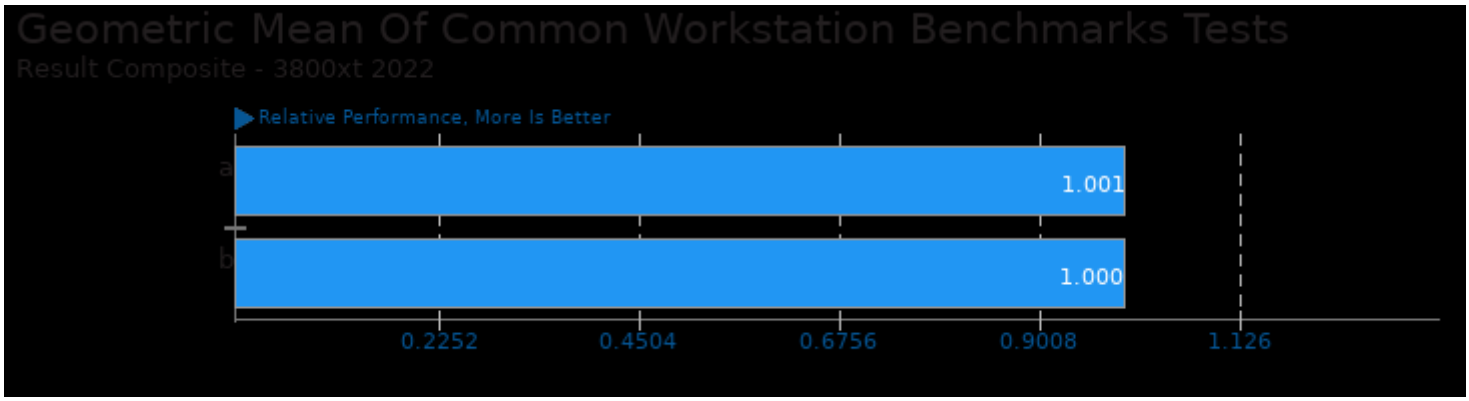
Geometric mean based upon tests: pts/openvino and pts/numenta-nab



Geometric mean based upon tests: pts/onednn, pts/svt-av1, pts/build-linux-kernel, pts/blender and pts/numenta-nab



Geometric mean based upon tests: pts/kvazaar, pts/uvg266 and pts/svt-av1



Geometric mean based upon tests: pts/blender and pts/brl-cad

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 11:21.