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Intel Xeon Gold 6226R testing with a Supermicro X11SPL-F v1.02 (3.1 BIOS) and ASPEED on Ubuntu 20.10 via the Phoronix Test Suite.

Automated Executive Summary

D had the most wins, coming in first place for 34% of the tests.

Based on the geometric mean of all complete results, the fastest (D) was 1.007x the speed of the slowest (C). A was 0.996x the speed of D, B was 0.999x the speed of A, C was 0.998x the speed of B.

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

oneDNN (Harness: Deconvolution Batch shapes_1d - Data Type: bf16bf16bf16 - Engine: CPU) at 2.721x
oneDNN (Harness: Recurrent Neural Network Inference - Data Type: f32 - Engine: CPU) at 1.918x
Stress-NG (Test: Context Switching) at 1.4x
oneDNN (Harness: Deconvolution Batch shapes_1d - Data Type: f32 - Engine: CPU) at 1.385x
AOM AV1 (Encoder Mode: Speed 6 Realtime - Input: Bosphorus 1080p) at 1.169x
perf-bench (Benchmark: Epoll Wait) at 1.152x
AOM AV1 (Encoder Mode: Speed 9 Realtime - Input: Bosphorus 1080p) at 1.132x
Renaissance (Test: Scala Dotty) at 1.13x
Stress-NG (Test: Futex) at 1.125x

AOM AV1 (Encoder Mode: Speed 8 Realtime - Input: Bosphorus 1080p) at 1.122x.

Test Systems:

A

B

C

D

Processor: Intel Xeon Gold 6226R @ 3.90GHz (16 Cores / 32 Threads), Motherboard: Supermicro X11SPL-F v1.02 (3.1 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 192GB, Disk: 280GB INTEL SSDPED1D280GA, Graphics: ASPEED, Monitor: VE228, Network: 2 x Intel I210

OS: Ubuntu 20.10, Kernel: 5.11.0-rc4-max-boost-inv-patch (x86_64) 20210121, Desktop: GNOME Shell 3.38.1, Display Server: X Server 1.20.9, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
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-poYruo/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-poYruo/gcc-10-10.3.0/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-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: intel_cpufreq schedutil - CPU Microcode: 0x5003102
Java Notes: OpenJDK Runtime Environment (build 11.0.11+9-Ubuntu-0ubuntu2.20.10)
Python Notes: Python 3.8.10
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: Mitigation of TSX disabled

	A	B	C	D
7-Zip Compression - Compression Rating (MIPS)	109783	**110223**		**108975**
Normalized	99.6%	100%		98.87%
7-Zip Compression - D.R (MIPS)	**86893**	**84612**		86139
Normalized	100%	97.37%		99.13%
AOM AV1 - Speed 0 Two-Pass - Bosphorus 4K (FPS)	**0.14**	**0.14**	**0.13**	**0.13**
Normalized	100%	100%	92.86%	92.86%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 4K (FPS)	3.34	**3.35**	3.34	**3.32**
Normalized	99.7%	100%	99.7%	99.1%

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AOM AV1 - Speed 6 Realtime - Bosphorus 4K (FPS)	**11.34**	10.28	10.8	**10.15**
Normalized	100%	90.65%	95.24%	89.51%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 4K (FPS)	5.42	**5.4**	**5.43**	**5.4**
Normalized	99.82%	99.45%	100%	99.45%
AOM AV1 - Speed 8 Realtime - Bosphorus 4K (FPS)	**18.05**	**17.93**	17.95	18.01
Normalized	100%	99.34%	99.45%	99.78%
AOM AV1 - Speed 9 Realtime - Bosphorus 4K (FPS)	28.56	28.66	**28.52**	**28.75**
Normalized	99.34%	99.69%	99.2%	100%
AOM AV1 - Speed 10 Realtime - Bosphorus 4K (FPS)	**28.35**	28.38	28.43	**28.44**
Normalized	99.68%	99.79%	99.96%	100%
AOM AV1 - Speed 0 Two-Pass - Bosphorus 1080p (FPS)	**0.34**	**0.34**	**0.35**	**0.35**
Normalized	97.14%	97.14%	100%	100%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 1080p (FPS)	**5.3**	5.25	5.26	**5.17**
Normalized	100%	99.06%	99.25%	97.55%
AOM AV1 - Speed 6 Realtime - Bosphorus 1080p (FPS)	15.81	**15.69**	16.2	**18.34**
Normalized	86.21%	85.55%	88.33%	100%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 1080p (FPS)	11.41	**11.47**	11.38	**11.36**
Normalized	99.48%	100%	99.22%	99.04%
AOM AV1 - Speed 8 Realtime - Bosphorus 1080p (FPS)	46.57	44.72	**43.61**	**48.92**
Normalized	95.2%	91.41%	89.15%	100%
AOM AV1 - Speed 9 Realtime - Bosphorus 1080p (FPS)	56.66	**61.81**	**54.58**	58.1
Normalized	91.67%	100%	88.3%	94%
AOM AV1 - Speed 10 Realtime - Bosphorus 1080p (FPS)	64.95	**62.03**	**65.51**	64.46
Normalized	99.15%	94.69%	100%	98.4%
Blender - BMW27 - CPU-Only (sec)	**107.5**	**107.67**		107.51
Normalized	100%	99.84%		99.99%
Blender - Classroom - CPU-Only (sec)	**306.67**	307.75		**308.43**
Normalized	100%	99.65%		99.43%
Blender - Fishy Cat - CPU-Only (sec)	**145.7**	**145.18**		145.24
Normalized	99.64%	100%		99.96%
Blender - Barbershop - CPU-Only	**1174**	**1170**		1172
Normalized	99.7%	100%		99.83%
Blender - Pabellon Barcelona - CPU-Only (sec)	**379.19**	**379.74**		379.42
Normalized	100%	99.86%		99.94%
Chaos Group V-RAY - CPU (vsamples)	**14794**	**15016**		14961
Normalized	98.52%	100%		99.63%

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Chia Blockchain VDF - Square Plain C++ (IPS)	**118800**	**117200**	**118800**	118700
Normalized	100%	98.65%	100%	99.92%
Chia Blockchain VDF - S.A.O (IPS)	**155700**	162000	**163200**	162500
Normalized	95.4%	99.26%	100%	99.57%
ClickHouse - 1.R.W.A.D.F.R.C.C (Queries/min, Geo Mean)	177.76	**172.52**		**178.95**
Normalized	99.34%	96.41%		100%
ClickHouse - 1.R.W.A.D.S.R (Queries/min, Geo Mean)	188.33	**180.53**		**190.36**
Normalized	98.93%	94.84%		100%
ClickHouse - 1.R.W.A.D.T.R (Queries/min, Geo Mean)	184.16	**185.00**		**179.81**
Normalized	99.55%	100%		97.19%
Etcpak - Multi-Threaded - ETC2	**2941**	**2917**	2921	2922
Normalized	100%	99.17%	99.32%	99.35%
Etcpak - Single-Threaded - ETC2 (Mpx/s)	191.464	**188.5**	188.564	**191.731**
Normalized	99.86%	98.31%	98.35%	100%
Facebook RocksDB - Rand Read	70391323	**68987827**		**70804216**
Normalized	99.42%	97.43%		100%
Facebook RocksDB - Update Rand (Op/s)	633380	**633293**		**633869**
Normalized	99.92%	99.91%		100%
Facebook RocksDB - Read While Writing (Op/s)	3010198	**3015141**		**2995064**
Normalized	99.84%	100%		99.33%
Facebook RocksDB - R.R.W.R (Op/s)	**2157960**	**2143910**		2147824
Normalized	100%	99.35%		99.53%
Glibc Benchmarks - cos (ns)	**74.7116**	74.9779	74.9212	**75.3679**
Normalized	100%	99.64%	99.72%	99.13%
Glibc Benchmarks - exp (ns)	**17.1234**	17.1577	17.1616	**17.2477**
Normalized	100%	99.8%	99.78%	99.28%
Glibc Benchmarks - ffs (ns)	5.27522	**5.28646**	5.27749	**5.25955**
Normalized	99.7%	99.49%	99.66%	100%
Glibc Benchmarks - sin (ns)	65.5414	**65.6681**	65.5583	**65.1269**
Normalized	99.37%	99.18%	99.34%	100%
Glibc Benchmarks - log2 (ns)	22.2054	**22.2516**	22.202	**22.1654**
Normalized	99.82%	99.61%	99.84%	100%
Glibc Benchmarks - modf (ns)	**6.77061**	**6.89959**	6.80363	6.80843
Normalized	100%	98.13%	99.51%	99.44%
Glibc Benchmarks - sinh (ns)	**28.3848**	**28.2712**	28.3612	28.2757
Normalized	99.6%	100%	99.68%	99.98%
Glibc Benchmarks - sqrt (ns)	**6.79582**	6.77717	**6.77094**	6.77666
Normalized	99.63%	99.91%	100%	99.92%
Glibc Benchmarks - tanh (ns)	**40.2847**	**39.3463**	39.5966	39.5146
Normalized	97.67%	100%	99.37%	99.57%
Glibc Benchmarks - asinh (ns)	**31.6299**	31.1765	**31.1094**	31.2237
Normalized	98.35%	99.78%	100%	99.63%
Glibc Benchmarks - atanh (ns)	**36.2159**	**35.4555**	35.5854	35.8092
Normalized	97.9%	100%	99.63%	99.01%
Glibc Benchmarks - ffsll (ns)	**5.09231**	5.03218	5.02977	**5.00725**

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Normalized	98.33%	99.5%	99.55%	100%
Glibc Benchmarks - sincos (ns)	46.4287	48.125	48.4713	45.8902
Normalized	98.84%	95.36%	94.67%	100%
Glibc Benchmarks - pthread_once	5.29319	5.26195	5.26201	5.24905
Normalized	99.17%	99.75%	99.75%	100%
Google Draco - Lion (ms)	6840	6879		6835
Normalized	99.93%	99.36%		100%
Google Draco - Church Facade (ms)	9606	9604		9626
Normalized	99.98%	100%		99.77%
Graph500 - 26 (bfs median_TEPS)	334362000	332860000		333423000
Normalized	100%	99.55%		99.72%
Graph500 - 26 (bfs max_TEPS)	337688000	335925000		336656000
Normalized	100%	99.48%		99.69%
Graph500 - 26 (sssp median_TEPS)	98000500	96562300		95831400
Normalized	100%	98.53%		97.79%
Graph500 - 26 (sssp max_TEPS)	129189000	129201000		128219000
Normalized	99.99%	100%		99.24%
GROMACS - MPI CPU - water_GMX50_bare (Ns/Day)	1.852	1.866		1.859
Normalized	99.25%	100%		99.62%
InfluxDB - 4 - 10000 - 2,5000,1 - 10000 (val/sec)	491687	484407		486129
Normalized	100%	98.52%		98.87%
InfluxDB - 64 - 10000 - 2,5000,1 - 10000 (val/sec)	800957	782763		792170
Normalized	100%	97.73%		98.9%
libavif avifenc - 0 (sec)	147.032	147.171		148.699
Normalized	100%	99.91%		98.88%
libavif avifenc - 2 (sec)	71.968	71.726		72.122
Normalized	99.66%	100%		99.45%
libavif avifenc - 6 (sec)	8.918	8.645		8.845
Normalized	96.94%	100%		97.74%
libavif avifenc - 6, Lossless (sec)	12.729	12.834		12.726
Normalized	99.98%	99.16%		100%
libavif avifenc - 10, Lossless (sec)	7.186	7.251		7.172
Normalized	99.81%	98.91%		100%
Nettle - aes256 (Mbyte/s)	6108	6099	6114	6126
Normalized	99.71%	99.57%	99.81%	100%
Nettle - chacha (Mbyte/s)	1197	1194	1190	1198
Normalized	99.91%	99.66%	99.3%	100%
Nettle - sha512 (Mbyte/s)	481.72	484.98	481.46	485.65
Normalized	99.19%	99.86%	99.14%	100%
Nettle - poly1305-aes (Mbyte/s)	3604	3625	3444	3331
Normalized	99.4%	100%	95%	91.88%
oneDNN - IP Shapes 1D - f32 - CPU (ms)	2.29507	2.29954		2.29593
Normalized	100%	99.81%		99.96%
oneDNN - IP Shapes 3D - f32 - CPU (ms)	3.0952	3.08617		3.06766
Normalized	99.11%	99.4%		100%

oneDNN - IP Shapes 1D - u8s8f32 - CPU (ms)	0.498823	**0.4975**	**0.499623**
Normalized	99.73%	100%	99.58%
oneDNN - IP Shapes 3D - u8s8f32 - CPU (ms)	1.24593	**1.25075**	**1.24158**
Normalized	99.65%	99.27%	100%
oneDNN - IP Shapes 1D - bf16bf16bf16 - CPU (ms)	5.5849	**5.58907**	**5.58271**
Normalized	99.96%	99.89%	100%
oneDNN - IP Shapes 3D - bf16bf16bf16 - CPU (ms)	2.5951	**2.5985**	**2.57547**
Normalized	99.24%	99.11%	100%
oneDNN - C.B.S.A - f32 - CPU (ms)	**4.27636**	**4.33581**	4.31526
Normalized	100%	98.63%	99.1%
oneDNN - D.B.s - f32 - CPU (ms)	**5.64541**	**7.82105**	5.71241
Normalized	100%	72.18%	98.83%
oneDNN - D.B.s - f32 - CPU (ms)	3.3354	**3.33286**	**3.33852**
Normalized	99.92%	100%	99.83%
oneDNN - C.B.S.A - u8s8f32 - CPU	4.19879	**4.20788**	**4.14962**
Normalized	98.83%	98.62%	100%
oneDNN - D.B.s - u8s8f32 - CPU (ms)	**0.54218**	0.541061	**0.539423**
Normalized	99.49%	99.7%	100%
oneDNN - D.B.s - u8s8f32 - CPU (ms)	0.857716	**0.843142**	**0.862283**
Normalized	98.3%	100%	97.78%
oneDNN - R.N.N.T - f32 - CPU (ms)	1614	**1611**	**1614**
Normalized	99.83%	100%	99.8%
oneDNN - R.N.N.I - f32 - CPU (ms)	**908.616**	**1743**	908.727
Normalized	100%	52.14%	99.99%
oneDNN - R.N.N.T - u8s8f32 - CPU	**1614**	**1608**	1613
Normalized	99.68%	100%	99.75%
oneDNN - C.B.S.A - bf16bf16bf16 - CPU (ms)	**9.41055**	**9.4**	9.40951
Normalized	99.89%	100%	99.9%
oneDNN - D.B.s - bf16bf16bf16 - CPU (ms)	13.7195	**37.3118**	**13.7123**
Normalized	99.95%	36.75%	100%
oneDNN - D.B.s - bf16bf16bf16 - CPU (ms)	**12.642**	**12.6881**	12.6783
Normalized	100%	99.64%	99.71%
oneDNN - R.N.N.I - u8s8f32 - CPU (ms)	**907.924**	911.401	**915.538**
Normalized	100%	99.62%	99.17%
oneDNN - M.M.B.S.T - f32 - CPU (ms)	0.96569	**0.971579**	**0.965417**
Normalized	99.97%	99.37%	100%
oneDNN - R.N.N.T - bf16bf16bf16 - CPU (ms)	**1621**	1611	**1608**
Normalized	99.21%	99.82%	100%
oneDNN - R.N.N.I - bf16bf16bf16 - CPU (ms)	906.687	**910.948**	**906.382**
Normalized	99.97%	99.5%	100%
oneDNN - M.M.B.S.T - u8s8f32 - CPU (ms)	**0.309251**	0.308236	**0.306607**
Normalized	99.15%	99.47%	100%

oneDNN - M.M.B.S.T - bf16bf16bf16 - CPU (ms)	**2.10714**	**2.10124**		2.10205
Normalized	99.72%	100%		99.96%
OSPRay - particle_volume/ao/real_time	5.09652	4.95079	**5.14891**	**4.90723**
Normalized	98.98%	96.15%	100%	95.31%
OSPRay - particle_volume/scivis/real_time (Items/sec)	5.05624	**5.09572**	**4.93475**	5.03878
Normalized	99.23%	100%	96.84%	98.88%
OSPRay - particle_volume/pathtracer/real_time (Items/sec)	**85.2476**	**84.6537**		85.1303
Normalized	100%	99.3%		99.86%
OSPRay - gravity_spheres_volume/dim_512/ao/real_time (Items/sec)	**4.22476**	**4.3144**		4.25724
Normalized	97.92%	100%		98.68%
OSPRay - gravity_spheres_volume/dim_512/scivis/real_time (Items/sec)	**4.09826**	4.18303		**4.19684**
Normalized	97.65%	99.67%		100%
OSPRay - gravity_spheres_volume/dim_512/pathtracer/real_time (Items/sec)	5.26585	**5.24165**		**5.26908**
Normalized	99.94%	99.48%		100%
OSPray Studio - 1 - 1080p - 1 - Path Tracer (ms)	**1765**	**1764**		**1764**
Normalized	99.94%	100%		100%
OSPray Studio - 2 - 1080p - 1 - Path Tracer (ms)	**1813**	**1807**		1810
Normalized	99.67%	100%		99.83%
OSPray Studio - 3 - 1080p - 1 - Path Tracer (ms)	**2154**	**2158**		**2158**
Normalized	100%	99.81%		99.81%
OSPray Studio - 1 - 1080p - 16 - Path Tracer (ms)	28164	**28170**		**28119**
Normalized	99.84%	99.82%		100%
OSPray Studio - 1 - 1080p - 32 - Path Tracer (ms)	**71609**	**71515**		71554
Normalized	99.87%	100%		99.95%
OSPray Studio - 2 - 1080p - 16 - Path Tracer (ms)	**28943**	**28975**		28965
Normalized	100%	99.89%		99.92%
OSPray Studio - 2 - 1080p - 32 - Path Tracer (ms)	**73188**	73143		**73139**
Normalized	99.93%	99.99%		100%
OSPray Studio - 3 - 1080p - 16 - Path Tracer (ms)	**34458**	**34458**		**34554**
Normalized	100%	100%		99.72%

OSPray Studio - 3 - 1080p - 32 - Path Tracer (ms)	84266	**84292**		**84177**
Normalized	99.89%	99.86%		100%
Parallel BZIP2 Compression - F.1.0.R.a.m.i.C (sec)	6.928	**6.836**		**7.162**
Normalized	98.67%	100%		95.45%
perf-bench - Epoll Wait (ops/sec)	**32940**	37525	37937	**37961**
Normalized	86.77%	98.85%	99.94%	100%
perf-bench - Futex Hash (ops/sec)	**4286945**	**4275533**	4279202	4284624
Normalized	100%	99.73%	99.82%	99.95%
perf-bench - Memcpy 1MB (GB/sec)	16.313786	**16.131914**	**17.324454**	16.685829
Normalized	94.17%	93.12%	100%	96.31%
perf-bench - Memset 1MB (GB/sec)	54.74849	**53.059025**	57.253928	**58.133253**
Normalized	94.18%	91.27%	98.49%	100%
perf-bench - Sched Pipe (ops/sec)	**66578**	**64584**	64802	65731
Normalized	100%	97.01%	97.33%	98.73%
perf-bench - Futex Lock-Pi (ops/sec)	**254**	**254**	255	**259**
Normalized	98.07%	98.07%	98.46%	100%
perf-bench - Syscall Basic (ops/sec)	**15798883**	**15705712**	15762401	15715420
Normalized	100%	99.41%	99.77%	99.47%
Renaissance - Scala Dotty (ms)	**1112**	**984.3**	1107	987.2
Normalized	88.48%	100%	88.89%	99.71%
Renaissance - Rand Forest (ms)	**1257**	**1307**	1294	1270
Normalized	100%	96.22%	97.15%	98.96%
Renaissance - ALS Movie Lens (ms)	32565	**32724**	32445	**32249**
Normalized	99.03%	98.55%	99.4%	100%
Renaissance - Apache Spark ALS	**46525**	**47295**	47049	46755
Normalized	100%	98.37%	98.89%	99.51%
Renaissance - Apache Spark Bayes (ms)	**1051**	**1007**	1050	1025
Normalized	95.86%	100%	95.94%	98.25%
Renaissance - Savina Reactors.IO	**13462**	13959	**14494**	13866
Normalized	100%	96.44%	92.88%	97.09%
Renaissance - A.S.P (ms)	**4193**	4209	**4300**	4285
Normalized	100%	99.6%	97.51%	97.85%
Renaissance - F.H.R (ms)	**4750**	4583	4736	**4452**
Normalized	93.73%	97.15%	94%	100%
Renaissance - I.M.D.S (ms)	**7055**	6911	7006	**6859**
Normalized	97.22%	99.25%	97.91%	100%
Renaissance - A.U.C.T (ms)	14036	14087	**14244**	**13955**
Normalized	99.42%	99.07%	97.97%	100%
Renaissance - G.A.U.J.F (ms)	**6811**	**6985**	6929	6899
Normalized	100%	97.52%	98.3%	98.73%
simdjson - Kostya (GB/s)	**2.27**	2.25	**2.22**	**2.22**
Normalized	100%	99.12%	97.8%	97.8%
simdjson - TopTweet (GB/s)	**4.03**	**4.04**	**4.03**	**4.04**
Normalized	99.75%	100%	99.75%	100%
simdjson - LargeRand (GB/s)	**0.86**	**0.86**	**0.87**	**0.86**
Normalized	98.85%	98.85%	100%	98.85%
simdjson - PartialTweets (GB/s)	**3.39**	**3.39**	**3.4**	**3.4**
Normalized	99.71%	99.71%	100%	100%
simdjson - DistinctUserID (GB/s)	**3.99**	**3.99**	**3.97**	3.98
Normalized	100%	100%	99.5%	99.75%

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Stockfish - Total Time (Nodes/s)	34892064	37498341		38758154
Normalized	90.03%	96.75%		100%
Stress-NG - MMAP (Bogo Ops/s)	386.93	387.37		385.02
Normalized	99.89%	100%		99.39%
Stress-NG - NUMA (Bogo Ops/s)	304.15	303.6		303.27
Normalized	100%	99.82%		99.71%
Stress-NG - Futex (Bogo Ops/s)	1268283	1426740		1353835
Normalized	88.89%	100%		94.89%
Stress-NG - MEMFD (Bogo Ops/s)	996.47	997.77		1003
Normalized	99.34%	99.47%		100%
Stress-NG - Atomic (Bogo Ops/s)	230497	218089		221704
Normalized	100%	94.62%		96.19%
Stress-NG - Crypto (Bogo Ops/s)	18828	18770		18828
Normalized	100%	99.69%		100%
Stress-NG - Malloc (Bogo Ops/s)	23719708	23706403		23681967
Normalized	100%	99.94%		99.84%
Stress-NG - Forking (Bogo Ops/s)	53559	53675		53448
Normalized	99.78%	100%		99.58%
Stress-NG - IO_uring (Bogo Ops/s)	2029946	2029595		2041307
Normalized	99.44%	99.43%		100%
Stress-NG - SENDFILE (Bogo Ops/s)	291327	291265		291151
Normalized	100%	99.98%		99.94%
Stress-NG - CPU Cache (Bogo Ops/s)	100.26	95.52		99.32
Normalized	100%	95.27%		99.06%
Stress-NG - CPU Stress (Bogo Ops/s)	33015	33095		33057
Normalized	99.76%	100%		99.88%
Stress-NG - Semaphores (Bogo	2396120	2396549		2396852
Normalized	99.97%	99.99%		100%
Stress-NG - Matrix Math (Bogo Ops/s)	74771	74563		74961
Normalized	99.75%	99.47%		100%
Stress-NG - Vector Math (Bogo Ops/s)	55453	55714		55809
Normalized	99.36%	99.83%		100%
Stress-NG - x86_64 RdRand (Bogo Ops/s)	252385	252372		252383
Normalized	100%	99.99%		100%
Stress-NG - Memory Copying (Bogo Ops/s)	5550	5776		5278
Normalized	96.1%	100%		91.38%
Stress-NG - Socket Activity (Bogo	10010	10443		10147
Normalized	95.85%	100%		97.16%
Stress-NG - Context Switching (Bogo Ops/s)	8352209	8099474		11341068
Normalized	73.65%	71.42%		100%
Stress-NG - G.C.S.F (Bogo Ops/s)	927638	929454		918757
Normalized	99.8%	100%		98.85%
Stress-NG - G.Q.D.S (Bogo Ops/s)	197.03	196.57		196.9
Normalized	100%	99.77%		99.93%
Stress-NG - S.V.M.P (Bogo Ops/s)	3422497	3397386		3444591
Normalized	99.36%	98.63%		100%
SVT-AV1 - Preset 4 - Bosphorus 4K (FPS)	2.05	2.05	2.038	2.057
Normalized	99.66%	99.66%	99.08%	100%

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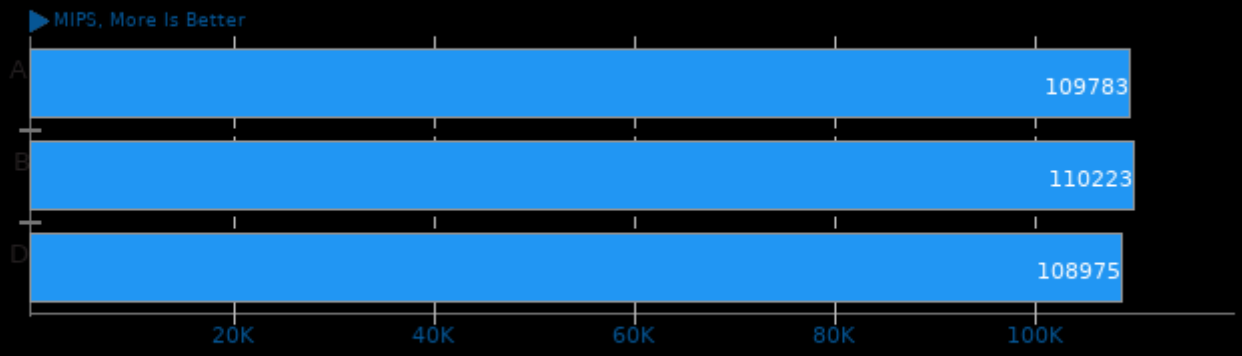
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)	30.972	30.635	**31.165**	**30.58**
Normalized	99.38%	98.3%	100%	98.12%
SVT-AV1 - Preset 10 - Bosphorus 4K (FPS)	66.94	**65.053**	67.158	**67.2**
Normalized	99.61%	96.81%	99.94%	100%
SVT-AV1 - Preset 12 - Bosphorus 4K (FPS)	**86.134**	84.492	**83.689**	84.482
Normalized	100%	98.09%	97.16%	98.08%
SVT-AV1 - Preset 4 - Bosphorus 1080p (FPS)	4.498	**4.482**	**4.596**	4.501
Normalized	97.87%	97.52%	100%	97.93%
SVT-AV1 - Preset 8 - Bosphorus 1080p (FPS)	**83.469**	82.823	**81.201**	81.464
Normalized	100%	99.23%	97.28%	97.6%
SVT-AV1 - Preset 10 - Bosphorus 1080p (FPS)	**150.159**	147.476	**144.177**	148.735
Normalized	100%	98.21%	96.02%	99.05%
SVT-AV1 - Preset 12 - Bosphorus 1080p (FPS)	176.095	**176.733**	174.954	**173.048**
Normalized	99.64%	100%	98.99%	97.91%
SVT-HEVC - 1 - Bosphorus 4K (FPS)	2.63	2.63	2.63	2.63
SVT-HEVC - 7 - Bosphorus 4K (FPS)	53.34	**53.15**	53.41	**53.58**
Normalized	99.55%	99.2%	99.68%	100%
SVT-HEVC - 10 - Bosphorus 4K (FPS)	**101.61**	**102.69**	102.51	**102.69**
Normalized	98.95%	100%	99.82%	100%
SVT-VP9 - VMAF Optimized - Bosphorus 4K (FPS)	85.59	**85**	85.79	**86.36**
Normalized	99.11%	98.43%	99.34%	100%
SVT-VP9 - P.S.O - Bosphorus 4K	89.67	89.5	**89.35**	**90.02**
Normalized	99.61%	99.42%	99.26%	100%
SVT-VP9 - V.Q.O - Bosphorus 4K	66.48	65.75	**65.65**	**66.62**
Normalized	99.79%	98.69%	98.54%	100%
Tachyon - Total Time (sec)	108.5623	**108.3467**		**109.9221**
Normalized	99.8%	100%		98.57%
TensorFlow Lite - SqueezeNet (us)	**2046**	2047		**2048**
Normalized	100%	99.95%		99.92%
TensorFlow Lite - Inception V4 (us)	31050	**32173**		**30792**
Normalized	99.17%	95.71%		100%
TensorFlow Lite - NASNet Mobile (us)	15098	**15132**		**15081**
Normalized	99.88%	99.66%		100%
TensorFlow Lite - Mobilenet Float (us)	**1513**	**1524**		1518
Normalized	100%	99.25%		99.66%
TensorFlow Lite - Mobilenet Quant	**2685**	**2708**		2692
Normalized	100%	99.14%		99.75%
TensorFlow Lite - I.R.V (us)	**32510**	31223		**29900**
Normalized	91.97%	95.76%		100%
Timed Gem5 Compilation - Time To Compile (sec)	**338.344**	**339.754**		339.209
Normalized	100%	99.58%		99.74%

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Timed Linux Kernel Compilation - defconfig (sec)	**65.705**	65.756		**65.865**
Normalized	100%	99.92%		99.76%
Timed Linux Kernel Compilation - allmodconfig (sec)	**775.814**	775.965		**776.561**
Normalized	100%	99.98%		99.9%
Timed MPlayer Compilation - Time To Compile (sec)	27.032	**27.136**		**26.989**
Normalized	99.84%	99.46%		100%
WebP2 Image Encode - Default (sec)	**3.18**	**3.23**		3.202
Normalized	100%	98.45%		99.31%
WebP2 Image Encode - Q.7.C.E.7	162.622	**163.357**		**159.05**
Normalized	97.8%	97.36%		100%
WebP2 Image Encode - Q.9.C.E.7	**344.295**	**341.493**		343.201
Normalized	99.19%	100%		99.5%
WebP2 Image Encode - Q.1.C.E.5	**4.615**	**4.61**		**4.61**
Normalized	99.89%	100%		100%
WebP2 Image Encode - Q.1.L.C (sec)	750.18	**748.427**		**750.674**
Normalized	99.77%	100%		99.7%
x264 - Bosphorus 4K (FPS)	**31.71**	**31.39**	31.68	31.55
Normalized	100%	98.99%	99.91%	99.5%
x264 - Bosphorus 1080p (FPS)	105.62	105.41	**107.4**	**103.04**
Normalized	98.34%	98.15%	100%	95.94%

7-Zip Compression 22.00

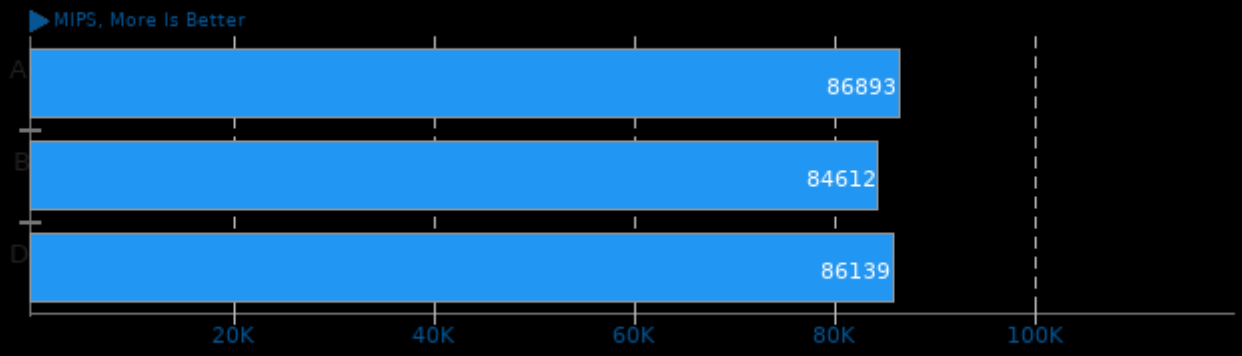
Test: Compression Rating



1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

7-Zip Compression 22.00

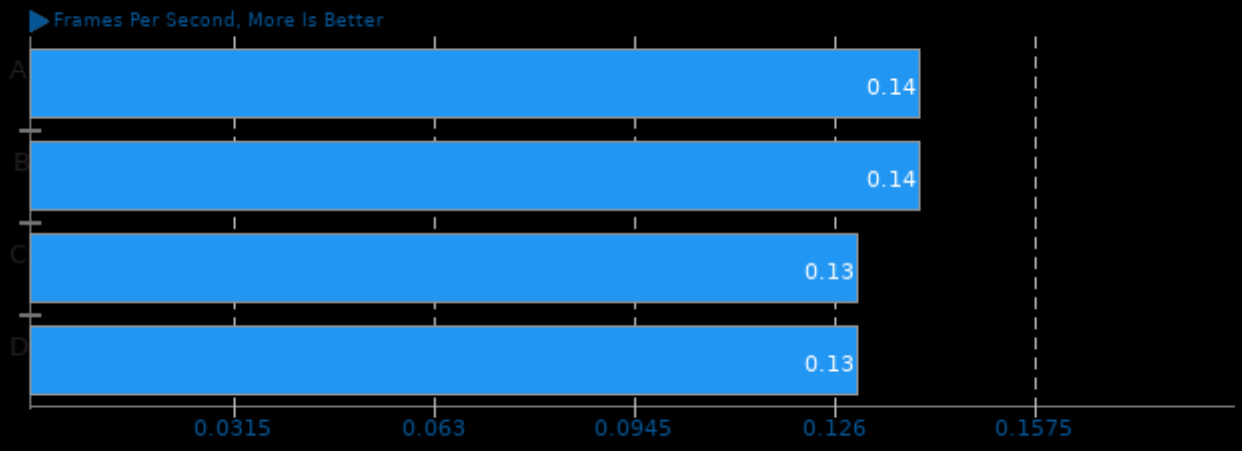
Test: Decompression Rating



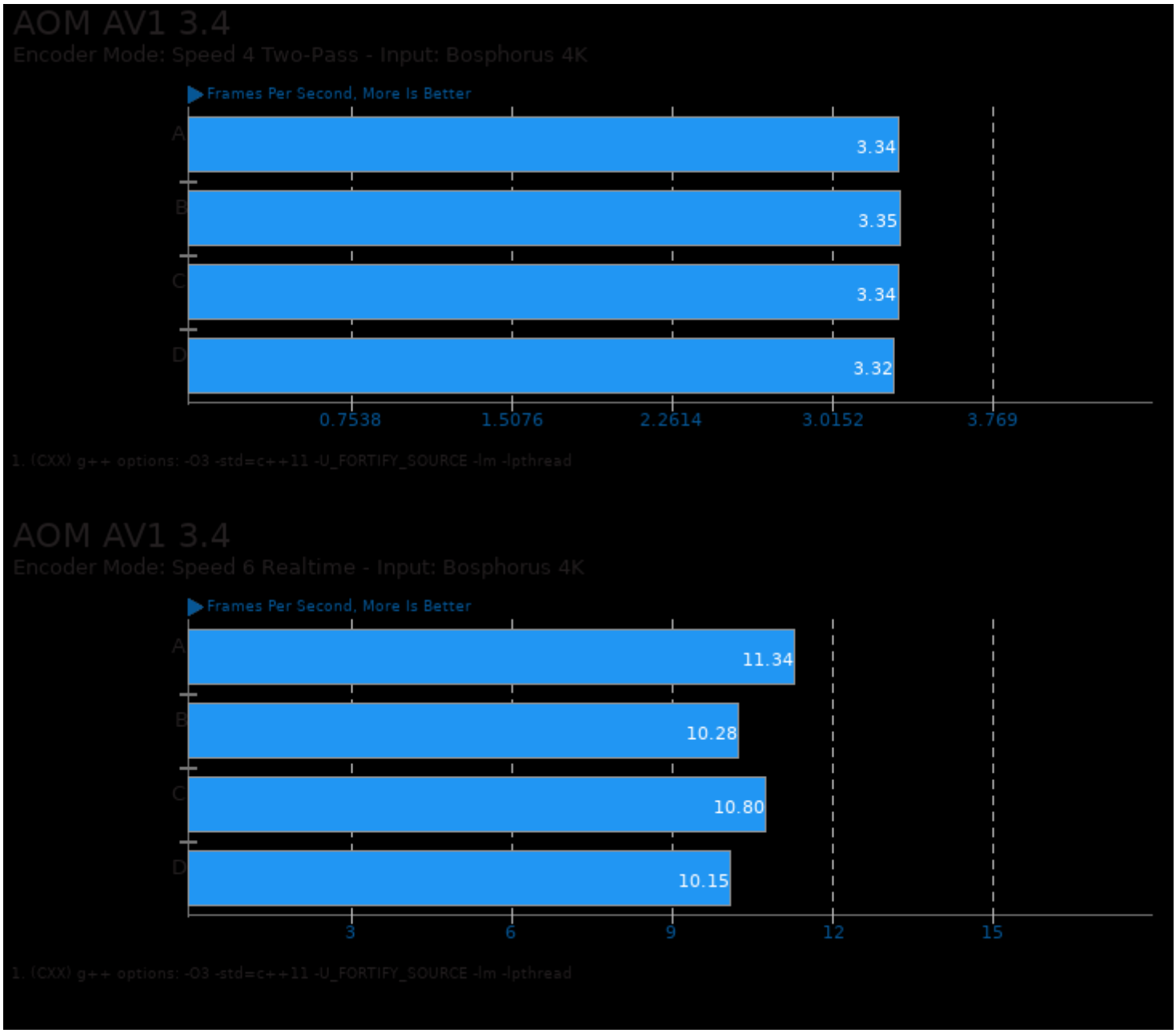
1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

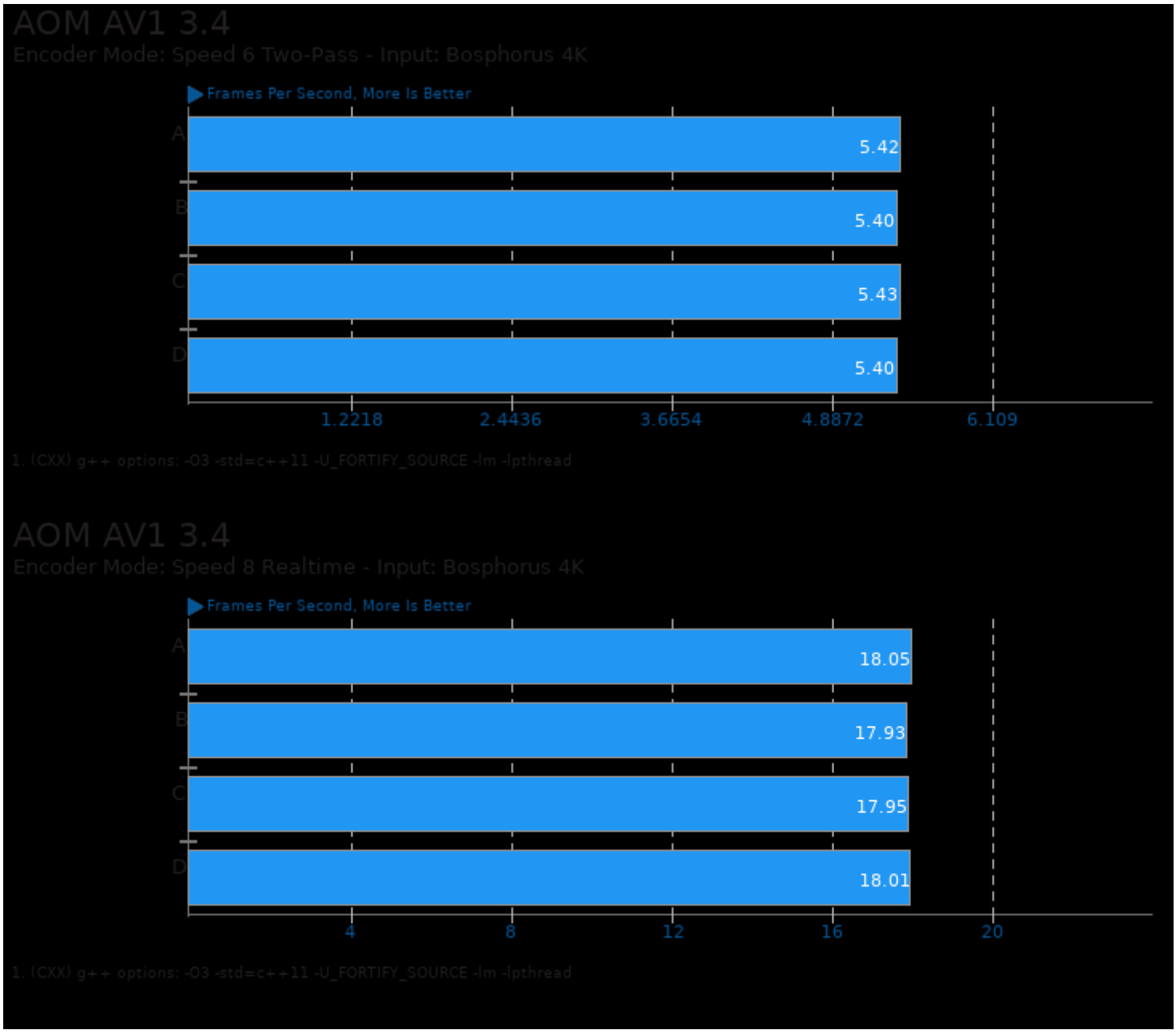
AOM AV1 3.4

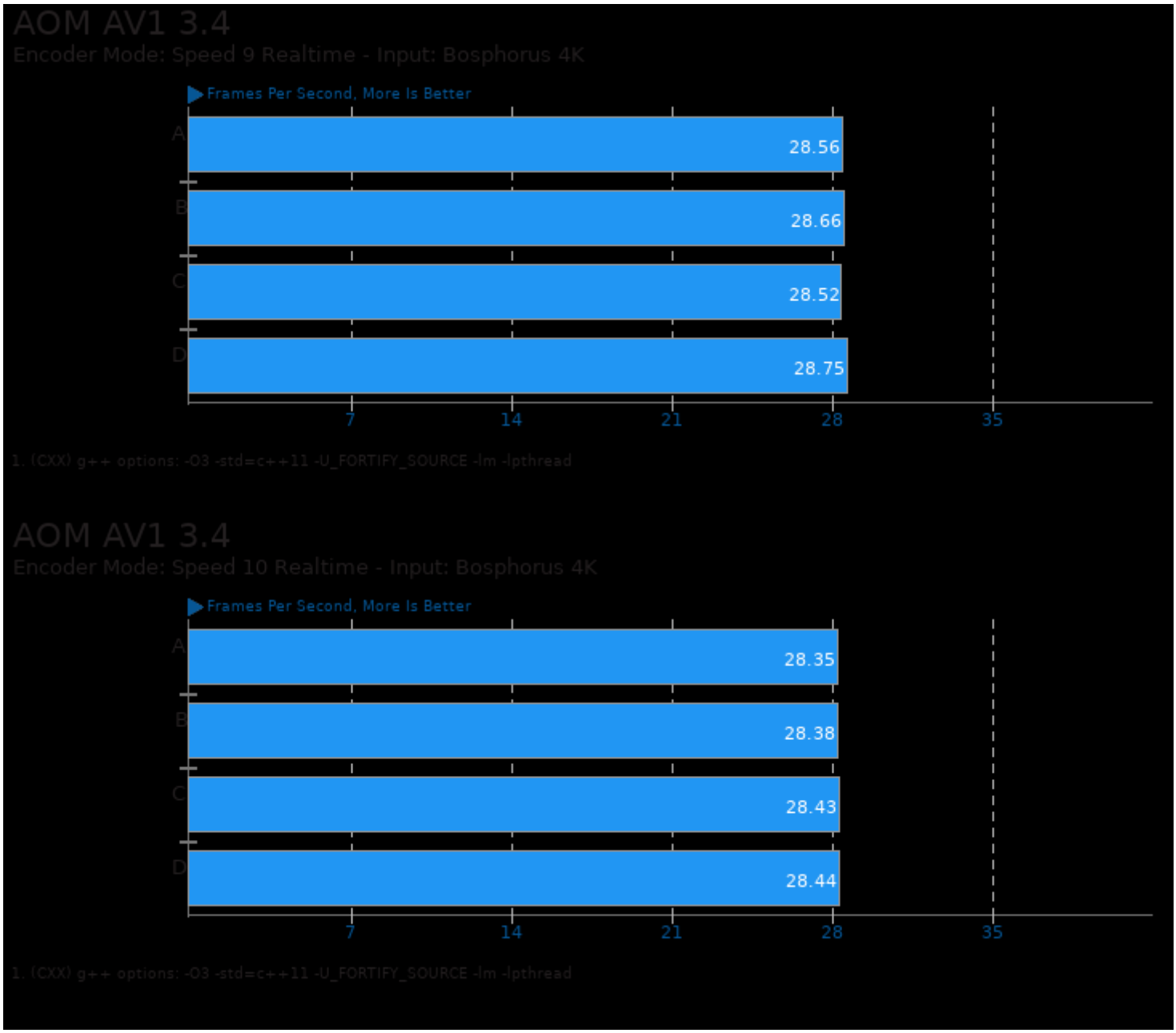
Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 4K

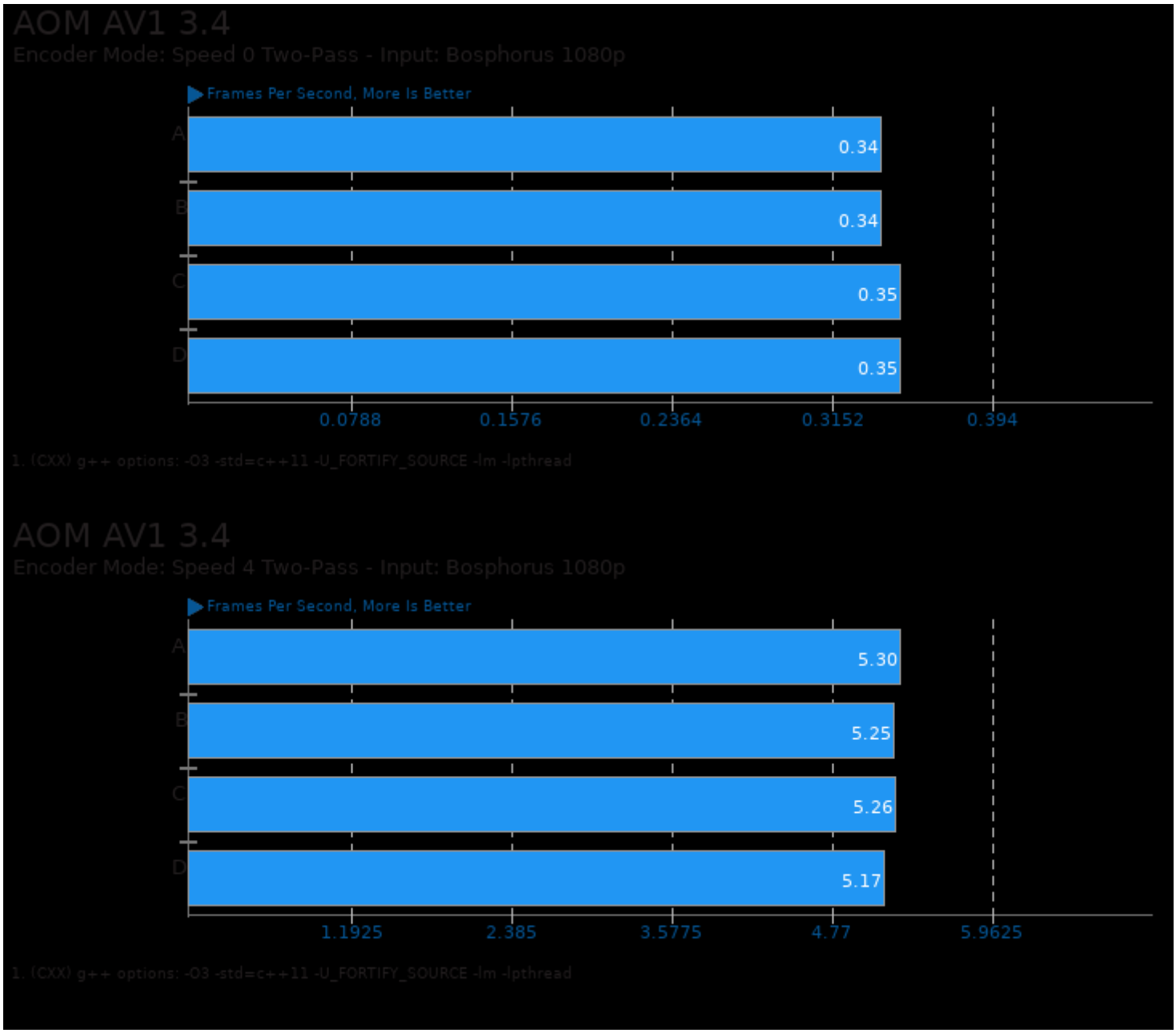


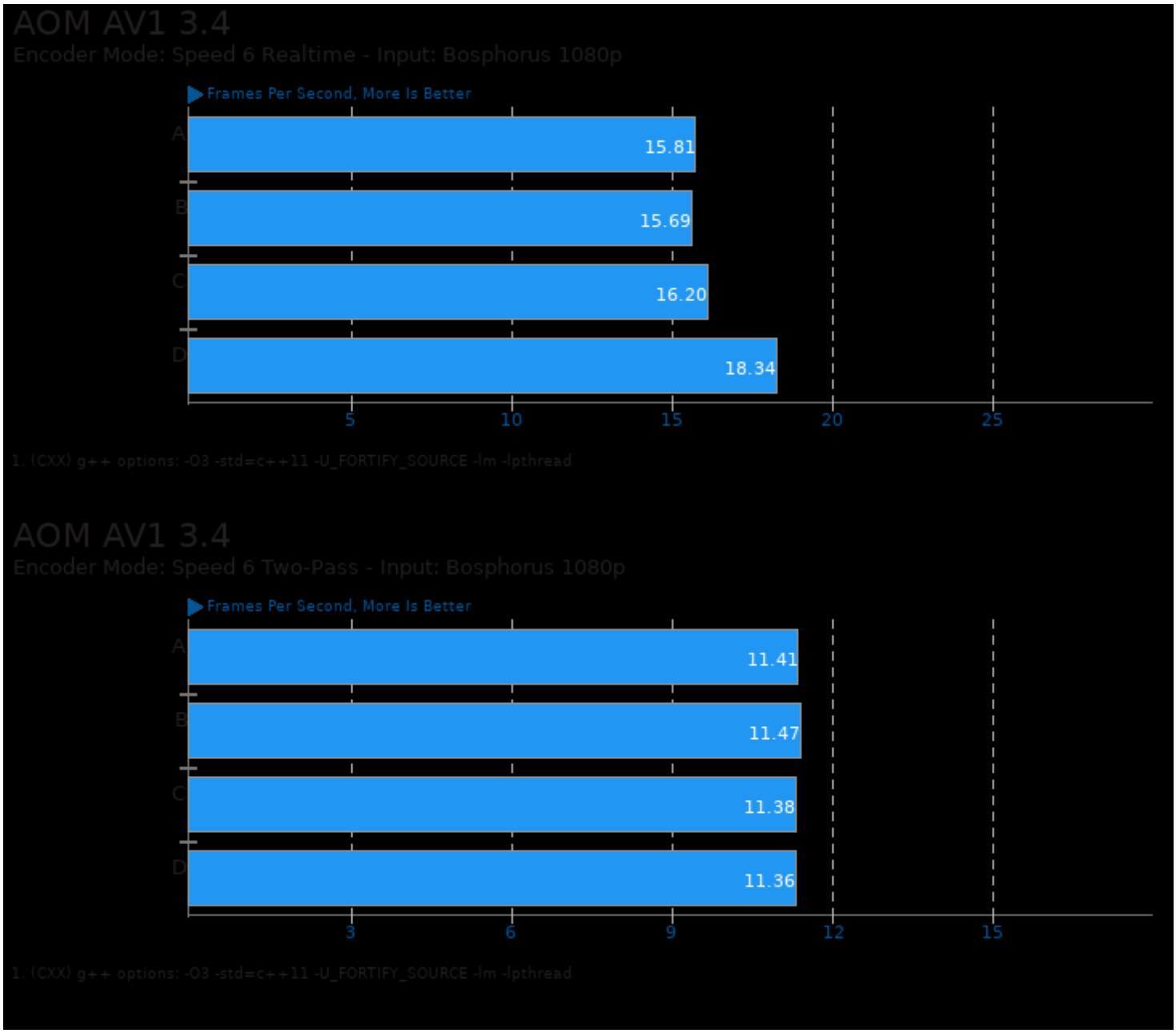
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

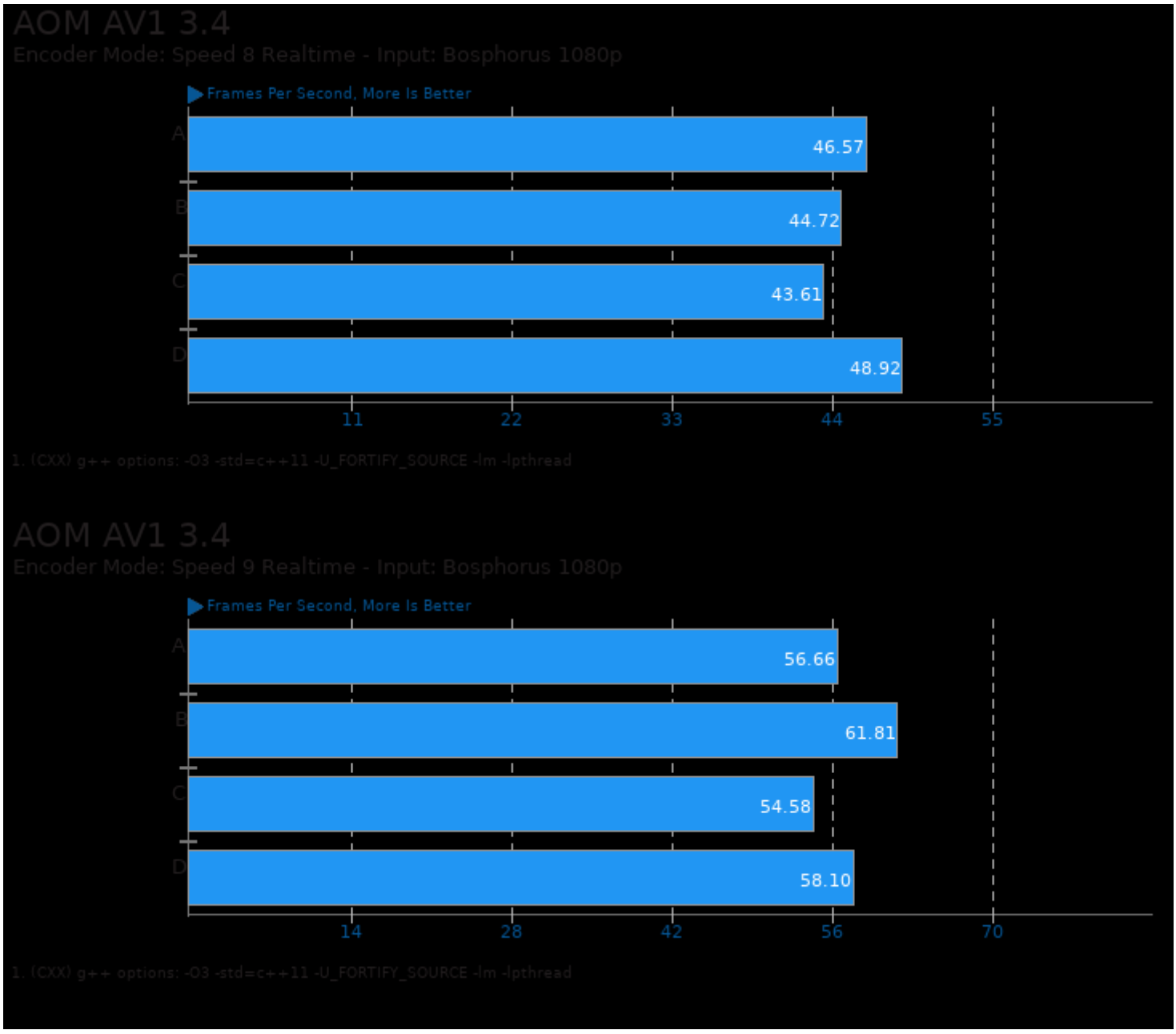

AOM AV1 3.4
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
B
C
D
3.34
3.35
3.34
3.32
0.7538
1.5076
2.2614
3.0152
3.769
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.4
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
B
C
D
11.34
10.28
10.80
10.15
3
6
9
12
15
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread


AOM AV1 3.4
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
B
C
D
5.42
5.40
5.43
5.40
1.2218
2.4436
3.6654
4.8872
6.109
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.4
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
B
C
D
18.05
17.93
17.95
18.01
4
8
12
16
20
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread


AOM AV1 3.4
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
28.56
B
28.66
C
28.52
D
28.75
7
14
21
28
35
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.4
Encoder Mode: Speed 10 Realtime - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
28.35
B
28.38
C
28.43
D
28.44
7
14
21
28
35
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

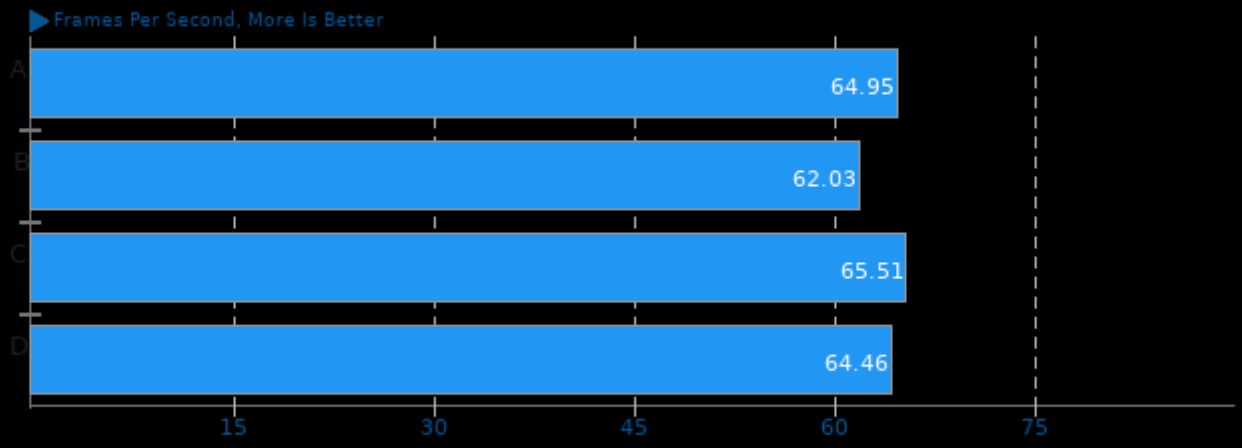

AOM AV1 3.4
Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
B
C
D
0.34
0.34
0.35
0.35
0.0788
0.1576
0.2364
0.3152
0.394
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.4
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
B
C
D
5.30
5.25
5.26
5.17
1.1925
2.385
3.5775
4.77
5.9625
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread


AOM AV1 3.4
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
15.81
B
15.69
C
16.20
D
18.34
5
10
15
20
25
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.4
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
11.41
B
11.47
C
11.38
D
11.36
3
6
9
12
15
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread


AOM AV1 3.4
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
B
C
D
46.57
44.72
43.61
48.92
11
22
33
44
55
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.4
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
B
C
D
56.66
61.81
54.58
58.10
14
28
42
56
70
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.4

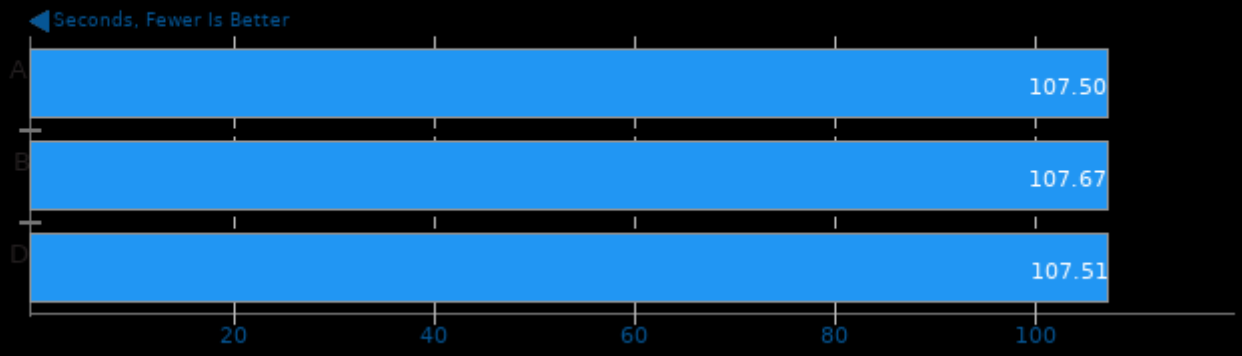
Encoder Mode: Speed 10 Realtime - Input: Bosphorus 1080p



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

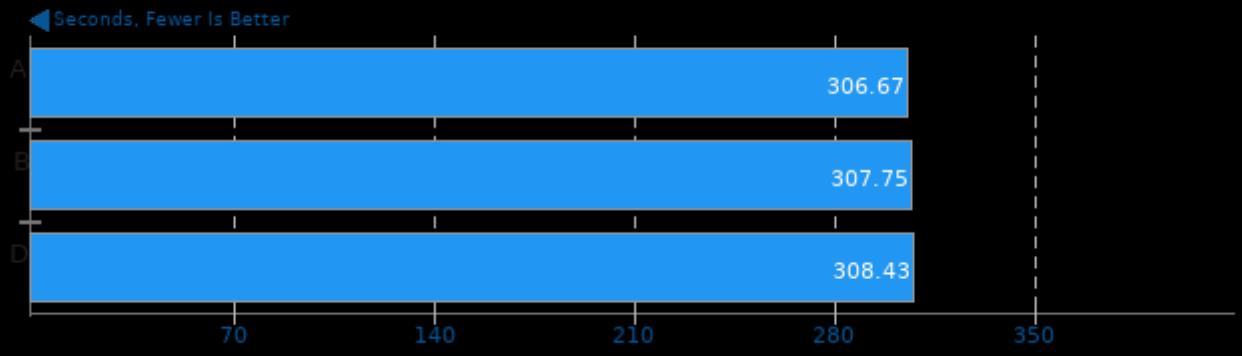
Blender 3.2

Blend File: BMW27 - Compute: CPU-Only

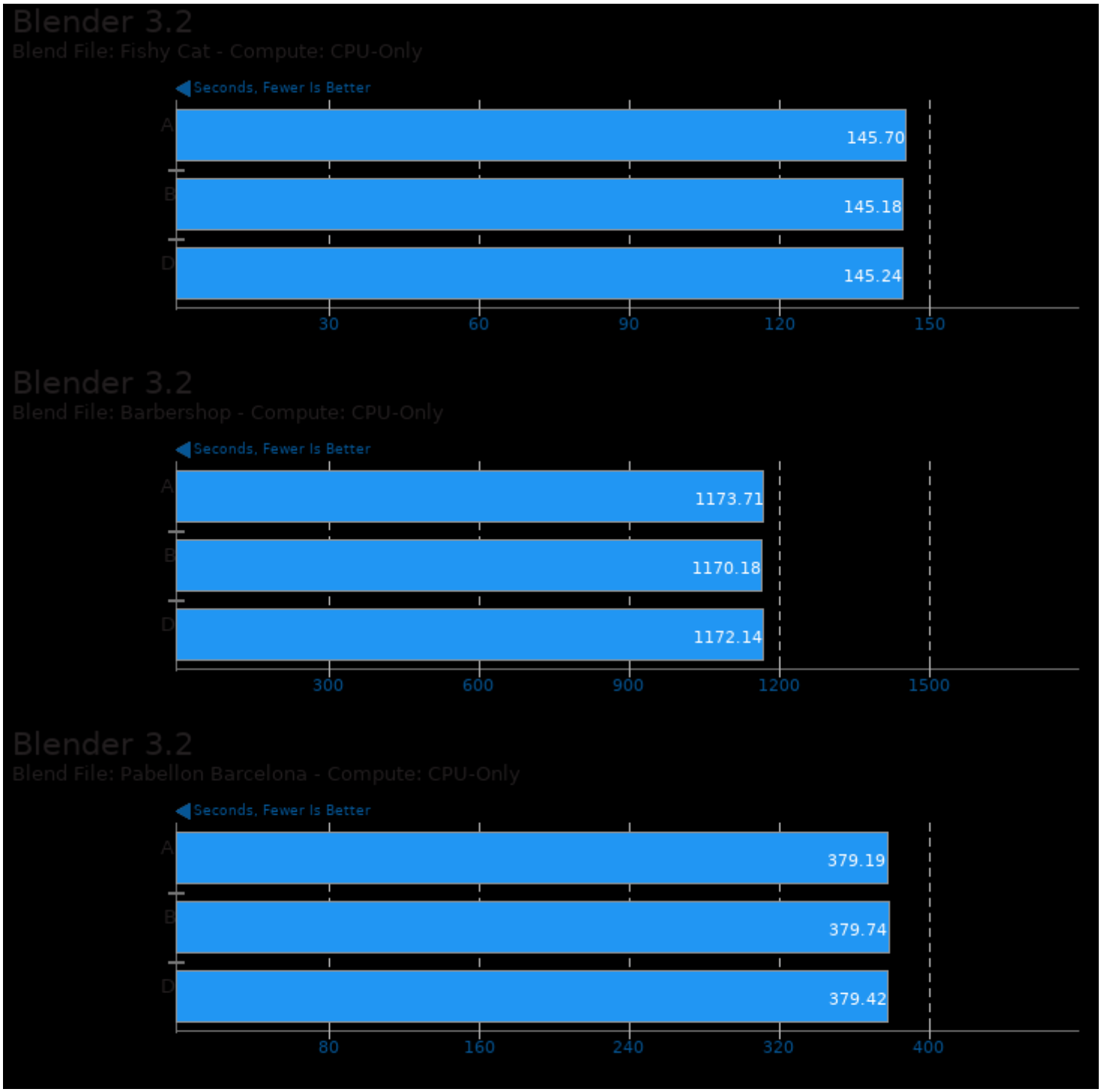


Blender 3.2

Blend File: Classroom - Compute: CPU-Only

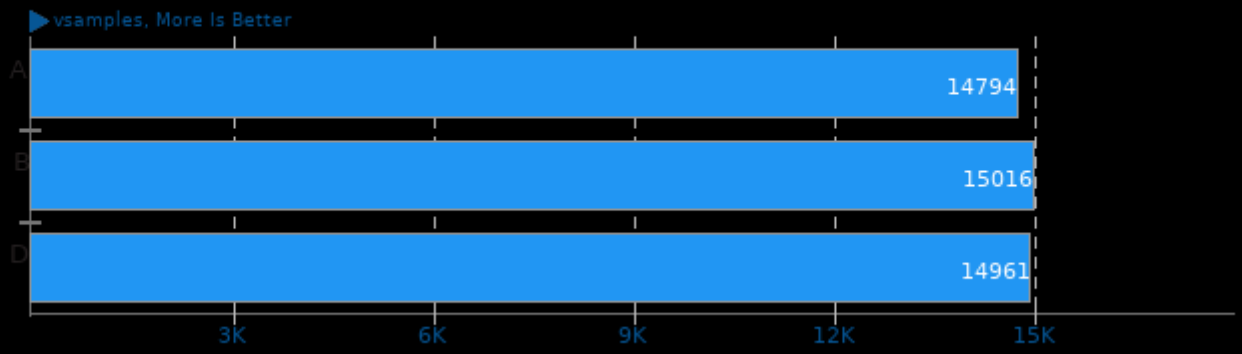


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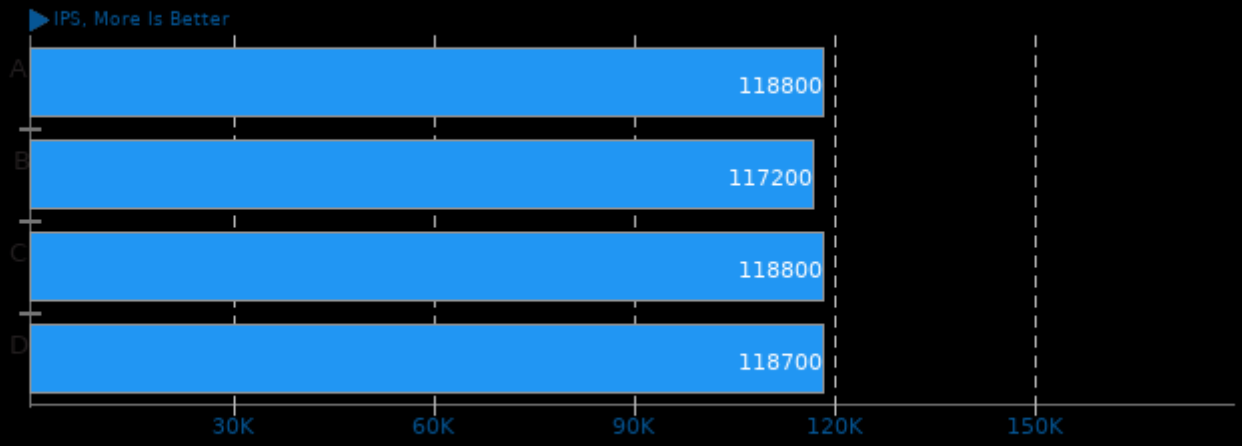
Chaos Group V-RAY 5.02

Mode: CPU



Chia Blockchain VDF 1.0.7

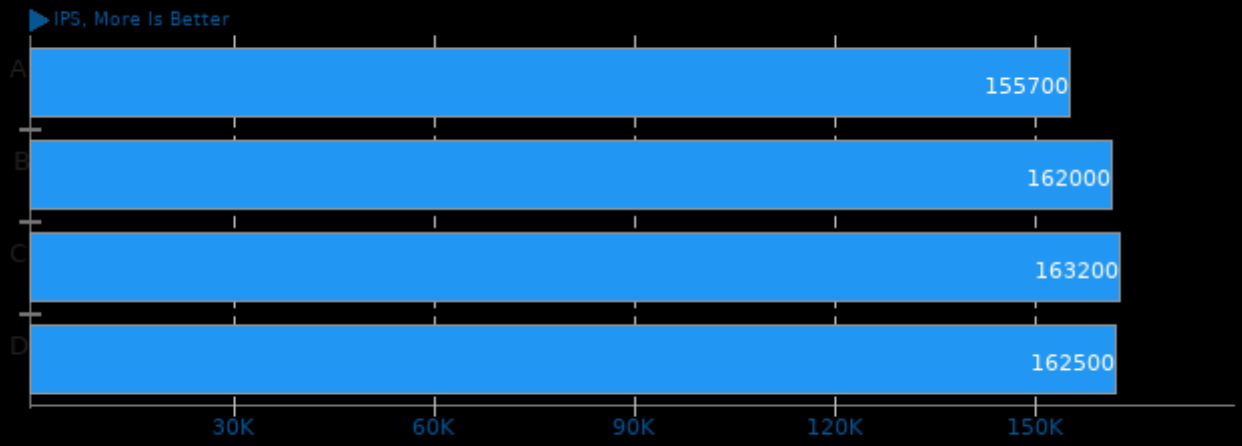
Test: Square Plain C++



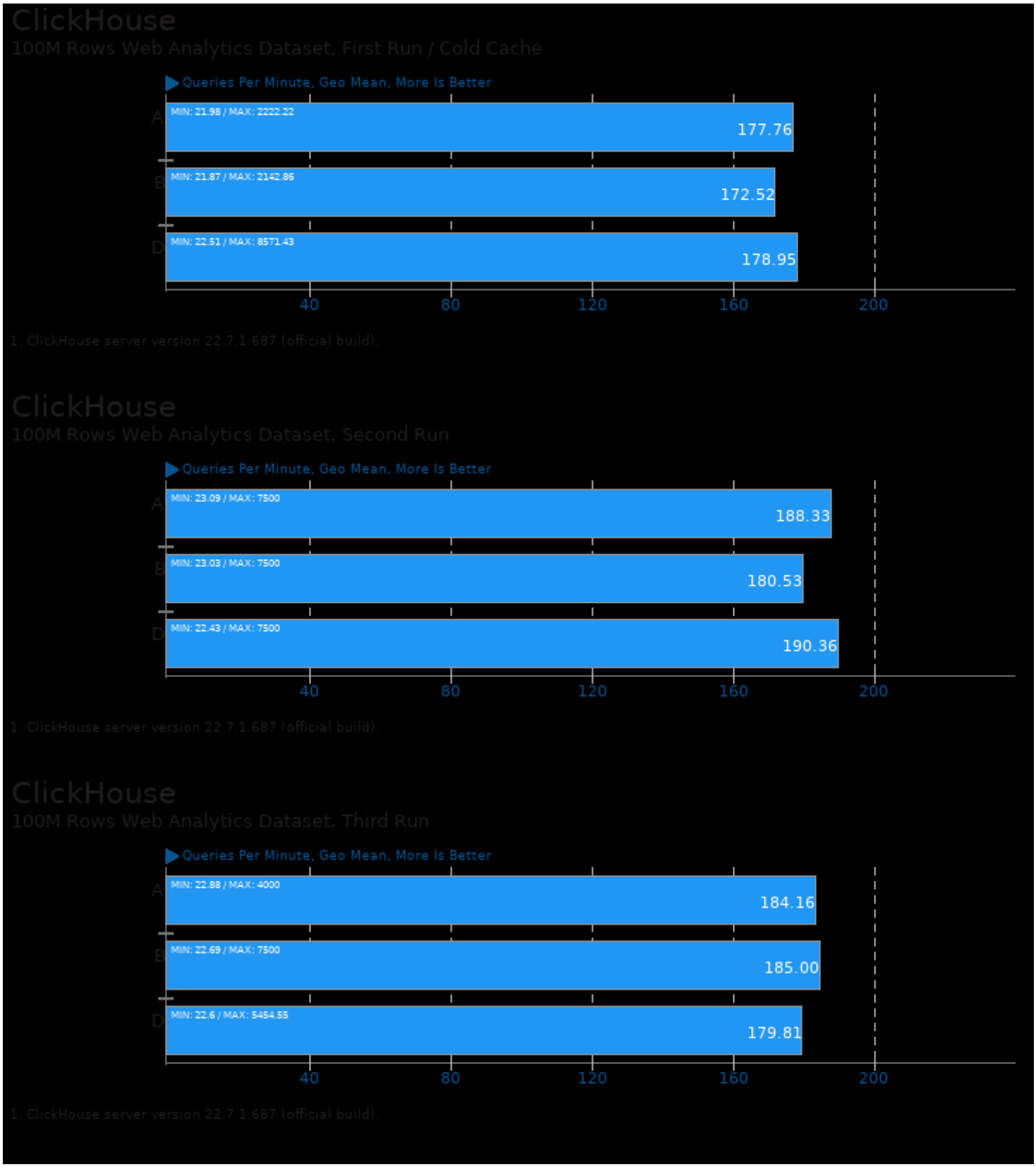
1. (CXX) g++ options: -flto -no-pie -lgmpxx -lgmp -lboost_system -pthread

Chia Blockchain VDF 1.0.7

Test: Square Assembly Optimized

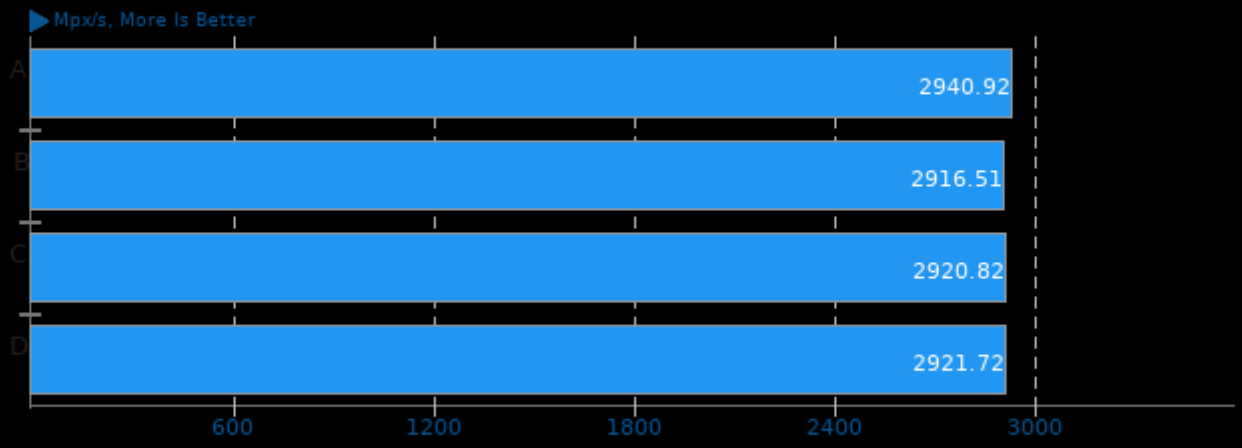


1. (CXX) g++ options: -flto -no-pie -lgmpxx -lgmp -lboost_system -pthread


ClickHouse
100M Rows Web Analytics Dataset, First Run / Cold Cache
Queries Per Minute, Geo Mean, More Is Better
A
MIN: 21.98 / MAX: 2222.22
177.76
B
MIN: 21.87 / MAX: 2142.86
172.52
D
MIN: 22.51 / MAX: 8571.43
178.95
40
80
120
160
200
1. ClickHouse server version 22.7.1.687 (official build).
ClickHouse
100M Rows Web Analytics Dataset, Second Run
Queries Per Minute, Geo Mean, More Is Better
A
MIN: 23.09 / MAX: 7500
188.33
B
MIN: 23.03 / MAX: 7500
180.53
D
MIN: 22.43 / MAX: 7500
190.36
40
80
120
160
200
1. ClickHouse server version 22.7.1.687 (official build).
ClickHouse
100M Rows Web Analytics Dataset, Third Run
Queries Per Minute, Geo Mean, More Is Better
A
MIN: 22.88 / MAX: 4000
184.16
B
MIN: 22.69 / MAX: 7500
185.00
D
MIN: 22.6 / MAX: 5454.55
179.81
40
80
120
160
200
1. ClickHouse server version 22.7.1.687 (official build).

Etcpak 1.0

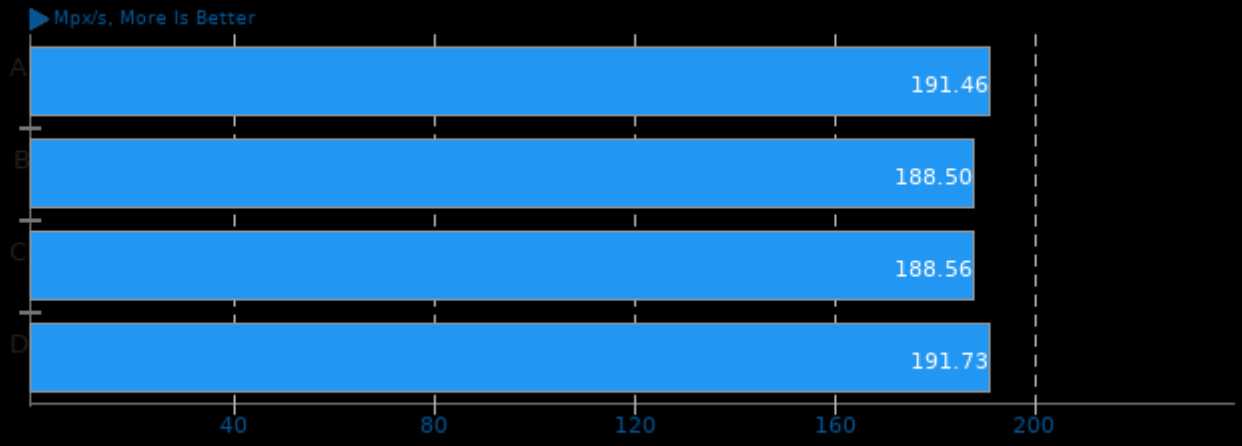
Benchmark: Multi-Threaded - Configuration: ETC2



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

Etcpak 1.0

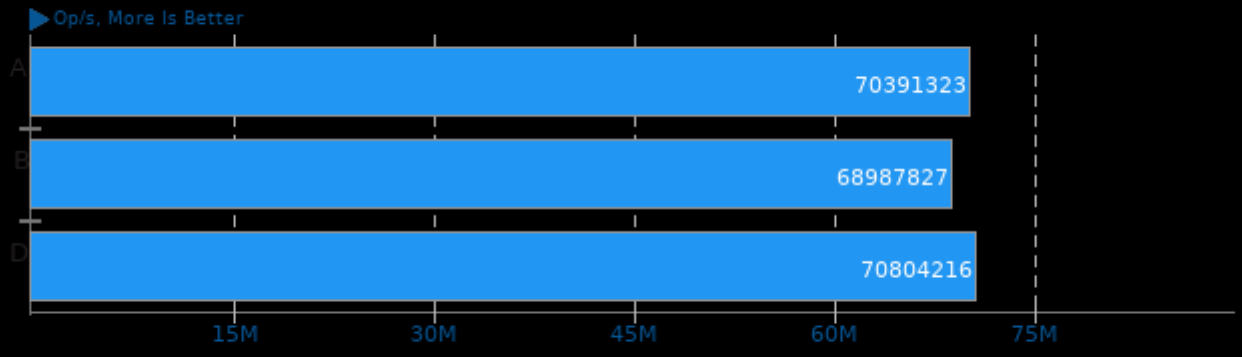
Benchmark: Single-Threaded - Configuration: ETC2



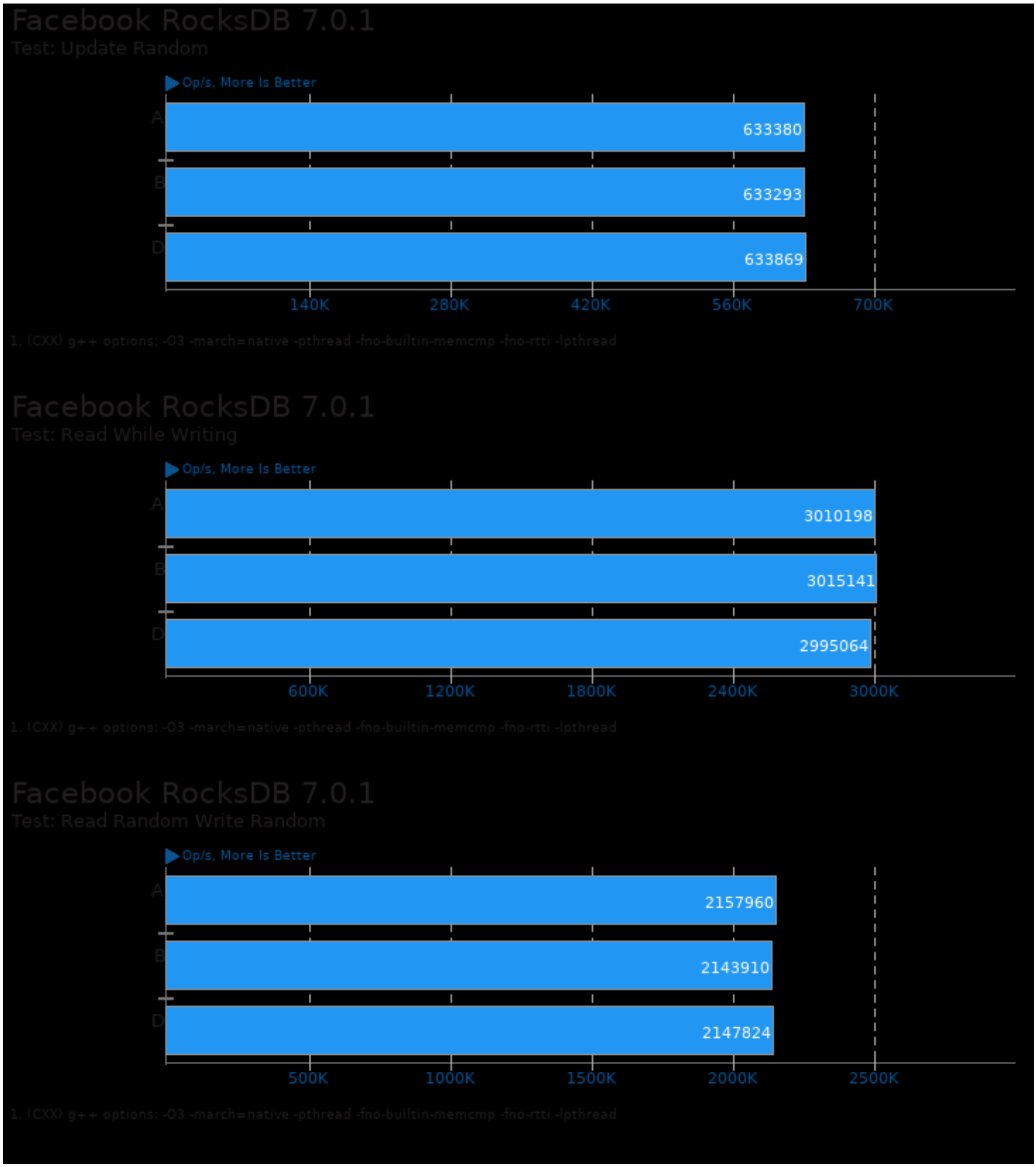
1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

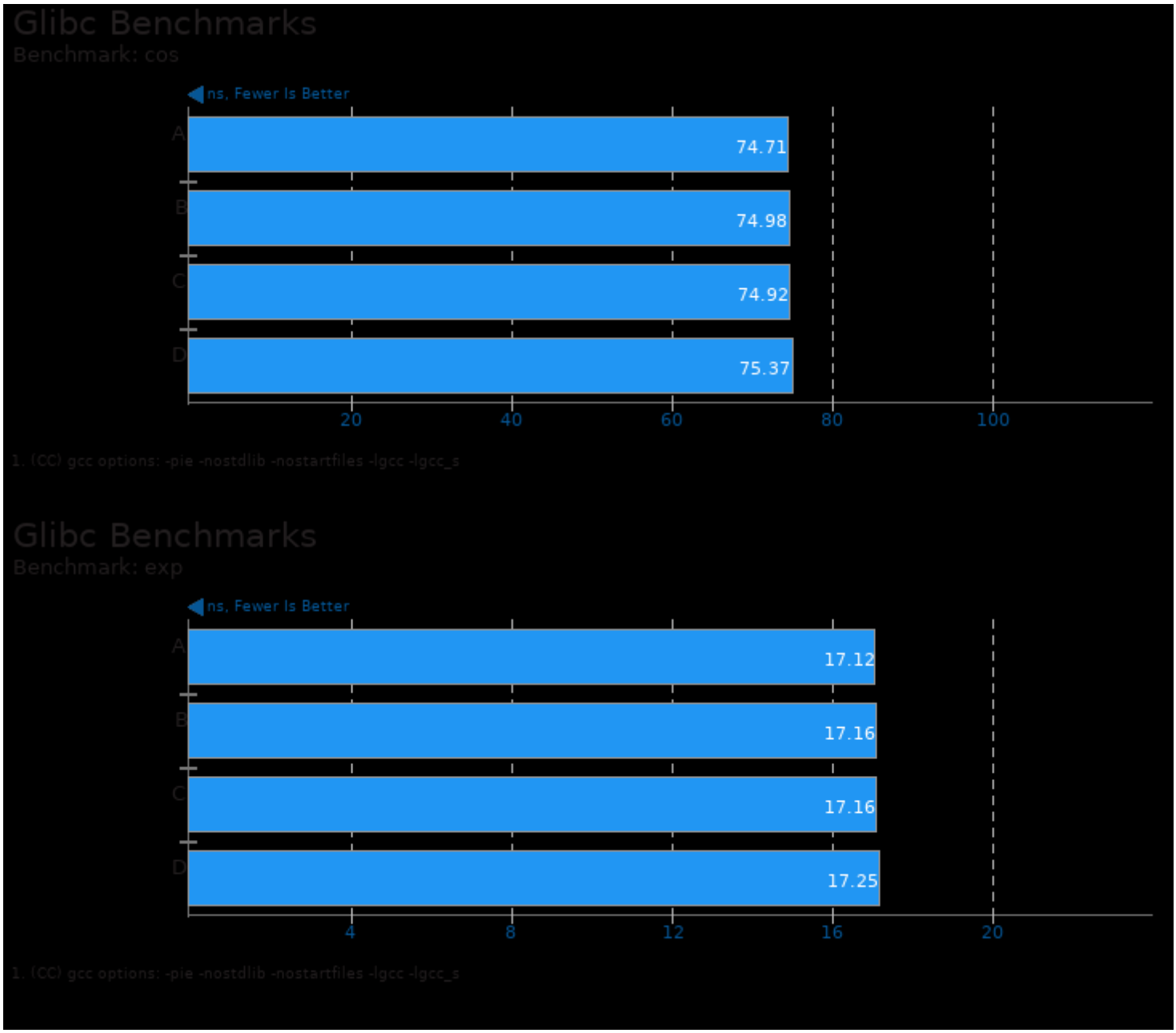
Facebook RocksDB 7.0.1

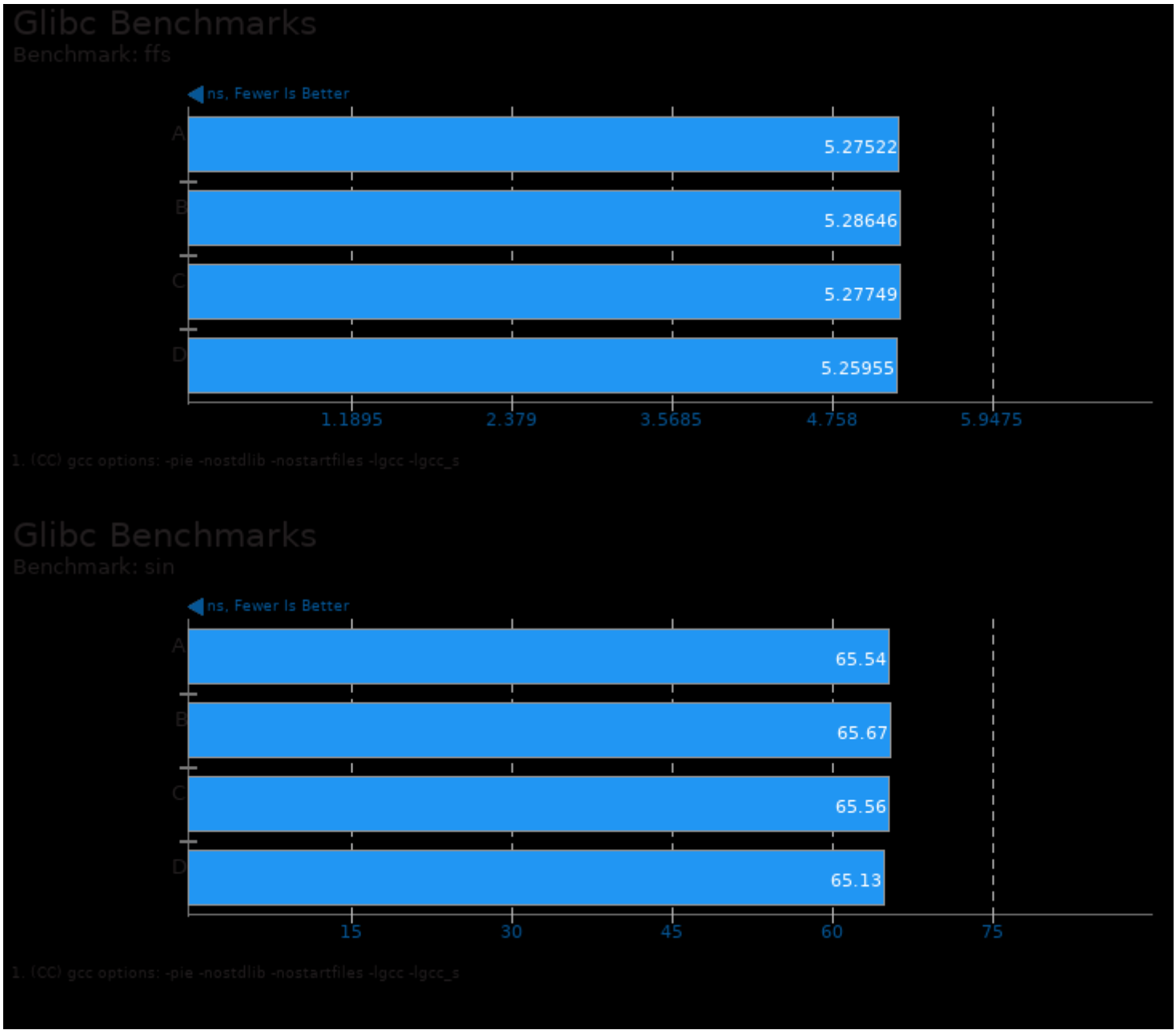
Test: Random Read

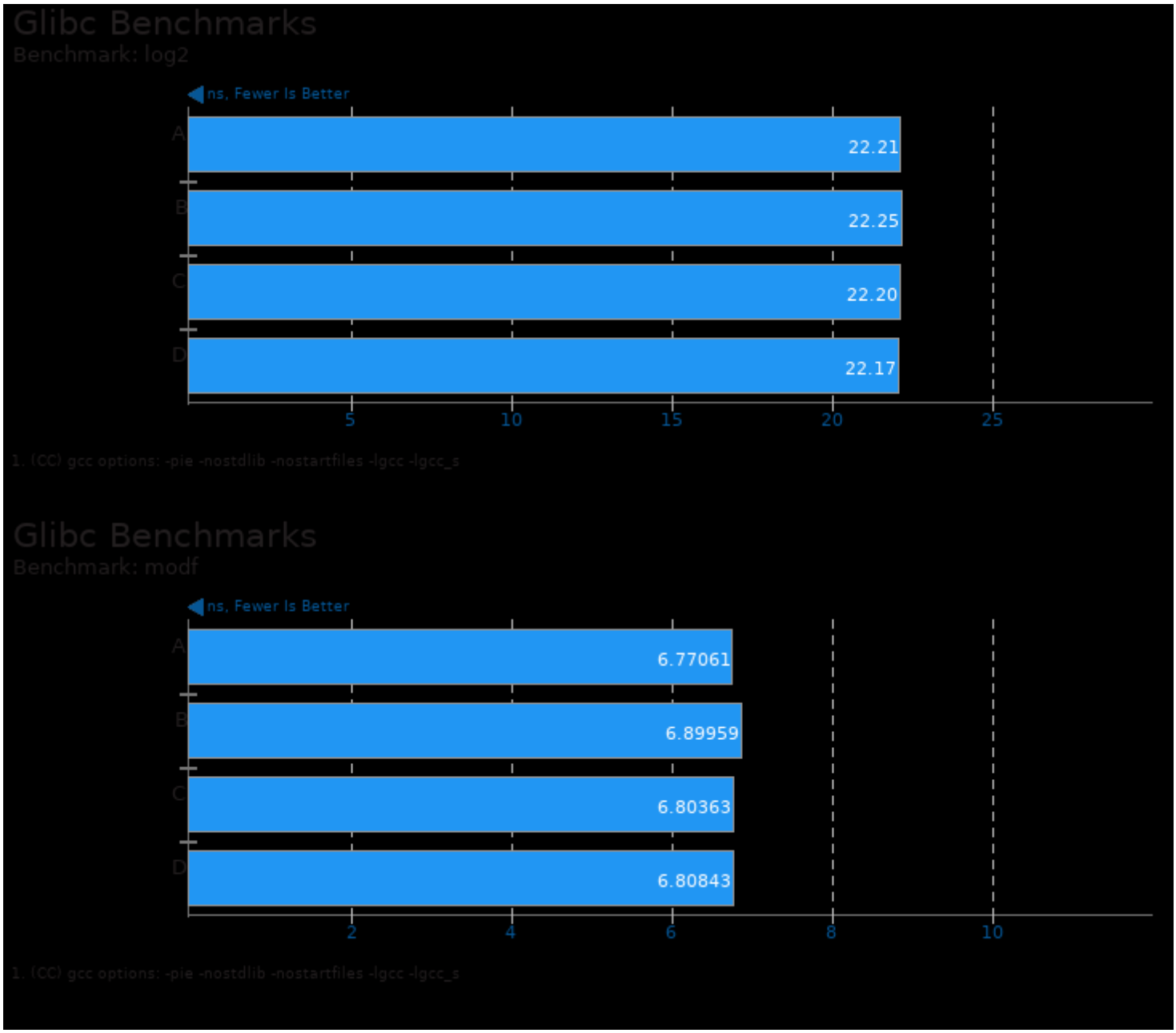


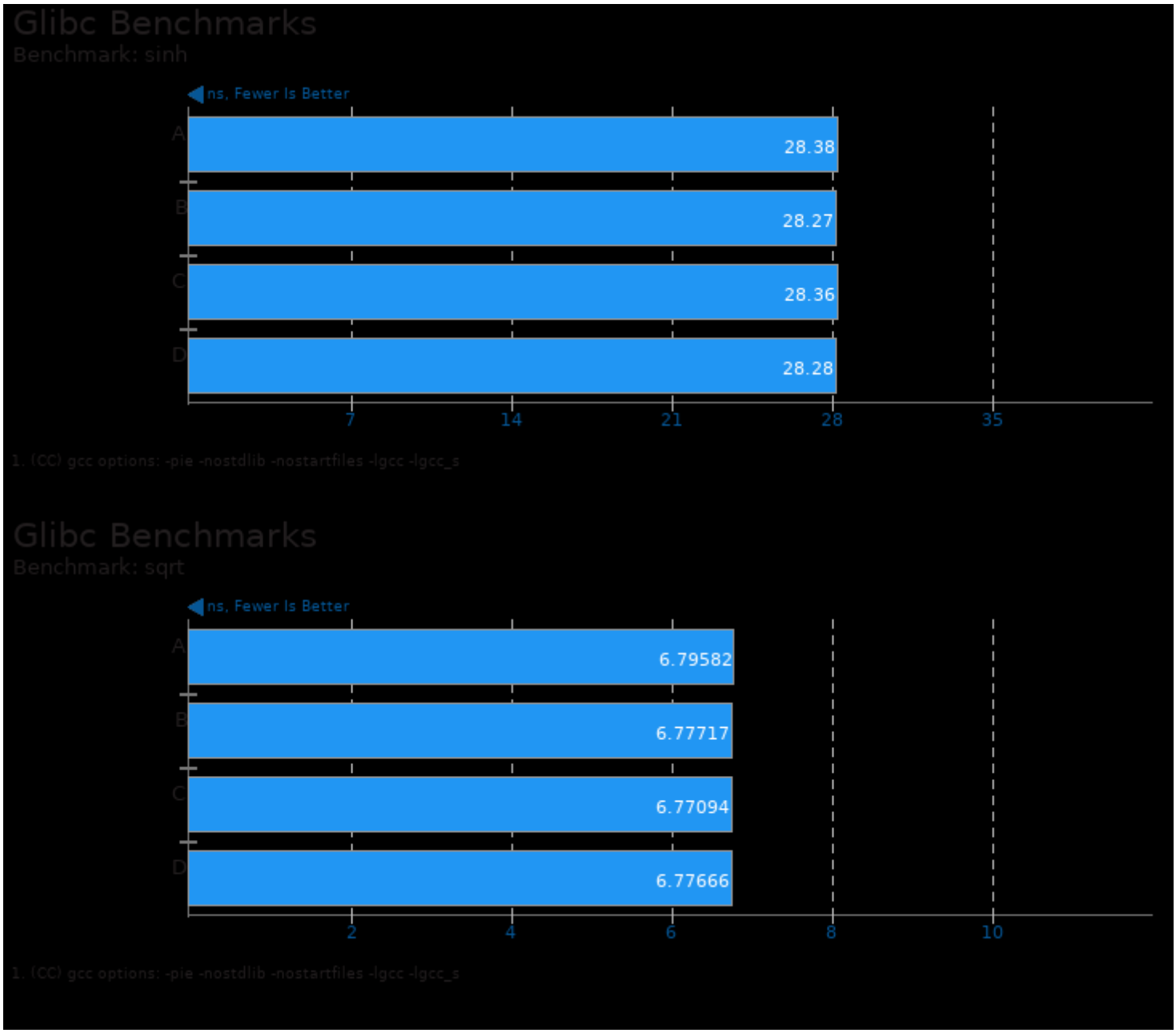
1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti -lpthread

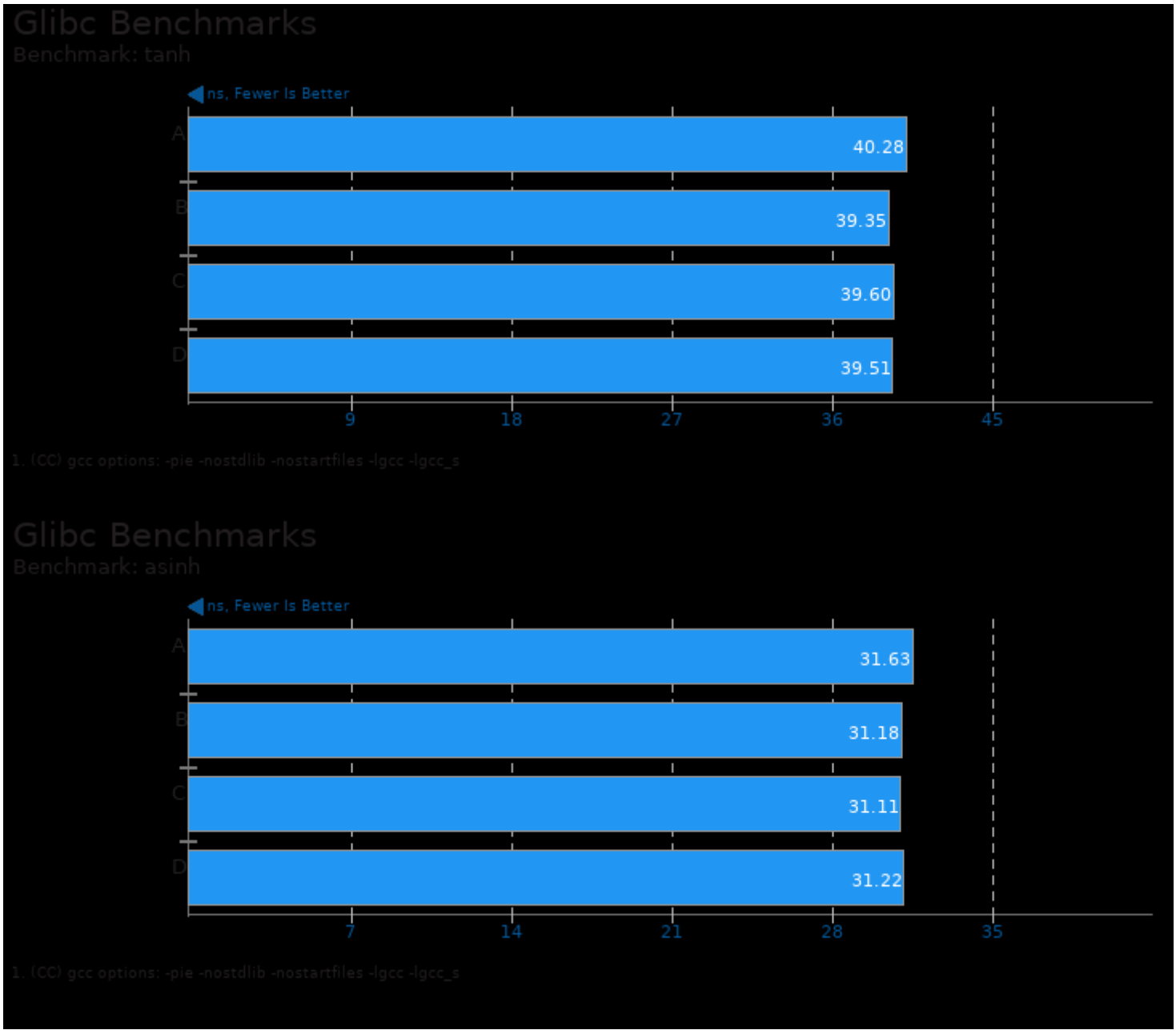

Facebook RocksDB 7.0.1
Test: Update Random
Op/s, More Is Better
A
B
D
633380
633293
633869
140K
280K
420K
560K
700K
1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti -lpthread
Facebook RocksDB 7.0.1
Test: Read While Writing
Op/s, More Is Better
A
B
D
3010198
3015141
2995064
600K
1200K
1800K
2400K
3000K
1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti -lpthread
Facebook RocksDB 7.0.1
Test: Read Random Write Random
Op/s, More Is Better
A
B
D
2157960
2143910
2147824
500K
1000K
1500K
2000K
2500K
1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti -lpthread

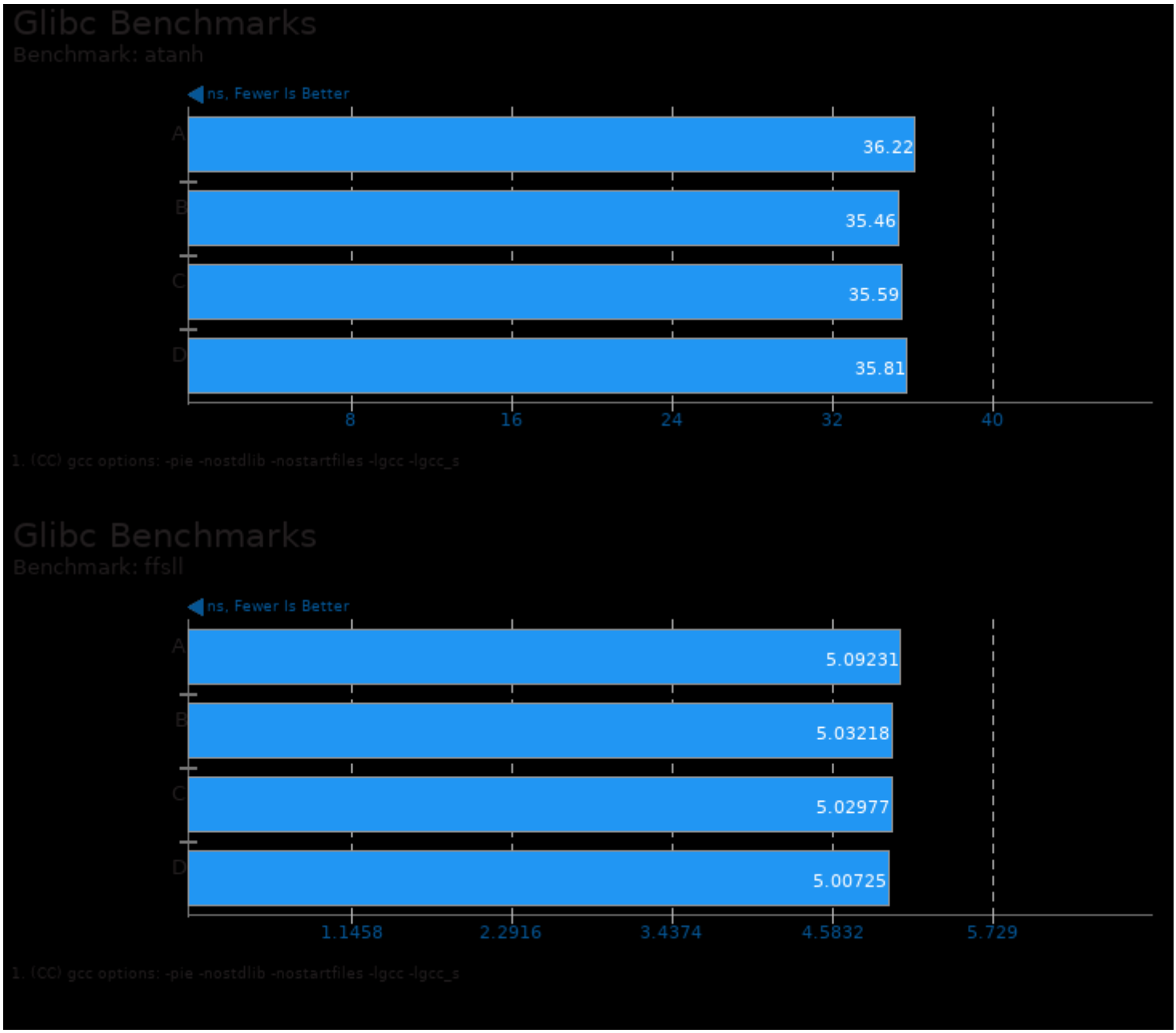

Glibc Benchmarks
Benchmark: cos
ns, Fewer Is Better
A
74.71
B
74.98
C
74.92
D
75.37
20
40
60
80
100
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: exp
ns, Fewer Is Better
A
17.12
B
17.16
C
17.16
D
17.25
4
8
12
16
20
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s


Glibc Benchmarks
Benchmark: ffs
ns, Fewer Is Better
A
B
C
D
5.27522
5.28646
5.27749
5.25955
1.1895
2.379
3.5685
4.758
5.9475
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: sin
ns, Fewer Is Better
A
B
C
D
65.54
65.67
65.56
65.13
15
30
45
60
75
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s


Glibc Benchmarks
Benchmark: log2
ns, Fewer Is Better
A
B
C
D
22.21
22.25
22.20
22.17
5
10
15
20
25
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: modf
ns, Fewer Is Better
A
B
C
D
6.77061
6.89959
6.80363
6.80843
2
4
6
8
10
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s

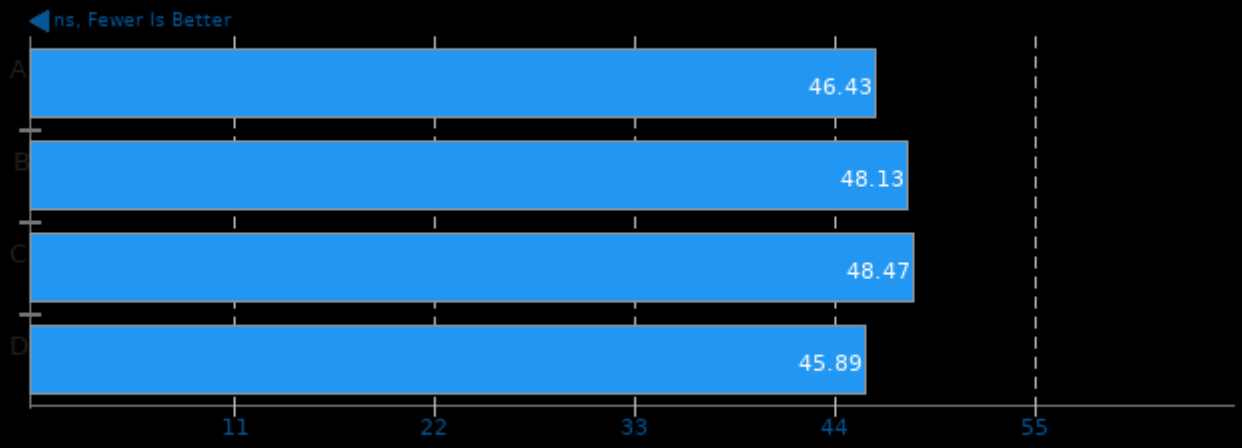

Glibc Benchmarks
Benchmark: sinh
ns, Fewer Is Better
A
B
C
D
28.38
28.27
28.36
28.28
7
14
21
28
35
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: sqrt
ns, Fewer Is Better
A
B
C
D
6.79582
6.77717
6.77094
6.77666
2
4
6
8
10
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s


Glibc Benchmarks
Benchmark: tanh
ns, Fewer Is Better
A
B
C
D
40.28
39.35
39.60
39.51
9
18
27
36
45
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: asinh
ns, Fewer Is Better
A
B
C
D
31.63
31.18
31.11
31.22
7
14
21
28
35
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s


Glibc Benchmarks
Benchmark: atanh
ns, Fewer Is Better
A
B
C
D
36.22
35.46
35.59
35.81
8
16
24
32
40
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s
Glibc Benchmarks
Benchmark: ffsll
ns, Fewer Is Better
A
B
C
D
5.09231
5.03218
5.02977
5.00725
1.1458
2.2916
3.4374
4.5832
5.729
1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s

Glibc Benchmarks

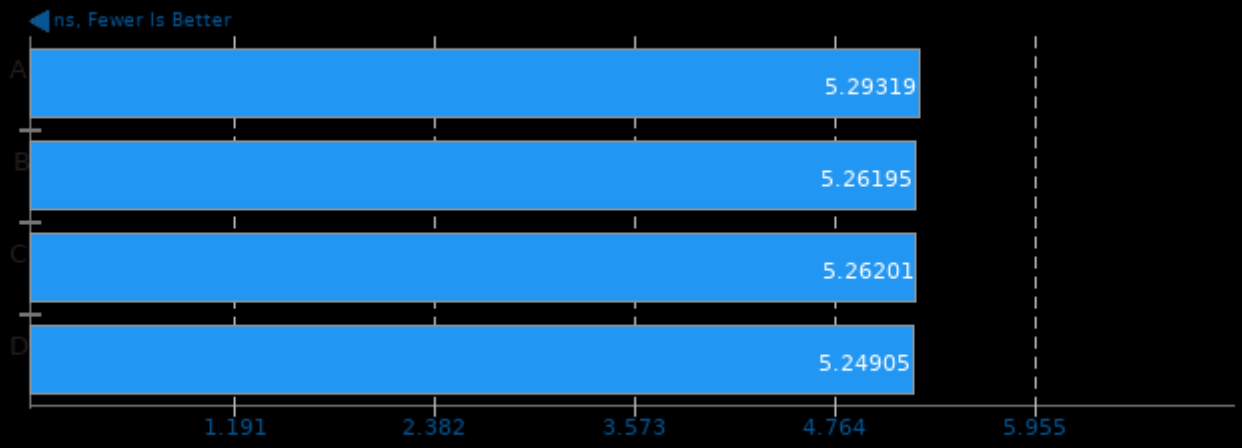
Benchmark: sincos



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s

Glibc Benchmarks

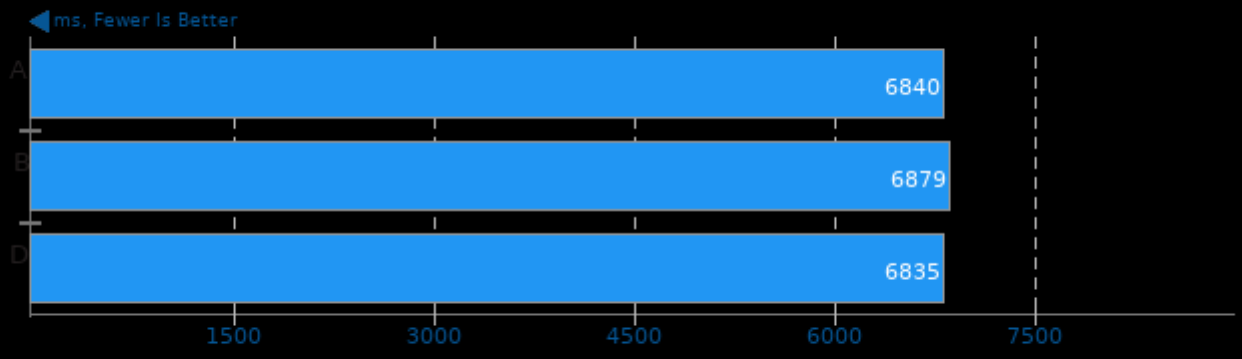
Benchmark: pthread_once



1. (CC) gcc options: -pie -nostdlib -nostartfiles -lgcc -lgcc_s

Google Draco 1.5.0

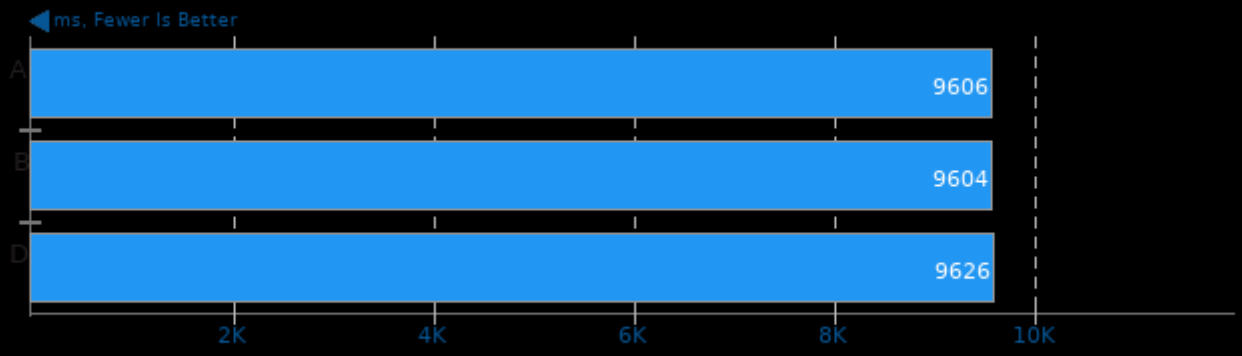
Model: Lion



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

Google Draco 1.5.0

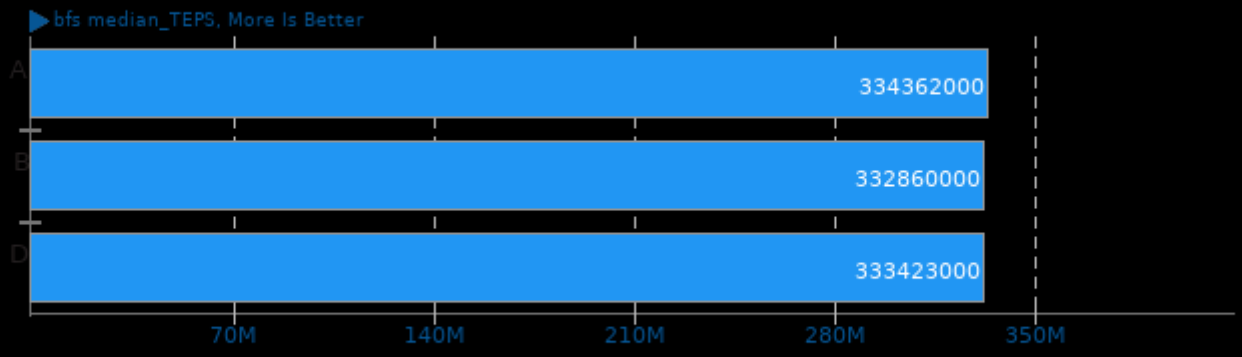
Model: Church Facade



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

Graph500 3.0

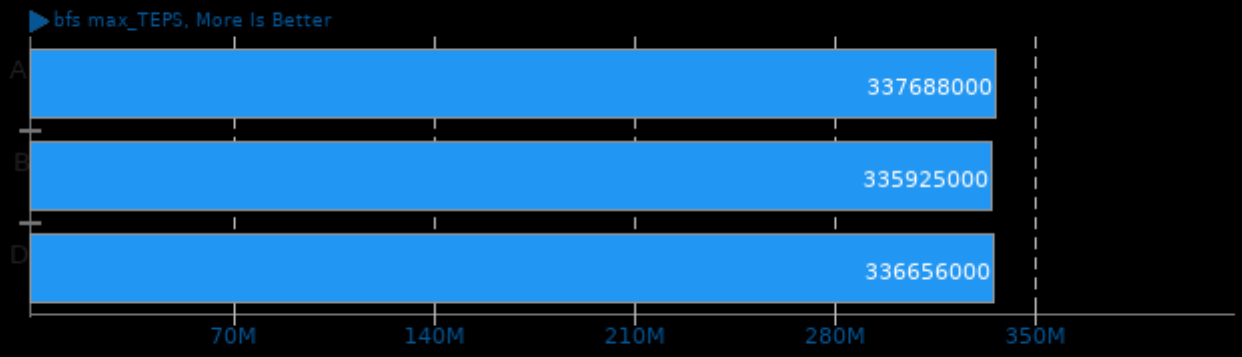
Scale: 26



1. (CC) gcc options: -fcommon -O3 -lpthread -lm -pthread -lmpi

Graph500 3.0

Scale: 26

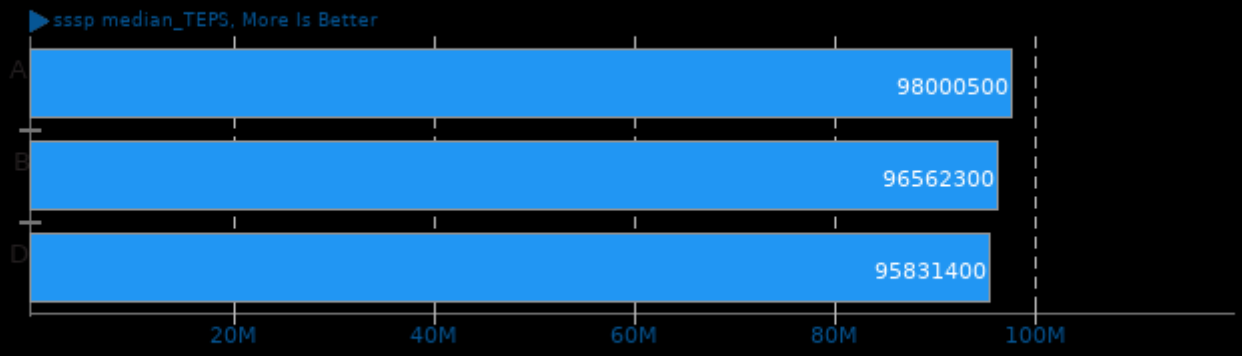


1. (CC) gcc options: -fcommon -O3 -lpthread -lm -pthread -lmpi

xeon gold sunday

Graph500 3.0

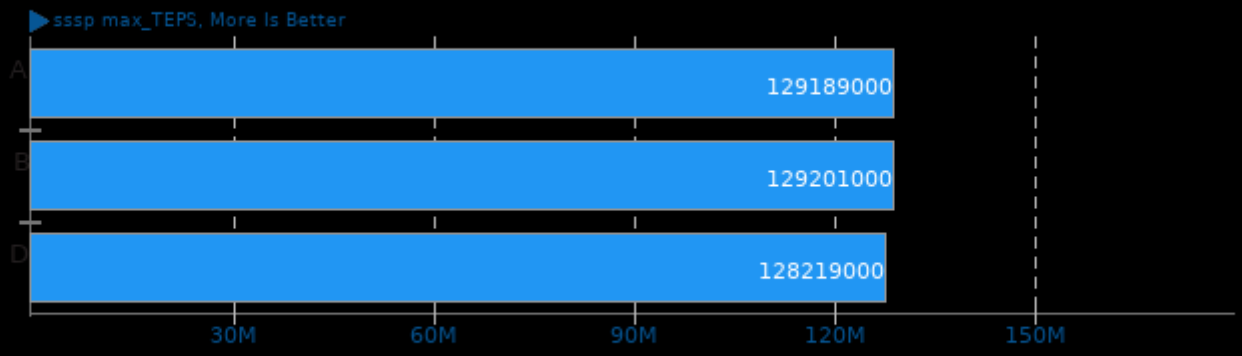
Scale: 26



1. (CC) gcc options: -fcommon -O3 -lpthread -lm -pthread -lmpi

Graph500 3.0

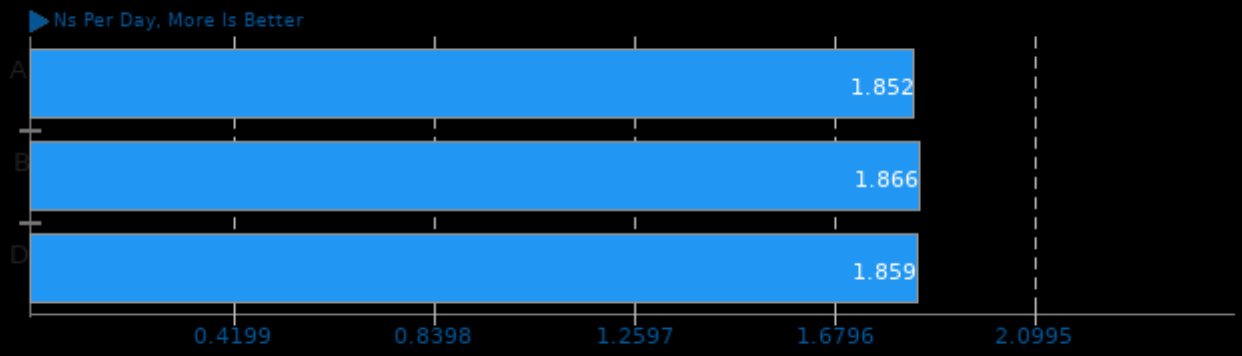
Scale: 26



1. (CC) gcc options: -fcommon -O3 -lpthread -lm -pthread -lmpi

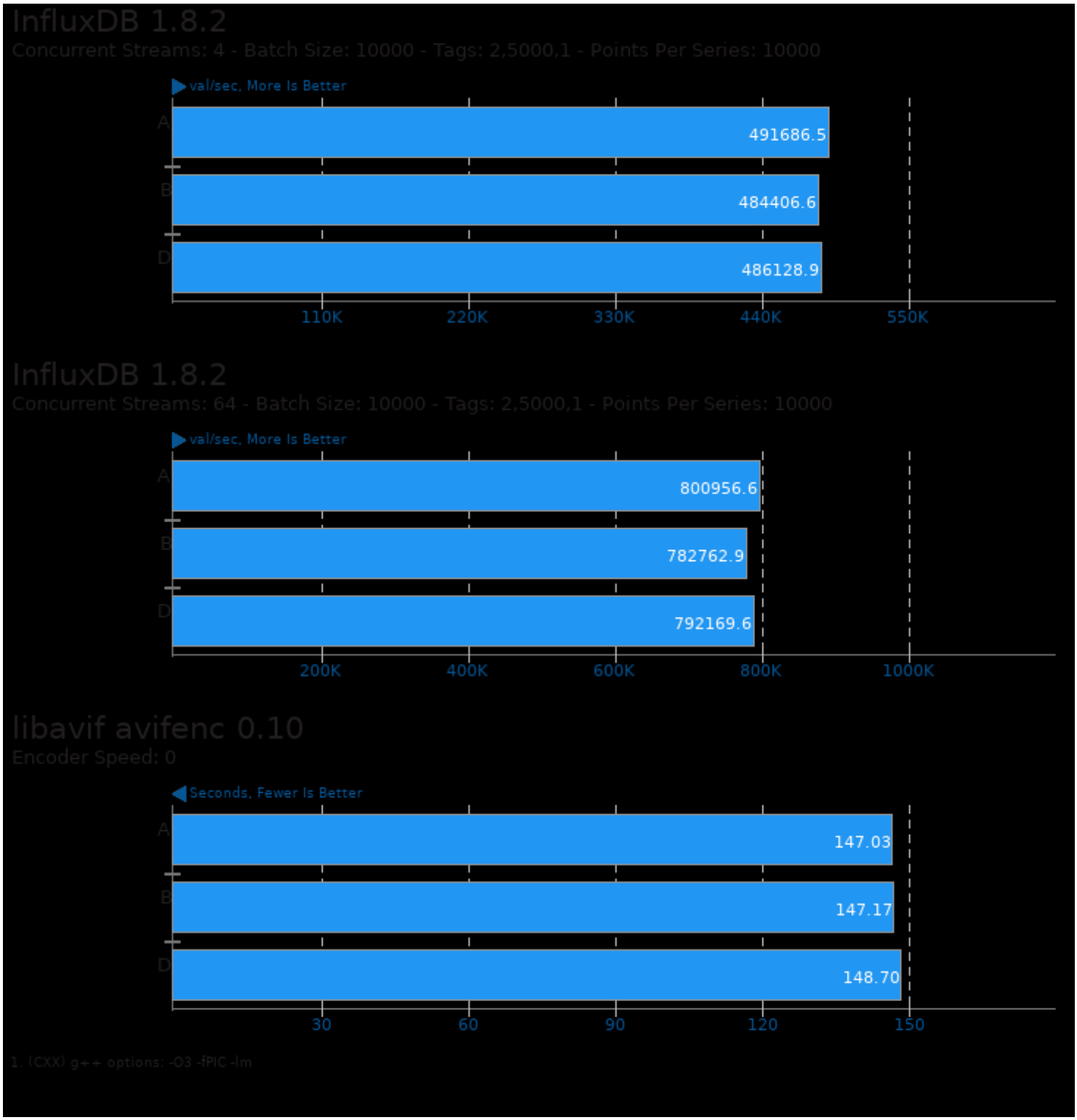
GROMACS 2022.1

Implementation: MPI CPU - Input: water_GMX50_bare

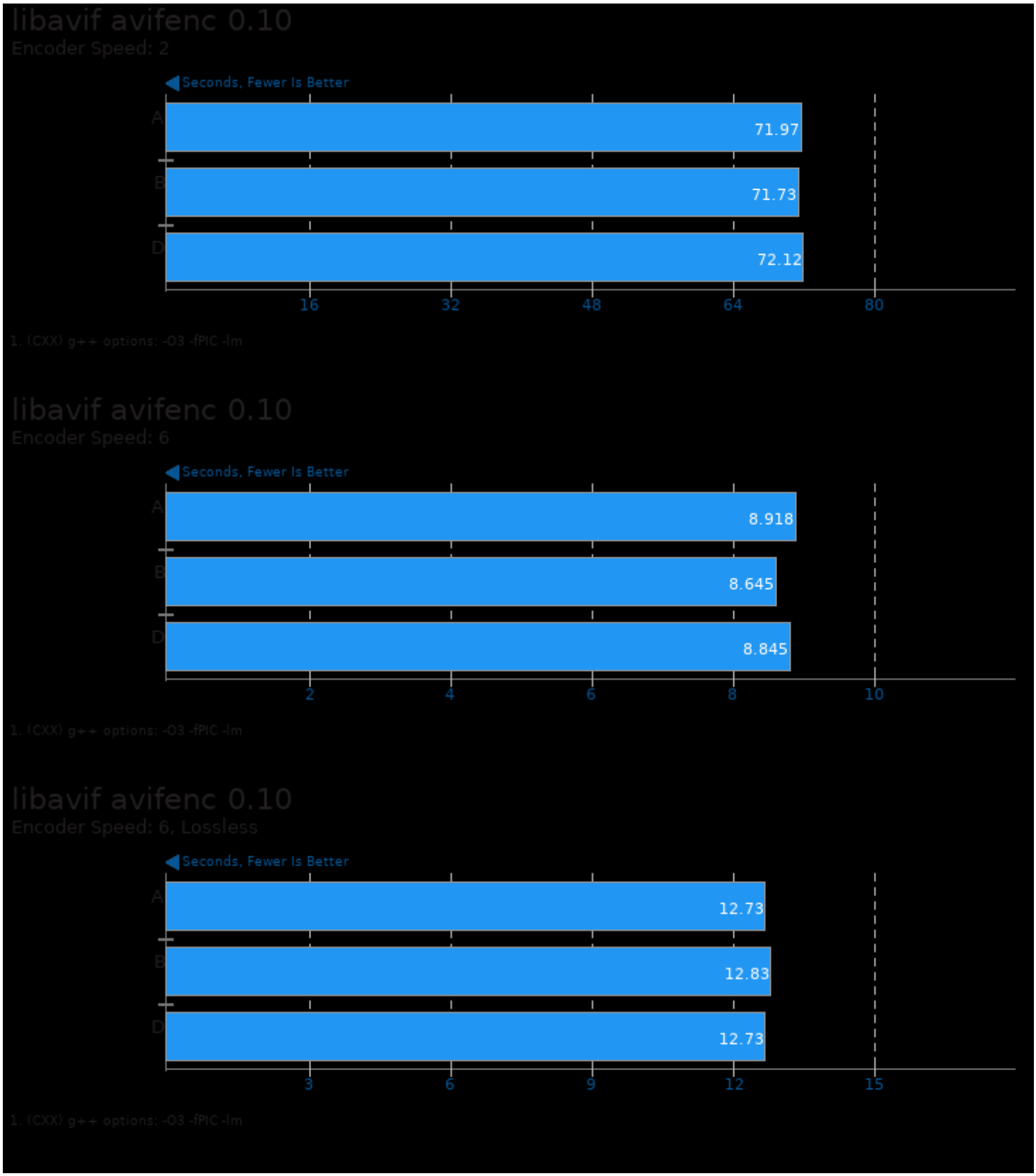


1. (CXX) g++ options: -O3 -pthread

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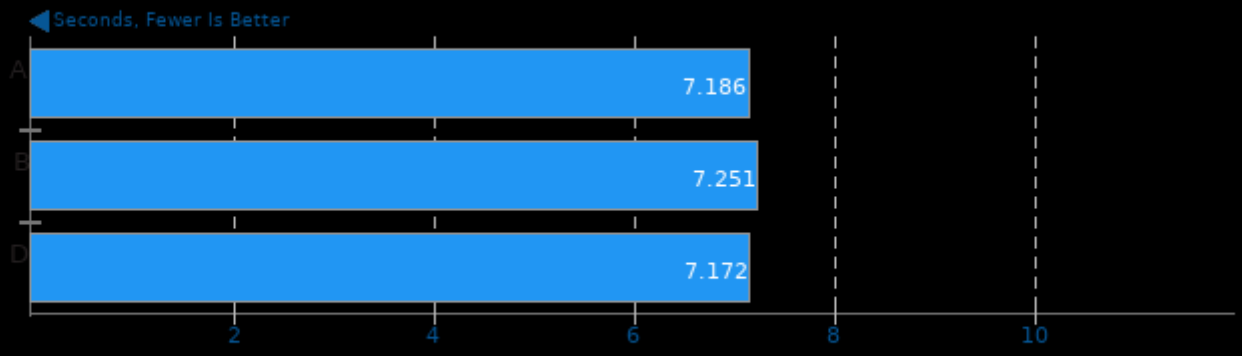


xeon gold sunday



libavif avifenc 0.10

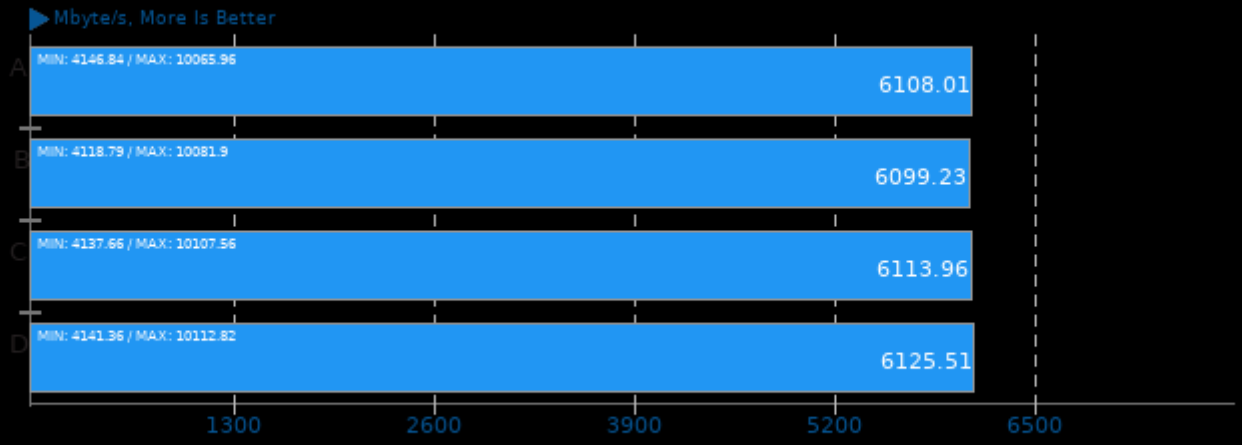
Encoder Speed: 10, Lossless



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

Nettle 3.8

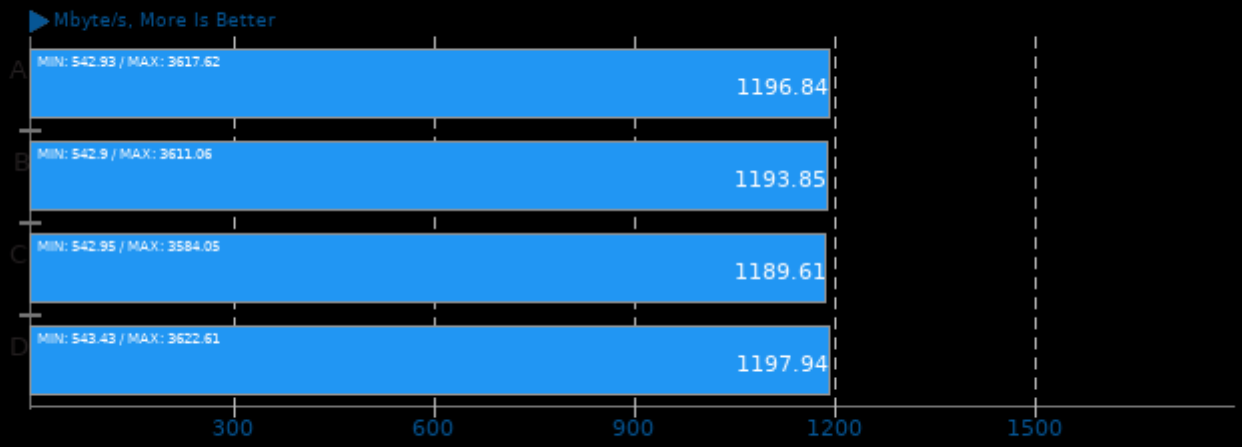
Test: aes256



1. (CC) gcc options: -O2 -ggdb3 -lnettle -lgmp -lm -lcrypto

Nettle 3.8

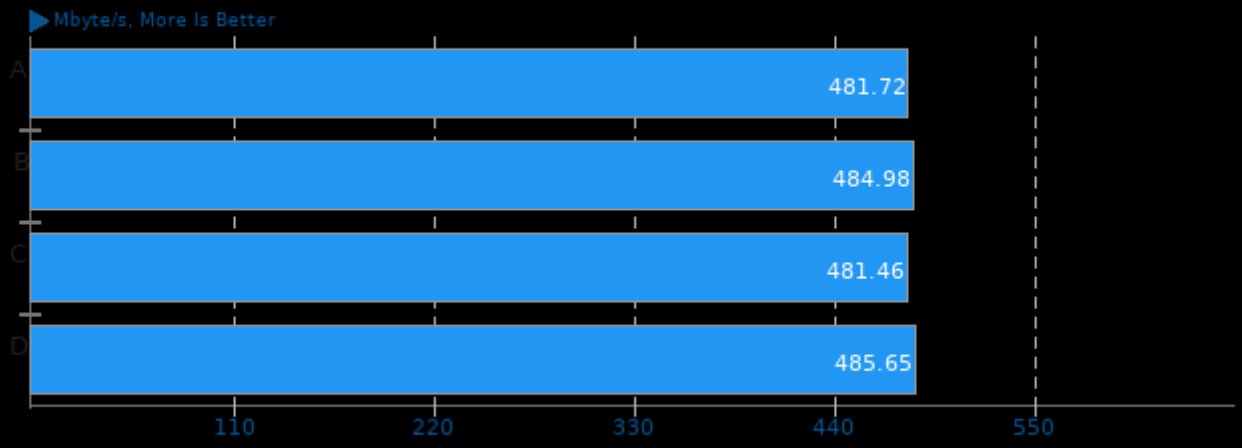
Test: chacha



1. (CC) gcc options: -O2 -ggdb3 -lnettle -lgmp -lm -lcrypto

Nettle 3.8

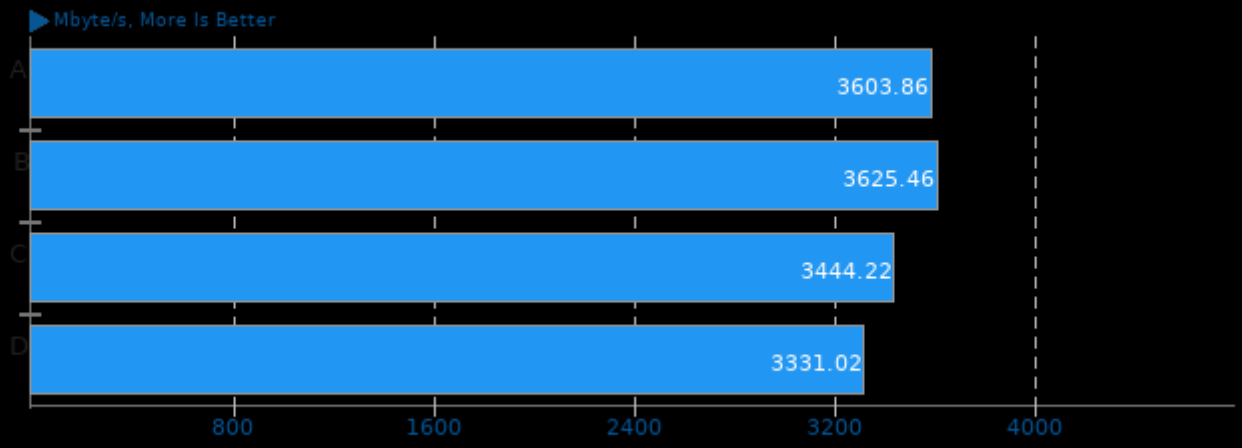
Test: sha512



1. (CC) gcc options: -O2 -ggdb3 -lnettle -lgmp -lm -lcrypto

Nettle 3.8

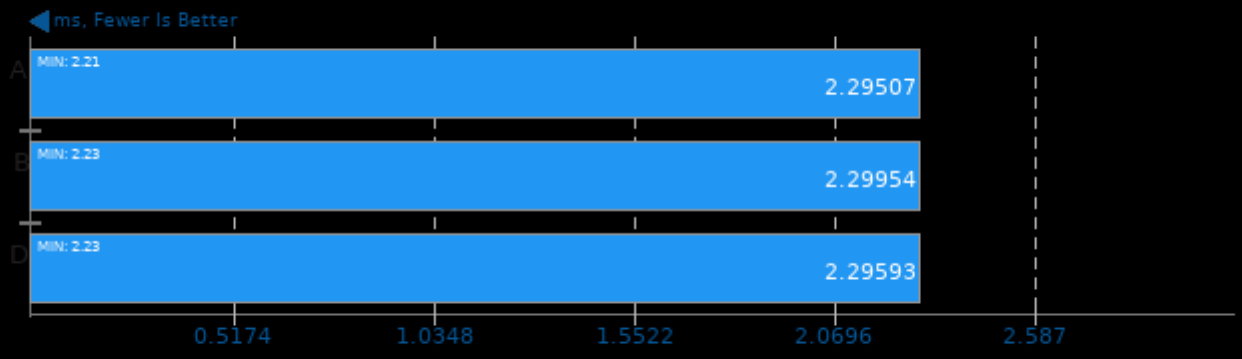
Test: poly1305-aes



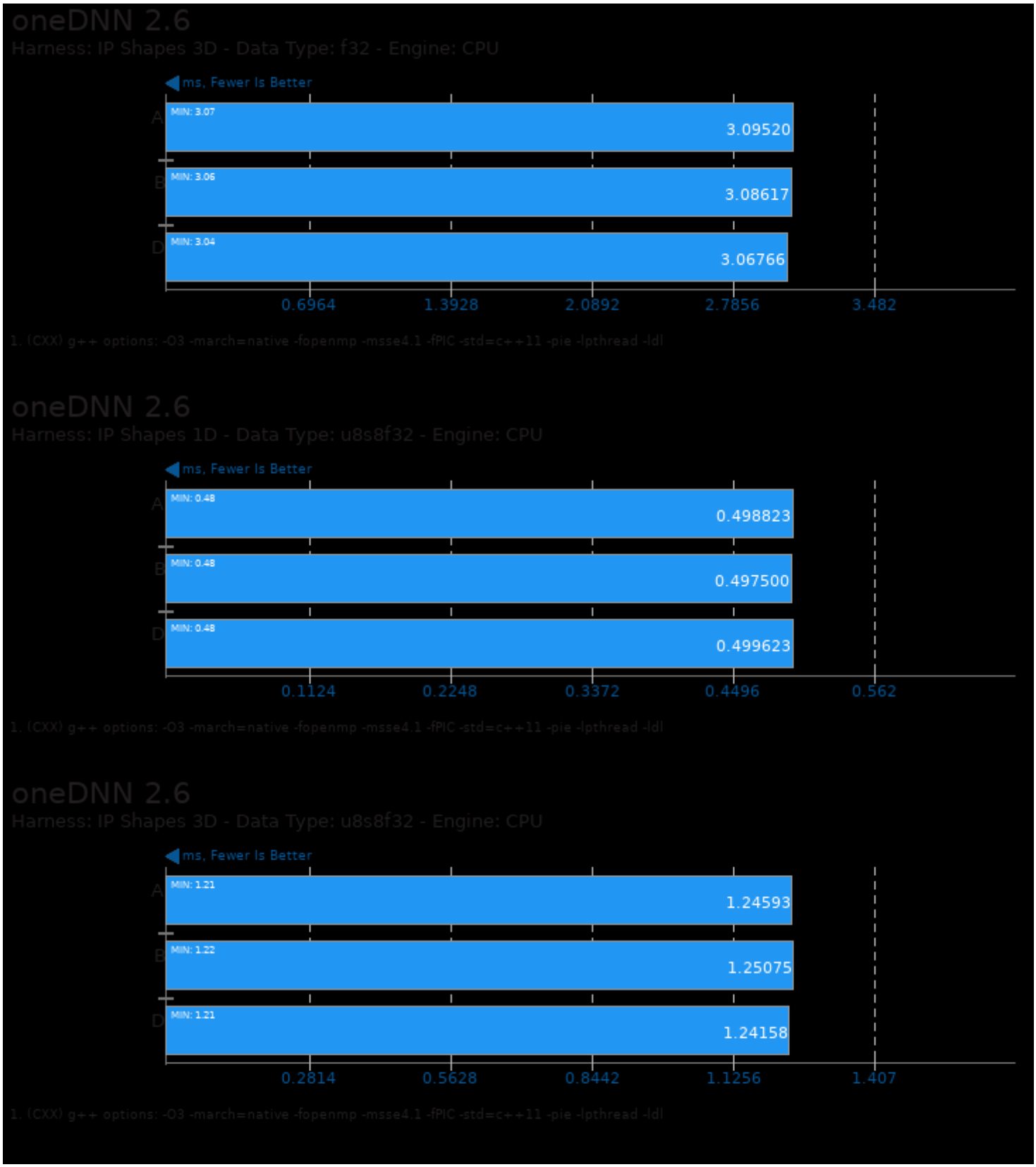
1. (CC) gcc options: -O2 -ggdb3 -lnettle -lgmp -lm -lcrypto

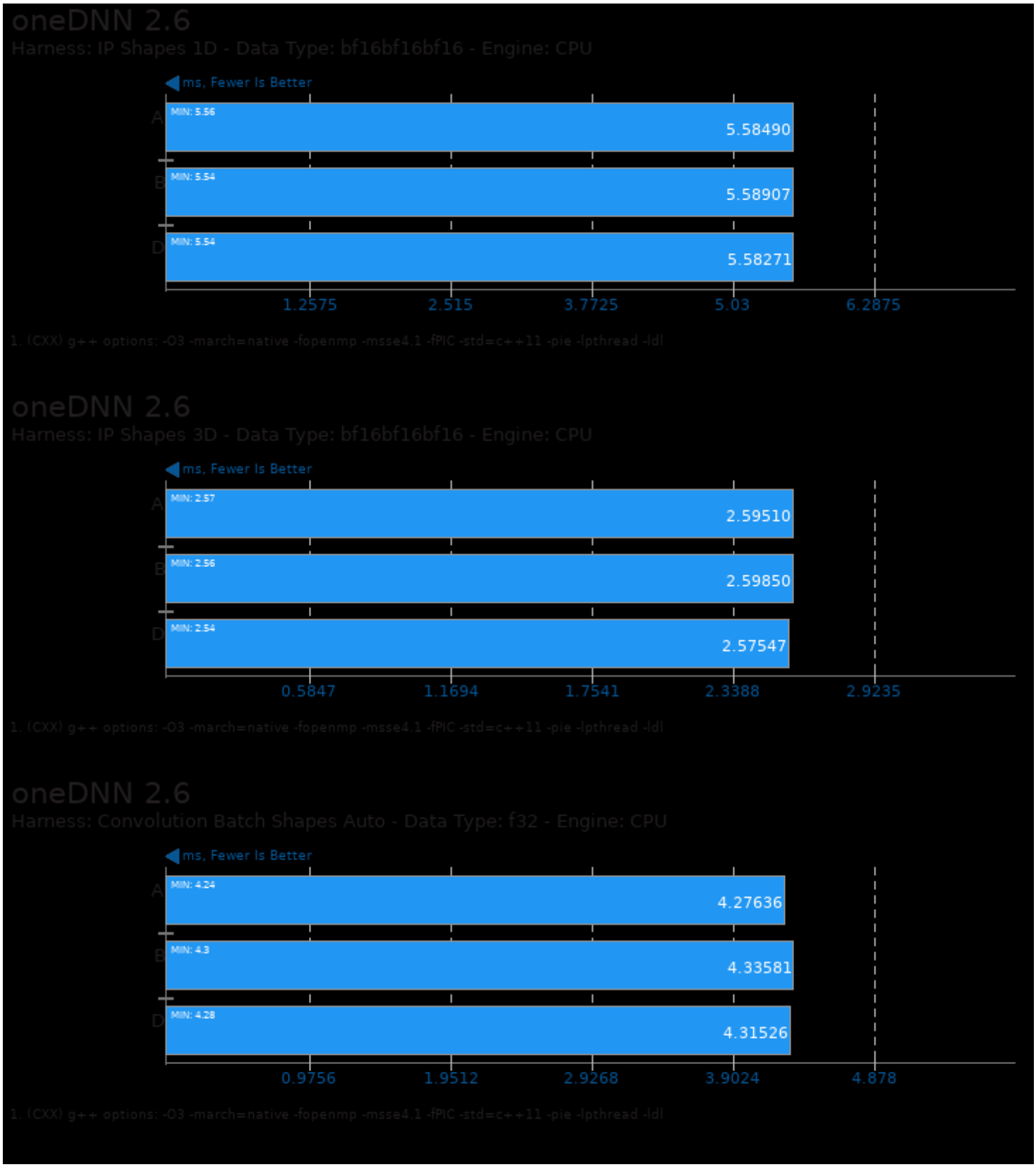
oneDNN 2.6

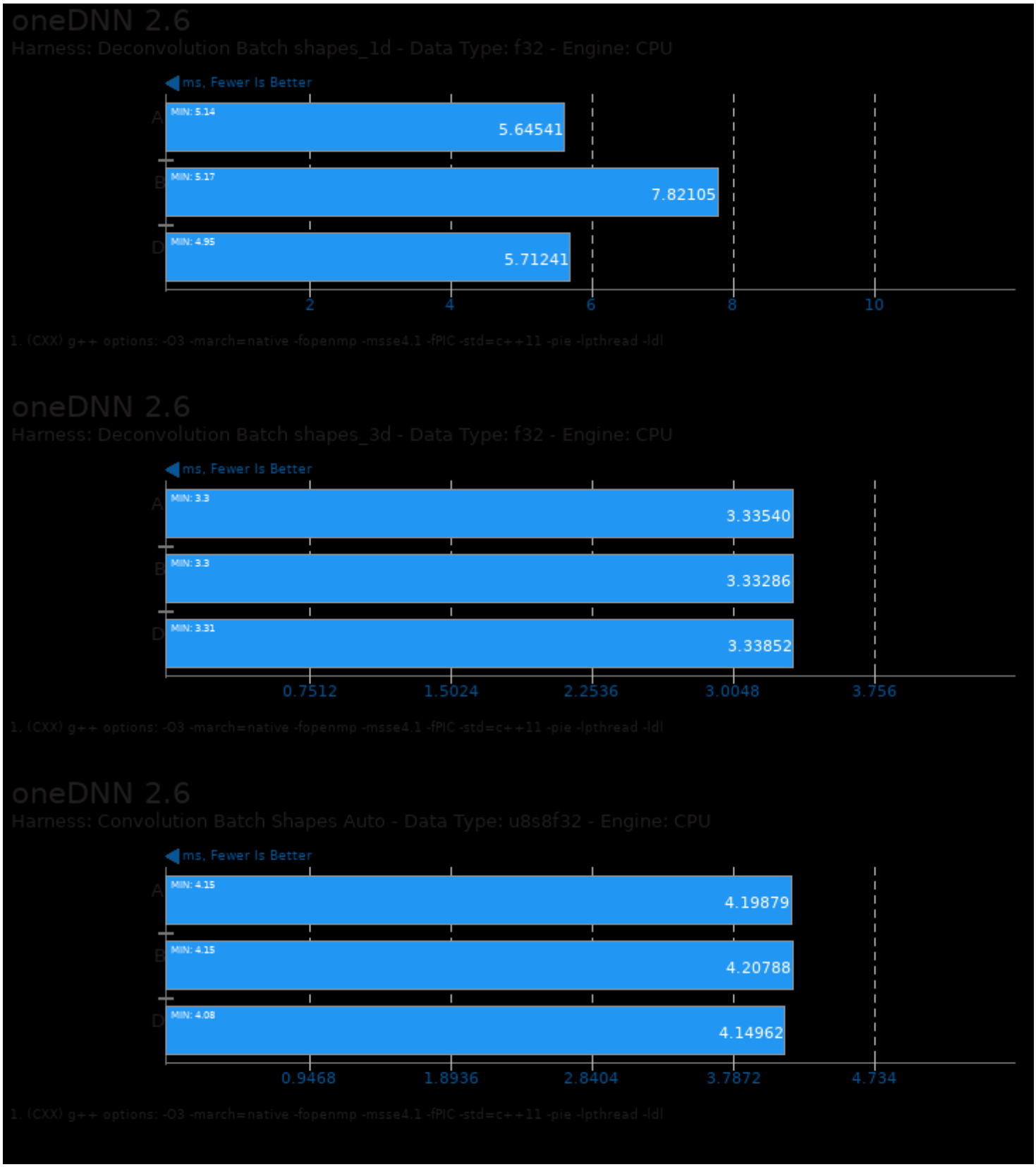
Harness: IP Shapes 1D - Data Type: f32 - Engine: CPU



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

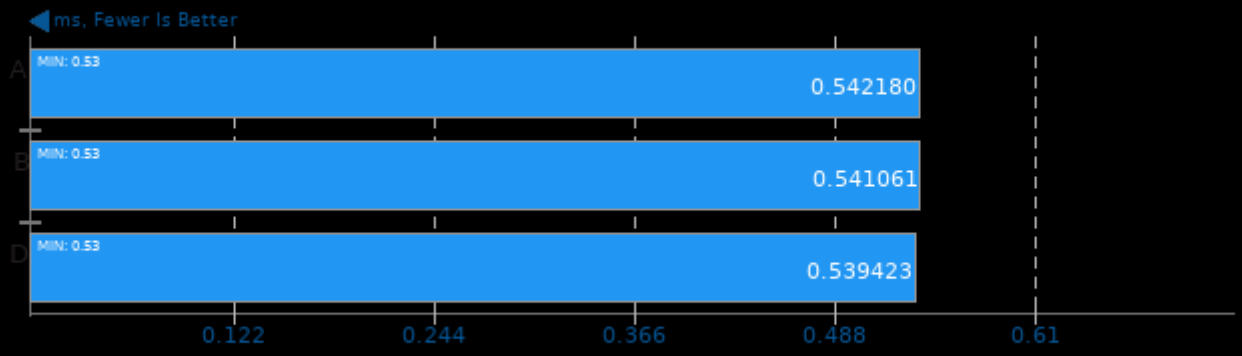

oneDNN 2.6
Harness: IP Shapes 3D - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 3.07
3.09520
B
MIN: 3.06
3.08617
D
MIN: 3.04
3.06766
0.6964
1.3928
2.0892
2.7856
3.482
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: IP Shapes 1D - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 0.48
0.498823
B
MIN: 0.48
0.497500
D
MIN: 0.48
0.499623
0.1124
0.2248
0.3372
0.4496
0.562
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: IP Shapes 3D - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 1.21
1.24593
B
MIN: 1.22
1.25075
D
MIN: 1.21
1.24158
0.2814
0.5628
0.8442
1.1256
1.407
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl


oneDNN 2.6
Harness: IP Shapes 1D - Data Type: bf16bf16bf16 - Engine: CPU
ms, Fewer Is Better
A
MIN: 5.56
5.58490
B
MIN: 5.54
5.58907
D
MIN: 5.54
5.58271
1.2575
2.515
3.7725
5.03
6.2875
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: IP Shapes 3D - Data Type: bf16bf16bf16 - Engine: CPU
ms, Fewer Is Better
A
MIN: 2.57
2.59510
B
MIN: 2.56
2.59850
D
MIN: 2.54
2.57547
0.5847
1.1694
1.7541
2.3388
2.9235
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: Convolution Batch Shapes Auto - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 4.24
4.27636
B
MIN: 4.3
4.33581
D
MIN: 4.28
4.31526
0.9756
1.9512
2.9268
3.9024
4.878
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl


oneDNN 2.6
Harness: Deconvolution Batch shapes_1d - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 5.14
5.64541
B
MIN: 5.17
7.82105
D
MIN: 4.95
5.71241
2
4
6
8
10
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: Deconvolution Batch shapes_3d - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 3.3
3.33540
B
MIN: 3.3
3.33286
D
MIN: 3.31
3.33852
0.7512
1.5024
2.2536
3.0048
3.756
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: Convolution Batch Shapes Auto - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 4.15
4.19879
B
MIN: 4.15
4.20788
D
MIN: 4.08
4.14962
0.9468
1.8936
2.8404
3.7872
4.734
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl

oneDNN 2.6

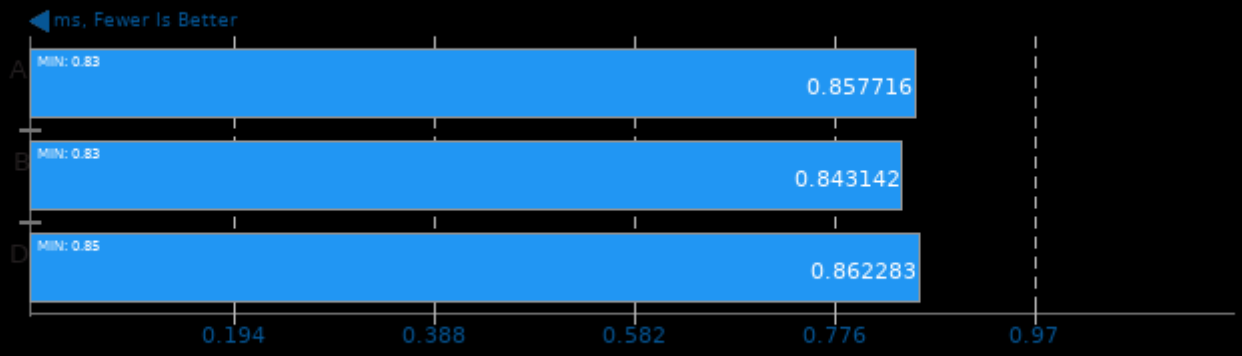
Harness: Deconvolution Batch shapes_1d - Data Type: u8s8f32 - Engine: CPU



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

oneDNN 2.6

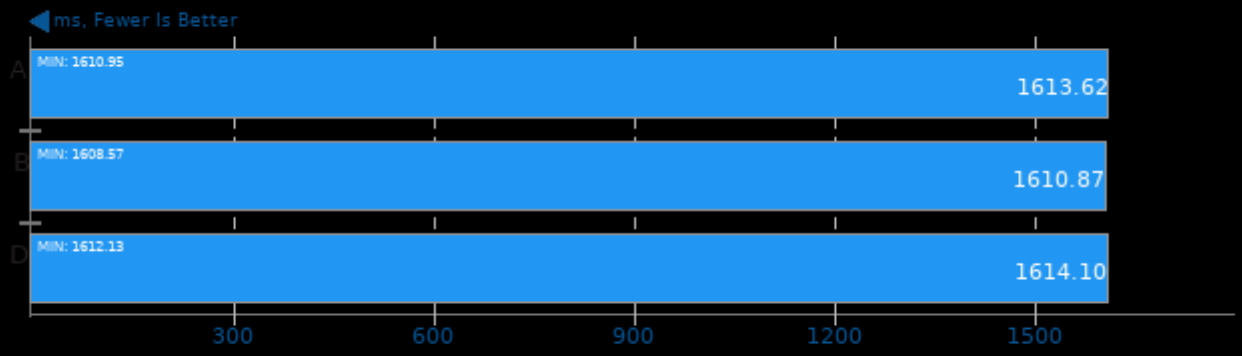
Harness: Deconvolution Batch shapes_3d - Data Type: u8s8f32 - Engine: CPU



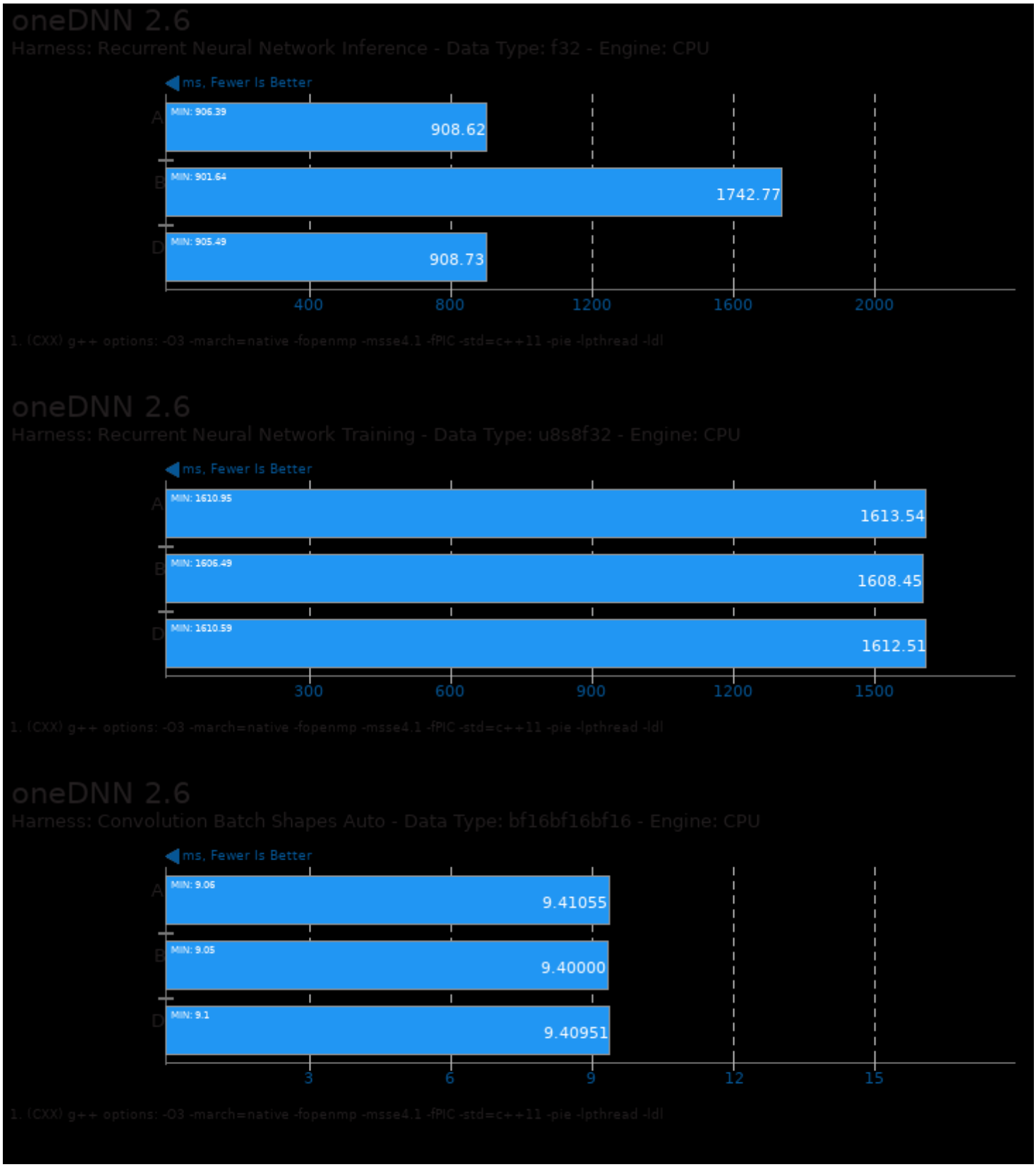
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl

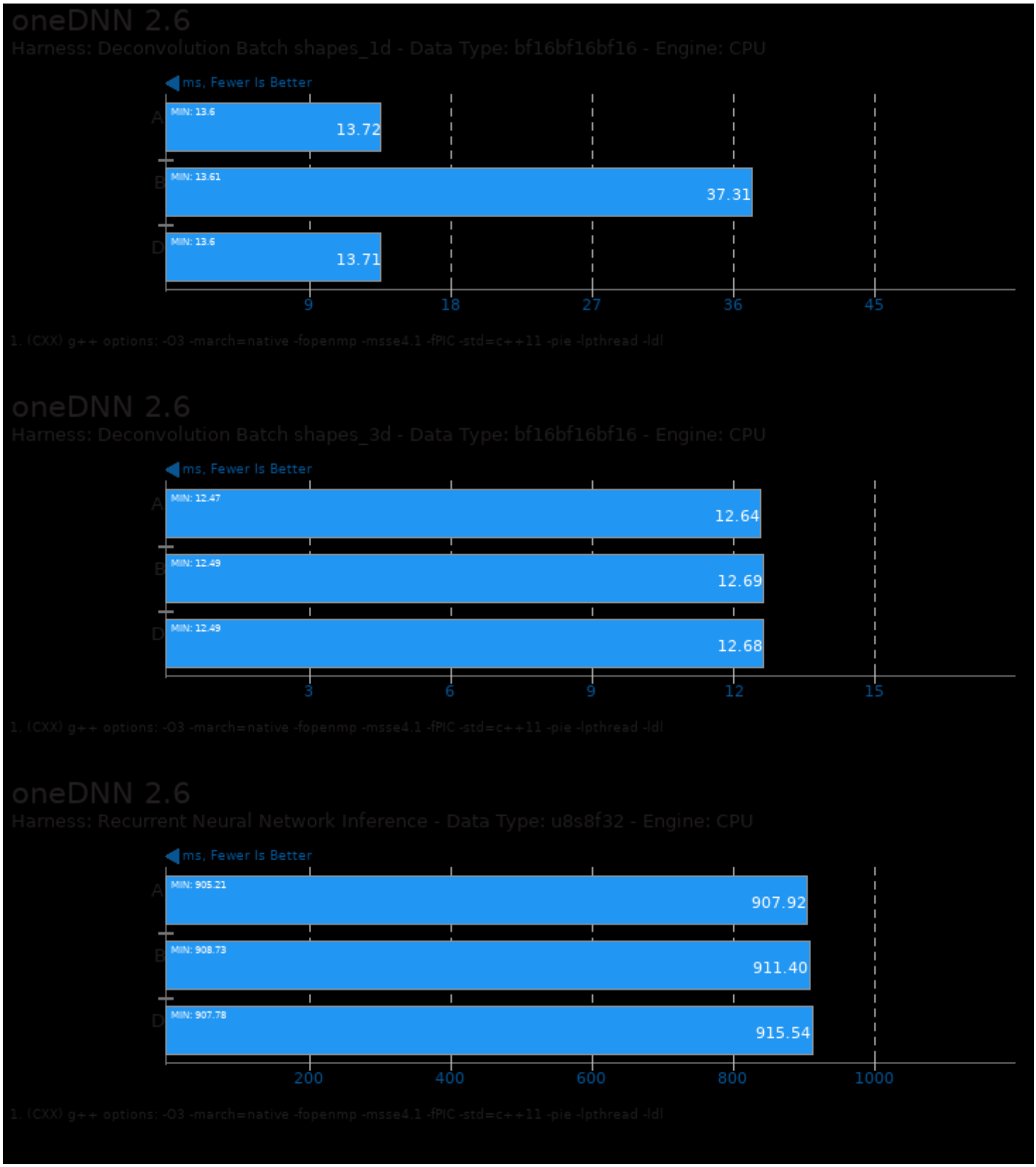
oneDNN 2.6

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



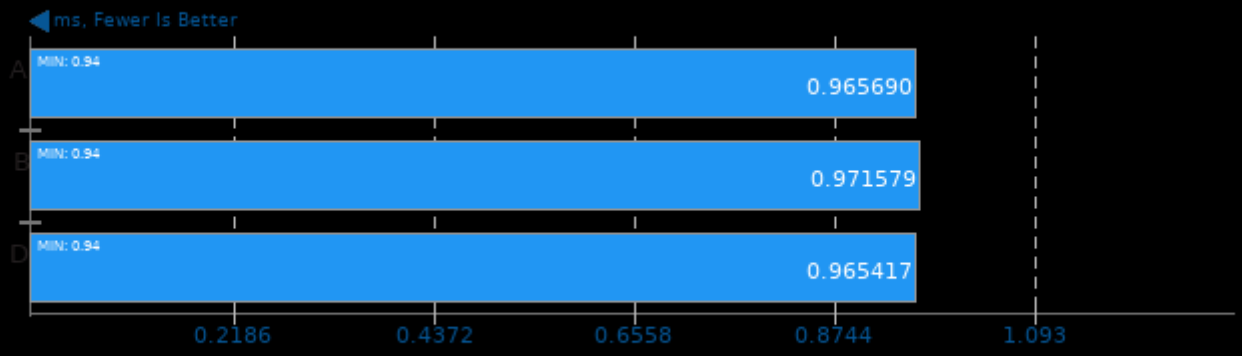
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl


oneDNN 2.6
Harness: Recurrent Neural Network Inference - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 906.39
908.62
B
MIN: 901.64
1742.77
D
MIN: 905.49
908.73
400
800
1200
1600
2000
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: Recurrent Neural Network Training - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 1610.95
1613.54
B
MIN: 1606.49
1608.45
D
MIN: 1610.59
1612.51
300
600
900
1200
1500
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: Convolution Batch Shapes Auto - Data Type: bf16bf16bf16 - Engine: CPU
ms, Fewer Is Better
A
MIN: 9.06
9.41055
B
MIN: 9.05
9.40000
D
MIN: 9.1
9.40951
3
6
9
12
15
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl


oneDNN 2.6
Harness: Deconvolution Batch shapes_1d - Data Type: bf16bf16bf16 - Engine: CPU
ms, Fewer Is Better
A
MIN: 13.6
13.72
B
MIN: 13.61
37.31
D
MIN: 13.6
13.71
9
18
27
36
45
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: Deconvolution Batch shapes_3d - Data Type: bf16bf16bf16 - Engine: CPU
ms, Fewer Is Better
A
MIN: 12.47
12.64
B
MIN: 12.49
12.69
D
MIN: 12.49
12.68
3
6
9
12
15
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl
oneDNN 2.6
Harness: Recurrent Neural Network Inference - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
A
MIN: 905.21
907.92
B
MIN: 908.73
911.40
D
MIN: 907.78
915.54
200
400
600
800
1000
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl

oneDNN 2.6

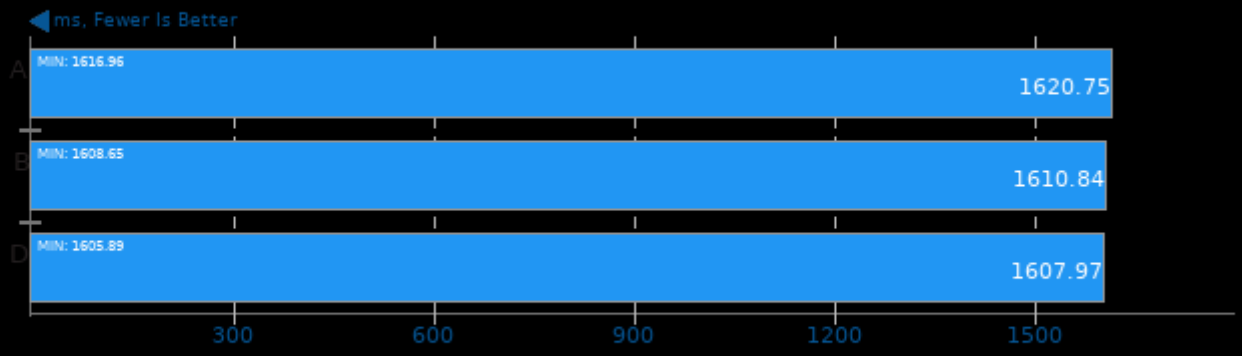
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: f32 - Engine: CPU



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

oneDNN 2.6

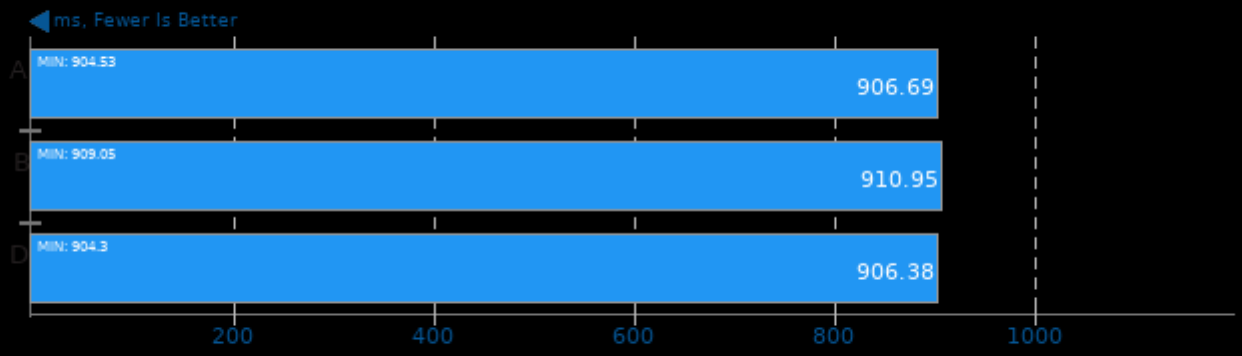
Harness: Recurrent Neural Network Training - Data Type: bf16bf16bf16 - Engine: CPU



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

oneDNN 2.6

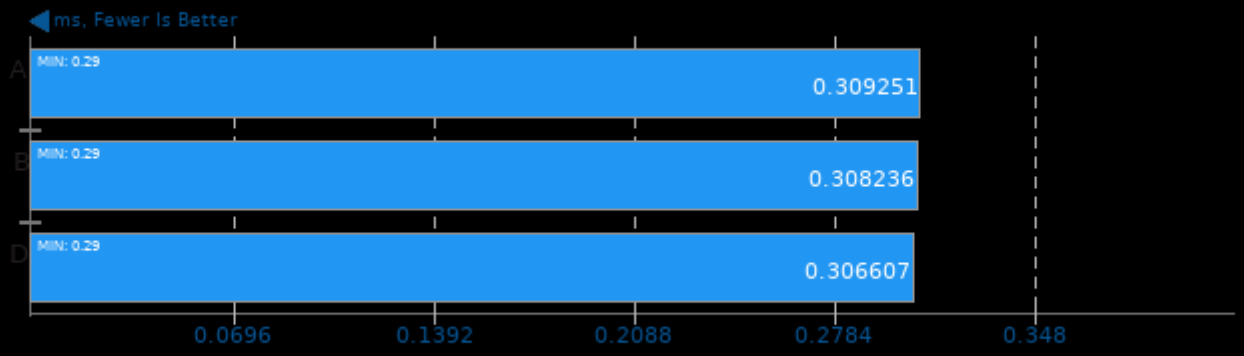
Harness: Recurrent Neural Network Inference - Data Type: bf16bf16bf16 - Engine: CPU



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

oneDNN 2.6

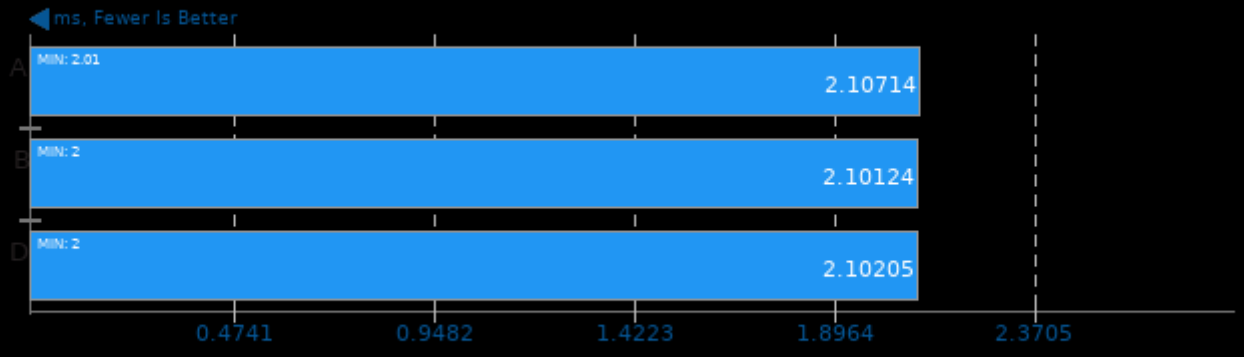
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: u8s8f32 - Engine: CPU



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

oneDNN 2.6

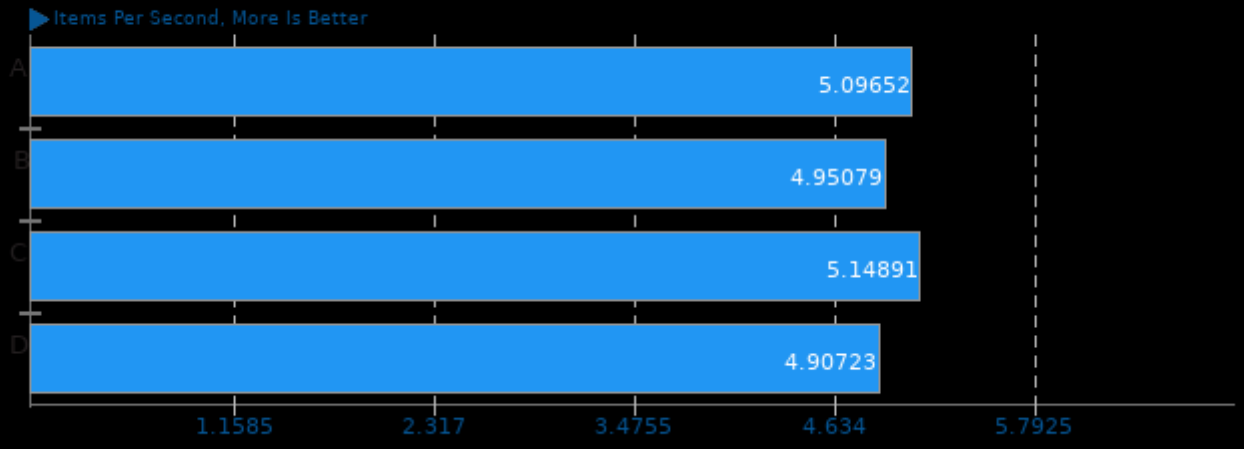
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: bf16bf16bf16 - Engine: CPU



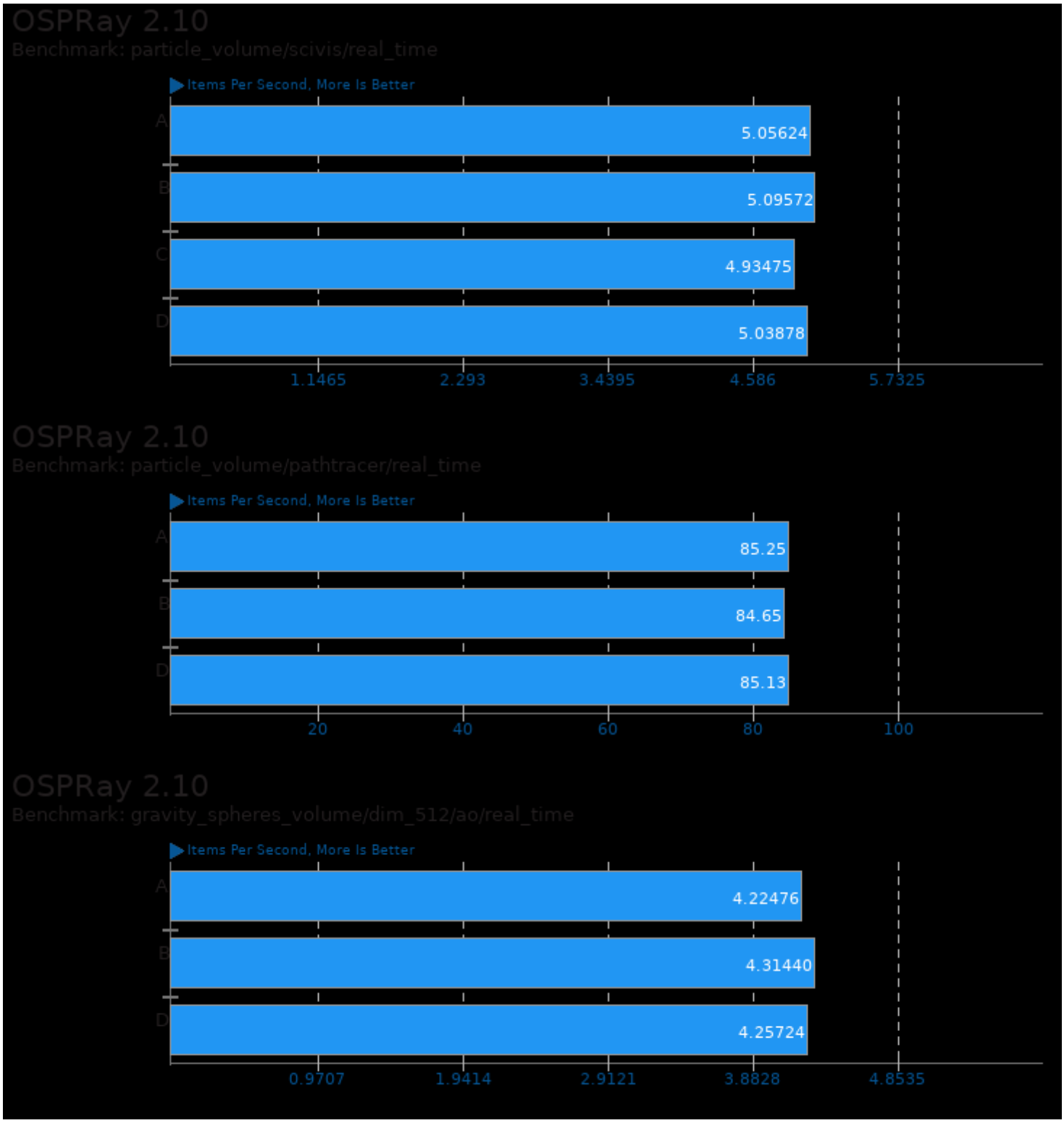
1. (CXX) g++ options: -O3 -march=native -fopenmp -msse4.1 -fPIC -std=c++11 -pie -lpthread -ldl

OSPRay 2.10

Benchmark: particle_volume/ao/real_time



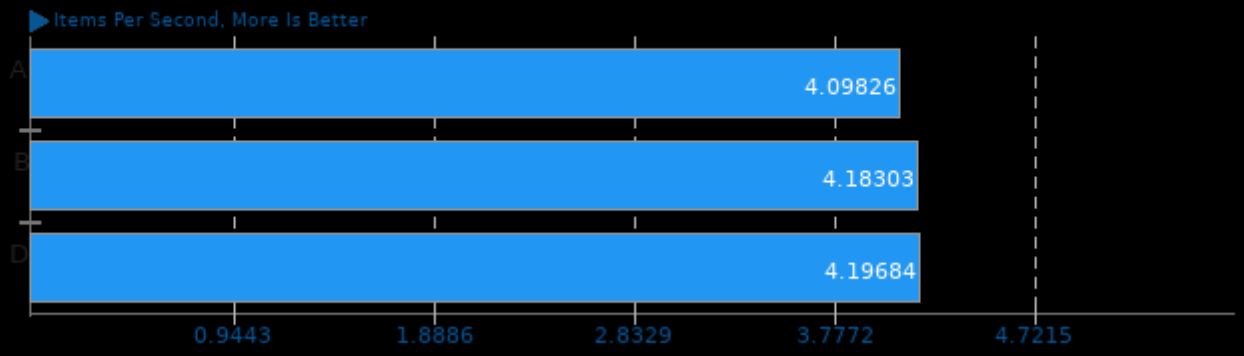
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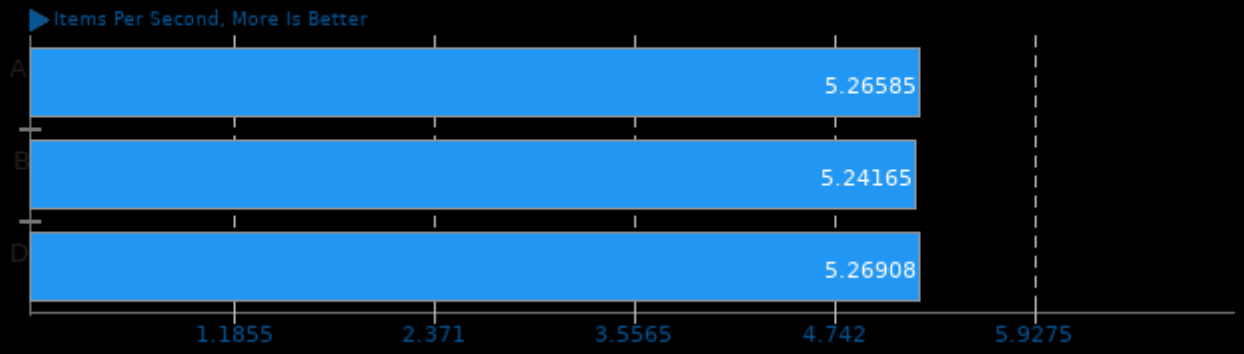
OSPRay 2.10

Benchmark: gravity_spheres_volume/dim_512/scivis/real_time



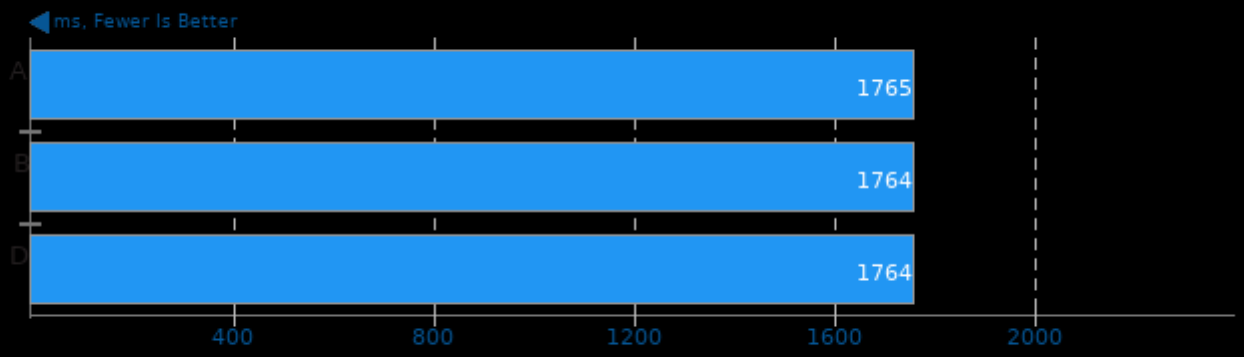
OSPRay 2.10

Benchmark: gravity_spheres_volume/dim_512/pathtracer/real_time

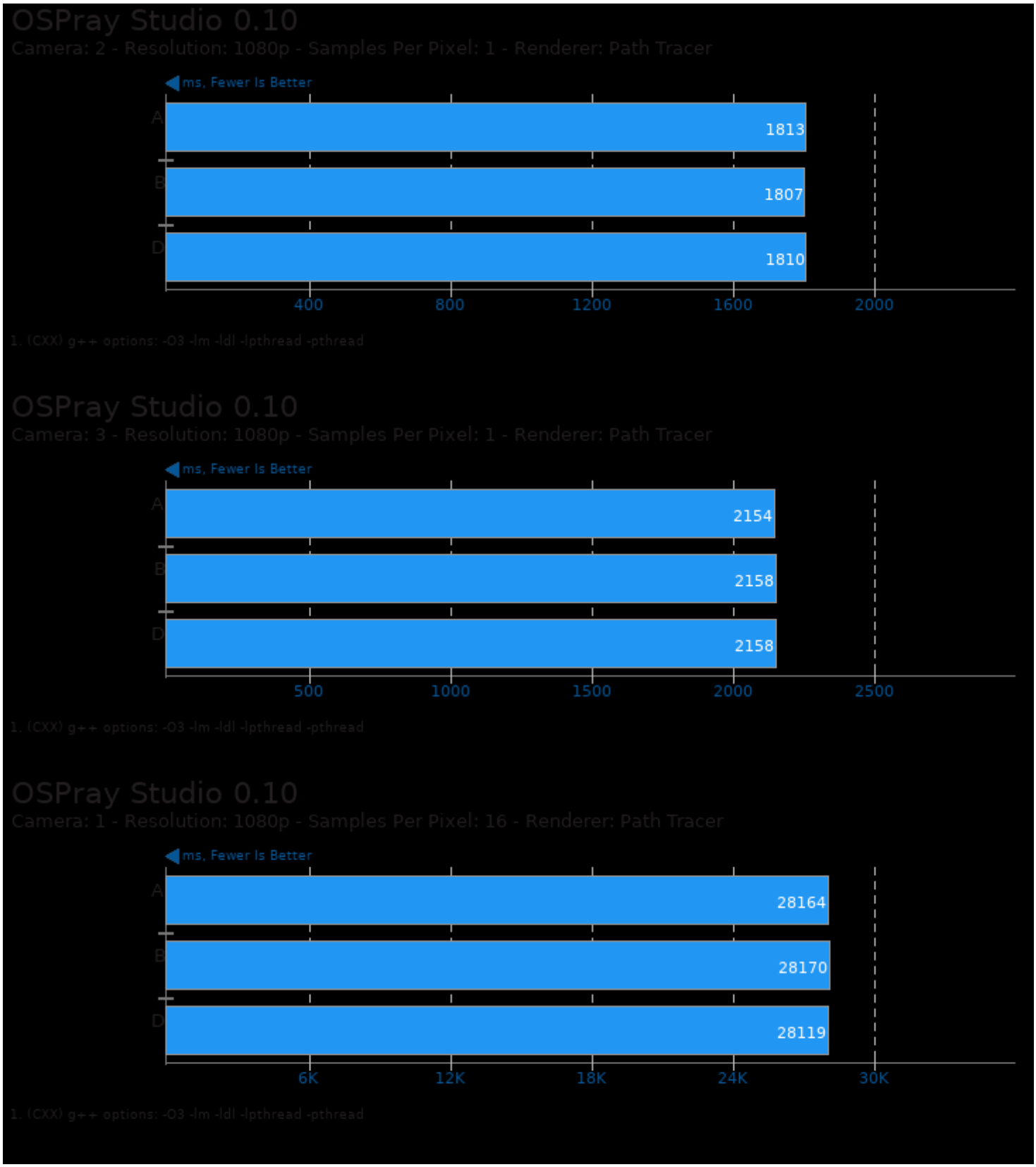


OSPray Studio 0.10

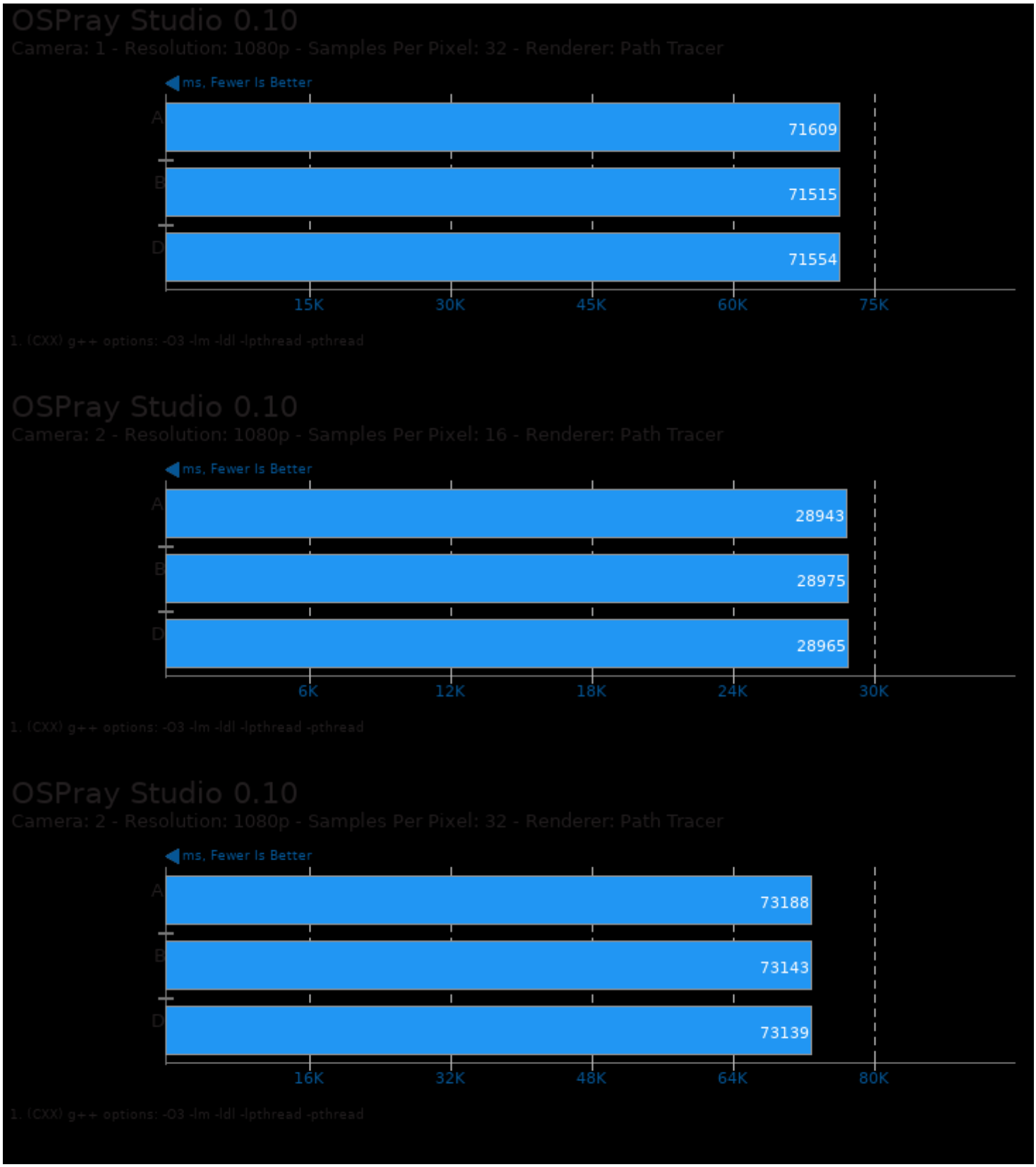
Camera: 1 - Resolution: 1080p - Samples Per Pixel: 1 - Renderer: Path Tracer



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

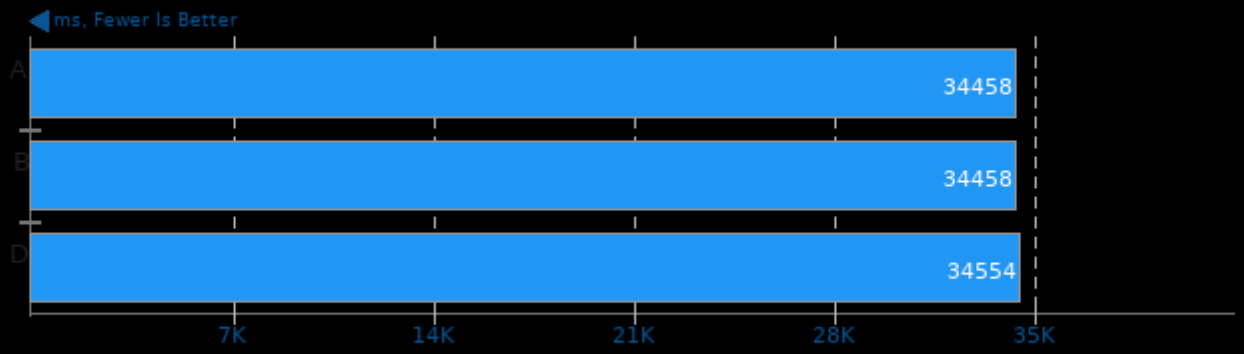

OSPray Studio 0.10
Camera: 2 - Resolution: 1080p - Samples Per Pixel: 1 - Renderer: Path Tracer
ms, Fewer Is Better
A
B
D
1813
1807
1810
400
800
1200
1600
2000
1. (CXX) g++ options: -O3 -lm -ldl -lpthread -pthread
OSPray Studio 0.10
Camera: 3 - Resolution: 1080p - Samples Per Pixel: 1 - Renderer: Path Tracer
ms, Fewer Is Better
A
B
D
2154
2158
2158
500
1000
1500
2000
2500
1. (CXX) g++ options: -O3 -lm -ldl -lpthread -pthread
OSPray Studio 0.10
Camera: 1 - Resolution: 1080p - Samples Per Pixel: 16 - Renderer: Path Tracer
ms, Fewer Is Better
A
B
D
28164
28170
28119
6K
12K
18K
24K
30K
1. (CXX) g++ options: -O3 -lm -ldl -lpthread -pthread

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OSPray Studio 0.10

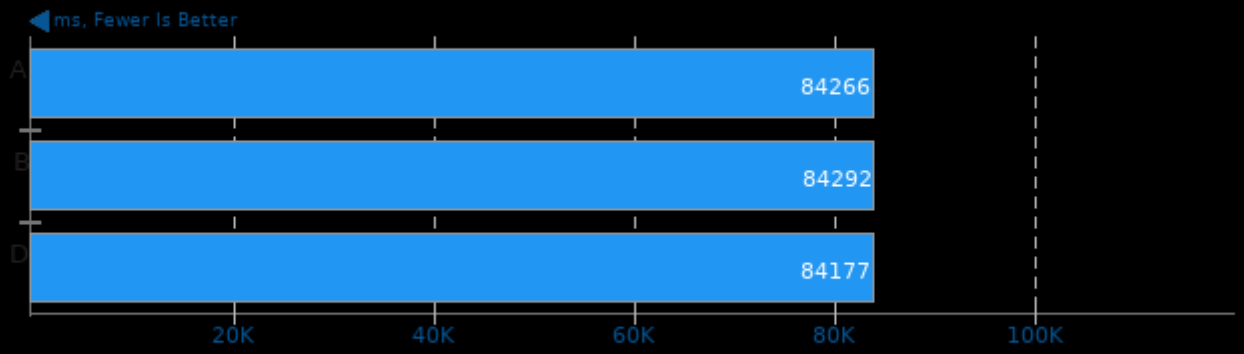
Camera: 3 - Resolution: 1080p - Samples Per Pixel: 16 - Renderer: Path Tracer



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

OSPray Studio 0.10

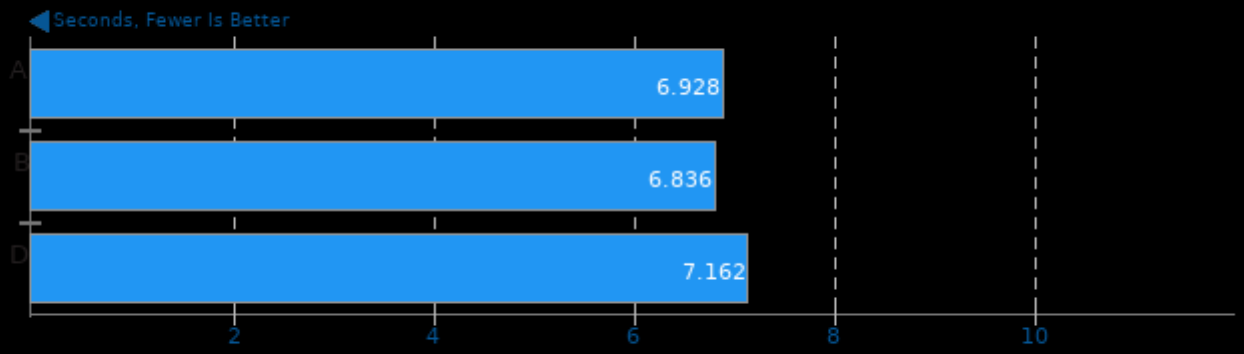
Camera: 3 - Resolution: 1080p - Samples Per Pixel: 32 - Renderer: Path Tracer



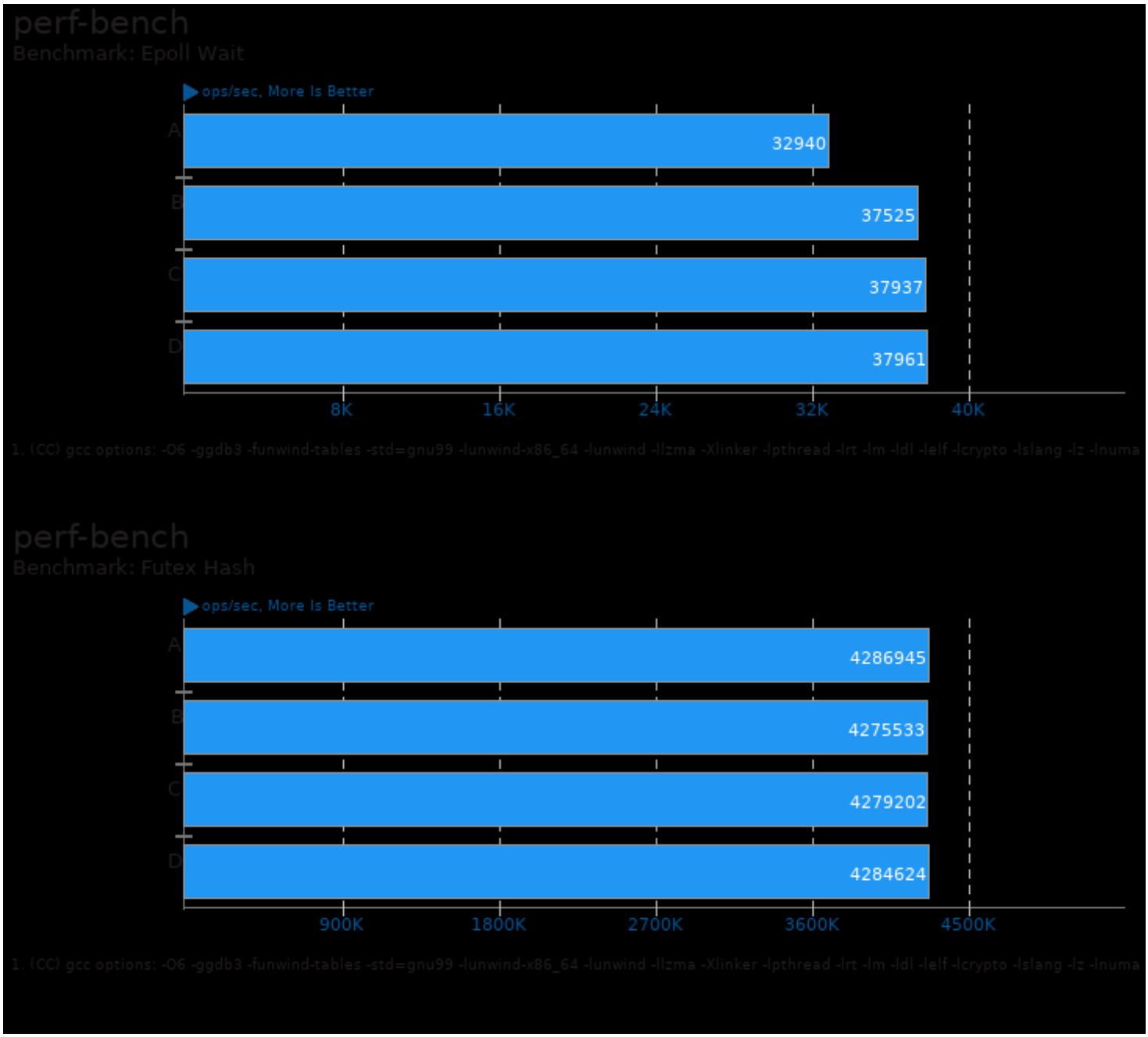
1. (CXX) g++ options: -O3 -lm -ldl -lpthread -pthread

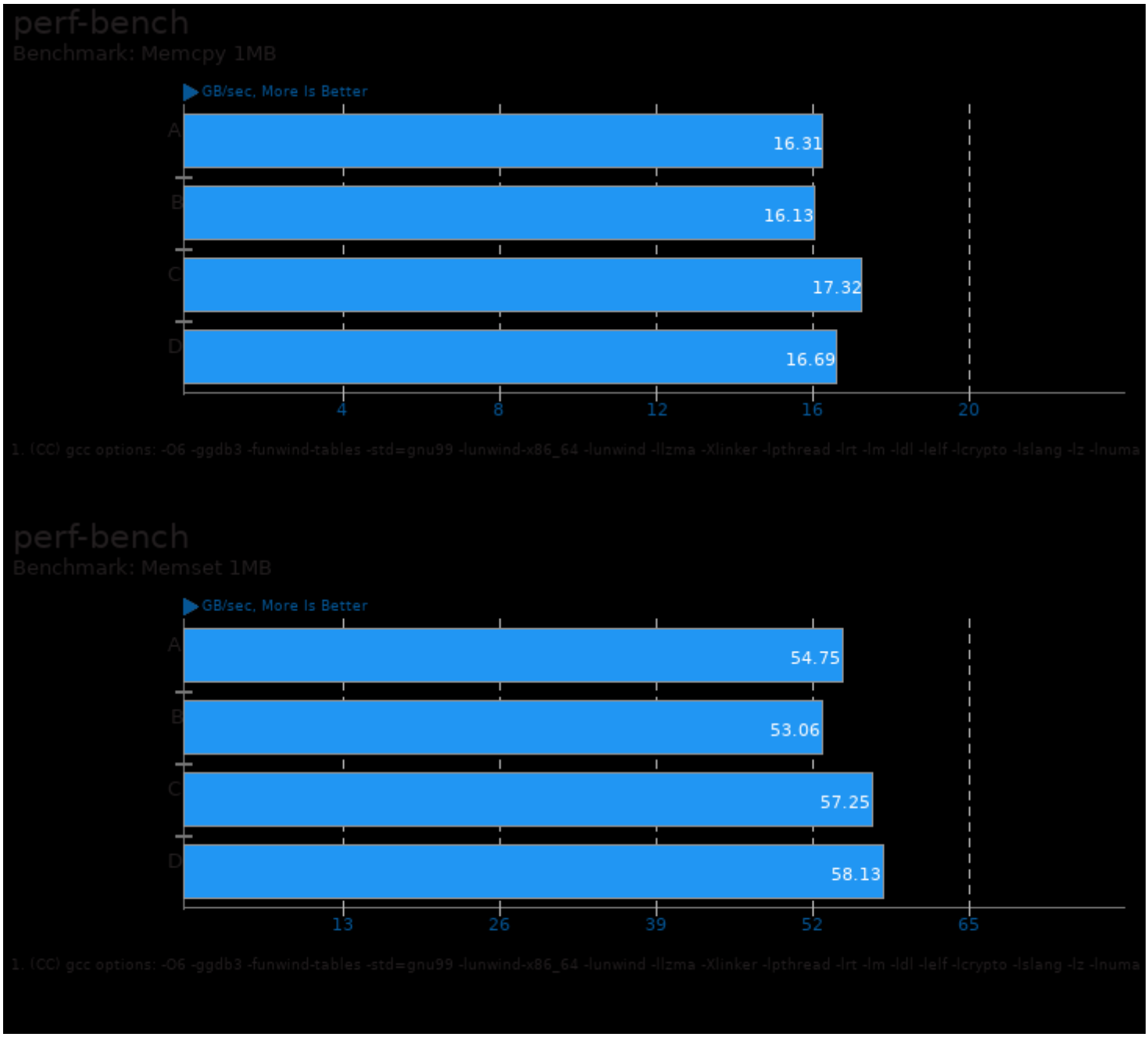
Parallel BZIP2 Compression 1.1.13

FreeBSD-13.0-RELEASE-amd64-memstick.img Compression

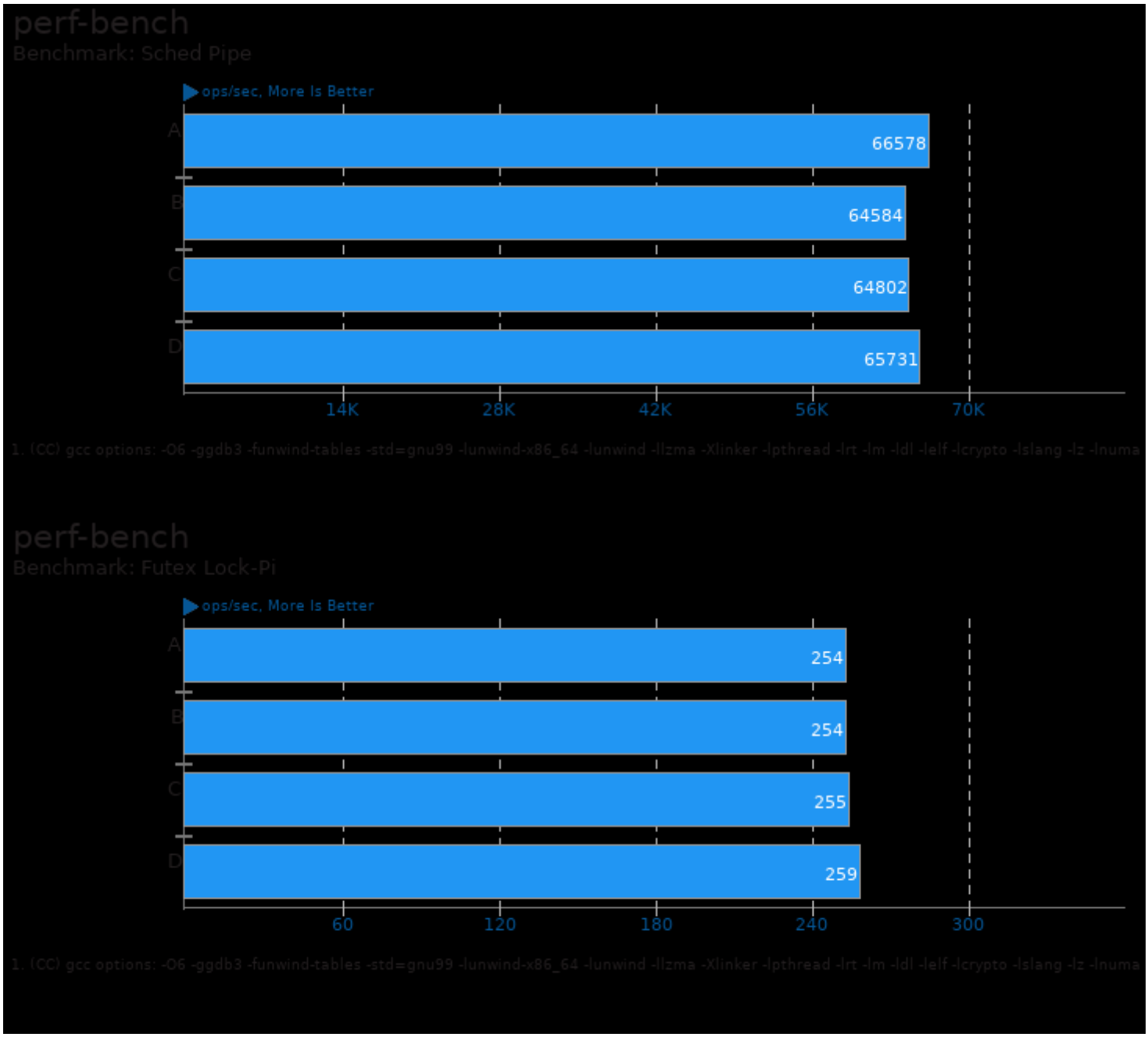


1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread


perf-bench
Benchmark: Epoll Wait
ops/sec, More Is Better
A
B
C
D
32940
37525
37937
37961
8K
16K
24K
32K
40K
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -lunwind-x86_64 -lunwind -llzma -Xlinker -lpthread -lrt -lm -ldl -lelf -lcrypto -lslang -lz -lnuma
perf-bench
Benchmark: Futex Hash
ops/sec, More Is Better
A
B
C
D
4286945
4275533
4279202
4284624
900K
1800K
2700K
3600K
4500K
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -lunwind-x86_64 -lunwind -llzma -Xlinker -lpthread -lrt -lm -ldl -lelf -lcrypto -lslang -lz -lnuma

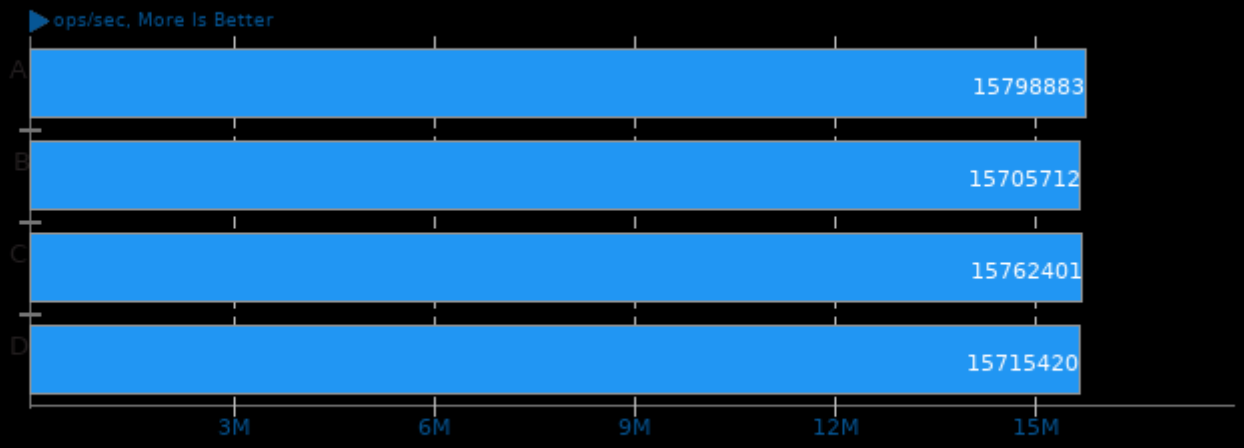

perf-bench
Benchmark: Memcpy 1MB
GB/sec, More Is Better
A
B
C
D
16.31
16.13
17.32
16.69
4
8
12
16
20
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -lunwind-x86_64 -lunwind -llzma -Xlinker -lpthread -lrt -lm -ldl -lelf -lcrypto -lslang -lz -lnuma
perf-bench
Benchmark: Memset 1MB
GB/sec, More Is Better
A
B
C
D
54.75
53.06
57.25
58.13
13
26
39
52
65
1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -lunwind-x86_64 -lunwind -llzma -Xlinker -lpthread -lrt -lm -ldl -lelf -lcrypto -lslang -lz -lnuma

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perf-bench

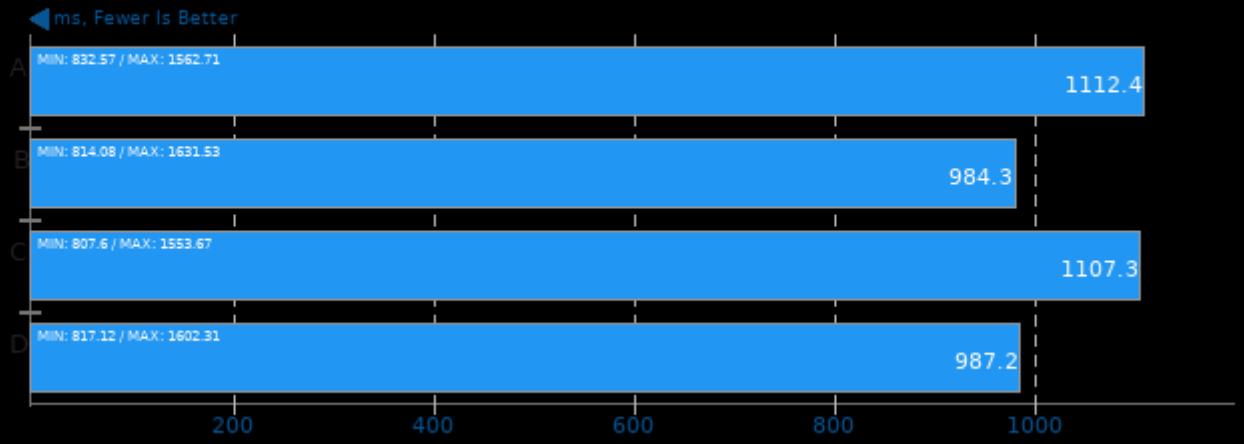
Benchmark: Syscall Basic



1. (CC) gcc options: -O6 -ggdb3 -funwind-tables -std=gnu99 -lunwind-x86_64 -lunwind -llzma -Xlinker -lpthread -lrt -lm -ldl -lelf -lcrypto -lslang -lz -lnuma

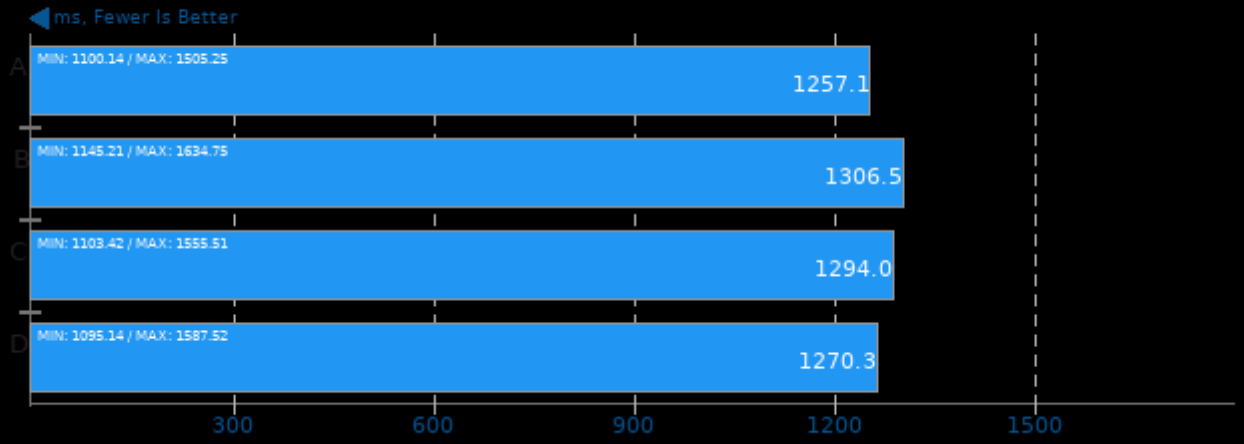
Renaissance 0.14

Test: Scala Dotty

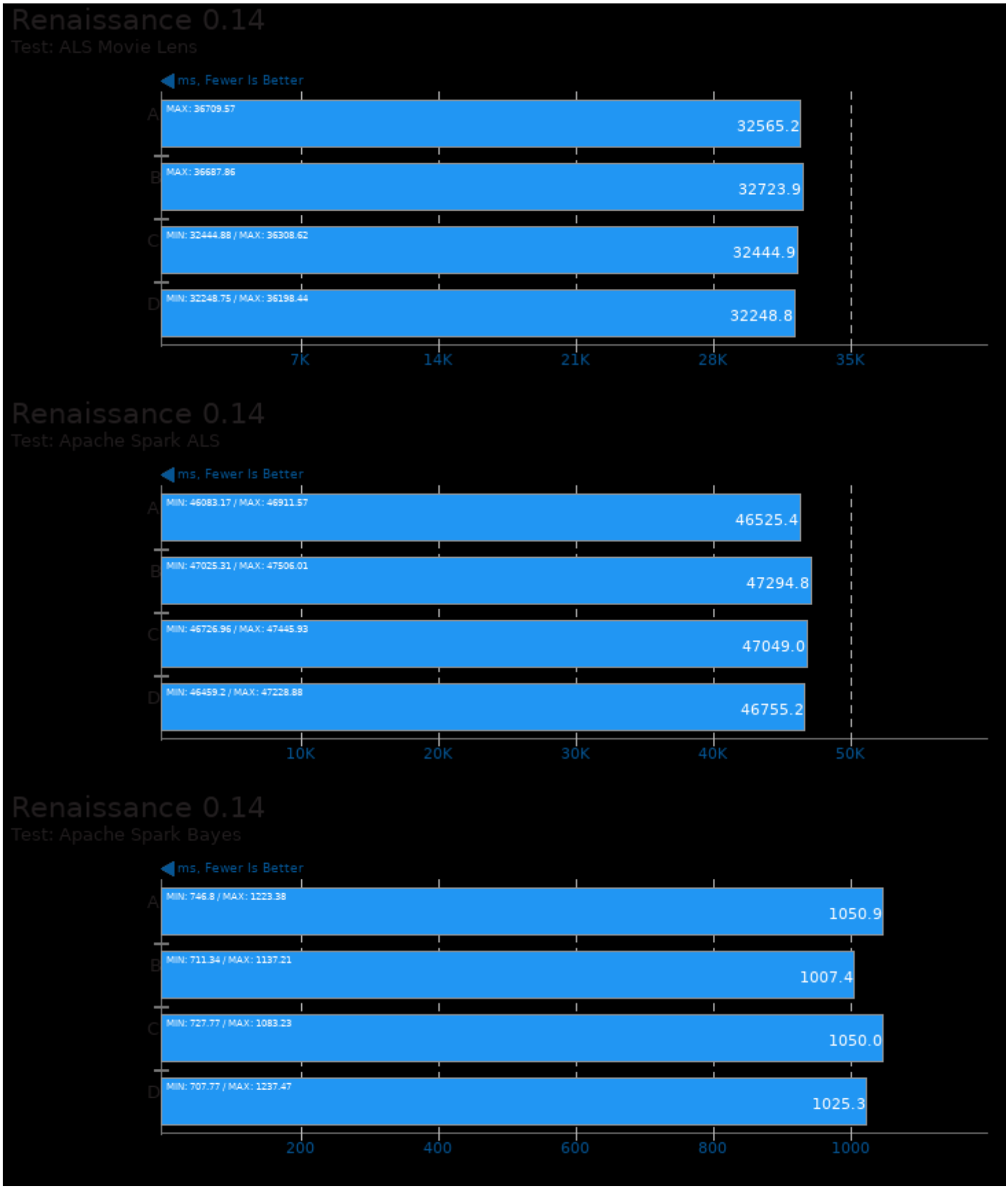


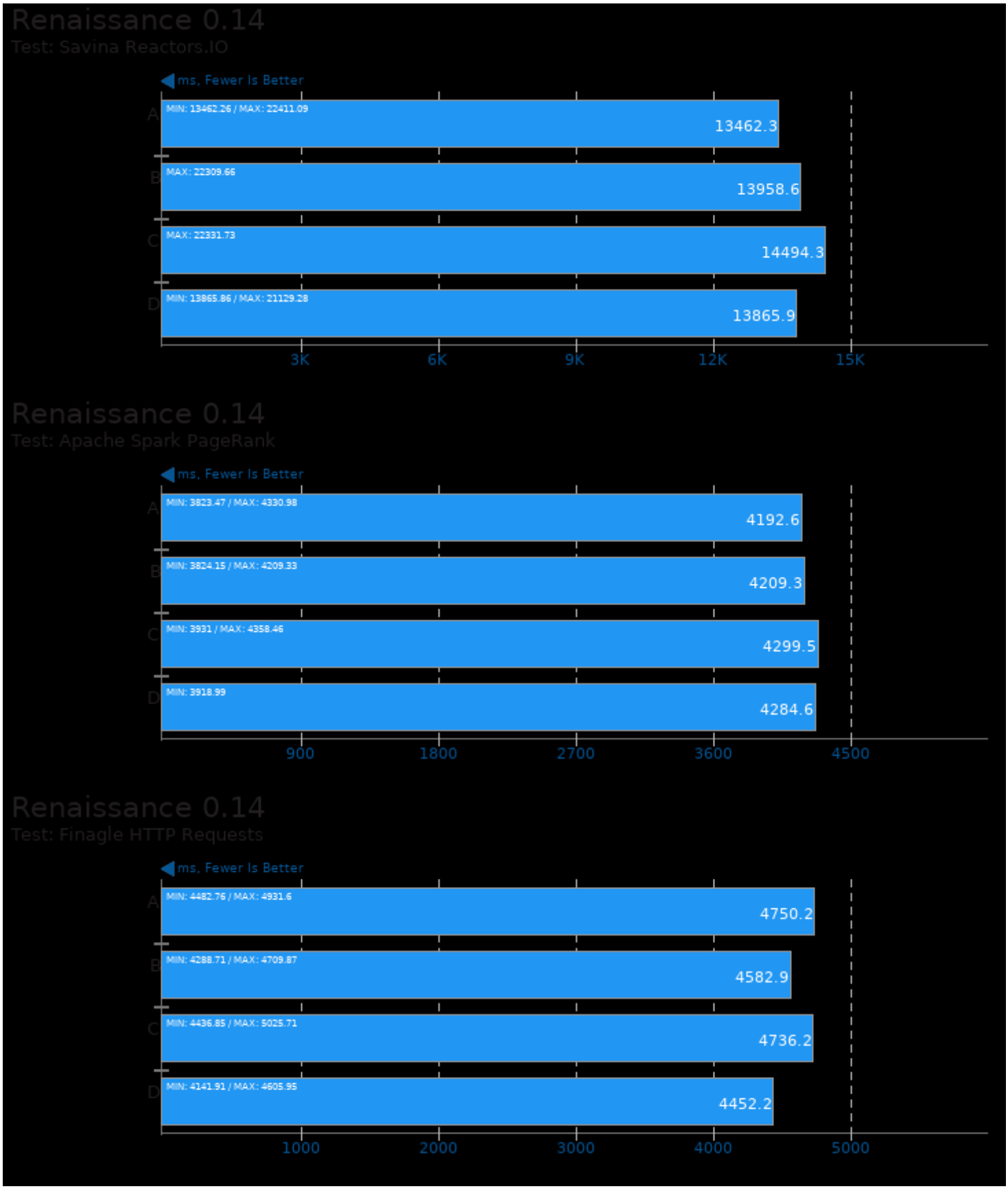
Renaissance 0.14

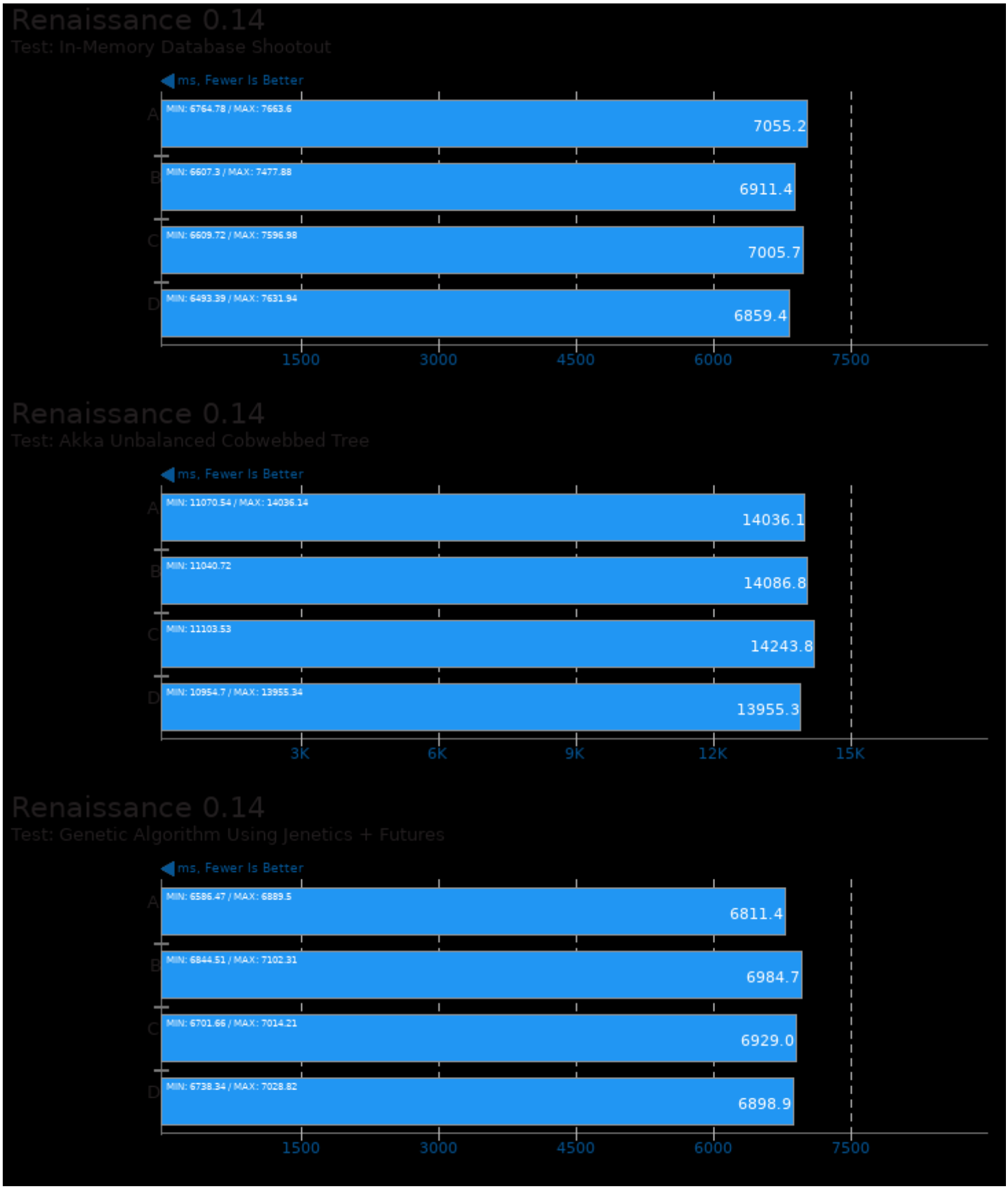
Test: Random Forest



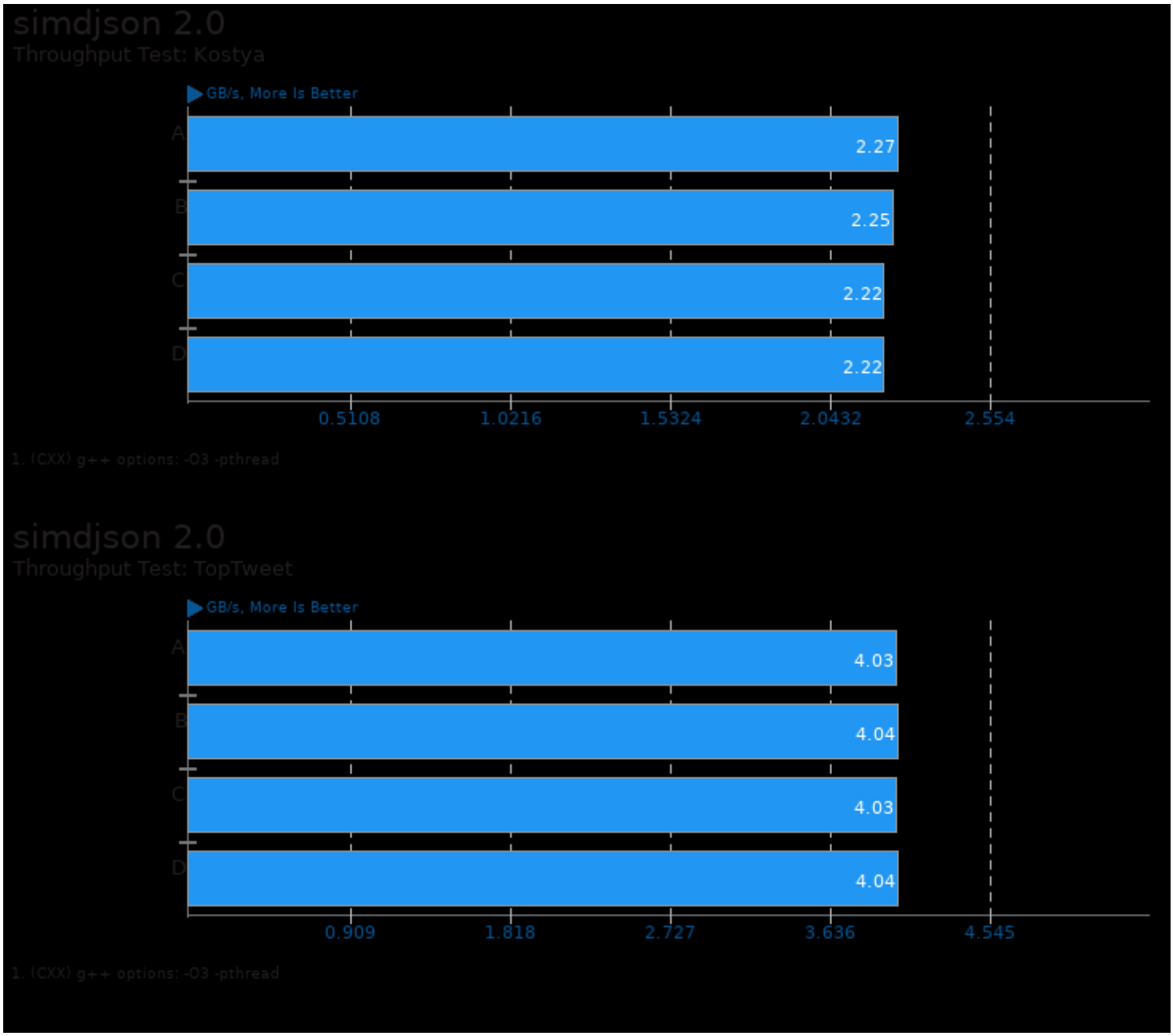
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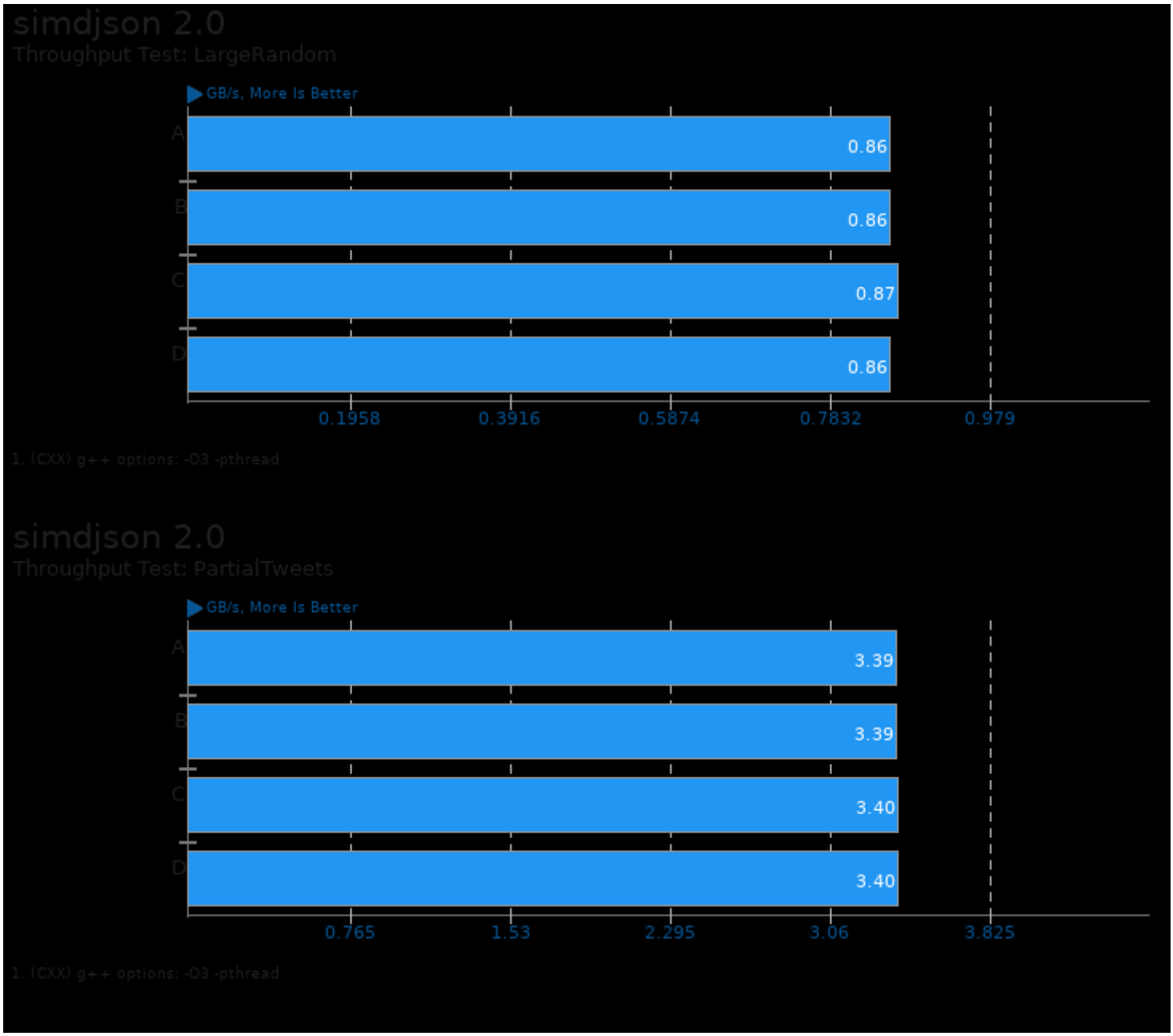

Renaissance 0.14
Test: Savina Reactors.IO
ms, Fewer Is Better
A
MIN: 13462.26 / MAX: 22411.09
13462.3
B
MAX: 22309.66
13958.6
C
MAX: 22331.73
14494.3
D
MIN: 13865.86 / MAX: 21129.28
13865.9
3K
6K
9K
12K
15K
Renaissance 0.14
Test: Apache Spark PageRank
ms, Fewer Is Better
A
MIN: 3823.47 / MAX: 4330.98
4192.6
B
MIN: 3824.15 / MAX: 4209.33
4209.3
C
MIN: 3931 / MAX: 4358.46
4299.5
D
MIN: 3918.99
4284.6
900
1800
2700
3600
4500
Renaissance 0.14
Test: Finagle HTTP Requests
ms, Fewer Is Better
A
MIN: 4482.76 / MAX: 4931.6
4750.2
B
MIN: 4288.71 / MAX: 4709.87
4582.9
C
MIN: 4436.85 / MAX: 5025.71
4736.2
D
MIN: 4141.91 / MAX: 4605.95
4452.2
1000
2000
3000
4000
5000


Renaissance 0.14
Test: In-Memory Database Shootout
ms, Fewer Is Better
A
MIN: 6764.78 / MAX: 7663.6
7055.2
B
MIN: 6607.3 / MAX: 7477.88
6911.4
C
MIN: 6609.72 / MAX: 7596.98
7005.7
D
MIN: 6493.39 / MAX: 7631.94
6859.4
1500
3000
4500
6000
7500
Renaissance 0.14
Test: Akka Unbalanced Cobwebbed Tree
ms, Fewer Is Better
A
MIN: 11070.54 / MAX: 14036.14
14036.1
B
MIN: 11040.72
14086.8
C
MIN: 11103.53
14243.8
D
MIN: 10954.7 / MAX: 13955.34
13955.3
3K
6K
9K
12K
15K
Renaissance 0.14
Test: Genetic Algorithm Using Jenetics + Futures
ms, Fewer Is Better
A
MIN: 6586.47 / MAX: 6889.5
6811.4
B
MIN: 6844.51 / MAX: 7102.31
6984.7
C
MIN: 6701.66 / MAX: 7014.21
6929.0
D
MIN: 6738.34 / MAX: 7028.82
6898.9
1500
3000
4500
6000
7500

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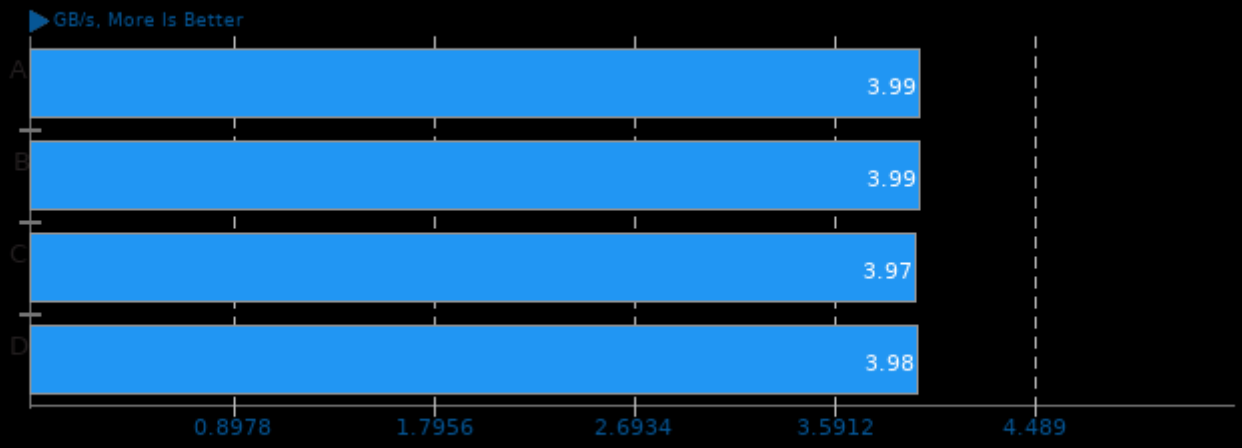


xeon gold sunday



simdjson 2.0

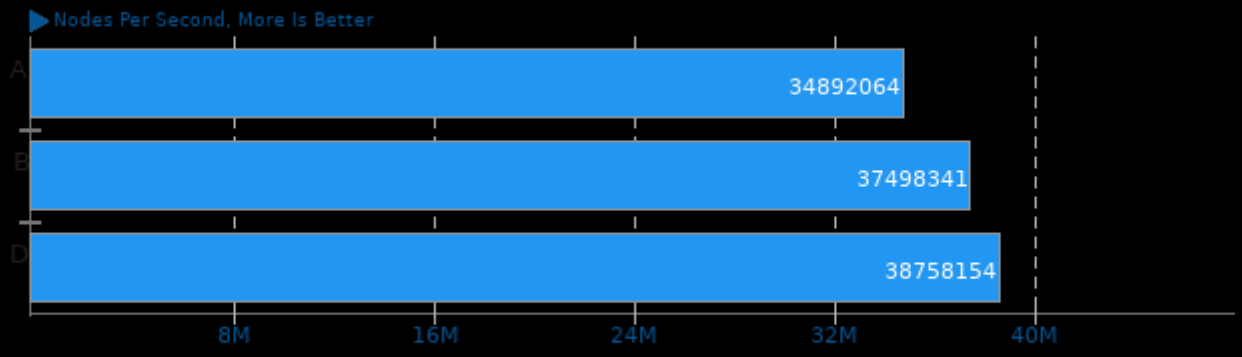
Throughput Test: DistinctUserID



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

Stockfish 15

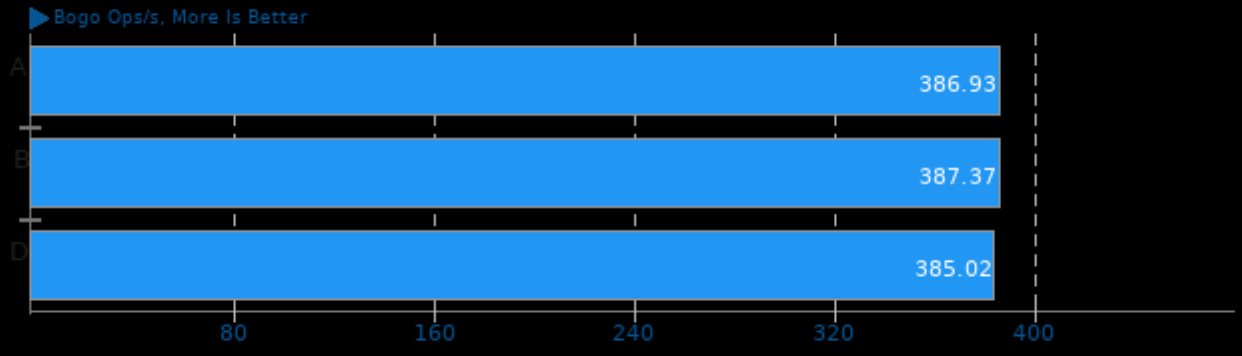
Total Time



1. (CXX) g++ options: -lgcov -m64 -lpthread -fno-exceptions -std=c++17 -fno-peel-loops -fno-tracer -pedantic -O3 -msse -msse3 -mpopcnt -mavx2 -mav

Stress-NG 0.14

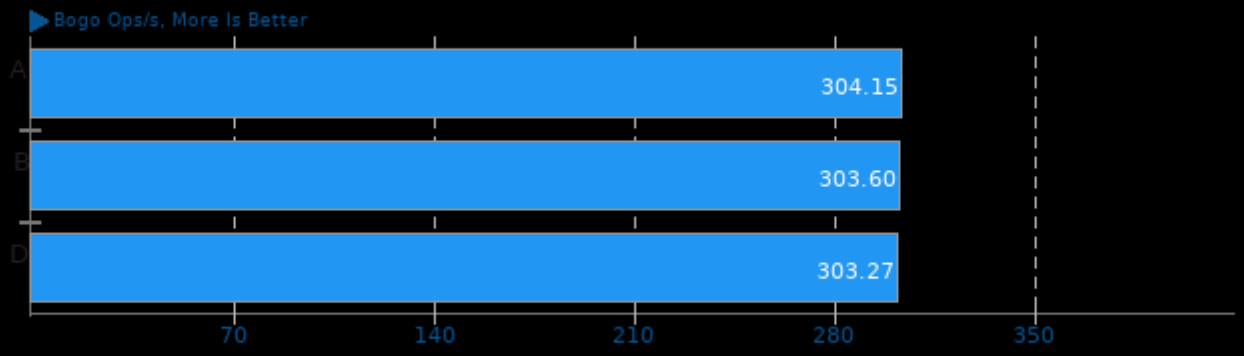
Test: MMAP



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

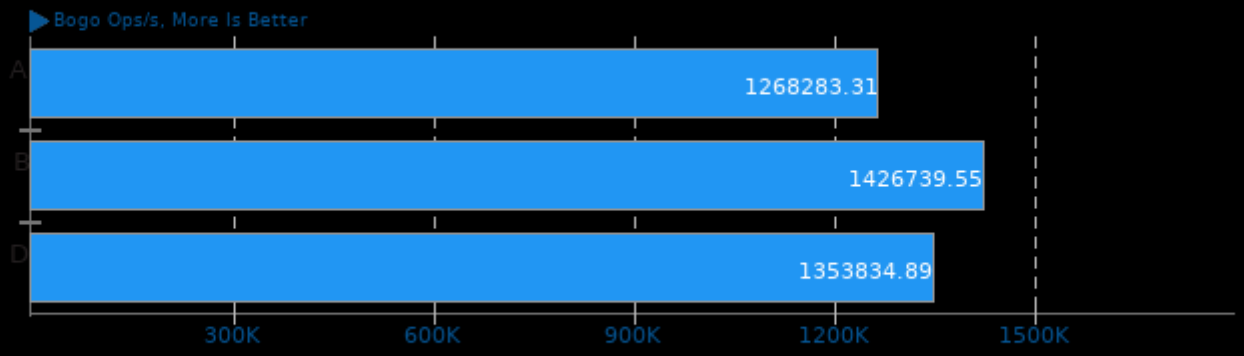
Test: NUMA



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

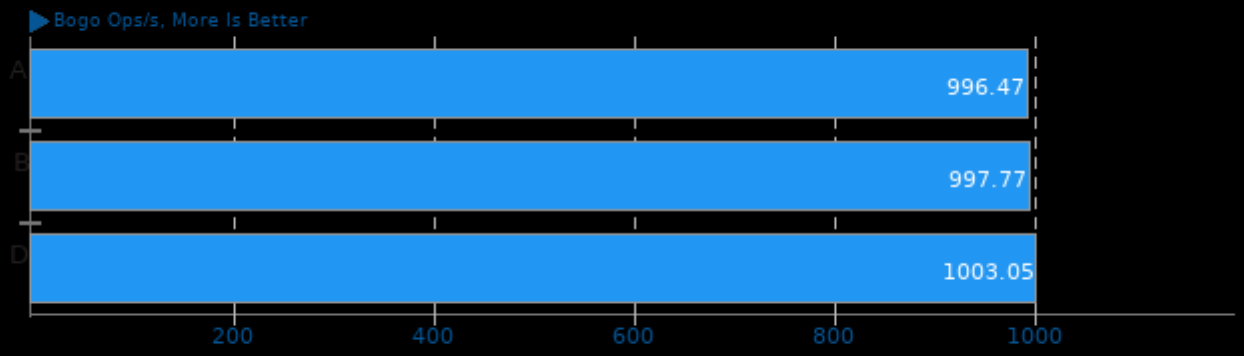
Test: Futex



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

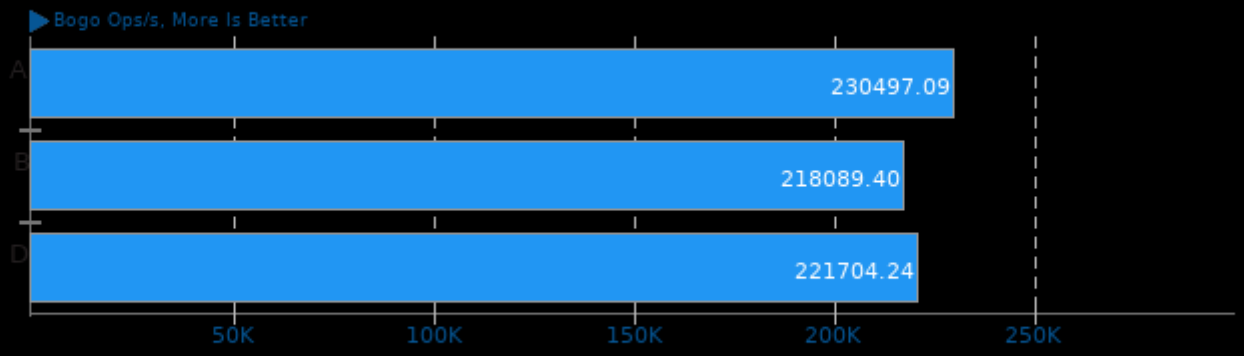
Test: MEMFD



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

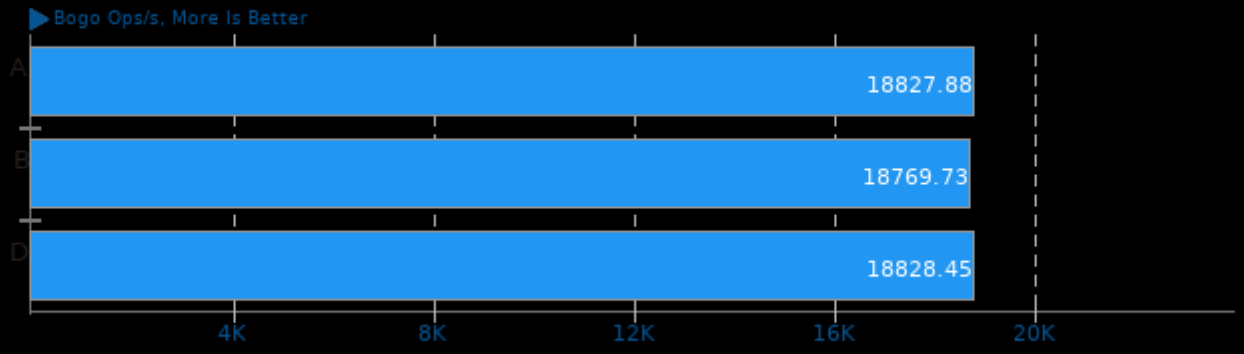
Test: Atomic



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

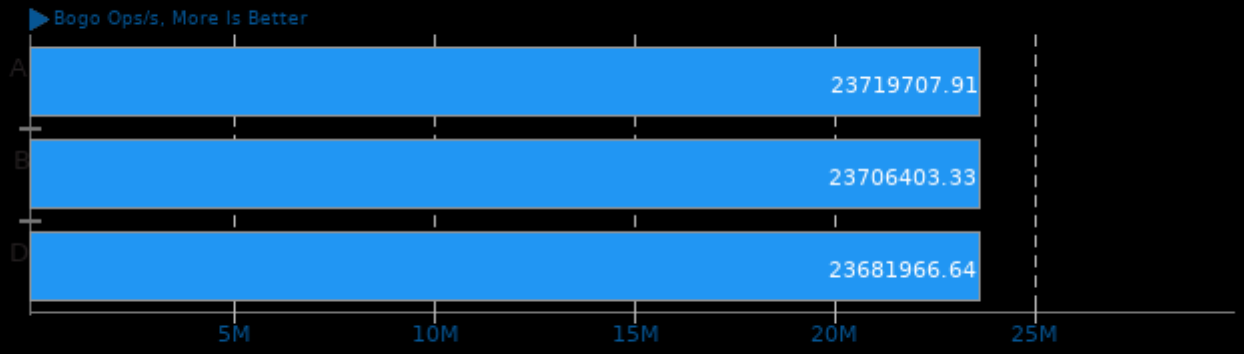
Test: Crypto



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

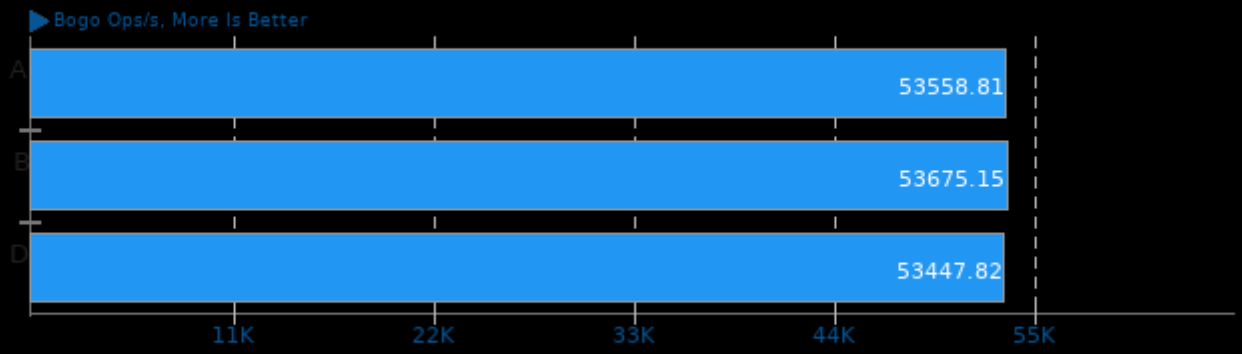
Test: Malloc



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

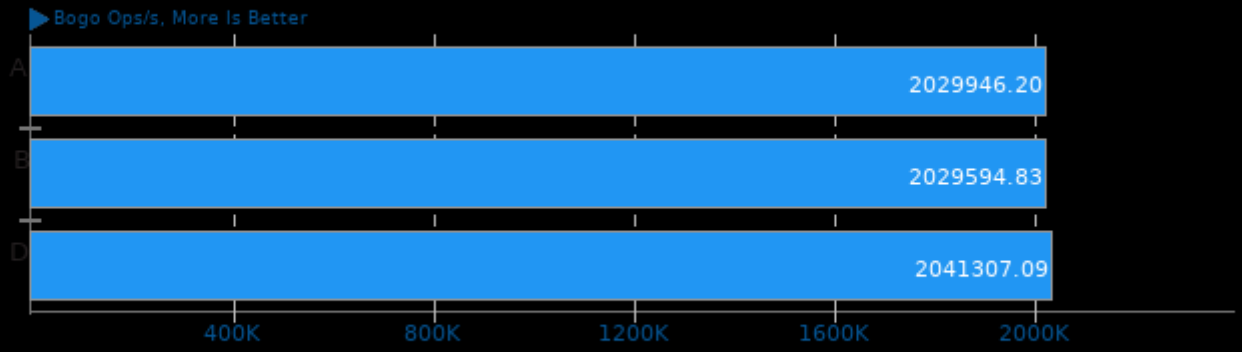
Test: Forking



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

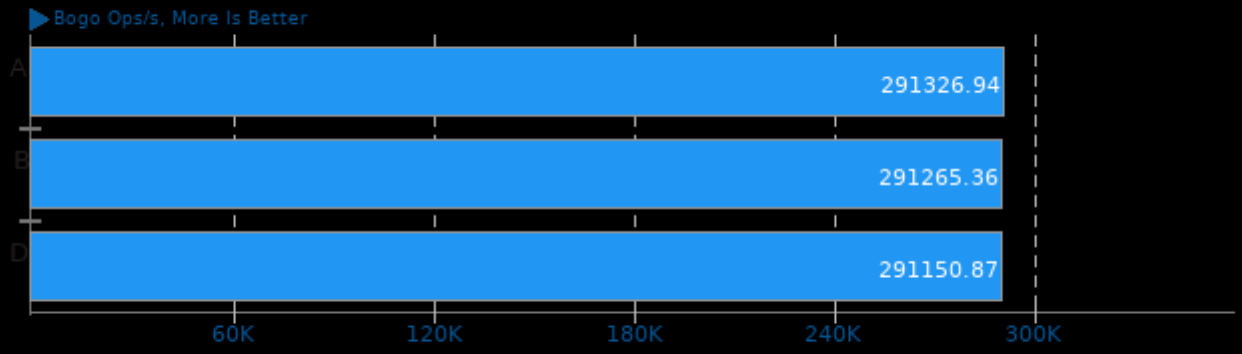
Test: IO_uring



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

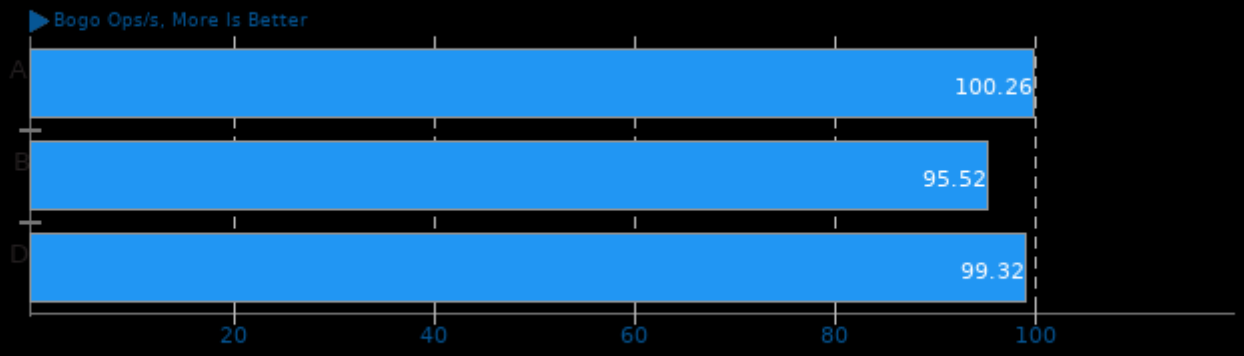
Test: SENDFILE



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

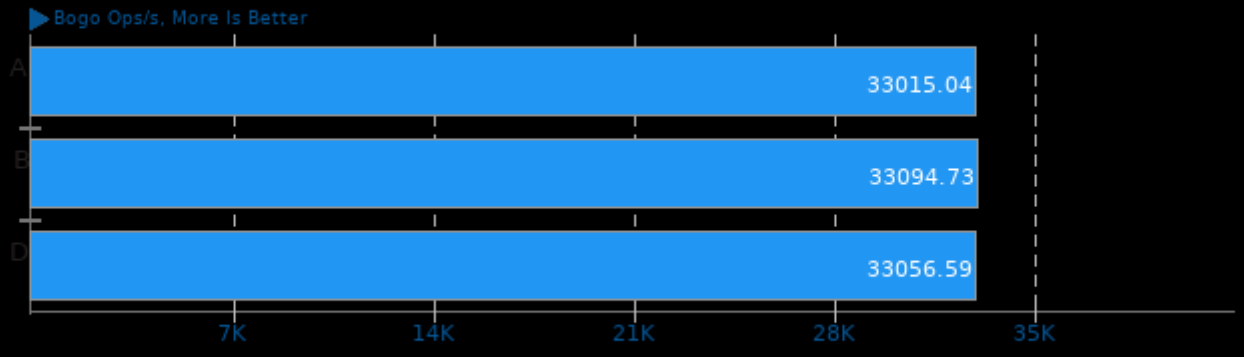
Test: CPU Cache



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

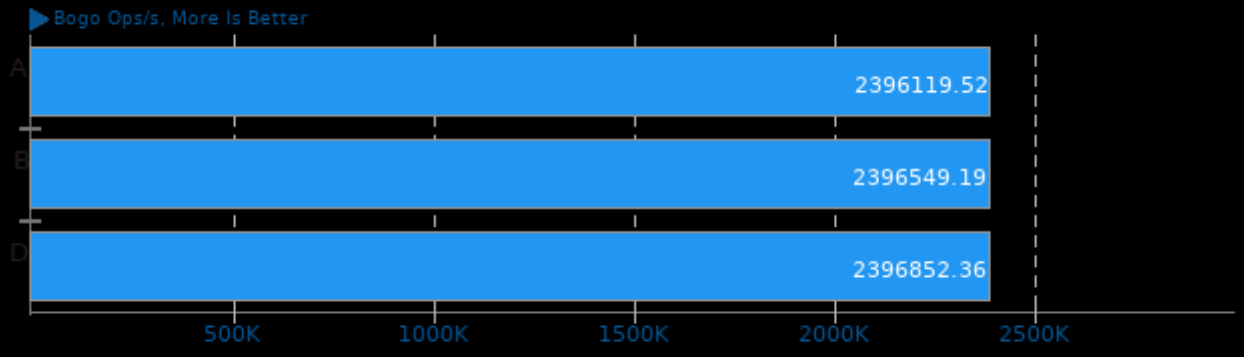
Test: CPU Stress



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

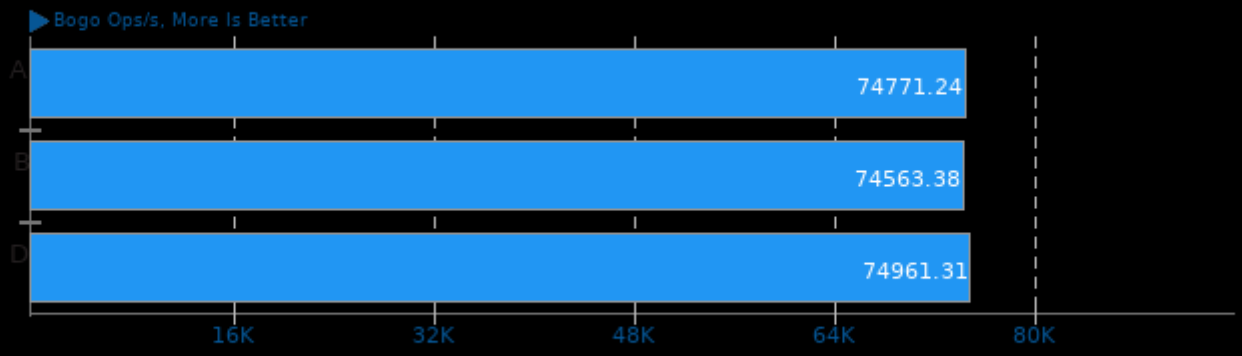
Test: Semaphores



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

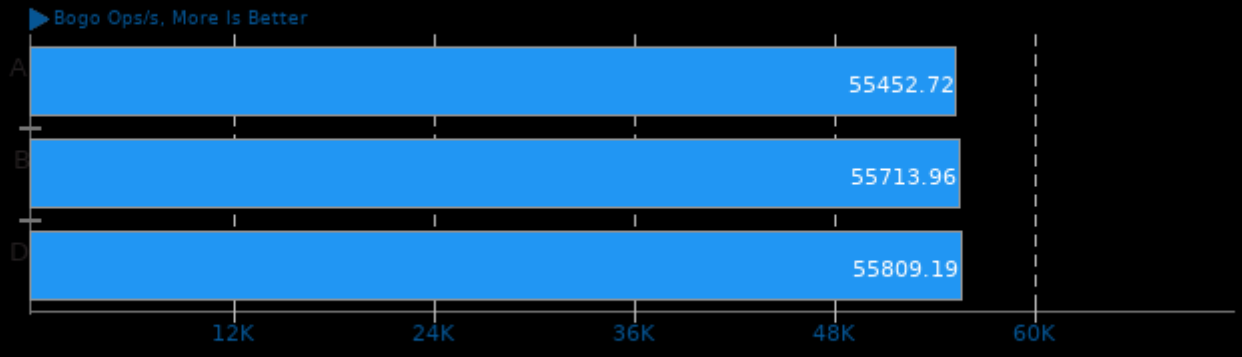
Test: Matrix Math



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

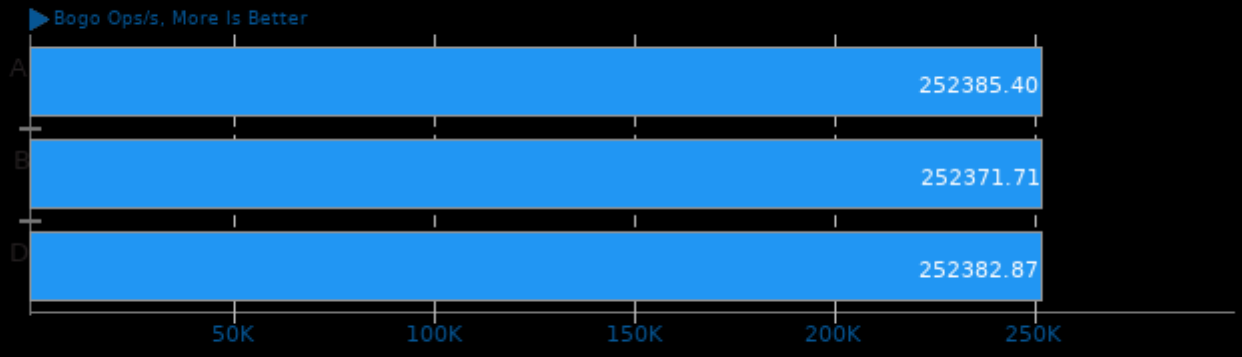
Test: Vector Math



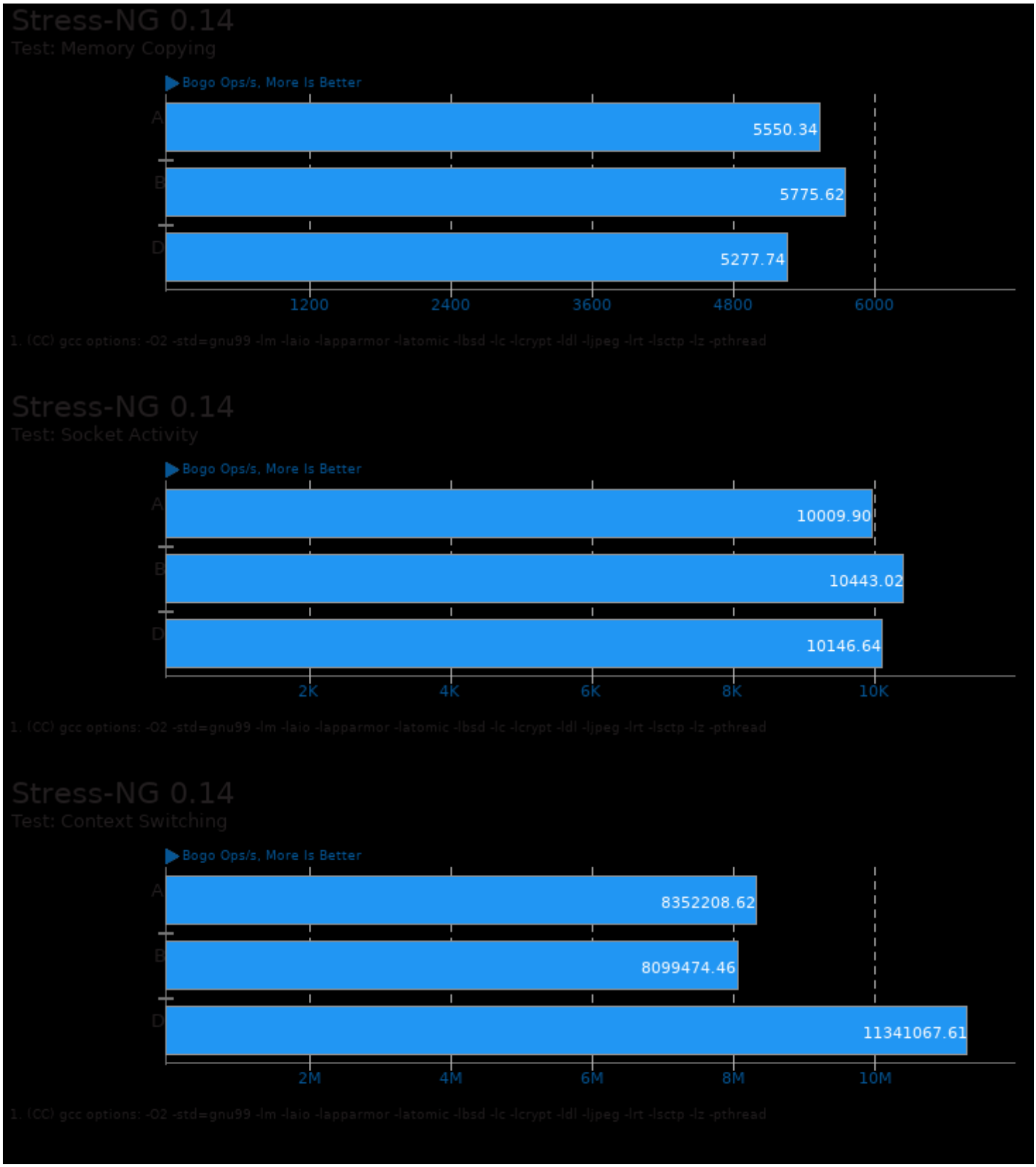
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

Test: x86_64 RdRand

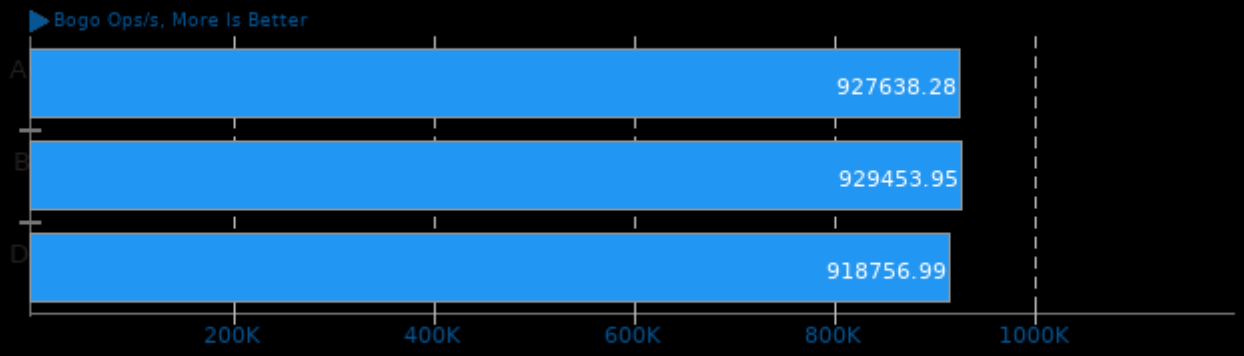


1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread


Stress-NG 0.14
Test: Memory Copying
Bogo Ops/s, More Is Better
A
B
D
5550.34
5775.62
5277.74
1200
2400
3600
4800
6000
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: Socket Activity
Bogo Ops/s, More Is Better
A
B
D
10009.90
10443.02
10146.64
2K
4K
6K
8K
10K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread
Stress-NG 0.14
Test: Context Switching
Bogo Ops/s, More Is Better
A
B
D
8352208.62
8099474.46
11341067.61
2M
4M
6M
8M
10M
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

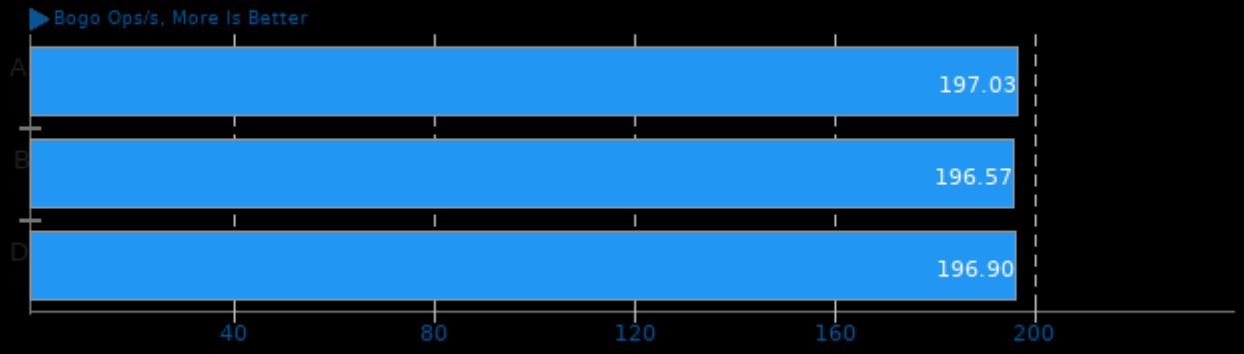
Test: Glibc C String Functions



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

Stress-NG 0.14

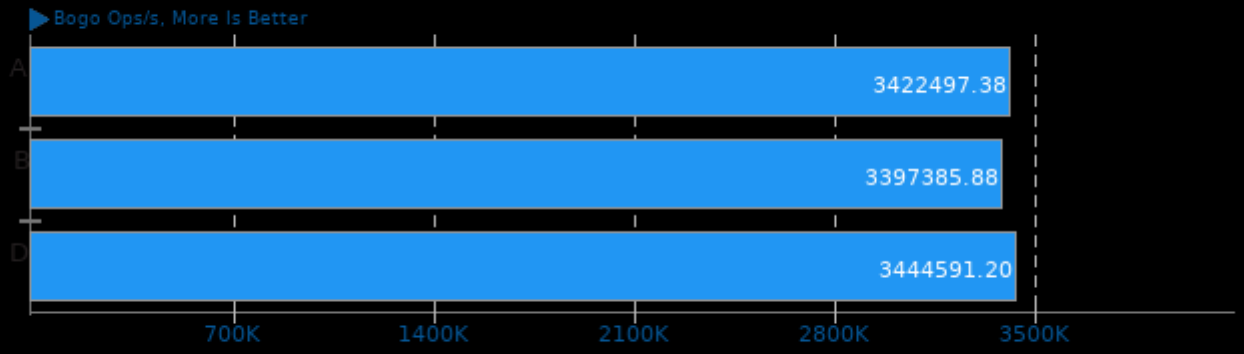
Test: Glibc Qsort Data Sorting



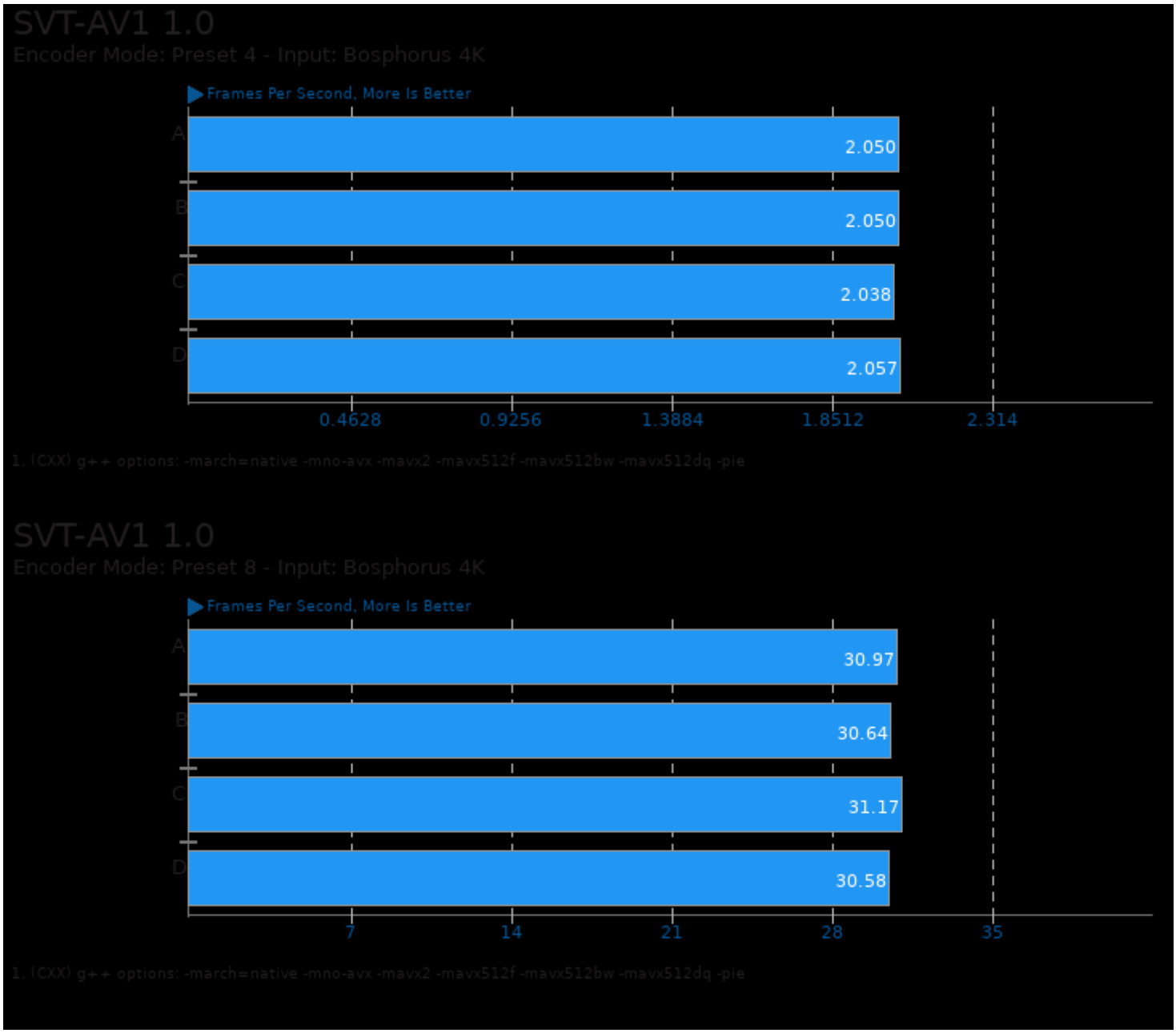
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread

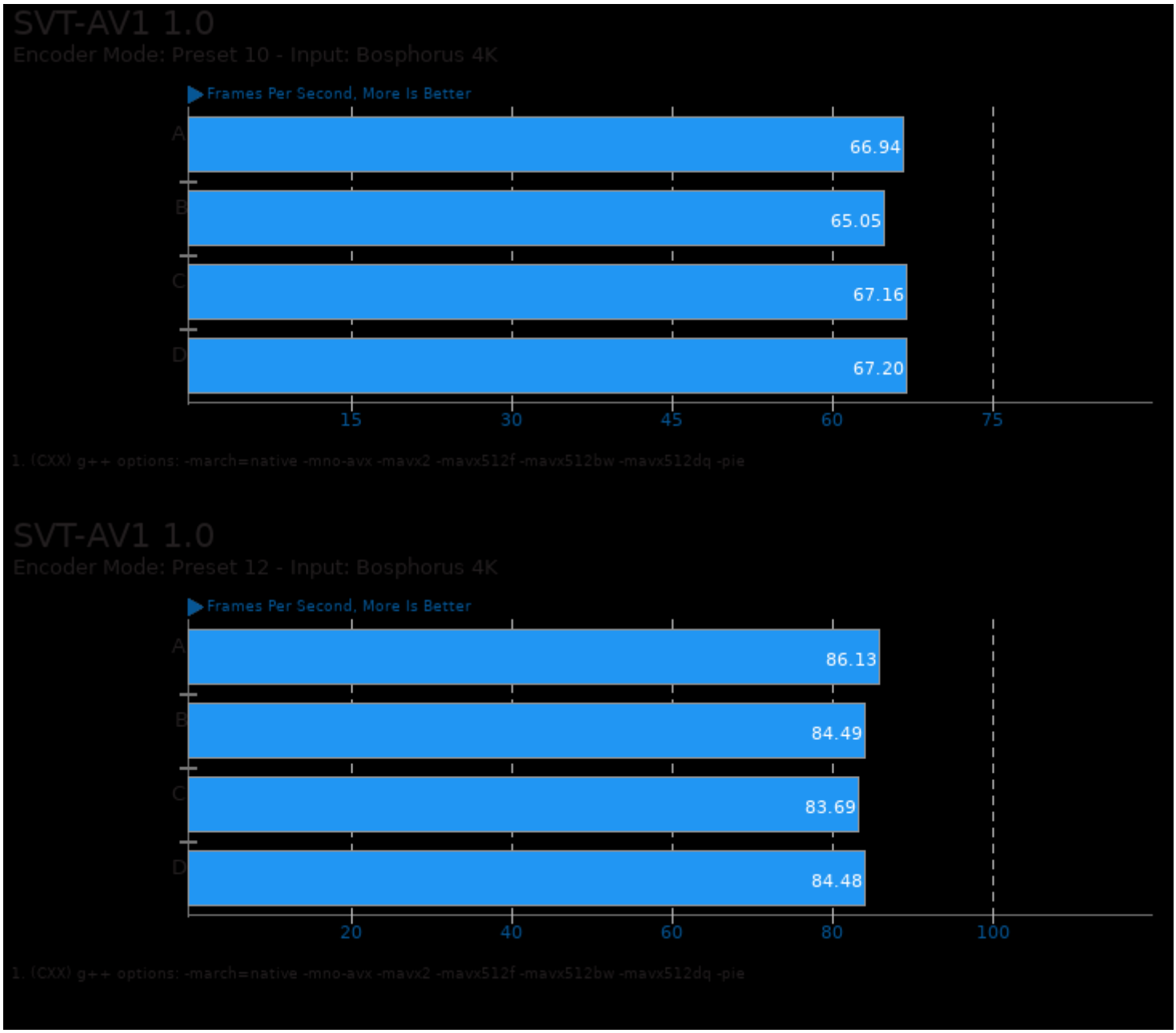
Stress-NG 0.14

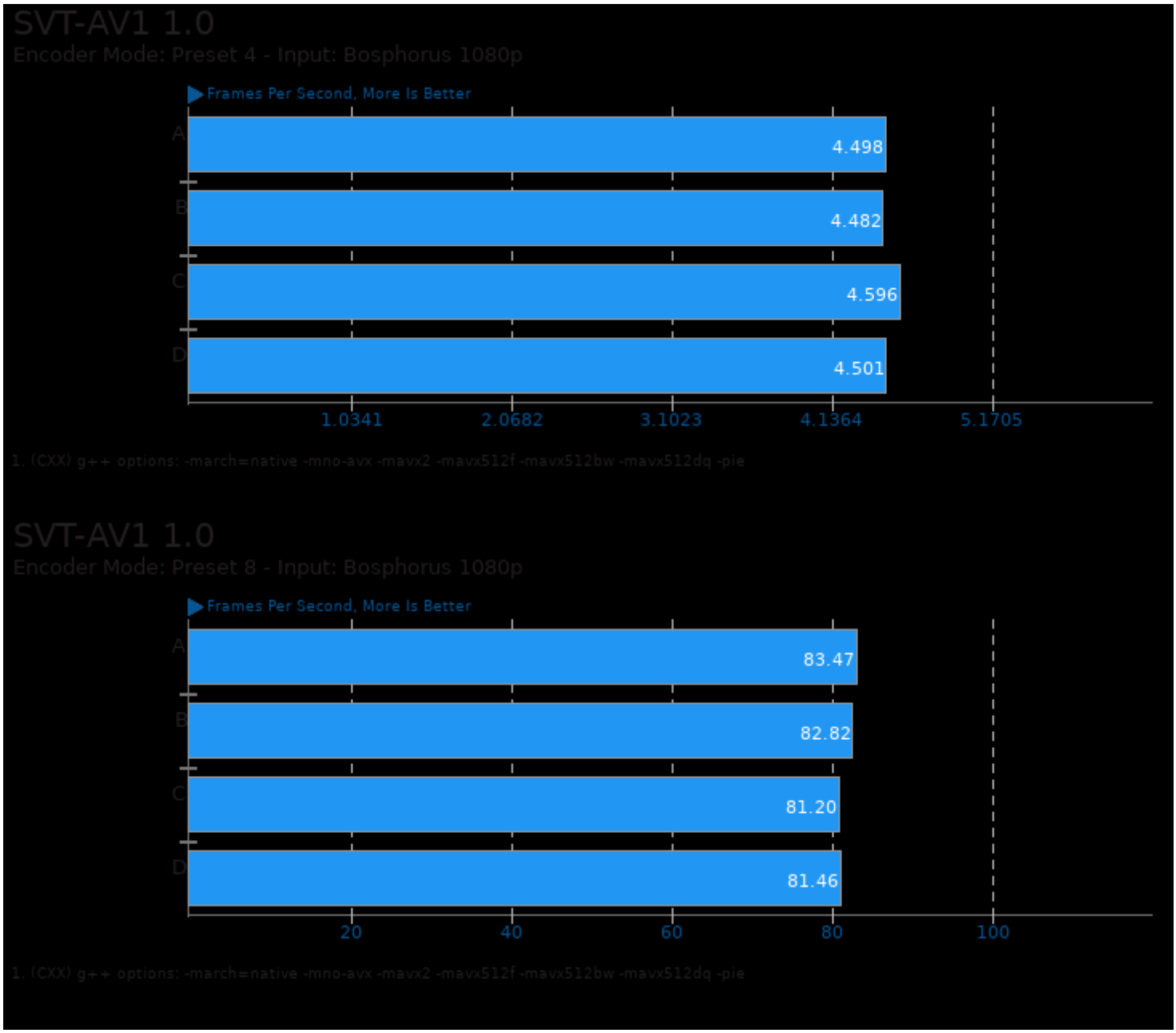
Test: System V Message Passing

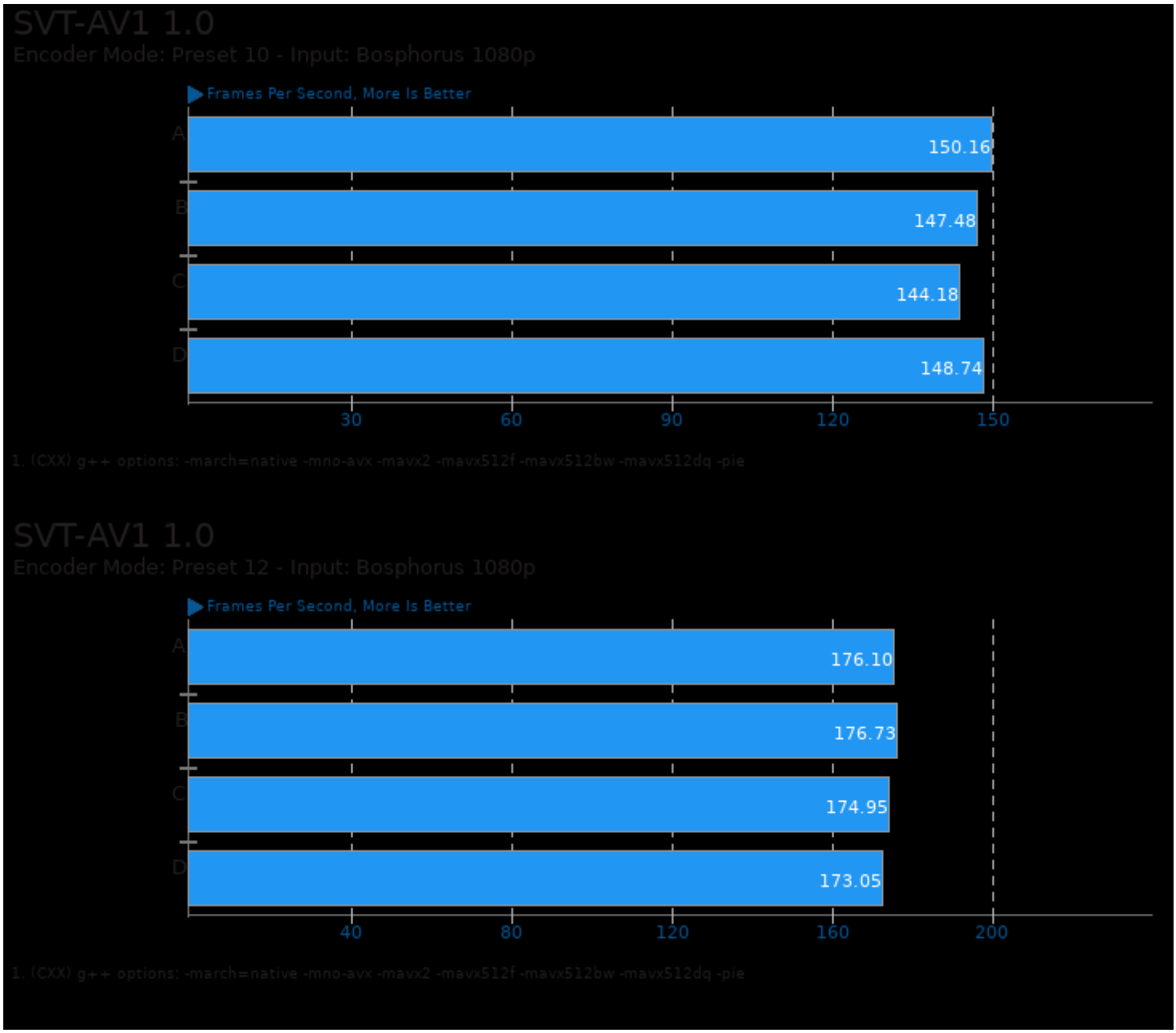


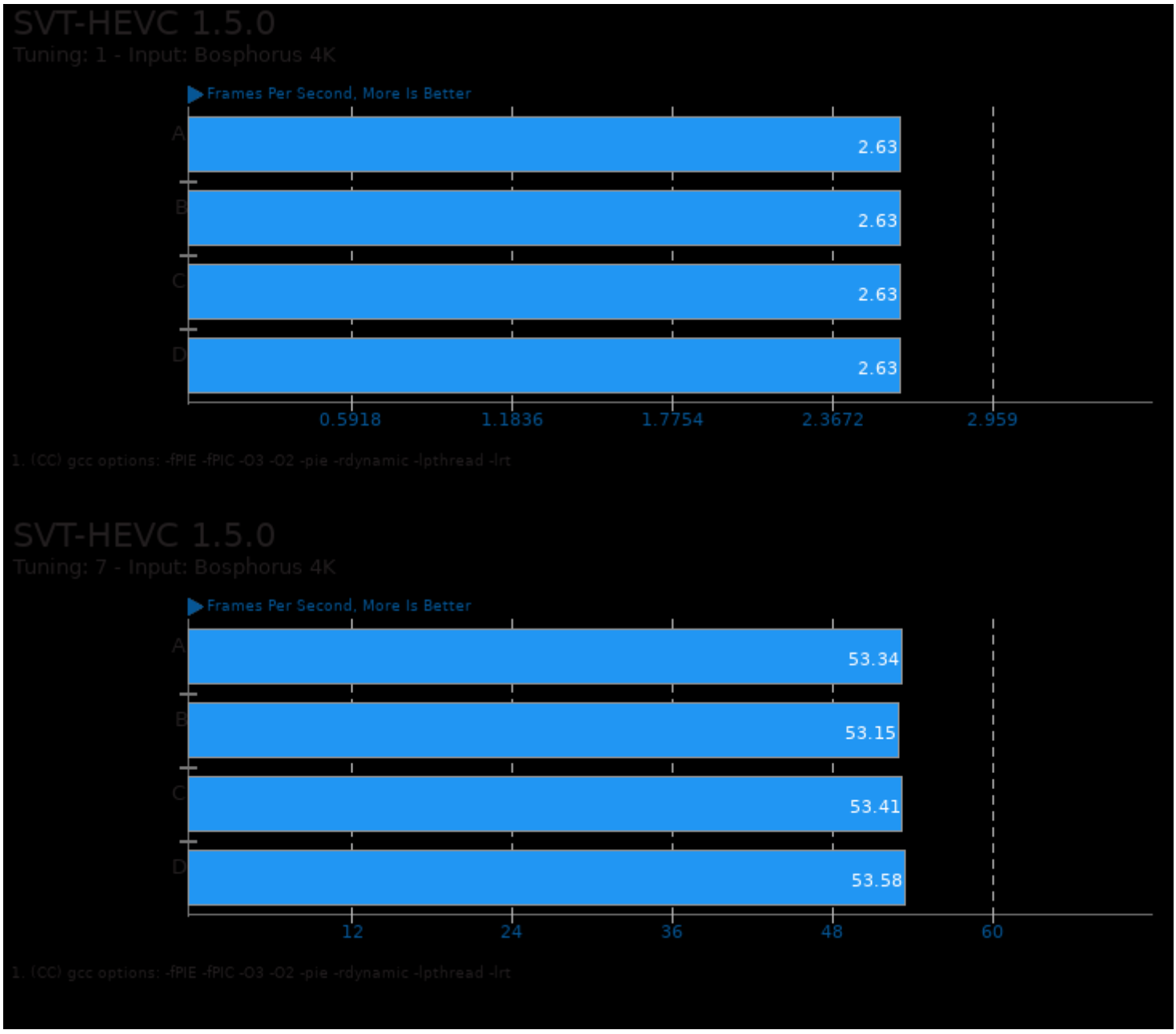
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lapparmor -latomic -lbsd -lc -lcrypt -ldl -ljpeg -lrt -lsctp -lz -pthread


SVT-AV1 1.0
Encoder Mode: Preset 4 - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
B
C
D
2.050
2.050
2.038
2.057
0.4628
0.9256
1.3884
1.8512
2.314
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie
SVT-AV1 1.0
Encoder Mode: Preset 8 - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
B
C
D
30.97
30.64
31.17
30.58
7
14
21
28
35
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

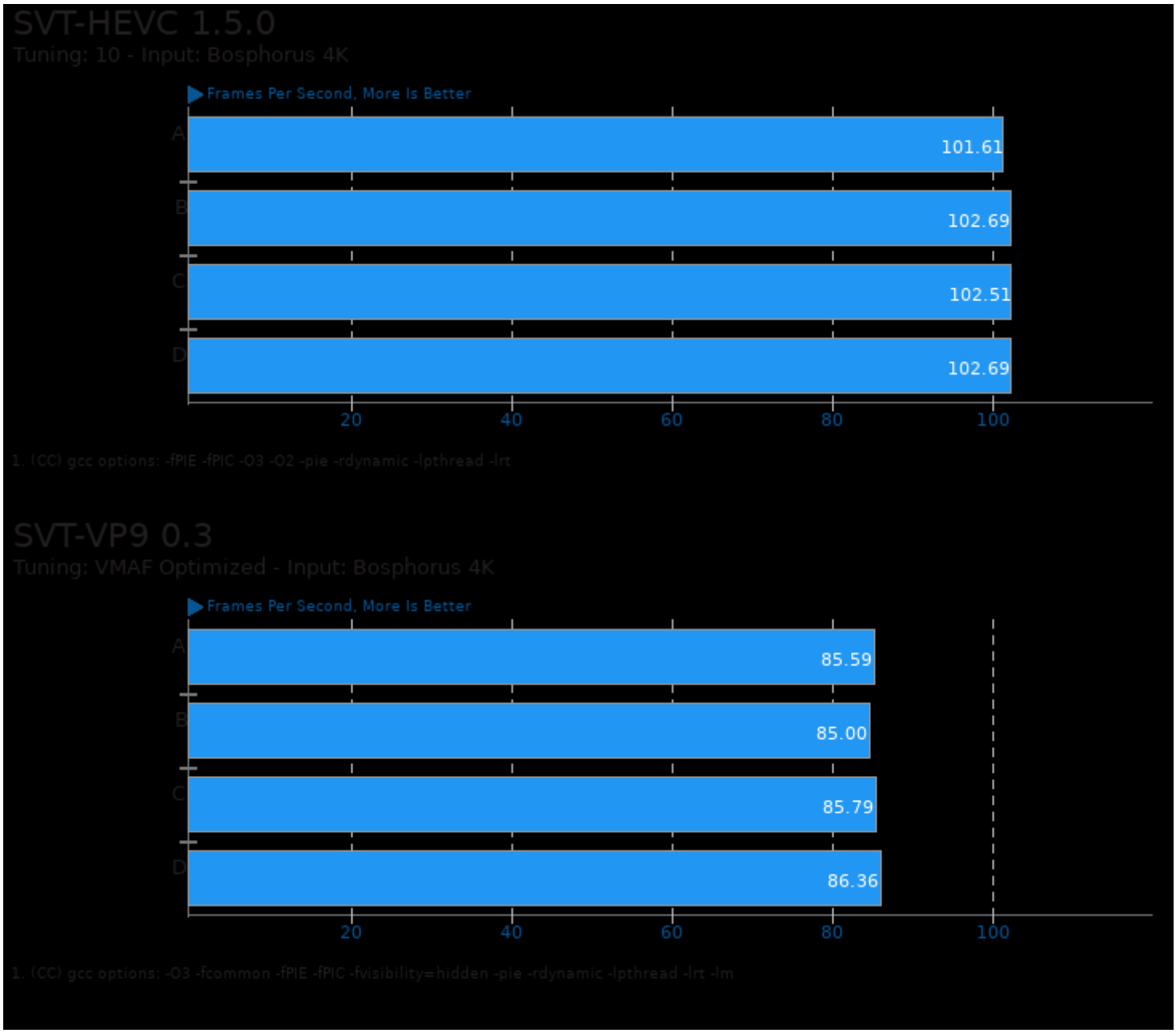

SVT-AV1 1.0
Encoder Mode: Preset 10 - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
66.94
B
65.05
C
67.16
D
67.20
15
30
45
60
75
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie
SVT-AV1 1.0
Encoder Mode: Preset 12 - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
86.13
B
84.49
C
83.69
D
84.48
20
40
60
80
100
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie


SVT-AV1 1.0
Encoder Mode: Preset 4 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
4.498
B
4.482
C
4.596
D
4.501
1.0341
2.0682
3.1023
4.1364
5.1705
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie
SVT-AV1 1.0
Encoder Mode: Preset 8 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
83.47
B
82.82
C
81.20
D
81.46
20
40
60
80
100
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie


SVT-AV1 1.0
Encoder Mode: Preset 10 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
150.16
B
147.48
C
144.18
D
148.74
30
60
90
120
150
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie
SVT-AV1 1.0
Encoder Mode: Preset 12 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
176.10
B
176.73
C
174.95
D
173.05
40
80
120
160
200
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

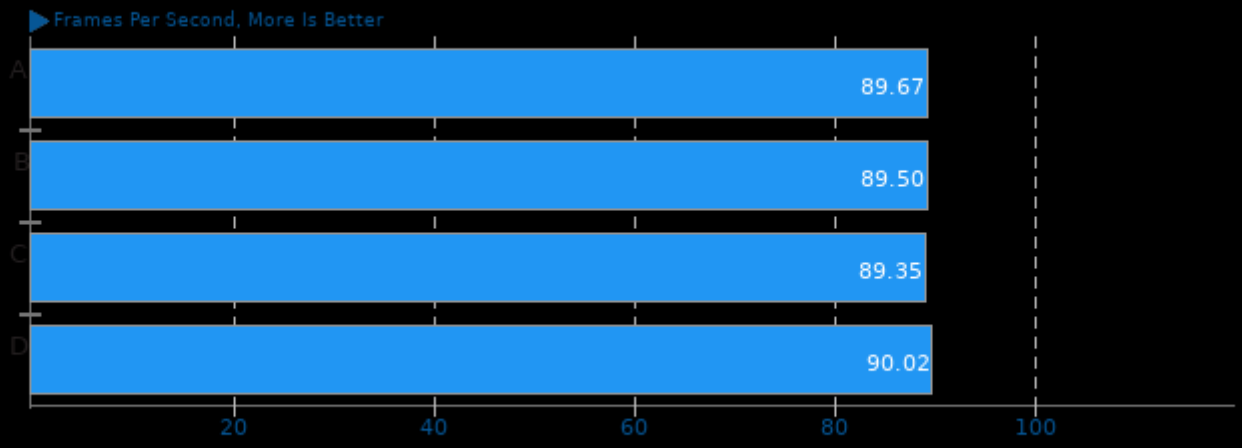

SVT-HEVC 1.5.0
Tuning: 1 - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
B
C
D
2.63
2.63
2.63
2.63
0.5918
1.1836
1.7754
2.3672
2.959
1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt
SVT-HEVC 1.5.0
Tuning: 7 - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
B
C
D
53.34
53.15
53.41
53.58
12
24
36
48
60
1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

xeon gold sunday



SVT-VP9 0.3

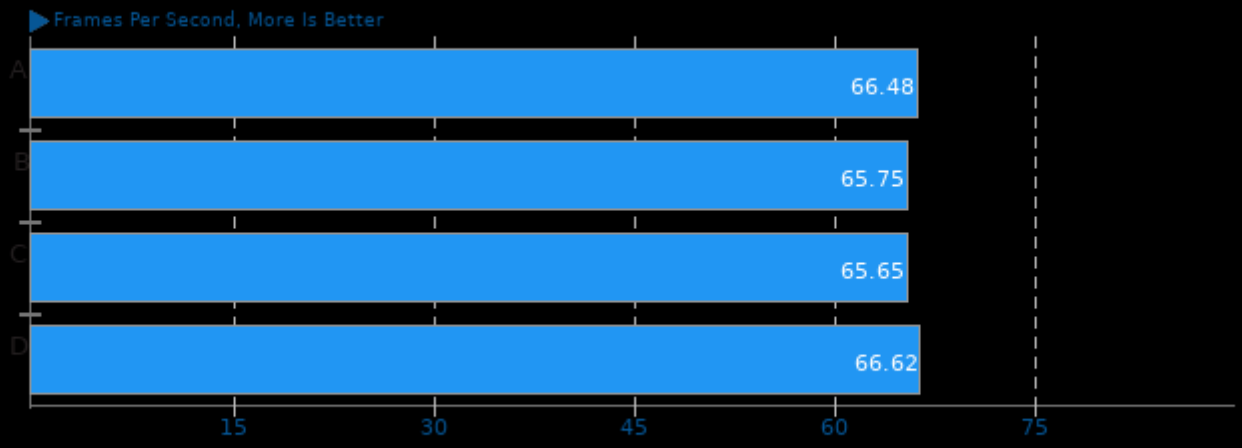
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 4K



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-VP9 0.3

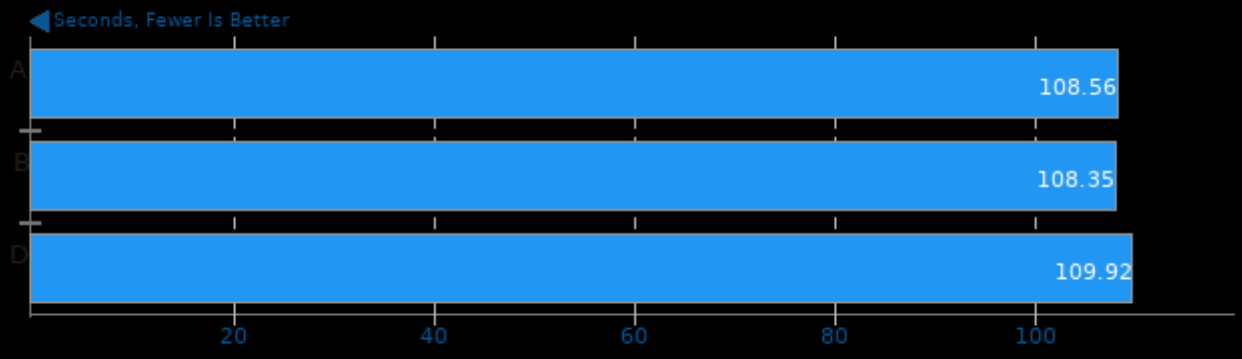
Tuning: Visual Quality Optimized - Input: Bosphorus 4K



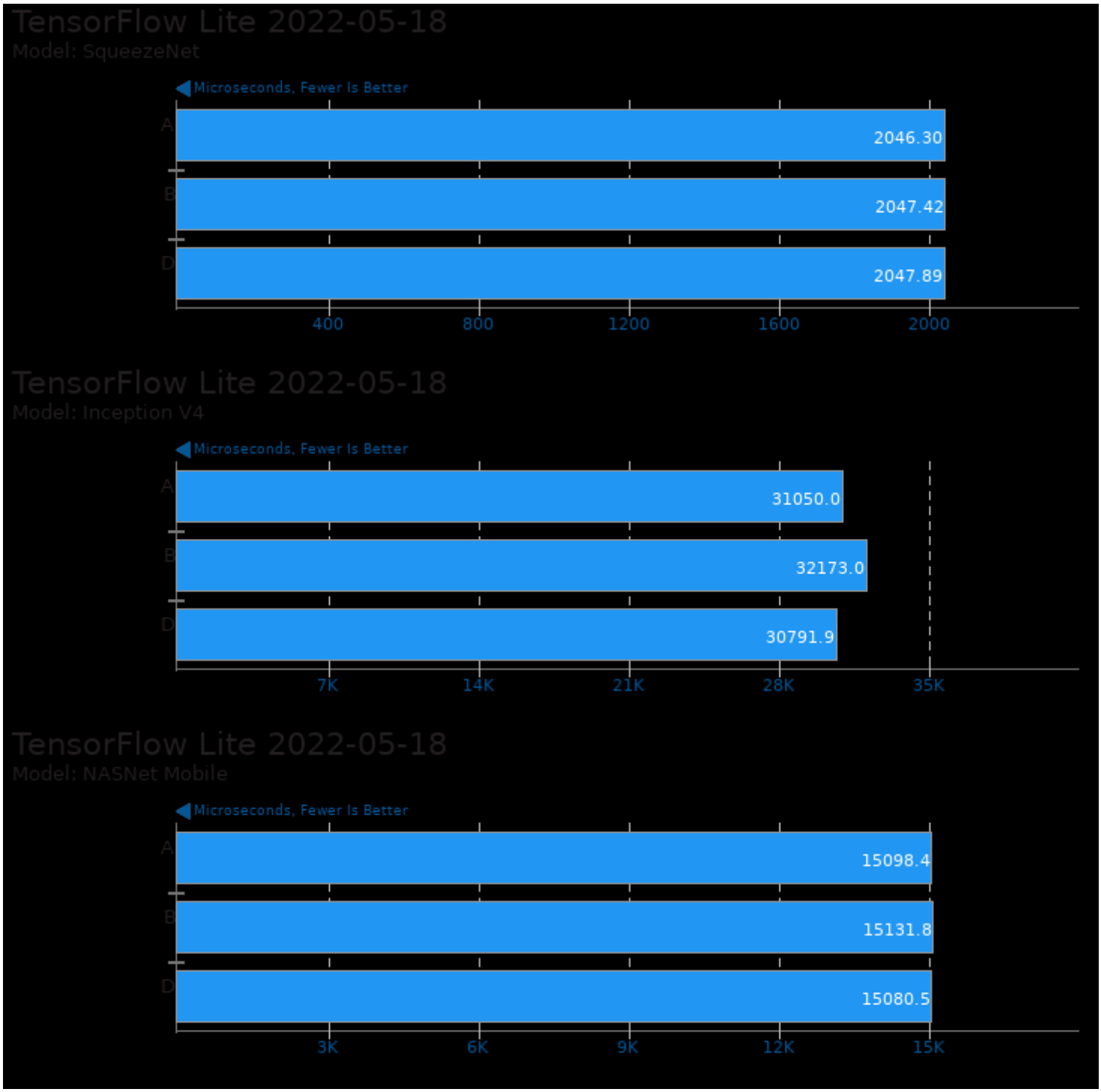
1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

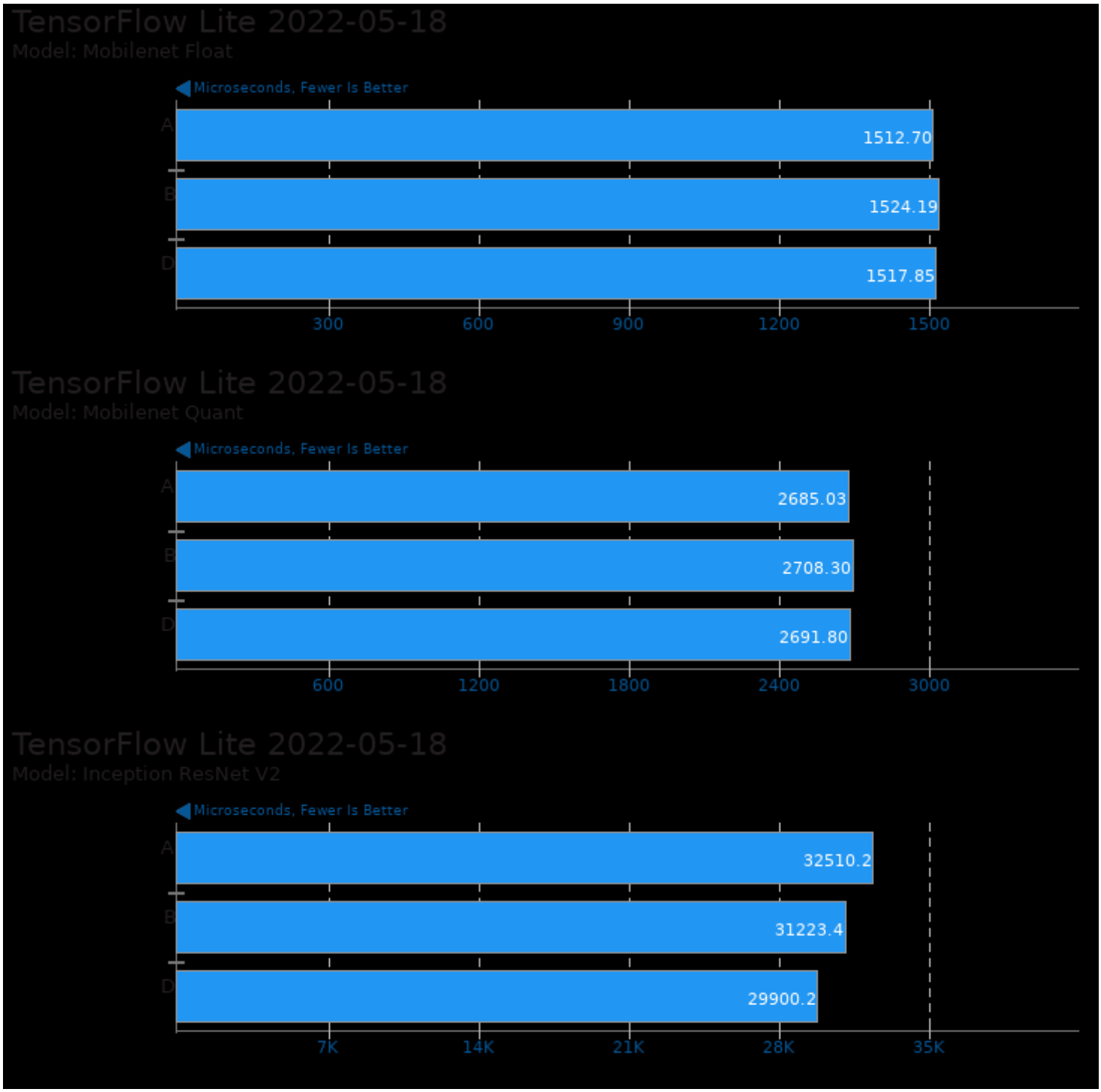
Tachyon 0.99.2

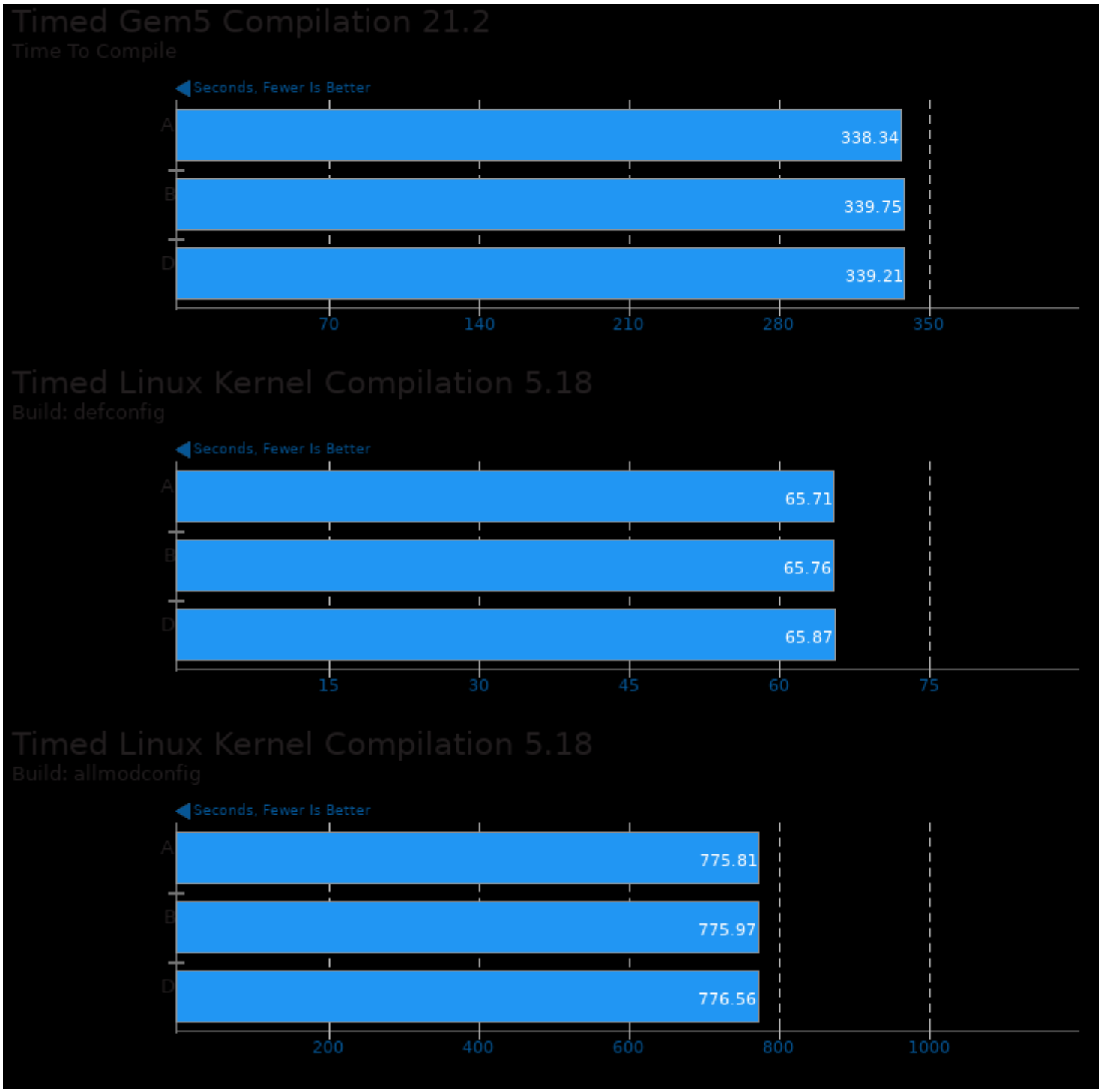
Total Time



1. (CC) gcc options: -m64 -O3 -fomit-frame-pointer -ffast-math -ltachyon -lm -lpthread

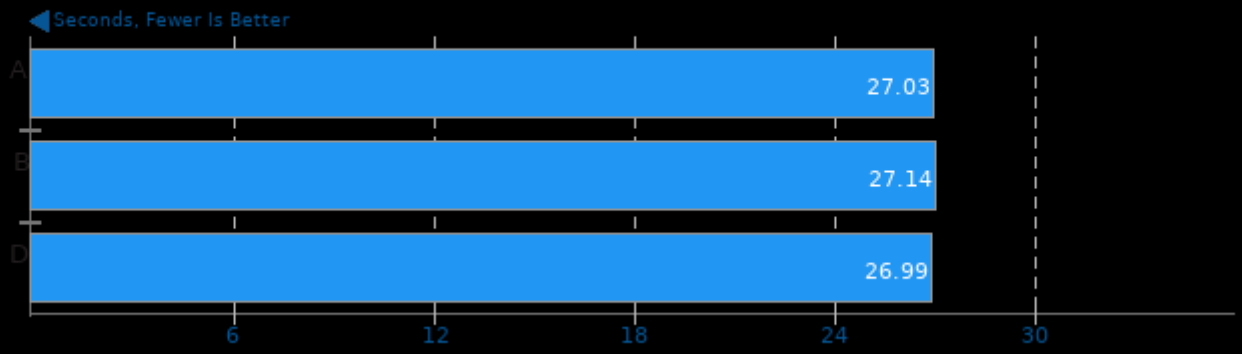

TensorFlow Lite 2022-05-18
Model: SqueezeNet
Microseconds, Fewer Is Better
A
B
D
2046.30
2047.42
2047.89
400
800
1200
1600
2000
TensorFlow Lite 2022-05-18
Model: Inception V4
Microseconds, Fewer Is Better
A
B
D
31050.0
32173.0
30791.9
7K
14K
21K
28K
35K
TensorFlow Lite 2022-05-18
Model: NASNet Mobile
Microseconds, Fewer Is Better
A
B
D
15098.4
15131.8
15080.5
3K
6K
9K
12K
15K


TensorFlow Lite 2022-05-18
Model: Mobilenet Float
Microseconds, Fewer Is Better
A
B
D
1512.70
1524.19
1517.85
300
600
900
1200
1500
TensorFlow Lite 2022-05-18
Model: Mobilenet Quant
Microseconds, Fewer Is Better
A
B
D
2685.03
2708.30
2691.80
600
1200
1800
2400
3000
TensorFlow Lite 2022-05-18
Model: Inception ResNet V2
Microseconds, Fewer Is Better
A
B
D
32510.2
31223.4
29900.2
7K
14K
21K
28K
35K


Timed Gem5 Compilation 21.2
Time To Compile
Seconds, Fewer Is Better
A
B
D
338.34
339.75
339.21
70
140
210
280
350
Timed Linux Kernel Compilation 5.18
Build: defconfig
Seconds, Fewer Is Better
A
B
D
65.71
65.76
65.87
15
30
45
60
75
Timed Linux Kernel Compilation 5.18
Build: allmodconfig
Seconds, Fewer Is Better
A
B
D
775.81
775.97
776.56
200
400
600
800
1000

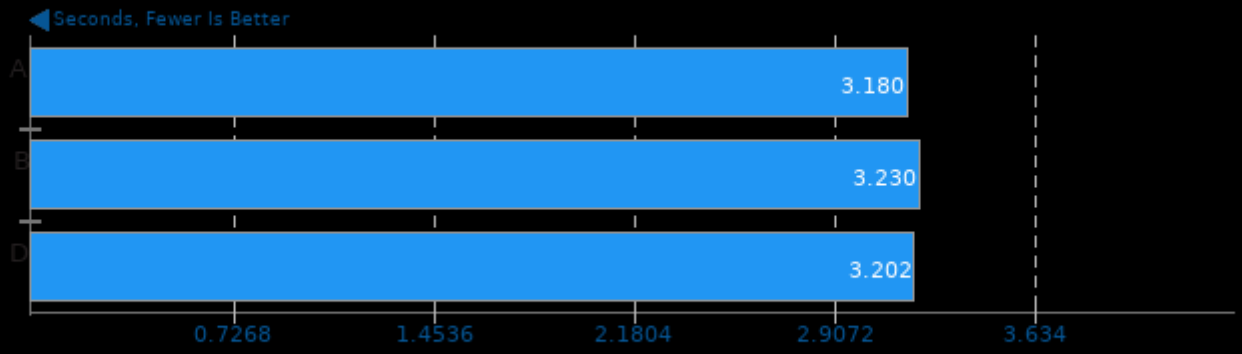
Timed MPlayer Compilation 1.5

Time To Compile



WebP2 Image Encode 20220422

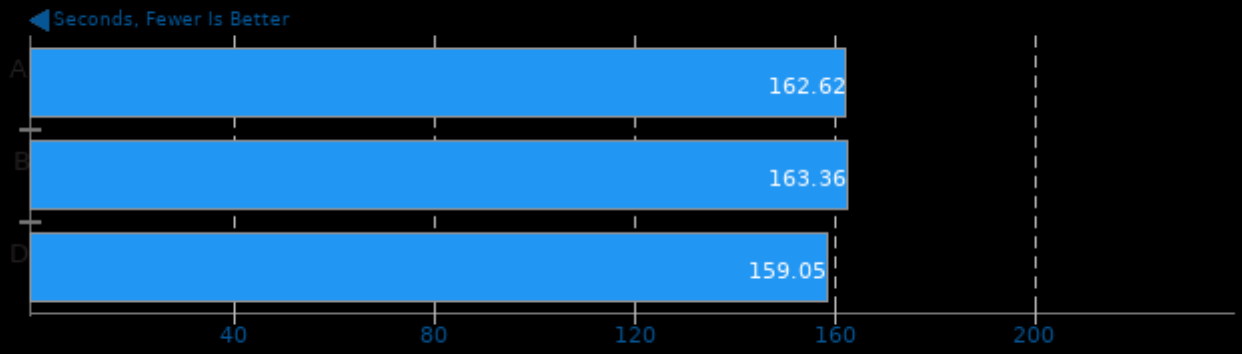
Encode Settings: Default



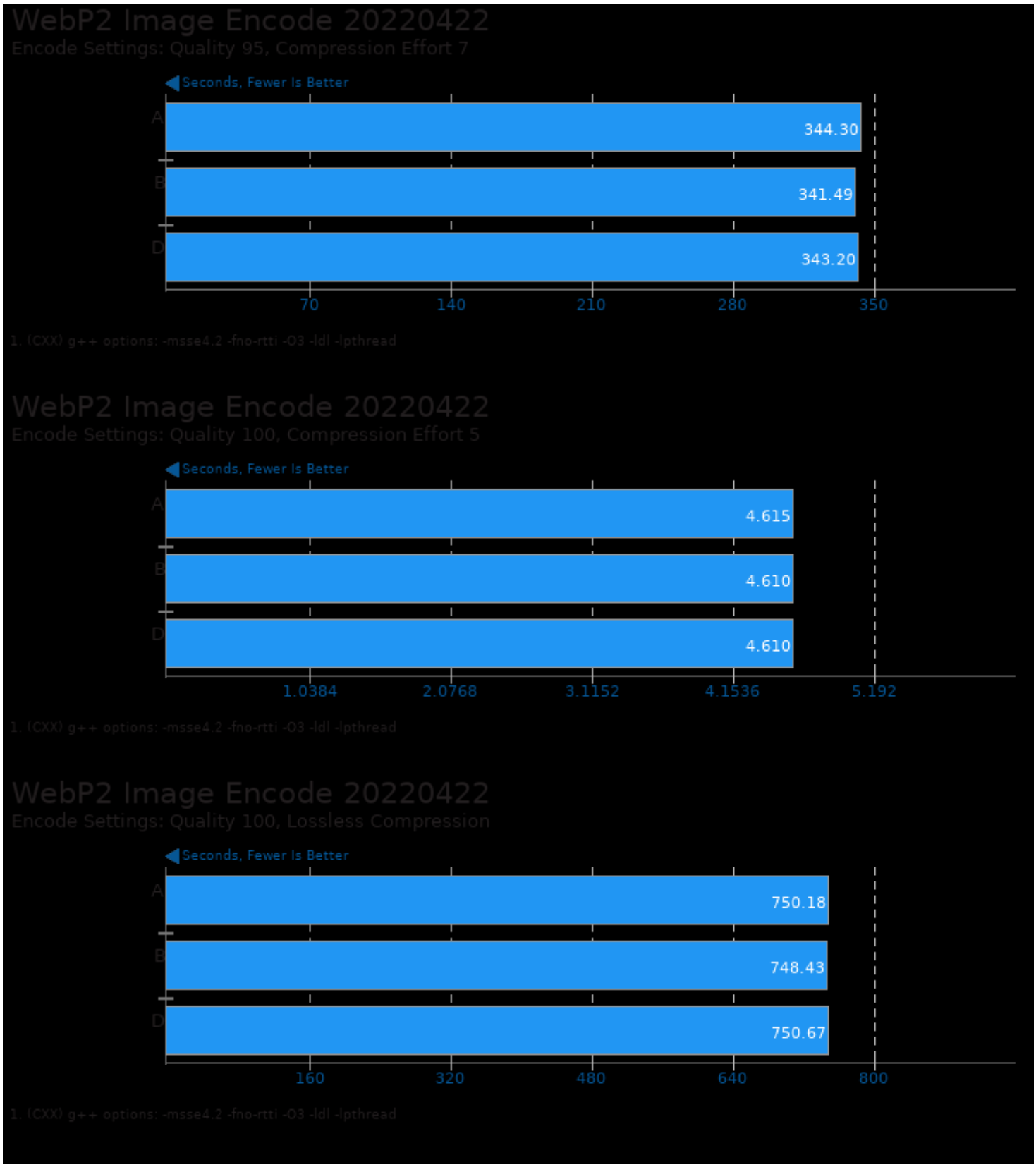
1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl -lpthread

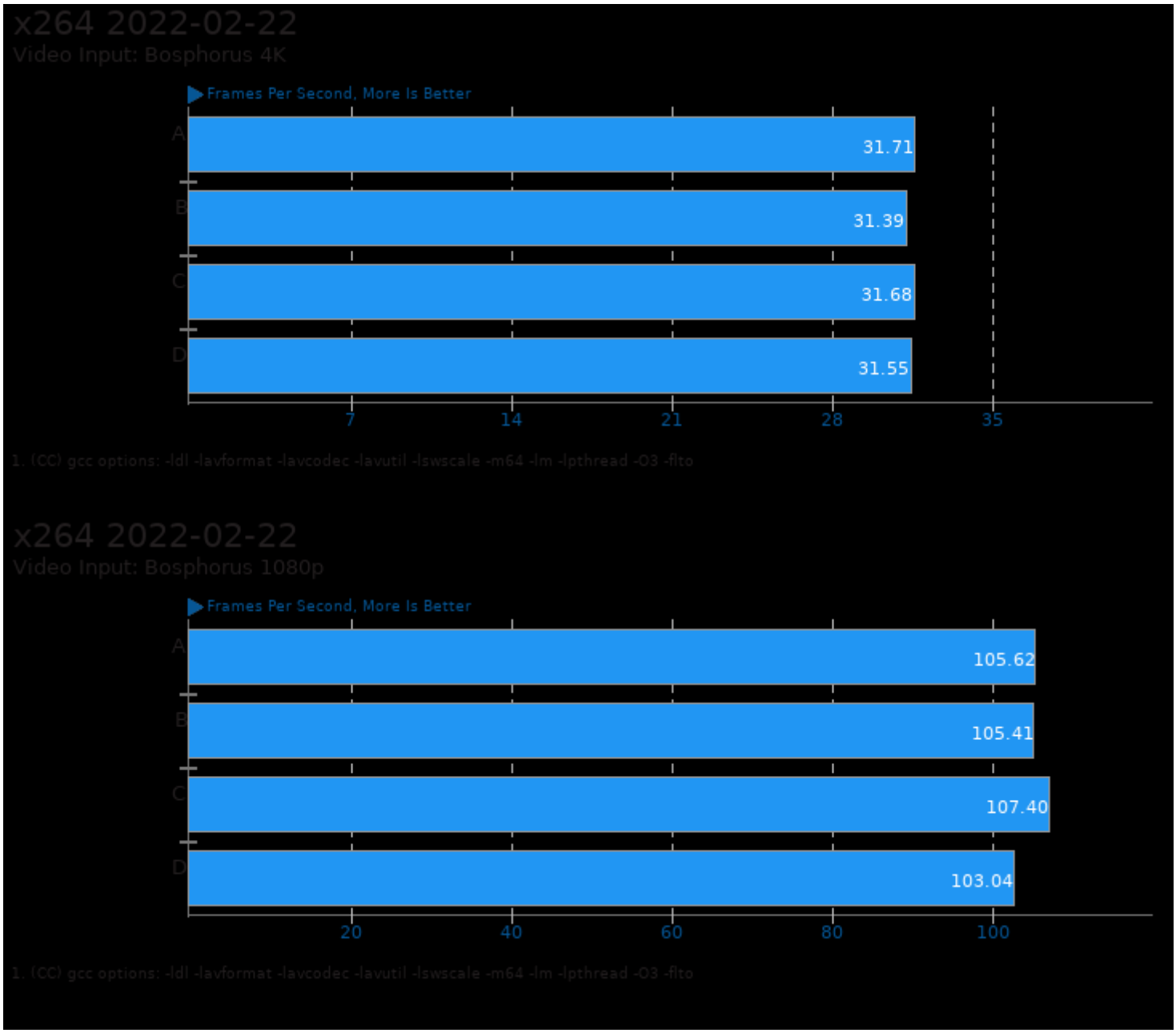
WebP2 Image Encode 20220422

Encode Settings: Quality 75, Compression Effort 7

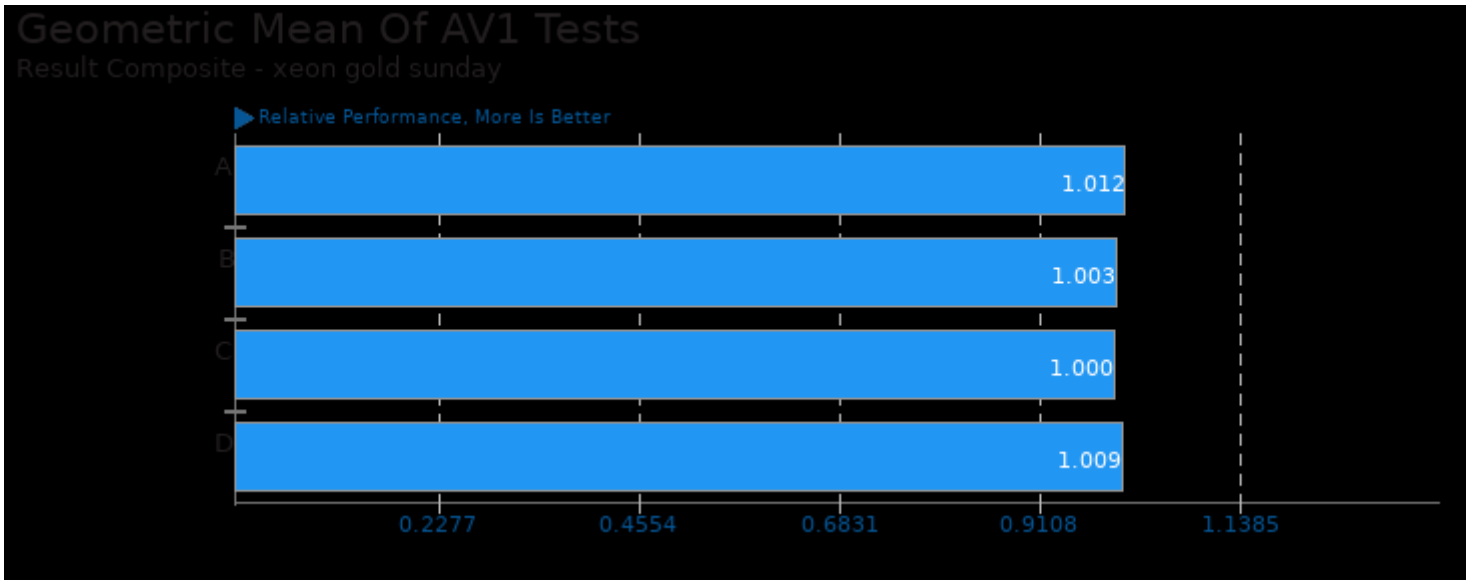


1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl -lpthread

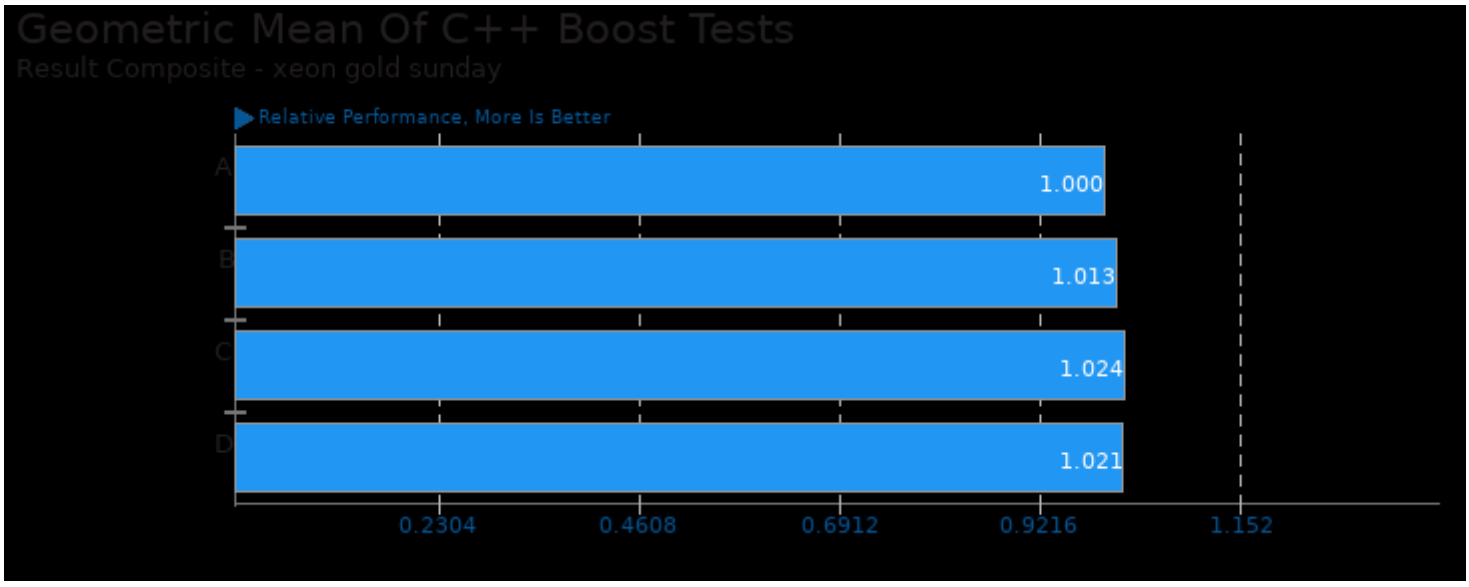

WebP2 Image Encode 20220422
Encode Settings: Quality 95, Compression Effort 7
Seconds, Fewer Is Better
A
B
D
344.30
341.49
343.20
70
140
210
280
350
1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl -lpthread
WebP2 Image Encode 20220422
Encode Settings: Quality 100, Compression Effort 5
Seconds, Fewer Is Better
A
B
D
4.615
4.610
4.610
1.0384
2.0768
3.1152
4.1536
5.192
1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl -lpthread
WebP2 Image Encode 20220422
Encode Settings: Quality 100, Lossless Compression
Seconds, Fewer Is Better
A
B
D
750.18
748.43
750.67
160
320
480
640
800
1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -ldl -lpthread


x264 2022-02-22
Video Input: Bosphorus 4K
Frames Per Second, More Is Better
A
B
C
D
31.71
31.39
31.68
31.55
7
14
21
28
35
1. (CC) gcc options: -ldl -lavformat -lavcodec -lavutil -lswscale -m64 -lm -lpthread -O3 -flto
x264 2022-02-22
Video Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
B
C
D
105.62
105.41
107.40
103.04
20
40
60
80
100
1. (CC) gcc options: -ldl -lavformat -lavcodec -lavutil -lswscale -m64 -lm -lpthread -O3 -flto

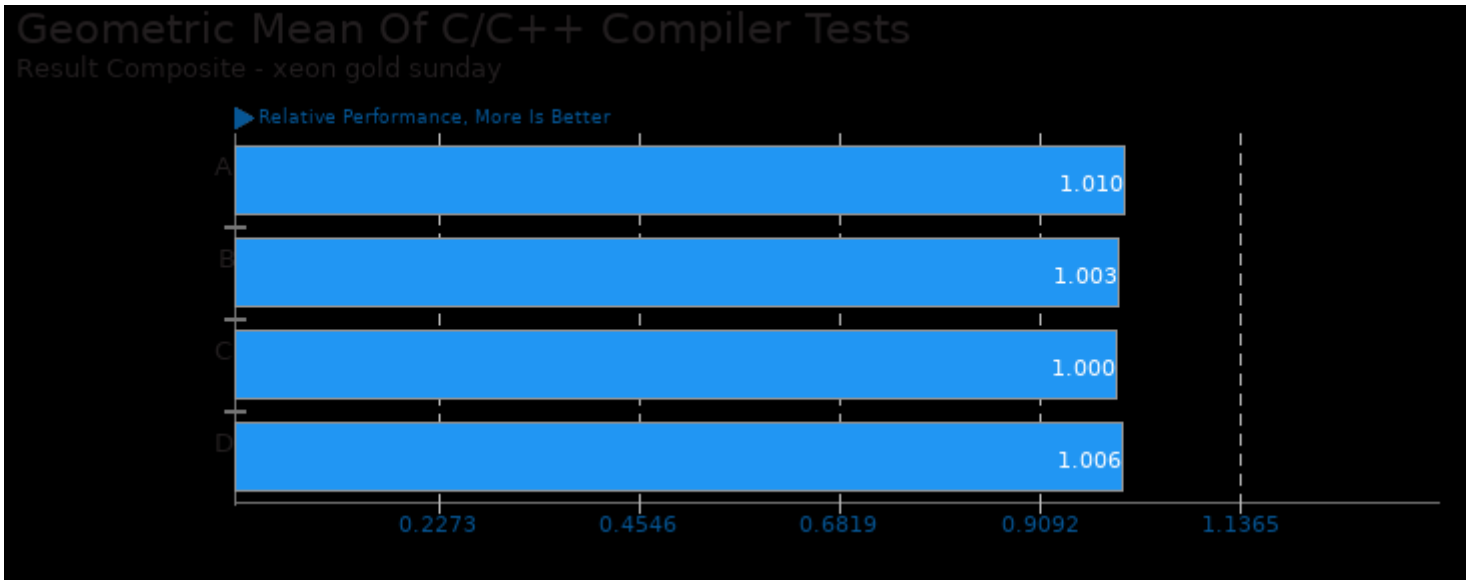
These geometric means are based upon test groupings / test suites for this result file.



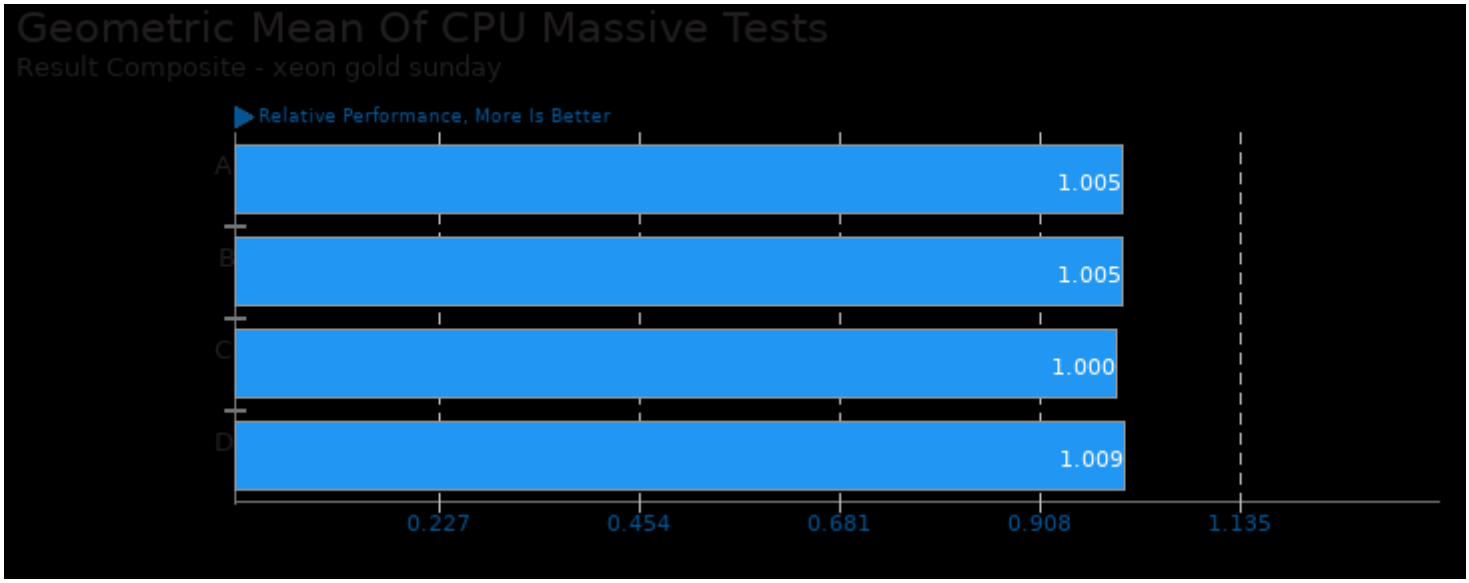
Geometric mean based upon tests: pts/aom-av1, pts/svt-av1 and pts/avifenc



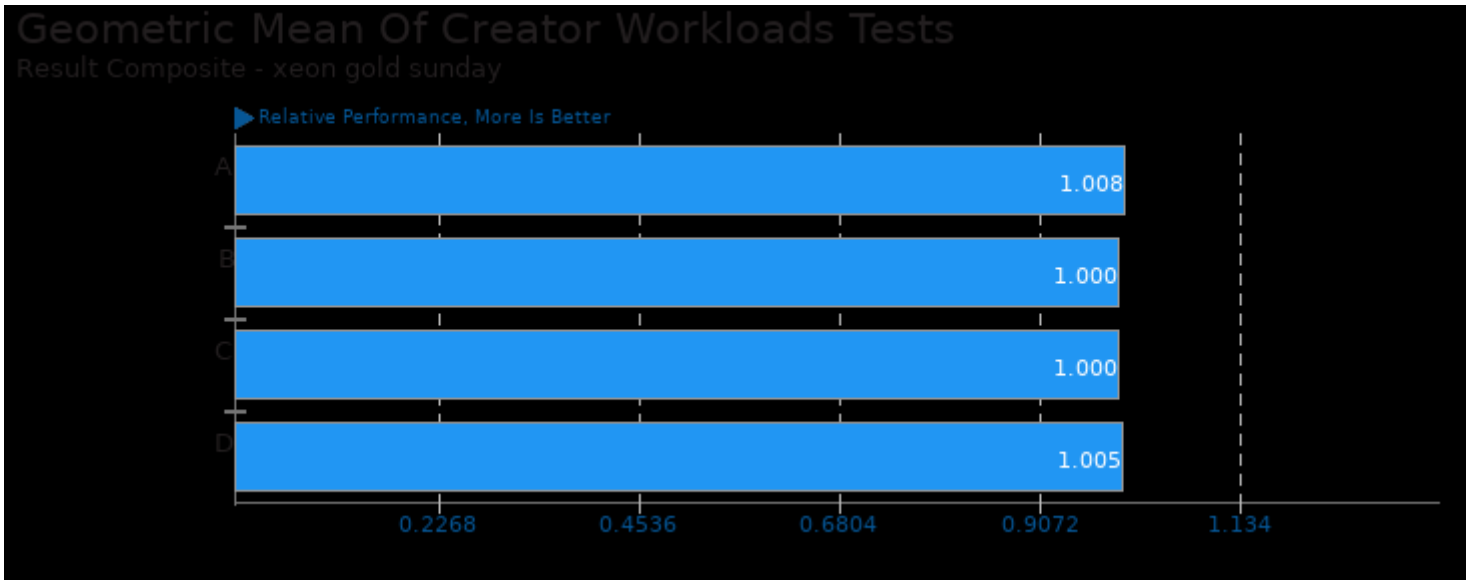
Geometric mean based upon tests: pts/chia-vdf and pts/build-gem5



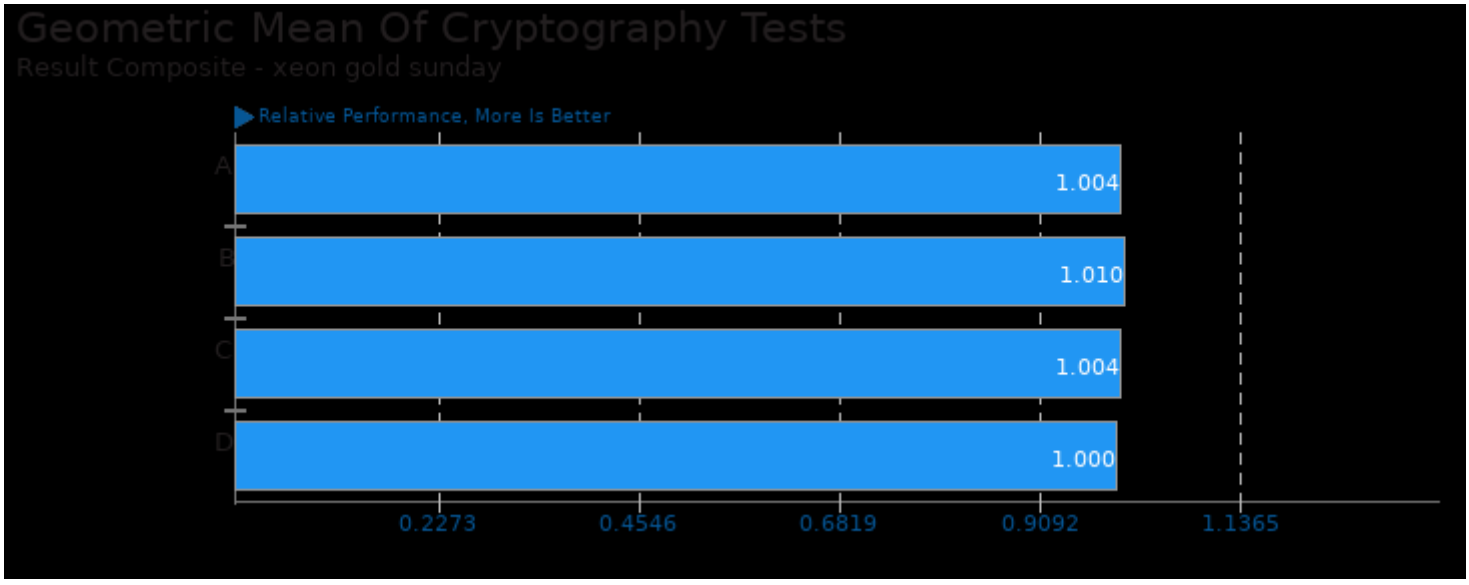
Geometric mean based upon tests: pts/stockfish, pts/compress-7zip, pts/x264, pts/aom-av1, pts/svt-av1, pts/svt-vp9, pts/gromacs, pts/build-mplayer, pts/tachyon and pts/nettle



Geometric mean based upon tests: pts/build-linux-kernel, pts/compress-7zip, pts/compress-pbzip2, pts/svt-av1, pts/svt-hevc, pts/svt-vp9, pts/x264, pts/glibc-bench, pts/onednn, pts/stockfish, pts/stress-ng, pts/tachyon, pts/v-ray, pts/blender and pts/renaissance

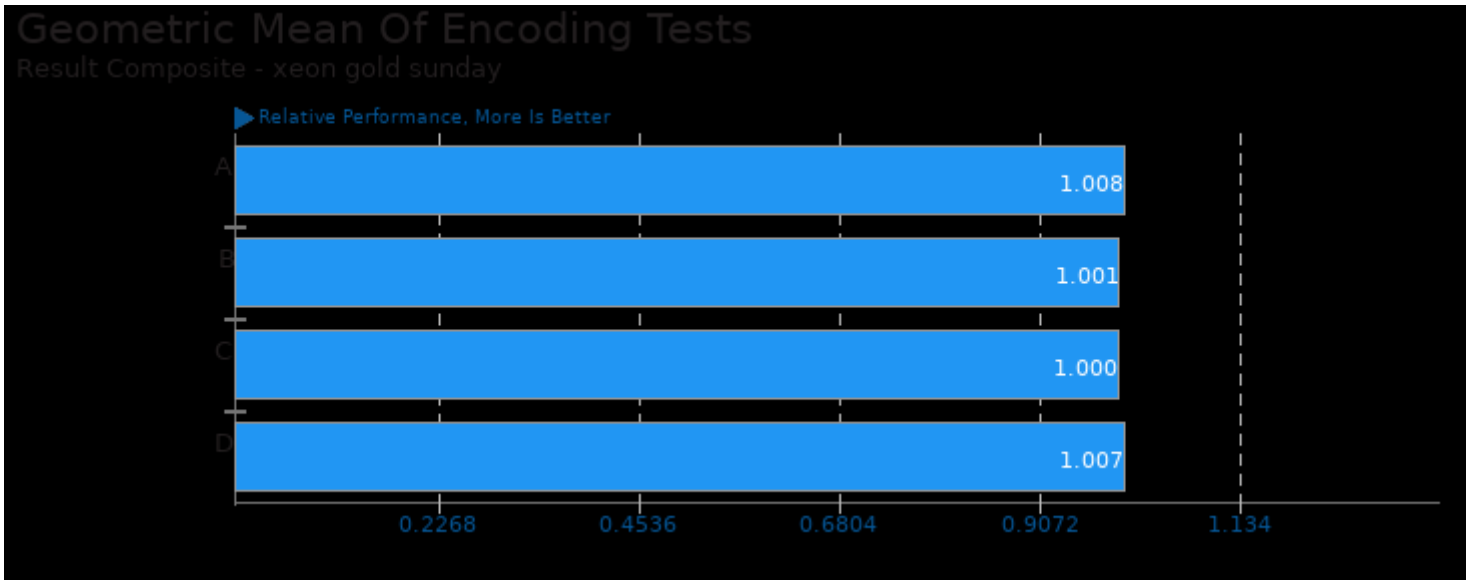


Geometric mean based upon tests: pts/ospray, pts/ospray-studio, pts/tachyon, pts/blender, pts/v-ray, pts/svt-vp9, pts/svt-hevc, pts/x264, pts/aom-av1, pts/svt-av1, pts/avifenc, pts/webp2, pts/onednn, pts/etcpak and pts/draco

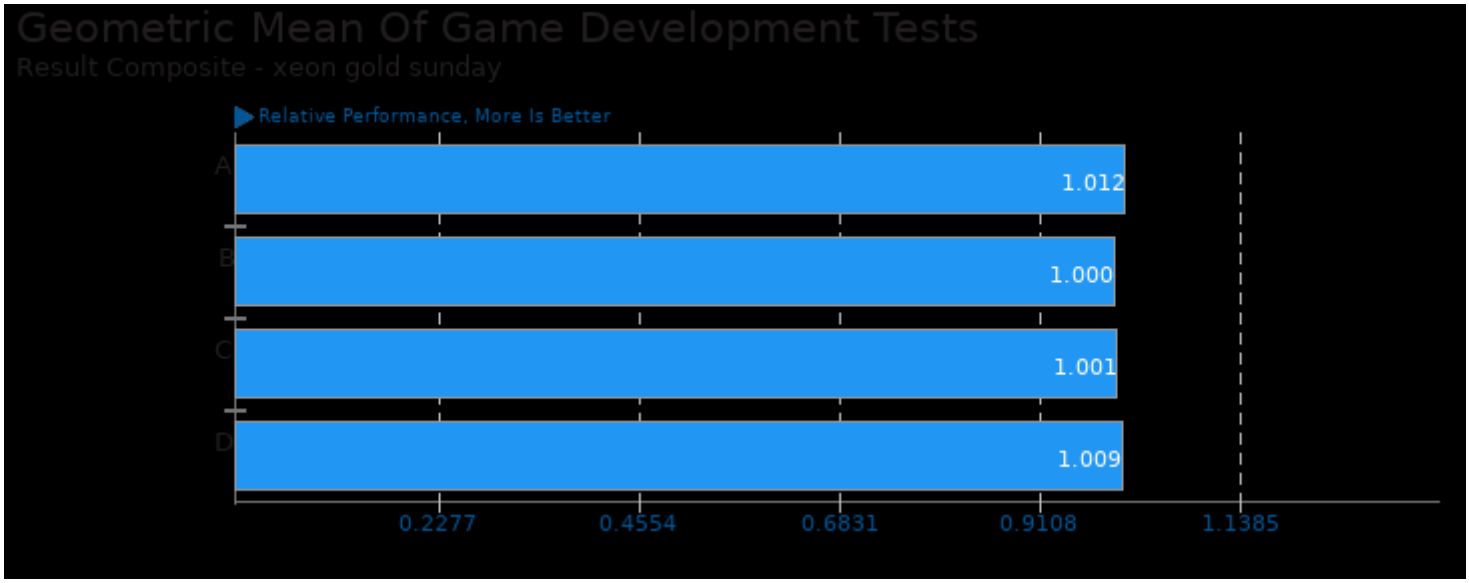


Geometric mean based upon tests: pts/nettle and pts/chia-vdf

xeon gold sunday

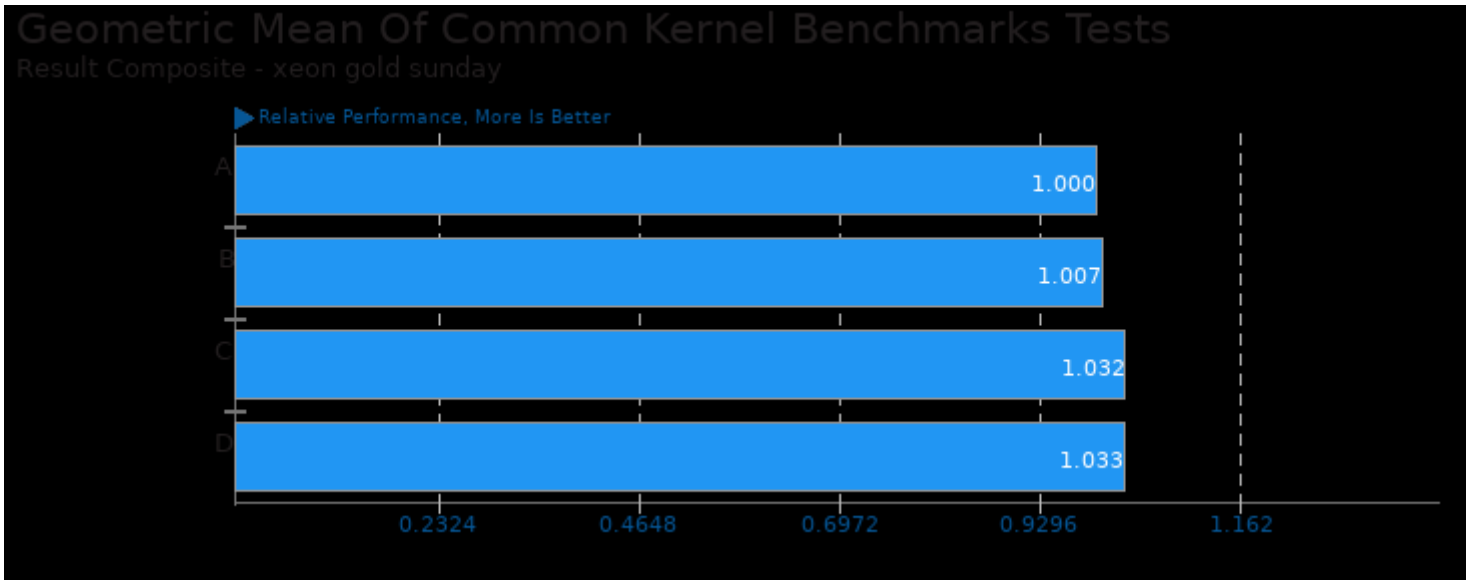


Geometric mean based upon tests: pts/svt-vp9, pts/svt-hevc, pts/x264, pts/aom-av1, pts/svt-av1 and pts/avifenc

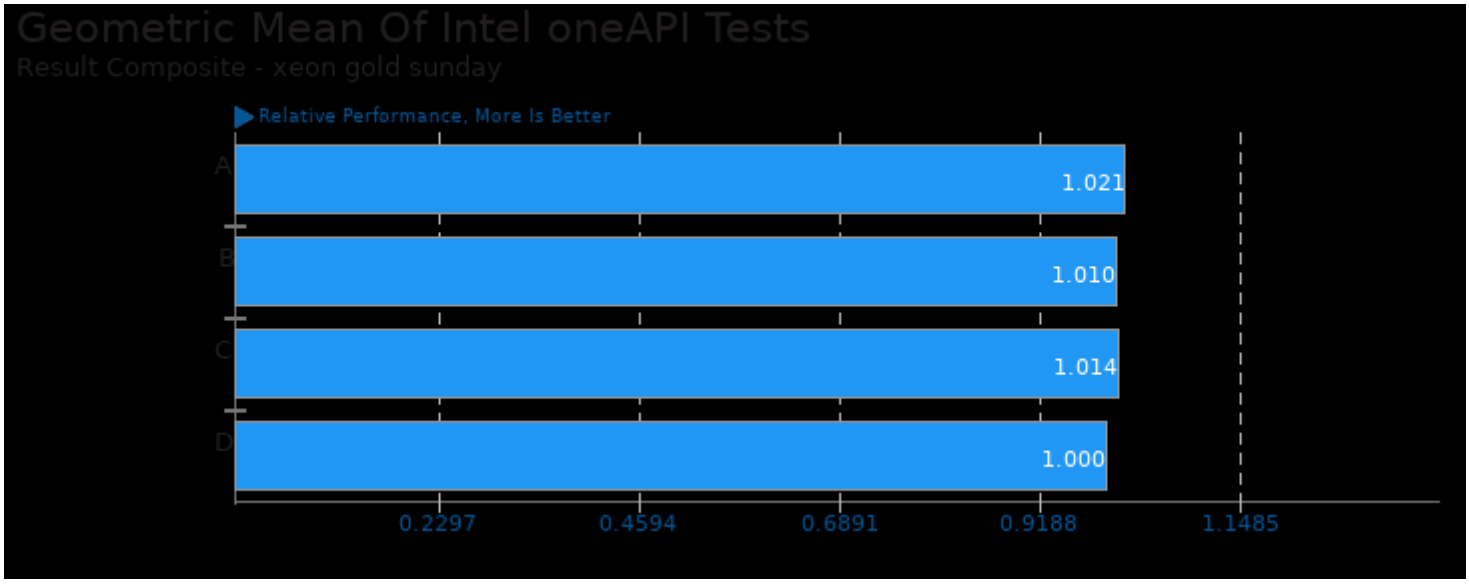


Geometric mean based upon tests: pts/etcpak, pts/draco and pts/blender

xeon gold sunday

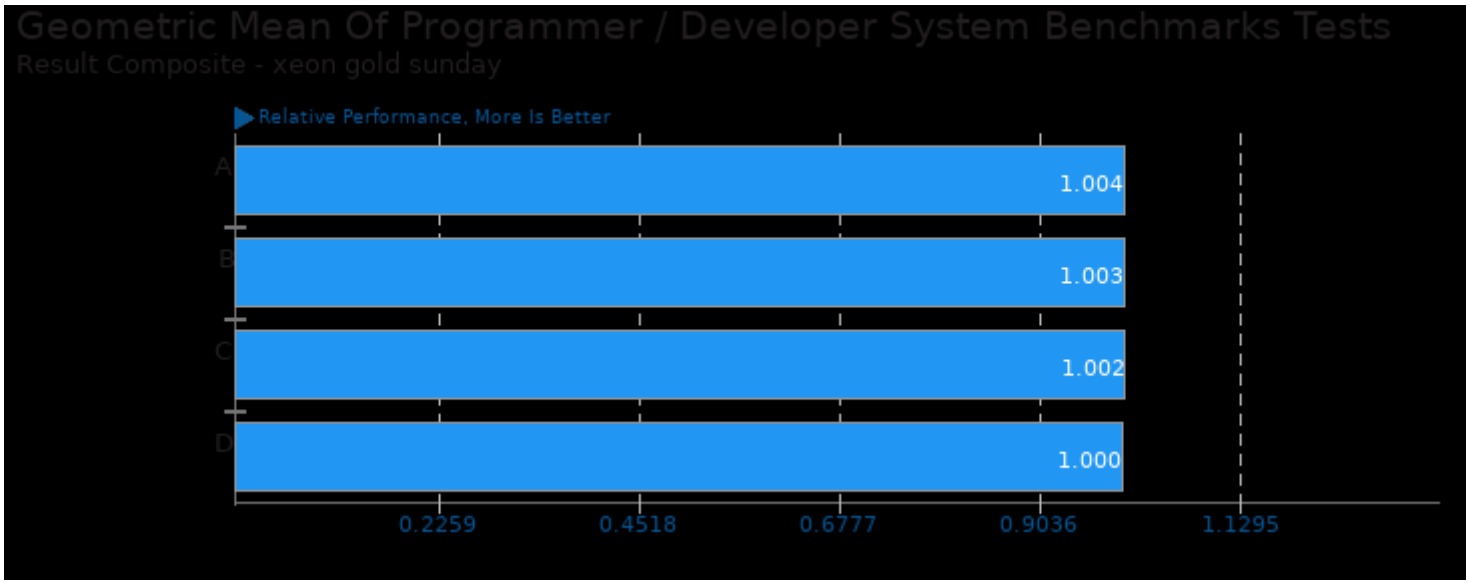


Geometric mean based upon tests: pts/perf-bench, pts/stress-ng and pts/rocksdb

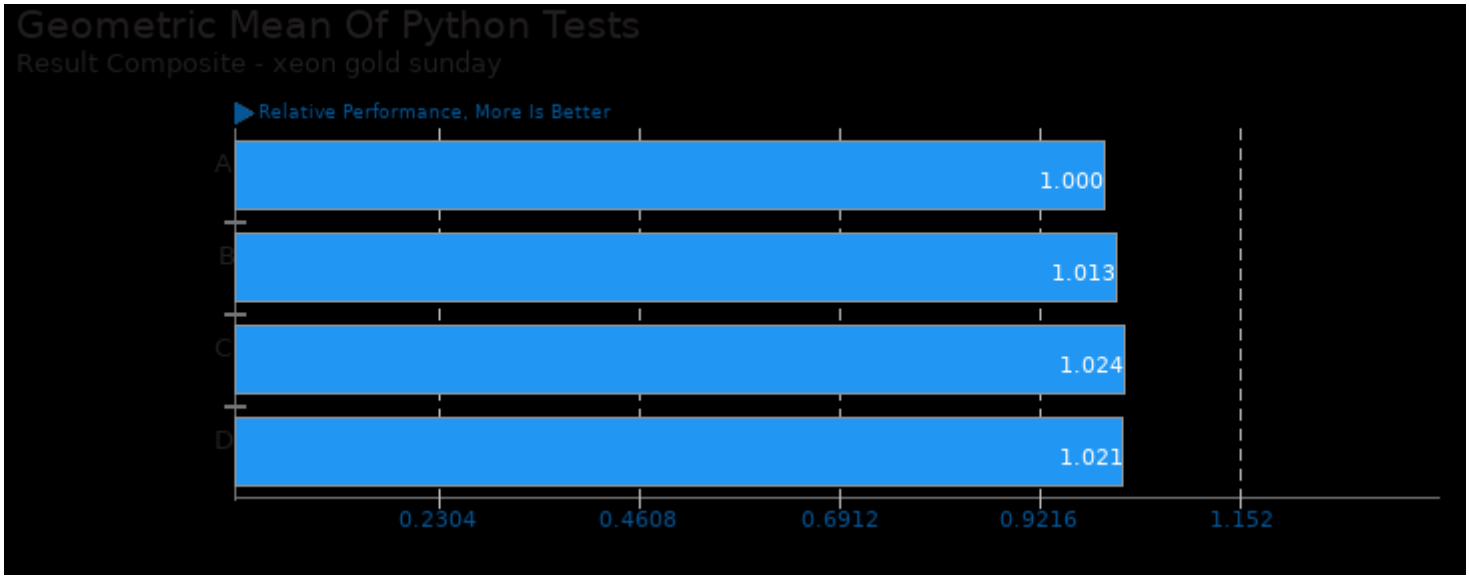


Geometric mean based upon tests: pts/onednn, pts/ospray and pts/ospray-studio

xeon gold sunday

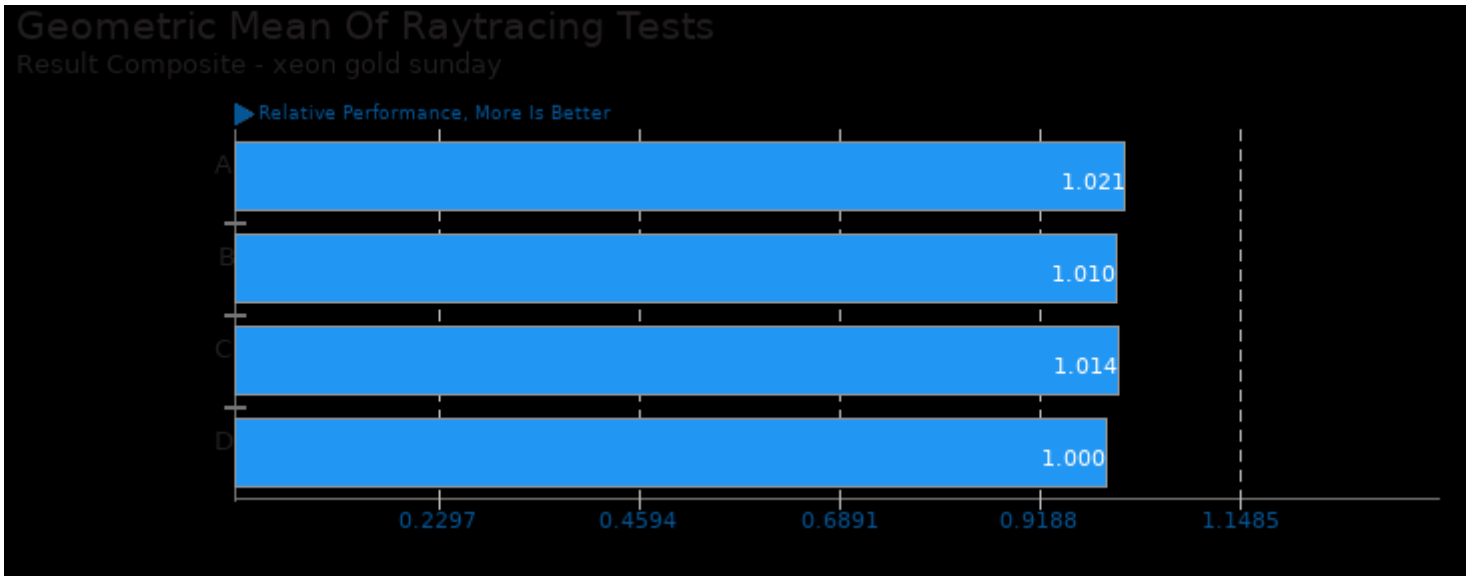


Geometric mean based upon tests: pts/simdjson, pts/build-linux-kernel, pts/build-mplayer and pts/build-gem5

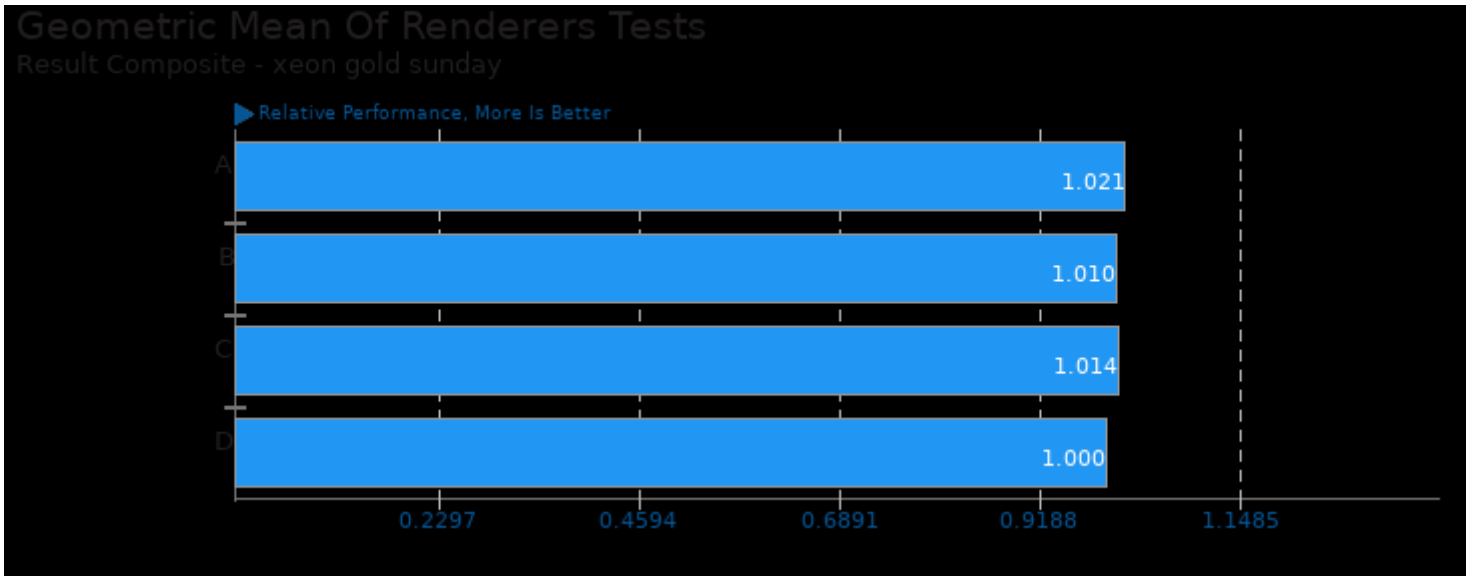


Geometric mean based upon tests: pts/chia-vdf and pts/build-gem5

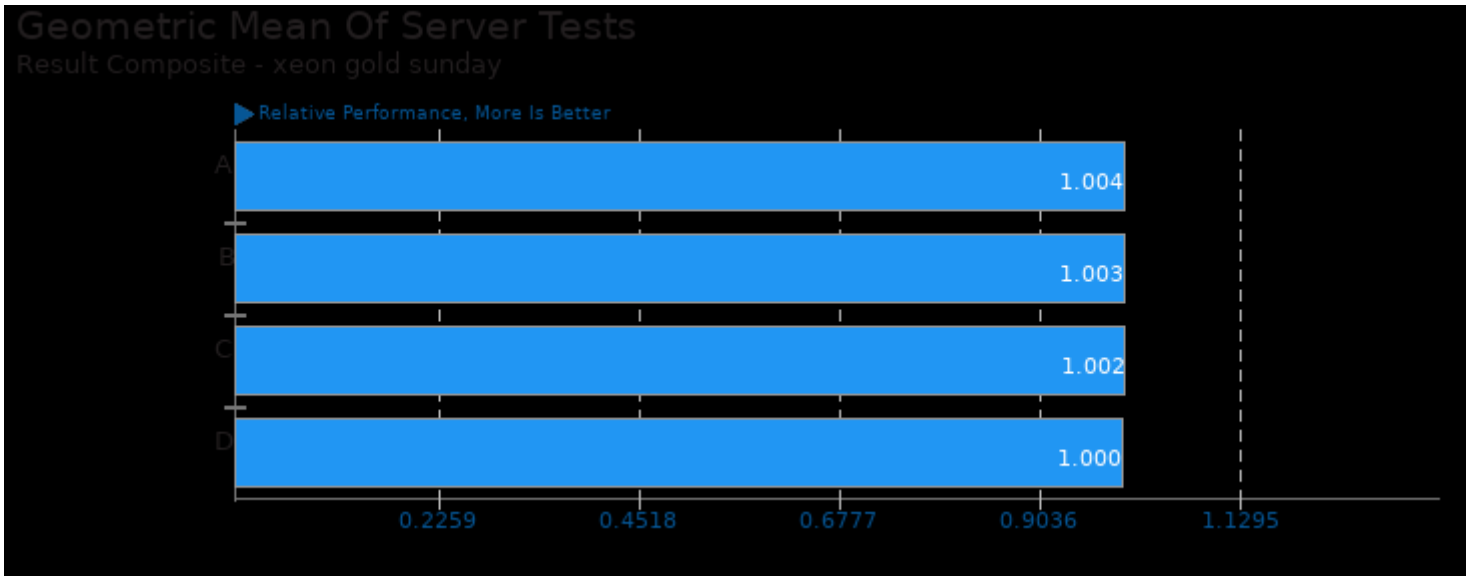
xeon gold sunday



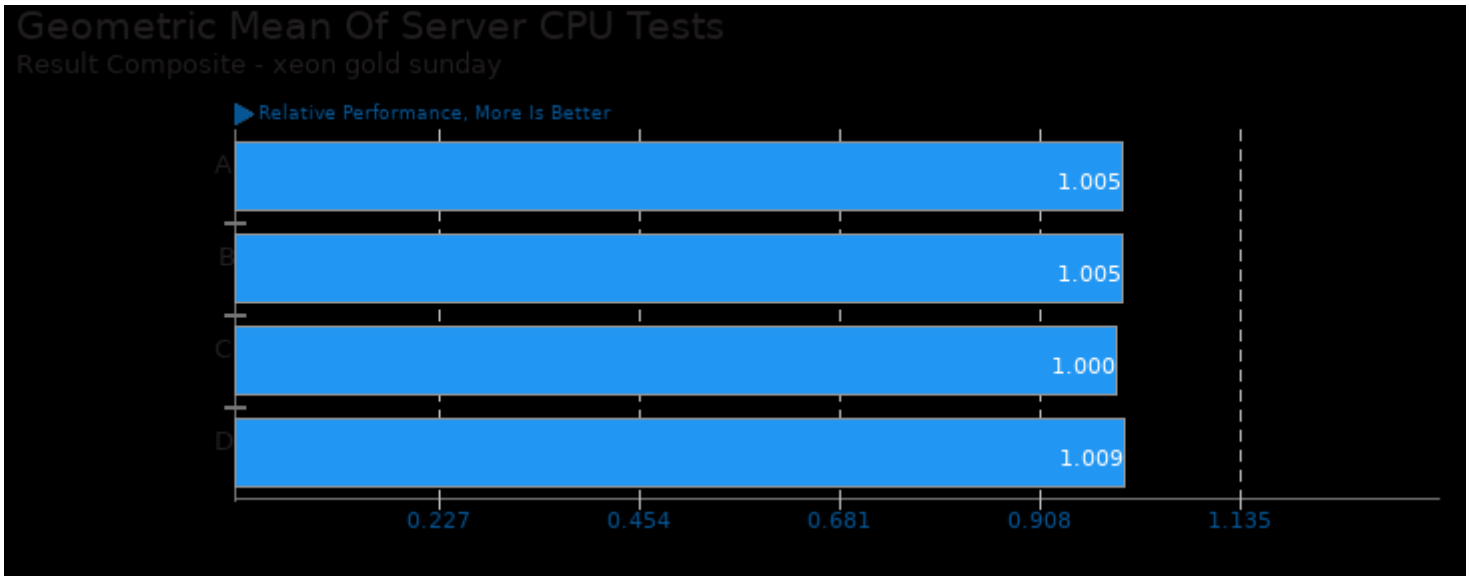
Geometric mean based upon tests: pts/ospray, pts/ospray-studio and pts/tachyon



Geometric mean based upon tests: pts/ospray, pts/ospray-studio, pts/tachyon, pts/blender and pts/v-ray

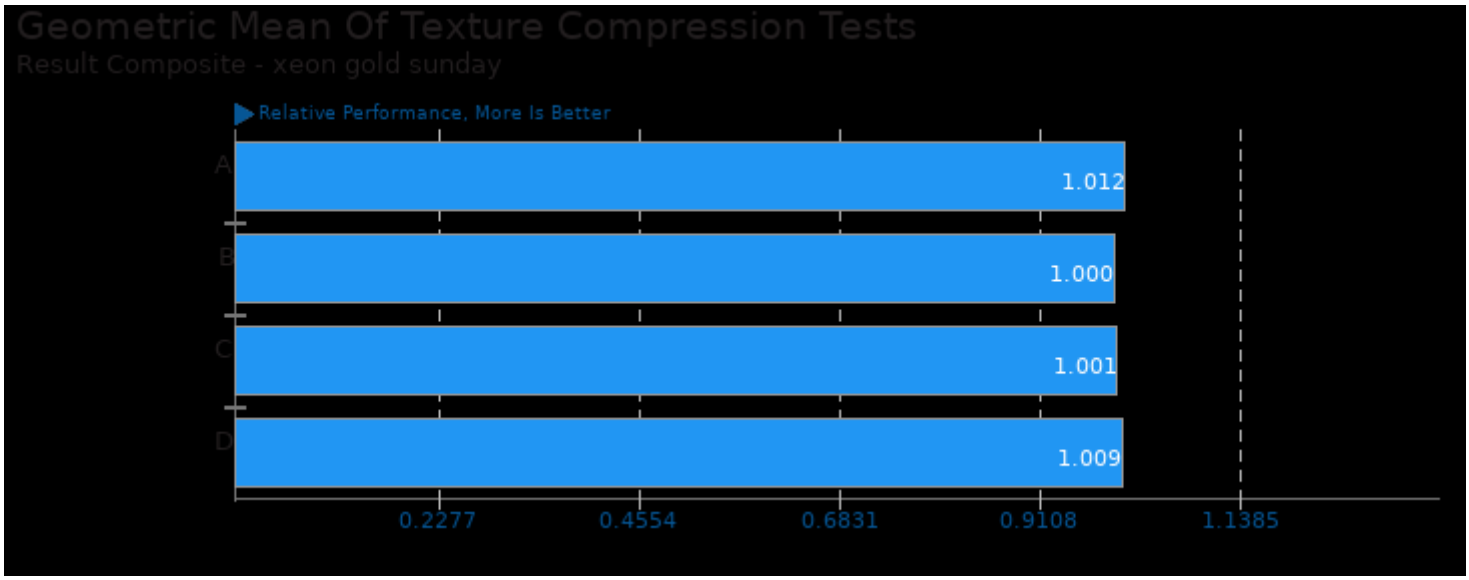


Geometric mean based upon tests: pts/rocksdb, pts/simdjson, pts/influxdb and pts/clickhouse

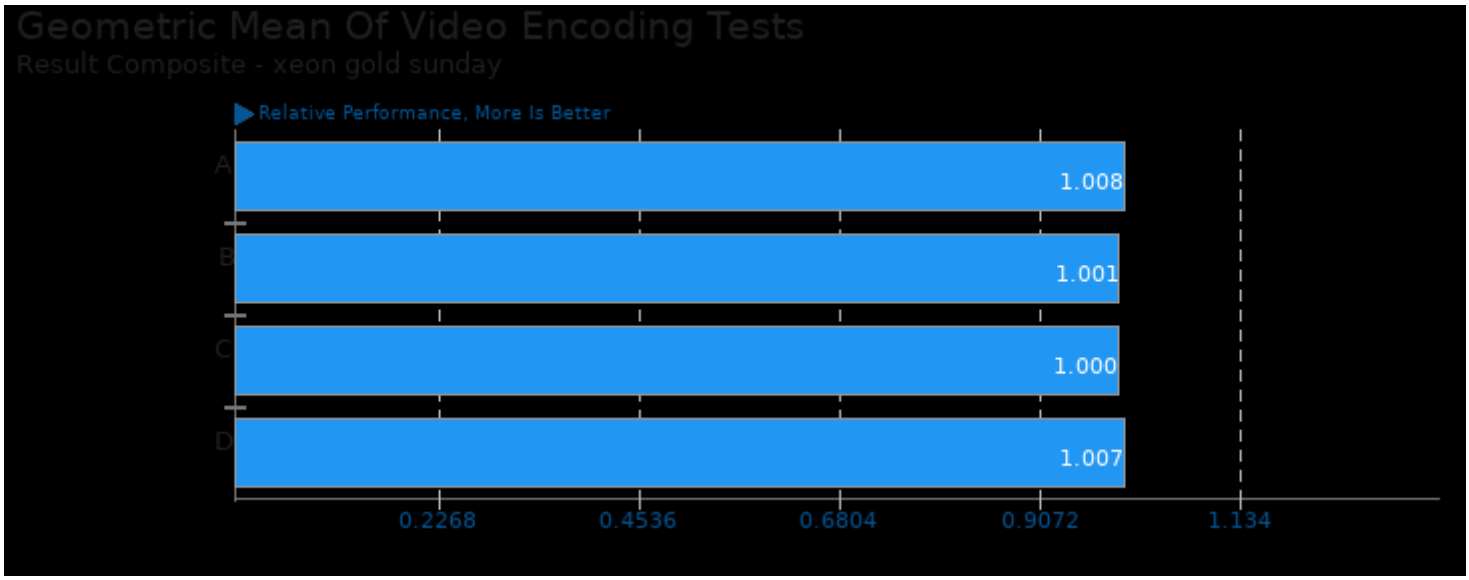


Geometric mean based upon tests: pts/renaissance, pts/onednn, pts/svt-av1, pts/svt-hevc, pts/svt-vp9, pts/x264, pts/compress-7zip, pts/stockfish, pts/build-linux-kernel, pts/glibc-bench, pts/stress-ng and pts/blender

xeon gold sunday



Geometric mean based upon tests: pts/etcpak and pts/draco



Geometric mean based upon tests: pts/svt-vp9, pts/svt-hevc, pts/x264, pts/aom-av1, pts/svt-av1 and pts/avifenc

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 07:02.