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aom-7zip-icelake-xeon

2 x Intel Xeon Platinum 8380 testing with a Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS) and ASPEED on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

B had the most wins, coming in first place for 68% of the tests.

Based on the geometric mean of all complete results, the fastest (B) was 1.004x the speed of the slowest (C). A was 0.997x the speed of B and C was 0.998x the speed of A.

Test Systems:

A

B

C

Processor: 2 x Intel Xeon Platinum 8380 @ 3.40GHz (80 Cores / 160 Threads), Motherboard: Intel M50CYP2SB2U (SE5C6200.86B.0022.D08.2103221623 BIOS), Chipset: Intel Device 0998, Memory: 16 x 32 GB DDR4-3200MT/s Hynix HMA84GR7CJR4N-XN, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP + 7682GB INTEL SSDPF2KX076TZ + 32GB Flash Drive, Graphics: ASPEED, Monitor: VE228, Network: 2 x Intel X710 for 10GBASE-T + 2 x Intel E810-C for QSFP

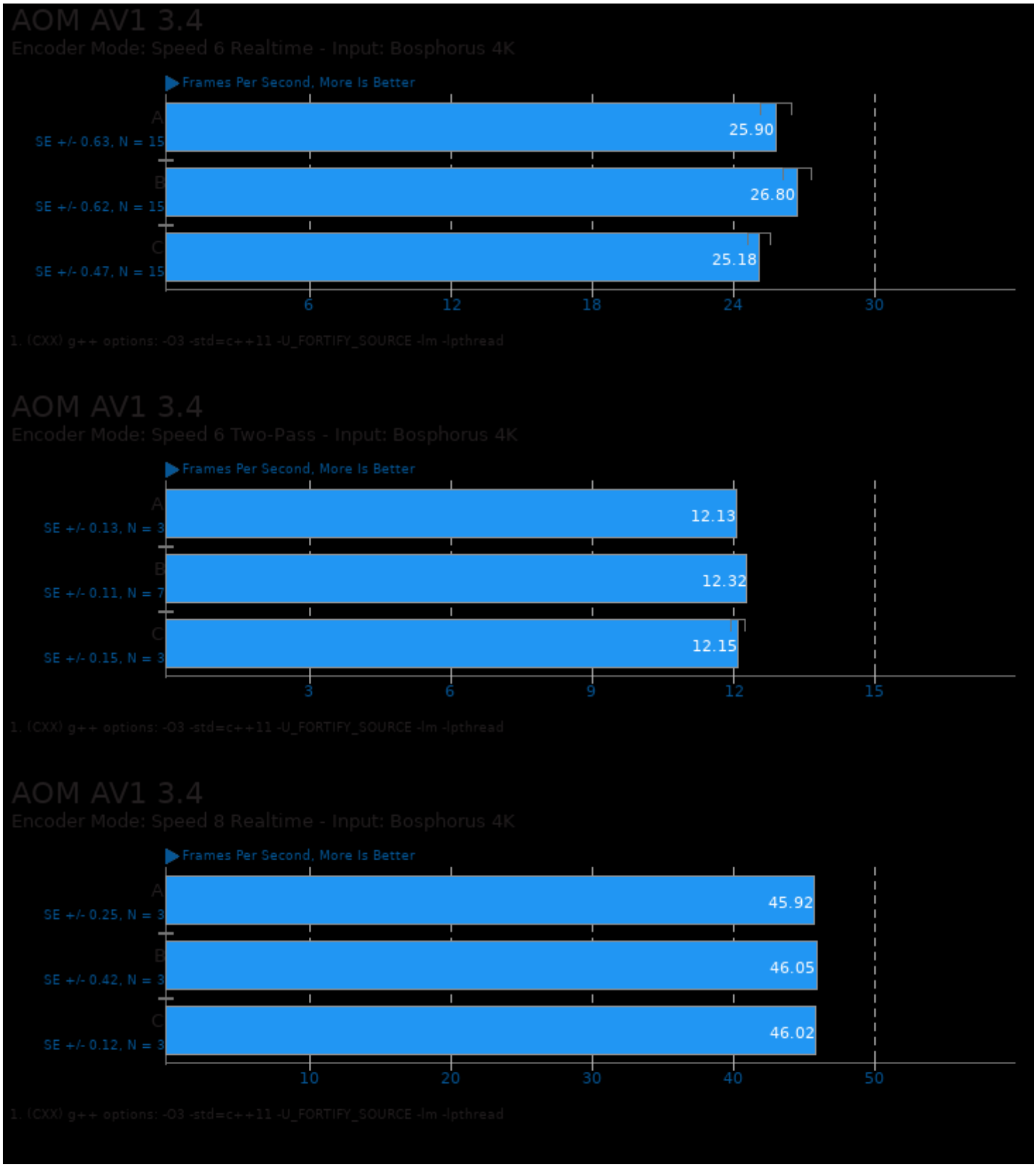
OS: Ubuntu 20.04, Kernel: 5.15.11-051511-generic (x86_64), Desktop: GNOME Shell 3.36.9, Display Server: X Server 1.20.8, Vulkan: 1.0.2, Compiler: GCC 9.3.0 + Clang 10.0.0-4ubuntu1, File-System: ext4, Screen Resolution: 1920x1080

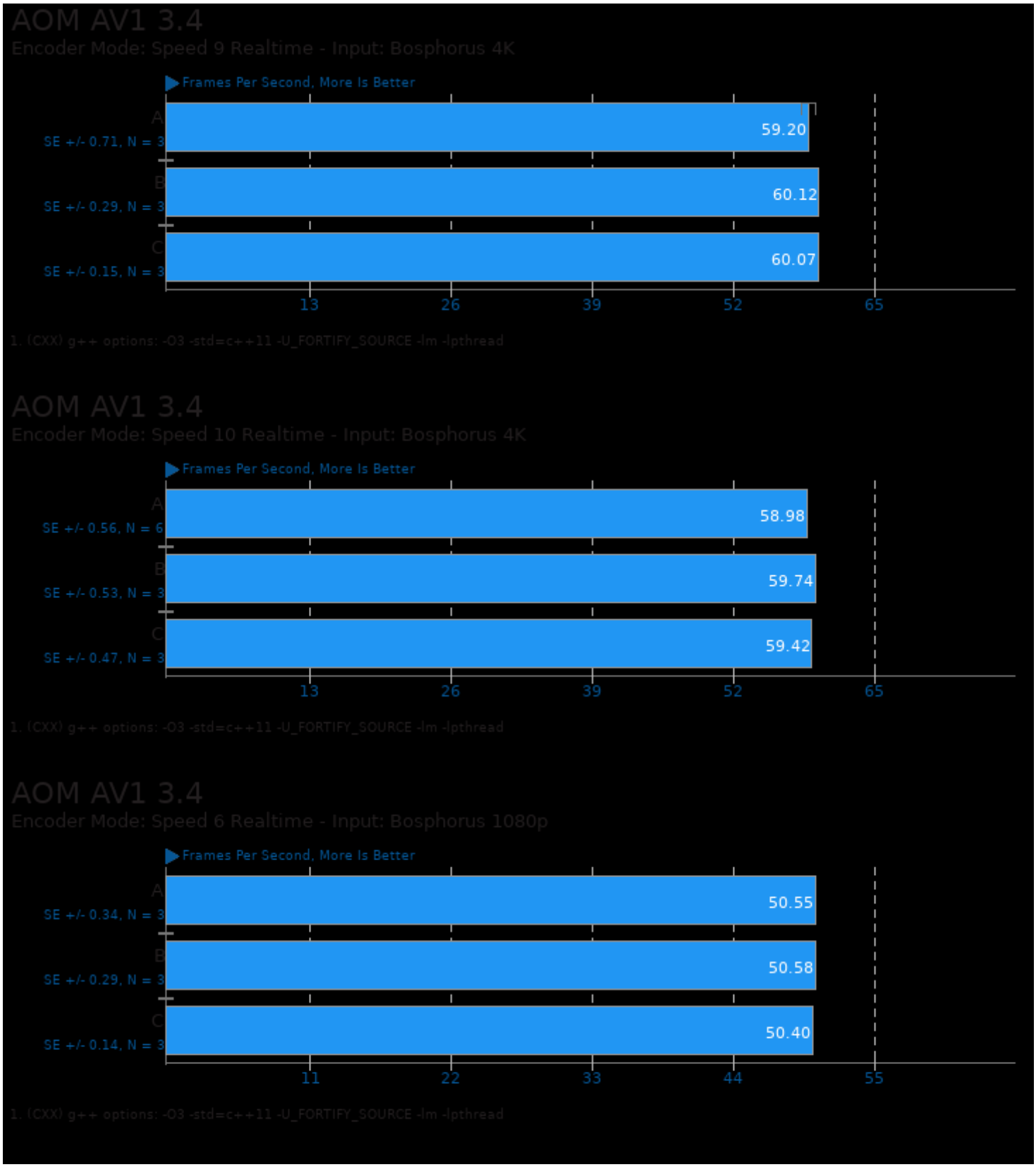
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance (EPP: performance) - CPU Microcode: 0xd0002a0
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

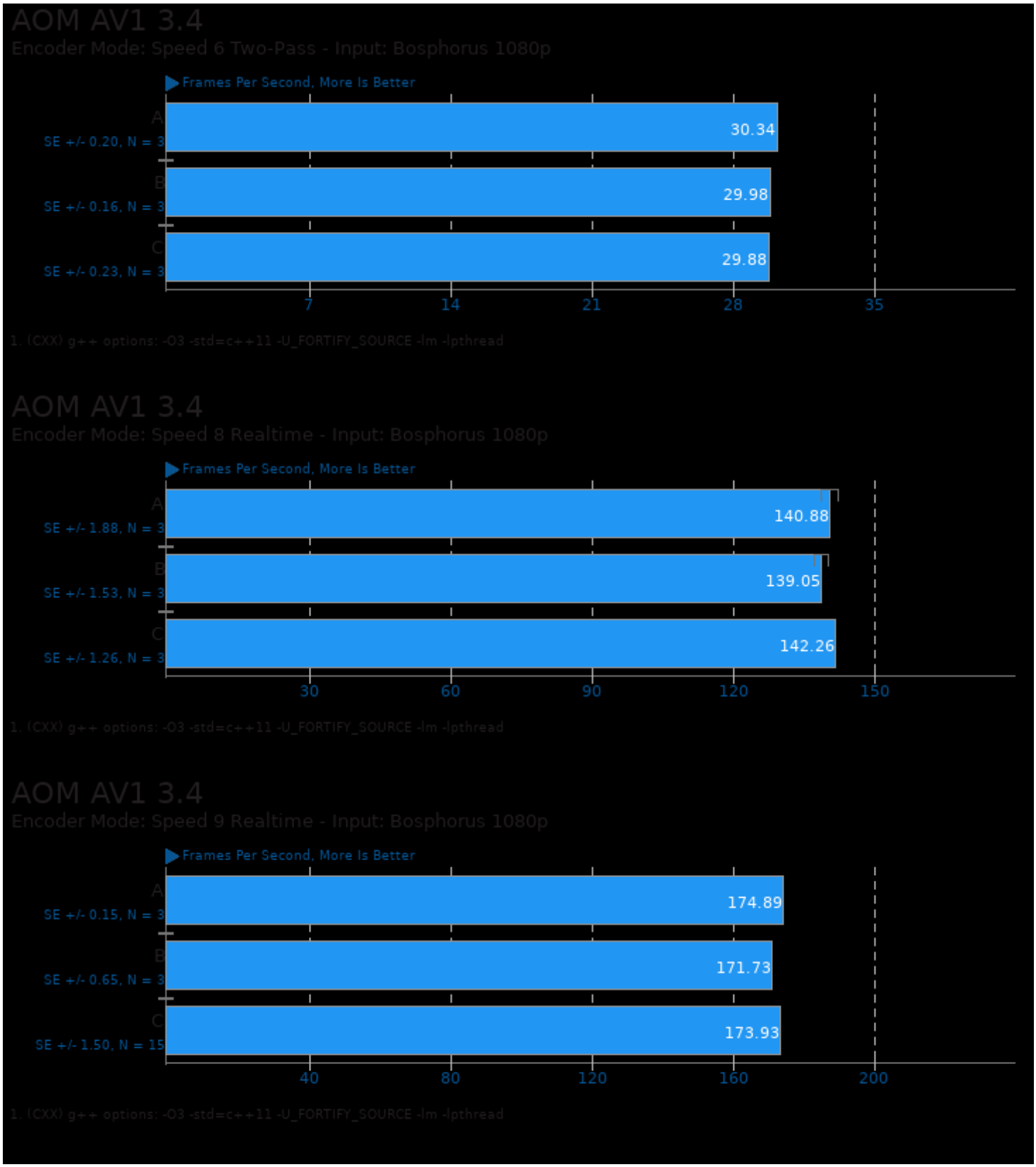
	A	B	C
AOM AV1 - Speed 6 Realtime - Bosphorus 4K (FPS)	25.90	**26.80**	**25.18**
Normalized	96.64%	100%	93.96%
Standard Deviation	9.4%	8.9%	7.2%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 4K (FPS)	**12.13**	**12.32**	12.15
Normalized	98.46%	100%	98.62%
Standard Deviation	1.9%	2.3%	2.1%
AOM AV1 - Speed 8 Realtime - Bosphorus 4K (FPS)	**45.92**	**46.05**	46.02
Normalized	99.72%	100%	99.93%
Standard Deviation	0.9%	1.6%	0.4%
AOM AV1 - Speed 9 Realtime - Bosphorus 4K (FPS)	**59.20**	**60.12**	60.07
Normalized	98.47%	100%	99.92%
Standard Deviation	2.1%	0.8%	0.4%
AOM AV1 - Speed 10 Realtime - Bosphorus 4K (FPS)	**58.98**	**59.74**	59.42
Normalized	98.73%	100%	99.46%
Standard Deviation	2.3%	1.5%	1.4%
AOM AV1 - Speed 6 Realtime - Bosphorus 1080p (FPS)	50.55	**50.58**	**50.40**
Normalized	99.94%	100%	99.64%
Standard Deviation	1.2%	1%	0.5%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 1080p (FPS)	**30.34**	29.98	**29.88**
Normalized	100%	98.81%	98.48%
Standard Deviation	1.2%	0.9%	1.4%

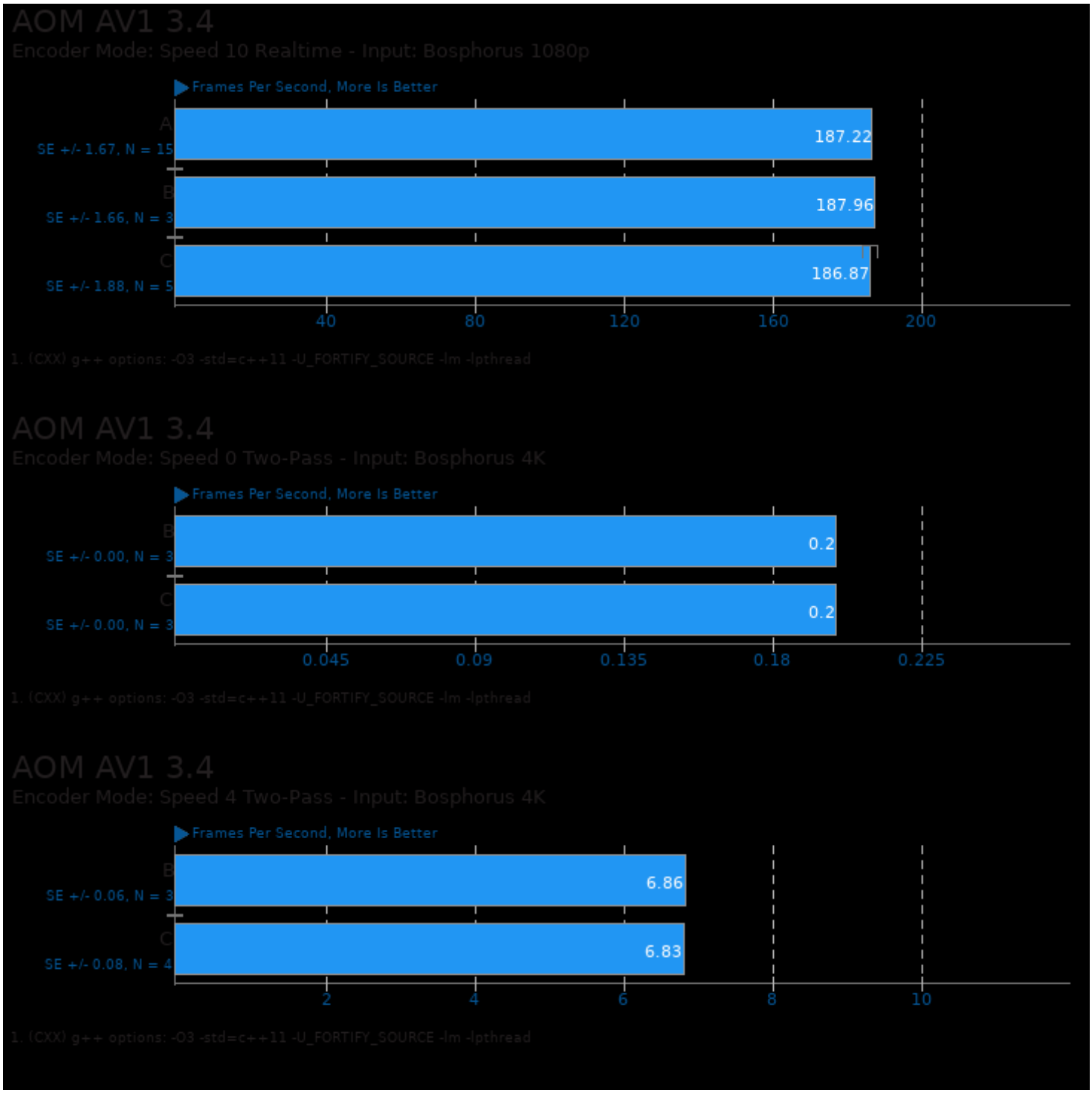
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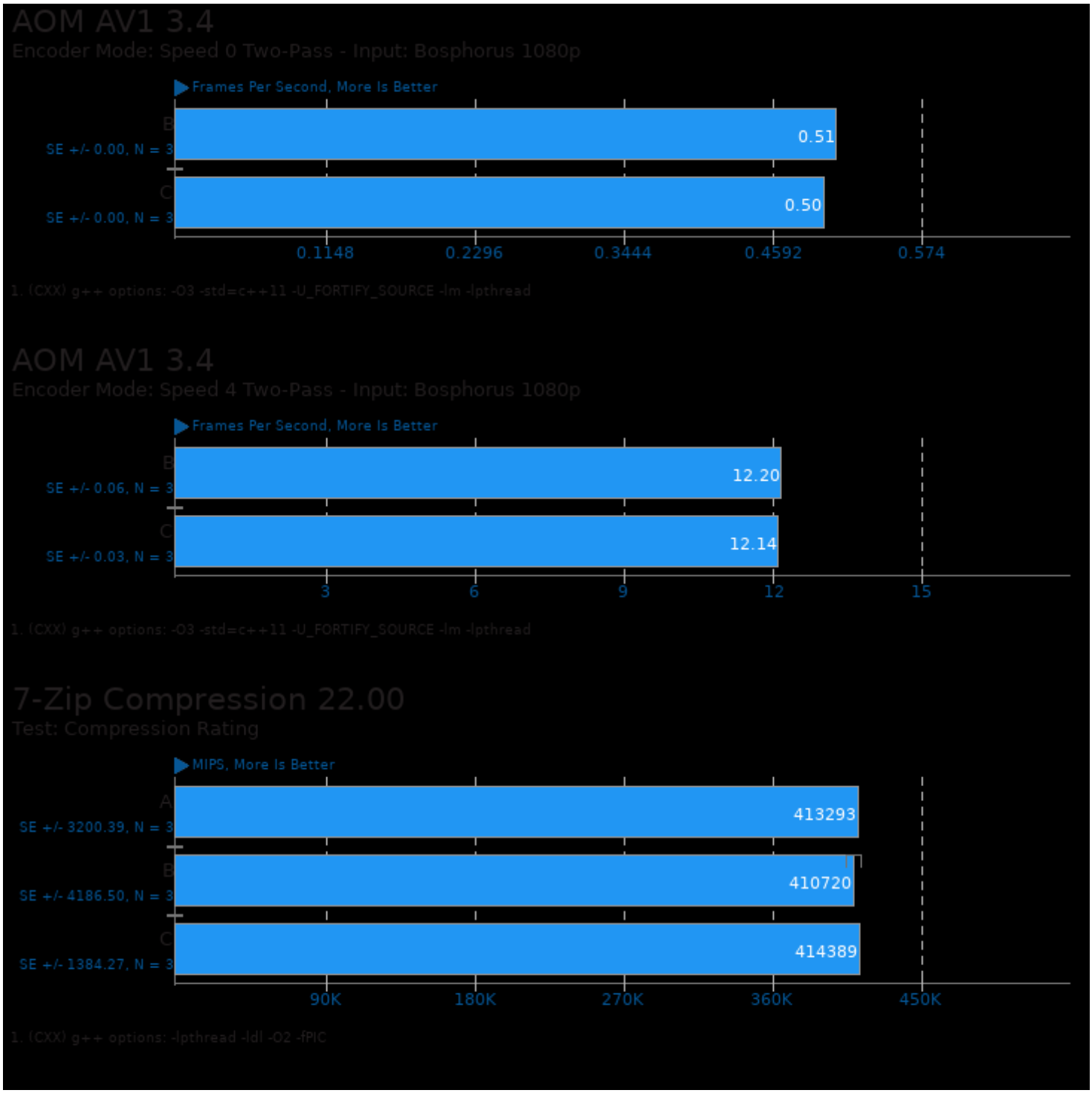
AOM AV1 - Speed 8 Realtime - Bosphorus 1080p (FPS)	140.88	**139.05**	**142.26**
Normalized	99.03%	97.74%	100%
Standard Deviation	2.3%	1.9%	1.5%
AOM AV1 - Speed 9 Realtime - Bosphorus 1080p (FPS)	**174.89**	**171.73**	173.93
Normalized	100%	98.19%	99.45%
Standard Deviation	0.1%	0.7%	3.3%
AOM AV1 - Speed 10 Realtime - Bosphorus 1080p (FPS)	187.22	**187.96**	**186.87**
Normalized	99.61%	100%	99.42%
Standard Deviation	3.4%	1.5%	2.2%
AOM AV1 - Speed 0 Two-Pass - Bosphorus 4K (FPS)		0.2	0.2
Standard Deviation		0%	0%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 4K (FPS)		**6.86**	**6.83**
Normalized		100%	99.56%
Standard Deviation		1.6%	2.5%
AOM AV1 - Speed 0 Two-Pass - Bosphorus 1080p (FPS)		**0.51**	**0.50**
Normalized		100%	98.04%
Standard Deviation		1.1%	1.1%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 1080p (FPS)		**12.20**	**12.14**
Normalized		100%	99.51%
Standard Deviation		0.9%	0.4%
7-Zip Compression - Compression Rating (MIPS)	413293	**410720**	**414389**
Normalized	99.74%	99.11%	100%
Standard Deviation	1.3%	1.8%	0.6%
7-Zip Compression - D.R (MIPS)	**372573**	371642	**371116**
Normalized	100%	99.75%	99.61%
Standard Deviation	0.6%	0.4%	0.5%

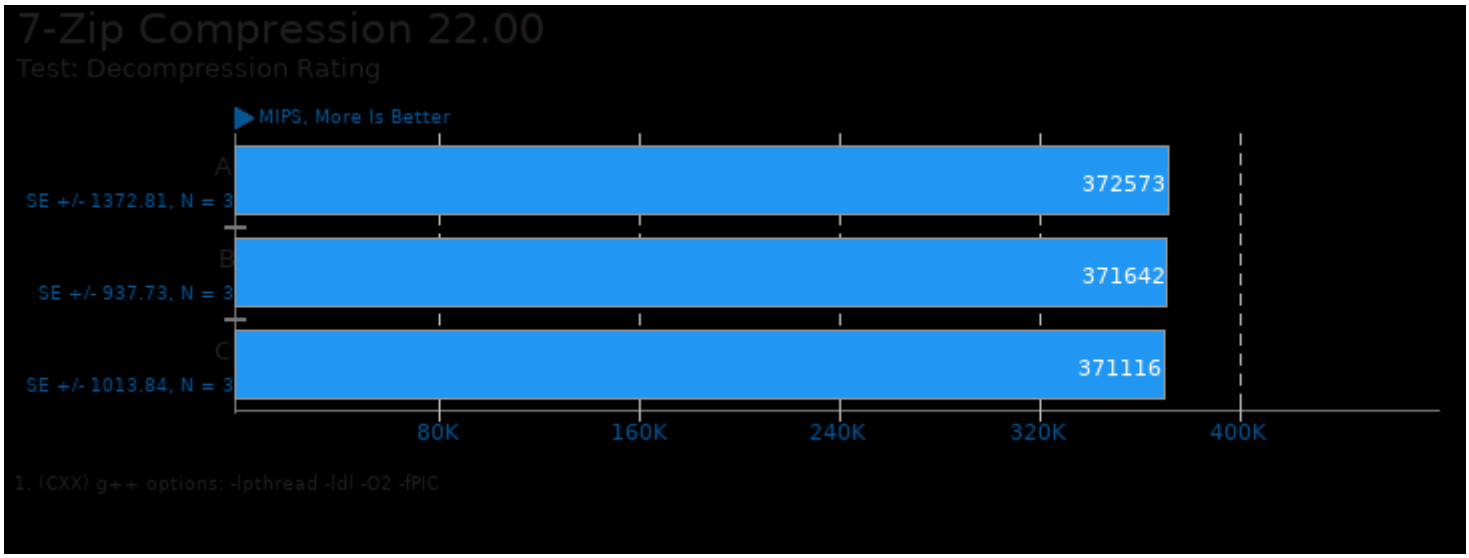

AOM AV1 3.4
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
SE +/- 0.63, N = 15
25.90
B
SE +/- 0.62, N = 15
26.80
C
SE +/- 0.47, N = 15
25.18
6
12
18
24
30
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.4
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
SE +/- 0.13, N = 3
12.13
B
SE +/- 0.11, N = 7
12.32
C
SE +/- 0.15, N = 3
12.15
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 8 Realtime - Input: Bosphorus 4K
Frames Per Second, More Is Better
A
SE +/- 0.25, N = 3
45.92
B
SE +/- 0.42, N = 3
46.05
C
SE +/- 0.12, N = 3
46.02
10
20
30
40
50
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
SE +/- 0.71, N = 3
59.20
B
SE +/- 0.29, N = 3
60.12
C
SE +/- 0.15, N = 3
60.07
13
26
39
52
65
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
SE +/- 0.56, N = 6
58.98
B
SE +/- 0.53, N = 3
59.74
C
SE +/- 0.47, N = 3
59.42
13
26
39
52
65
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
SE +/- 0.34, N = 3
50.55
B
SE +/- 0.29, N = 3
50.58
C
SE +/- 0.14, N = 3
50.40
11
22
33
44
55
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

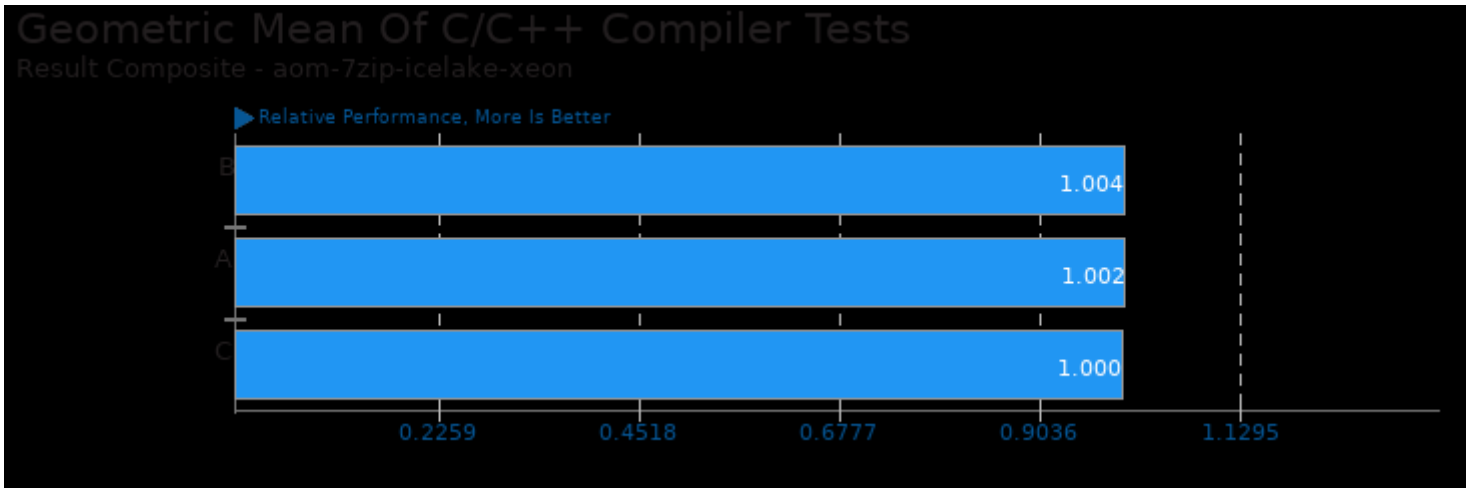

AOM AV1 3.4
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
SE +/- 0.20, N = 3
30.34
B
SE +/- 0.16, N = 3
29.98
C
SE +/- 0.23, N = 3
29.88
7
14
21
28
35
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
AOM AV1 3.4
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
SE +/- 1.88, N = 3
140.88
B
SE +/- 1.53, N = 3
139.05
C
SE +/- 1.26, N = 3
142.26
30
60
90
120
150
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
SE +/- 0.15, N = 3
174.89
B
SE +/- 0.65, N = 3
171.73
C
SE +/- 1.50, N = 15
173.93
40
80
120
160
200
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
Frames Per Second, More Is Better
A
SE +/- 1.67, N = 15
187.22
B
SE +/- 1.66, N = 3
187.96
C
SE +/- 1.88, N = 5
186.87
40
80
120
160
200
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 4K
Frames Per Second, More Is Better
B
SE +/- 0.00, N = 3
0.2
C
SE +/- 0.00, N = 3
0.2
0.045
0.09
0.135
0.18
0.225
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
B
SE +/- 0.06, N = 3
6.86
C
SE +/- 0.08, N = 4
6.83
2
4
6
8
10
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
B
SE +/- 0.00, N = 3
0.51
C
SE +/- 0.00, N = 3
0.50
0.1148
0.2296
0.3444
0.4592
0.574
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
B
SE +/- 0.06, N = 3
12.20
C
SE +/- 0.03, N = 3
12.14
3
6
9
12
15
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread
7-Zip Compression 22.00
Test: Compression Rating
MIPS, More Is Better
A
SE +/- 3200.39, N = 3
413293
B
SE +/- 4186.50, N = 3
410720
C
SE +/- 1384.27, N = 3
414389
90K
180K
270K
360K
450K
1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC


7-Zip Compression 22.00
Test: Decompression Rating
MIPS, More Is Better
A
SE +/- 1372.81, N = 3
372573
B
SE +/- 937.73, N = 3
371642
C
SE +/- 1013.84, N = 3
371116
80K
160K
240K
320K
400K
1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

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



Geometric mean based upon tests: pts/compress-7zip and pts/aom-av1



Geometric mean based upon tests: pts/aom-av1 and pts/compress-7zip

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 16:50.