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SVT-AV1 0.9 AMD EPYC

2 x AMD EPYC 7763 64-Core testing with a AMD DAYTONA_X (RYM1001D BIOS) and ASPEED on Ubuntu 21.04 via the Phoronix Test Suite.

Automated Executive Summary

E had the most wins, coming in first place for 75% of the tests.

Based on the geometric mean of all complete results, the fastest (E) was 1.018x the speed of the slowest (A). C was 0.985x the speed of E, D was 0.999x the speed of C, B was 0.999x the speed of D, A was 0.999x the speed of B.

Test Systems:

A

B

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C

D

E

Processor: 2 x AMD EPYC 7763 64-Core @ 2.45GHz (128 Cores / 256 Threads), Motherboard: AMD DAYTONA_X (RYM1001D BIOS), Chipset: AMD Starship/Matisse, Memory: 512GB, Disk: 3841GB Micron_9300_MTFDHAL3T8TDP, Graphics: ASPEED, Monitor: VE228, Network: 2 x Mellanox MT27710

OS: Ubuntu 21.04, Kernel: 5.16.0-051600daily20220117-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server 1.20.11, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 1920x1080

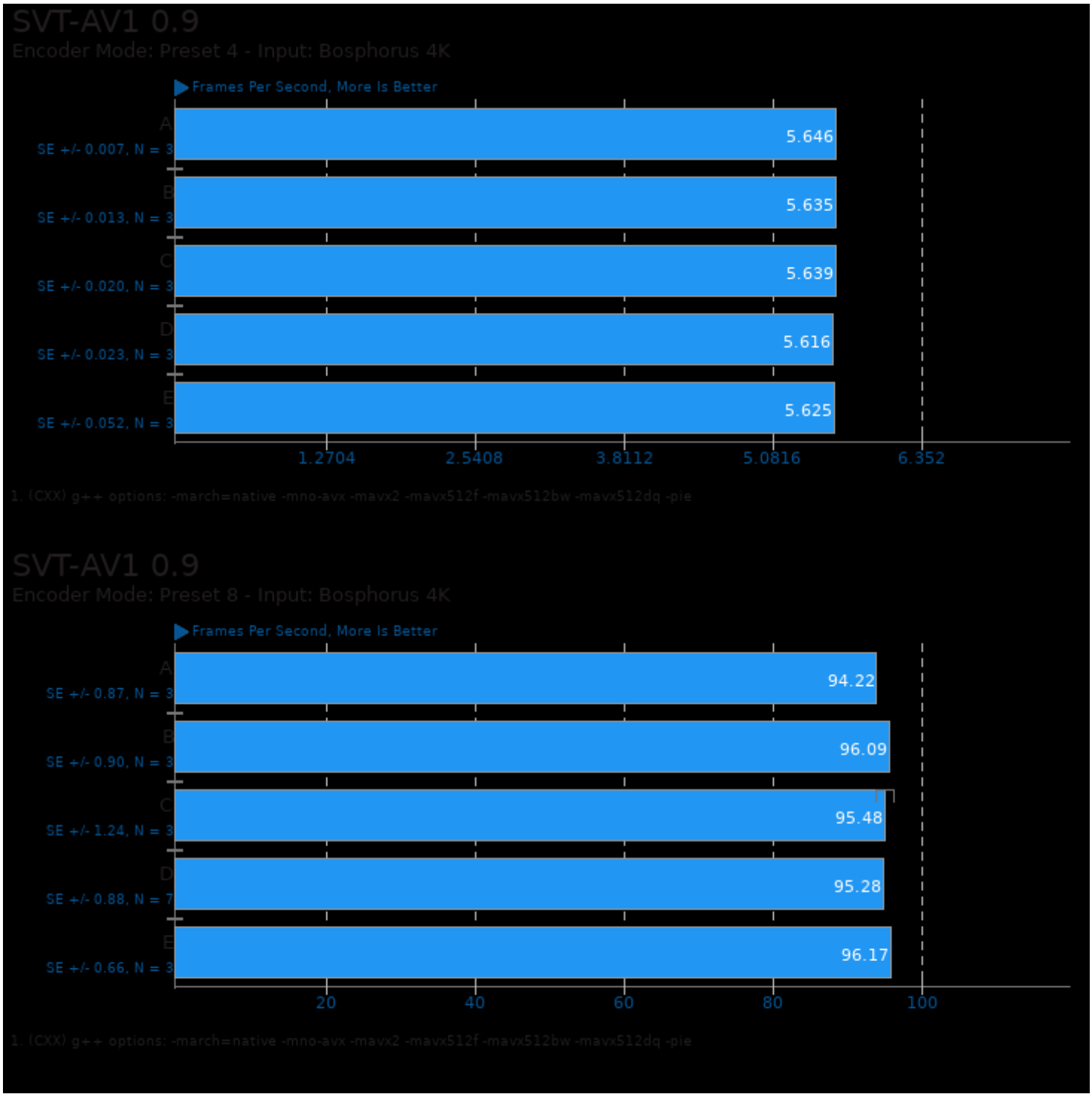
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --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-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/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: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa001119
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	A	B	C	D	E
SVT-AV1 - Preset 4 - Bosphorus 4K (FPS)	**5.646**	5.635	5.639	**5.616**	5.625
Normalized	100%	99.81%	99.88%	99.47%	99.63%
Standard Deviation	0.2%	0.4%	0.6%	0.7%	1.6%
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)	**94.224**	96.090	95.478	95.282	**96.170**
Normalized	97.98%	99.92%	99.28%	99.08%	100%
Standard Deviation	1.6%	1.6%	2.3%	2.5%	1.2%
SVT-AV1 - Preset 10 - Bosphorus 4K (FPS)	157.999	158.045	158.296	**155.806**	**159.223**
Normalized	99.23%	99.26%	99.42%	97.85%	100%
Standard Deviation	1.6%	2.4%	0.3%	2.1%	2.2%
SVT-AV1 - Preset 12 - Bosphorus 4K (FPS)	**198.944**	200.085	204.332	200.241	**205.946**
Normalized	96.6%	97.15%	99.22%	97.23%	100%
Standard Deviation	1.4%	2.4%	3%	2.3%	1.7%
SVT-AV1 - Preset 4 - Bosphorus 1080p (FPS)	10.236	10.266	**10.225**	10.229	**10.318**
Normalized	99.21%	99.5%	99.1%	99.14%	100%
Standard Deviation	0.6%	0.5%	0.9%	0.4%	0.5%
SVT-AV1 - Preset 8 - Bosphorus 1080p (FPS)	**208.728**	**203.225**	203.440	208.237	206.531
Normalized	100%	97.36%	97.47%	99.76%	98.95%
Standard Deviation	0.9%	0.9%	2.1%	2.5%	2.2%

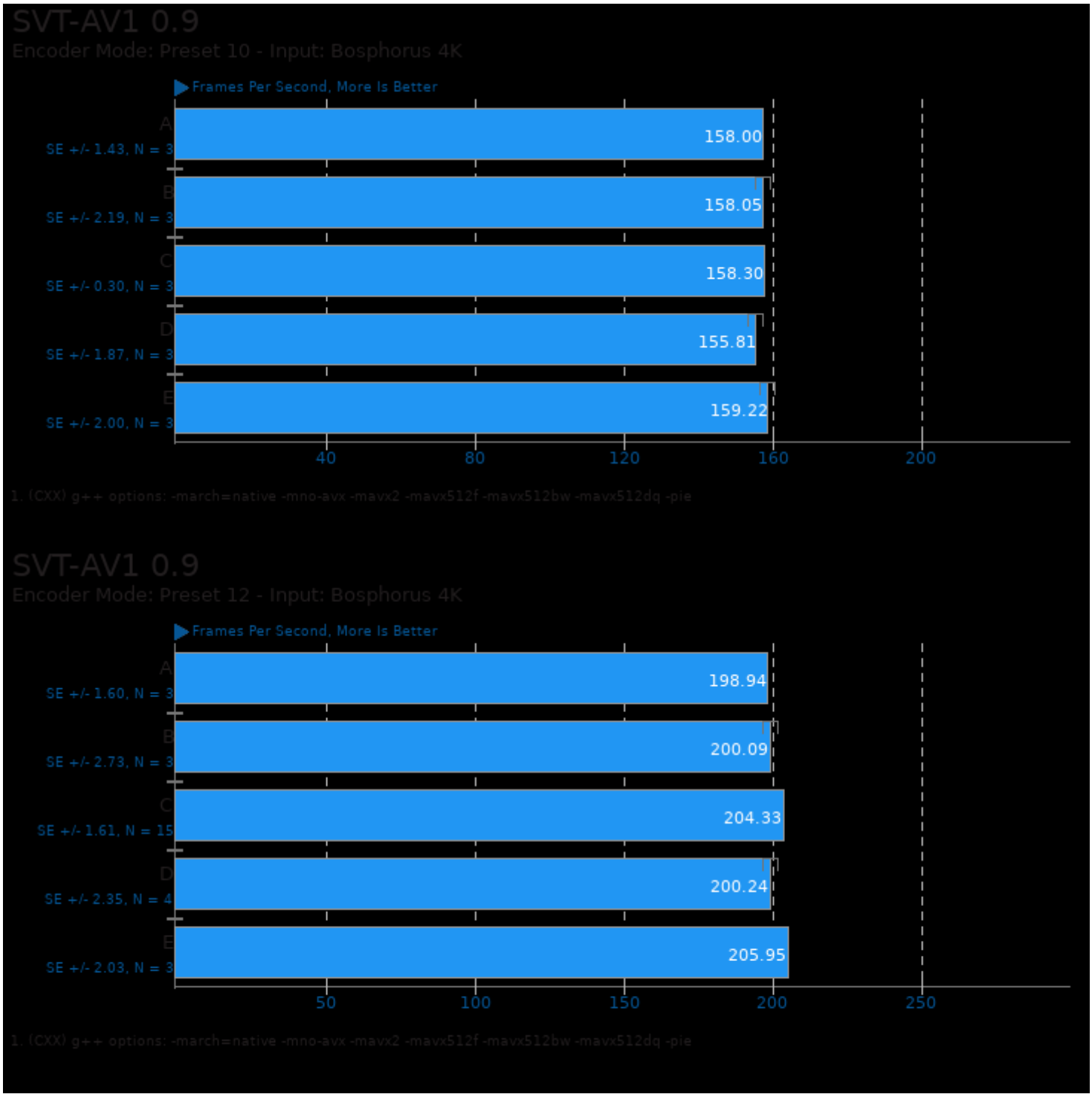
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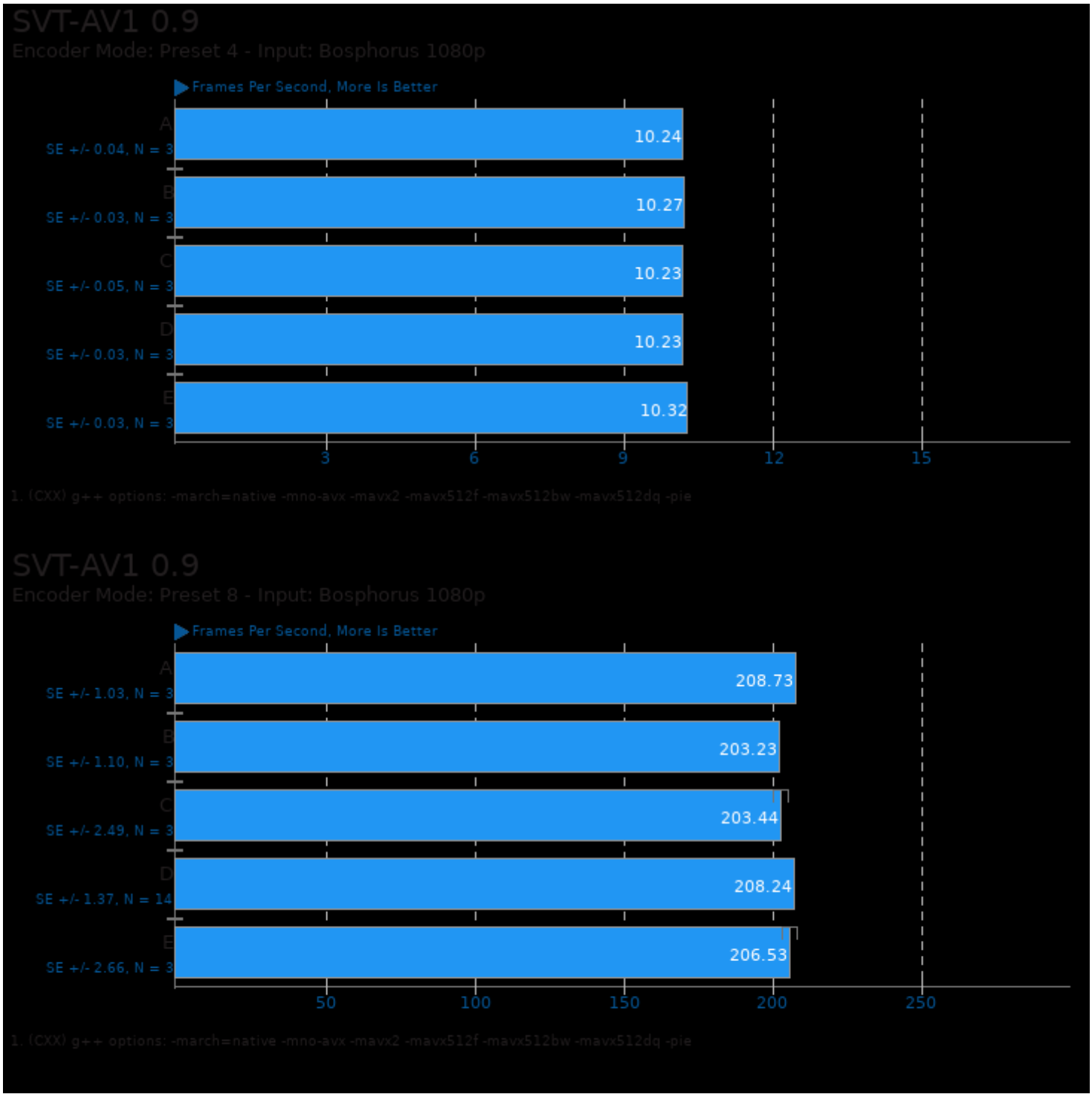
SVT-AV1 - Preset 10 - Bosphorus 1080p (FPS)	422.791	**419.100**	425.336	428.492	**435.074**
Normalized	97.18%	96.33%	97.76%	98.49%	100%
Standard Deviation	1.2%	0.8%	1.6%	0.9%	2.4%
SVT-AV1 - Preset 12 - Bosphorus 1080p (FPS)	**674.088**	686.223	676.057	679.659	**715.861**
Normalized	94.16%	95.86%	94.44%	94.94%	100%
Standard Deviation	1.9%	0.4%	1.7%	1.1%	1.8%

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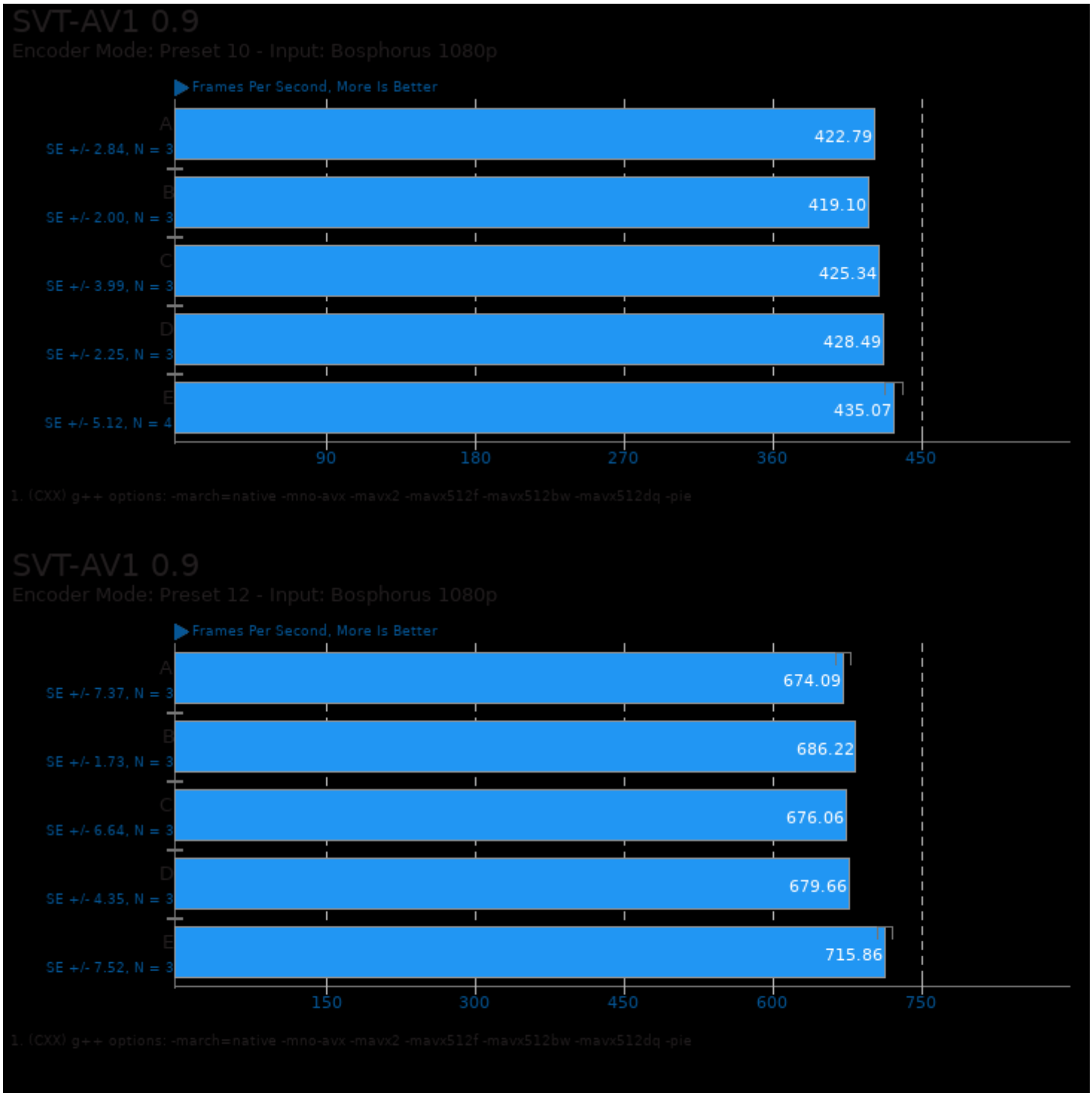


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SVT-AV1 0.9
Encoder Mode: Preset 4 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
SE +/- 0.04, N = 3
10.24
B
SE +/- 0.03, N = 3
10.27
C
SE +/- 0.05, N = 3
10.23
D
SE +/- 0.03, N = 3
10.23
E
SE +/- 0.03, N = 3
10.32
3
6
9
12
15
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie
SVT-AV1 0.9
Encoder Mode: Preset 8 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
SE +/- 1.03, N = 3
208.73
B
SE +/- 1.10, N = 3
203.23
C
SE +/- 2.49, N = 3
203.44
D
SE +/- 1.37, N = 14
208.24
E
SE +/- 2.66, N = 3
206.53
50
100
150
200
250
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

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This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 09:15.