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5950x121922

AMD Ryzen 9 5950X 16-Core testing with a MSI MEG X570 GODLIKE (MS-7C34) v1.0 (1.I0 BIOS) and eVGA NVIDIA GeForce GTX 1060 6GB on Gentoo 2.9 via the Phoronix Test Suite.

Test Systems:

AMD Ryzen 9 5950X 16-Core

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: MSI MEG X570 GODLIKE (MS-7C34) v1.0 (1.I0 BIOS), Chipset: AMD Starship/Matisse, Memory: 2 x 16 GB DDR4-3733MT/s TEAMGROUP-UD4-3600, Disk: 3 x 1000GB Samsung SSD 980 PRO 1TB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB, Audio: NVIDIA GP106 HD Audio, Network: Realtek Device 2600 + Realtek Killer E3000 2.5GbE + Intel Wi-Fi 6 AX200

OS: Gentoo 2.9, Kernel: 6.1.0-harambe-edition (x86_64), Desktop: KDE Plasma 5.26.4, Display Server: X Server 1.21.1.4, Display Driver: NVIDIA 515.86.01, Compiler: GCC 12.2.1 20221210 + Clang 15.0.6 + LLVM 15.0.6, File-System: ext4

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --bindir=/usr/x86_64-pc-linux-gnu/gcc-bin/12 --build=x86_64-pc-linux-gnu --datadir=/usr/share/gcc-data/x86_64-pc-linux-gnu/12 --disable-cet --disable-default-ssp --disable-esp --disable-fixed-point --disable-isl-version-check --disable-libada --disable-libsanitizer --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-libvtv --disable-nls --disable-systemtap --disable-valgrind-annotations --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-languages=c,c++,go,fortran --enable-libgomp --enable-libstdcxx-time --enable-lto --enable-multilib --enable-obsolete --enable-secureplt --enable-shared --enable-targets=all --enable-threads=posix --host=x86_64-pc-linux-gnu --includedir=/usr/lib/gcc/x86_64-pc-linux-gnu/12/include --mandir=/usr/share/gcc-data/x86_64-pc-linux-gnu/12/man --with-build-config=bootstrap-lto --with-gcc-major-version-only --with-isl --with-multilib-list=m32,m64 --with-python-dir=/share/gcc-data/x86_64-pc-linux-gnu/12/python --with-zstd
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa201016
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Vulnerable IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

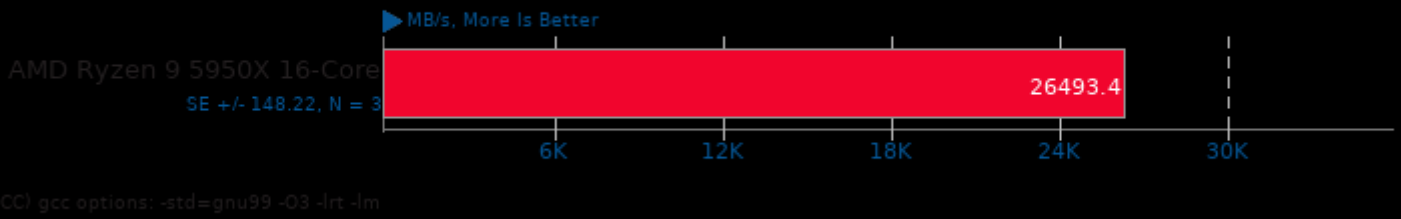
	AMD Ryzen 9 5950X 16-Core
C-Blosc - blosclz shuffle (MB/s)	26493
Standard Deviation	1%
C-Blosc - blosclz bitshuffle (MB/s)	16263
Standard Deviation	0.4%
Zstd Compression - 3 - Compression Speed (MB/s)	5202
Standard Deviation	0.7%
Zstd Compression - 3 - D.S (MB/s)	4978
Standard Deviation	0.4%
Zstd Compression - 8 - Compression Speed (MB/s)	1420
Standard Deviation	3.5%
Zstd Compression - 8 - D.S (MB/s)	5190
Standard Deviation	1%
Zstd Compression - 19 - Compression Speed (MB/s)	72.6
Standard Deviation	2.4%
Zstd Compression - 19 - D.S (MB/s)	4487
Standard Deviation	2.8%
Zstd Compression - 3, Long Mode - Compression Speed (MB/s)	1383
Standard Deviation	0.3%
Zstd Compression - 3, Long Mode - D.S (MB/s)	5403
Standard Deviation	0.6%
Zstd Compression - 8, Long Mode - Compression Speed (MB/s)	1352
Standard Deviation	1.6%
Zstd Compression - 8, Long Mode - D.S (MB/s)	5461
Standard Deviation	2.6%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	53.4
Standard Deviation	0.2%
Zstd Compression - 19, Long Mode - D.S (MB/s)	4631
Standard Deviation	1.3%
AOM AV1 - Speed 0 Two-Pass - Bosphorus 4K (FPS)	0.35
Standard Deviation	0%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 4K (FPS)	10.57
Standard Deviation	0.7%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 4K (FPS)	18.50
Standard Deviation	0.6%
AOM AV1 - Speed 0 Two-Pass - Bosphorus 1080p (FPS)	1.04
Standard Deviation	1%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 1080p (FPS)	21.06
Standard Deviation	0.4%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 1080p (FPS)	42.77

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Standard Deviation	0.8%
x264 - Bosphorus 4K (FPS)	59.36
Standard Deviation	0.8%
x264 - Bosphorus 1080p (FPS)	220.84
Standard Deviation	0.5%
Timed Linux Kernel Compilation - defconfig (sec)	51.925
Standard Deviation	0.9%

C-Blosc 2.3

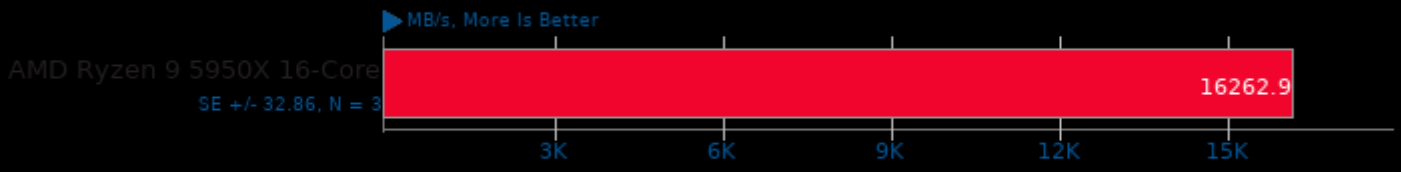
Test: blosclz shuffle



1. (CC) gcc options: -std=gnu99 -O3 -lrt -lm

C-Blosc 2.3

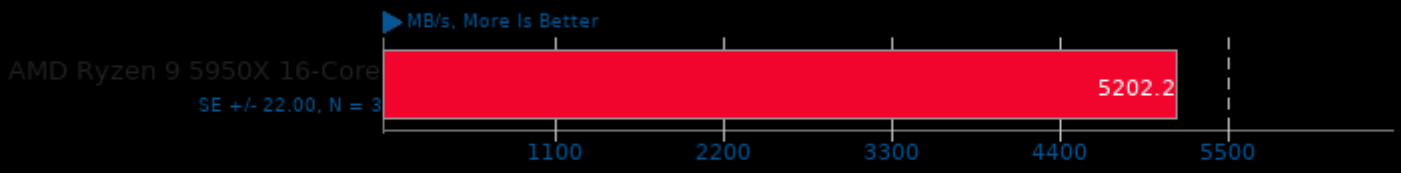
Test: blosclz bitshuffle



1. (CC) gcc options: -std=gnu99 -O3 -lrt -lm

Zstd Compression 1.5.0

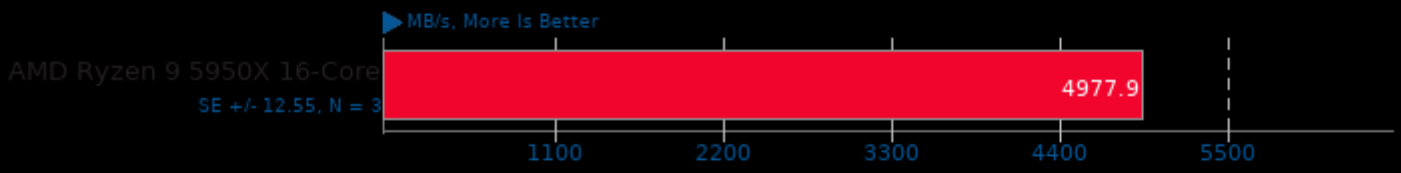
Compression Level: 3 - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

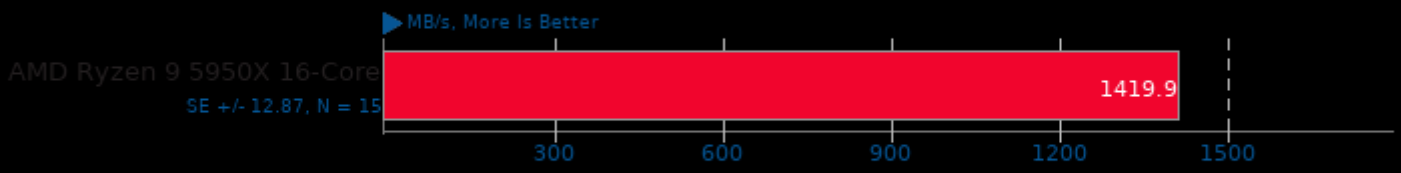
Compression Level: 3 - Decompression Speed



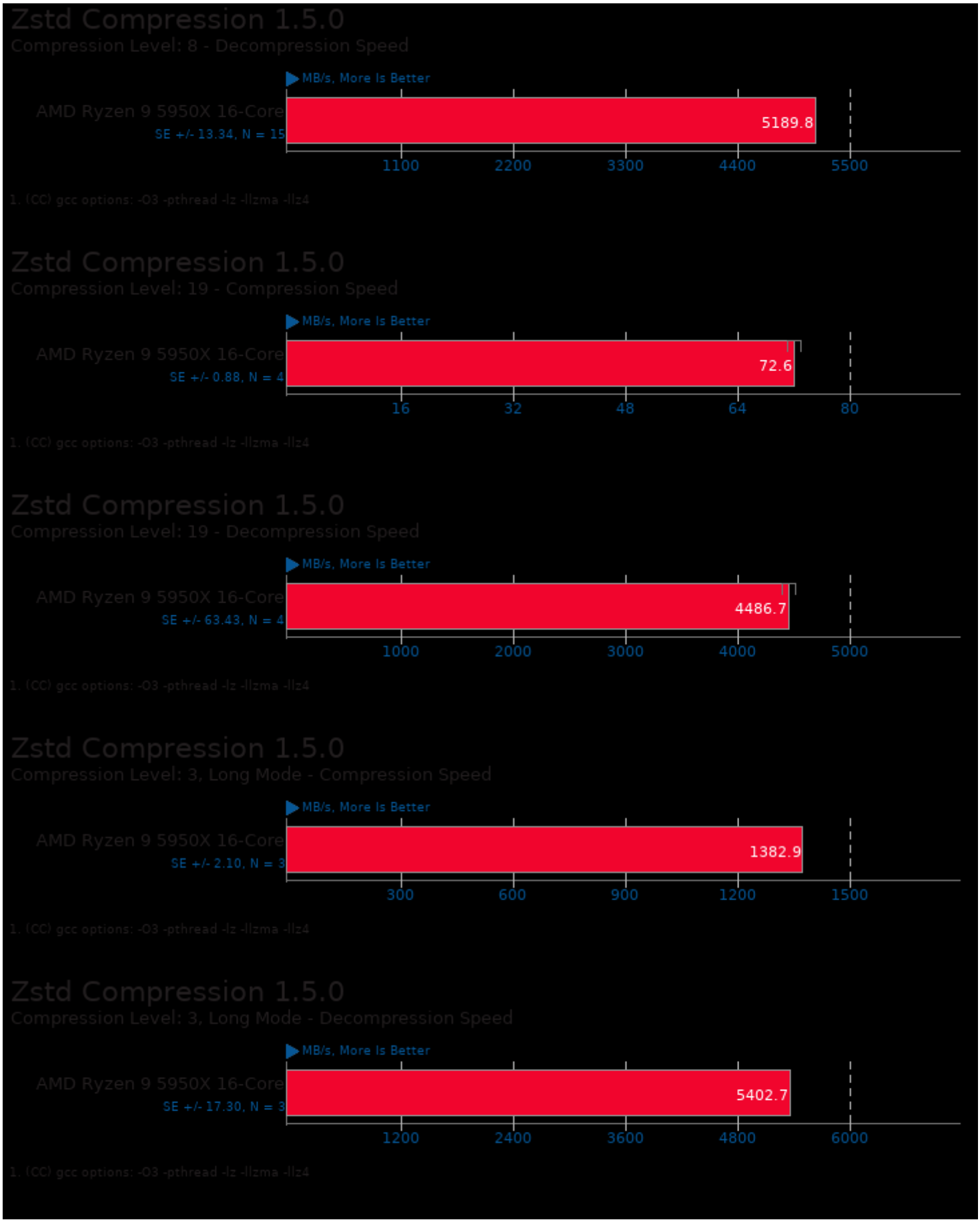
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

Compression Level: 8 - Compression Speed

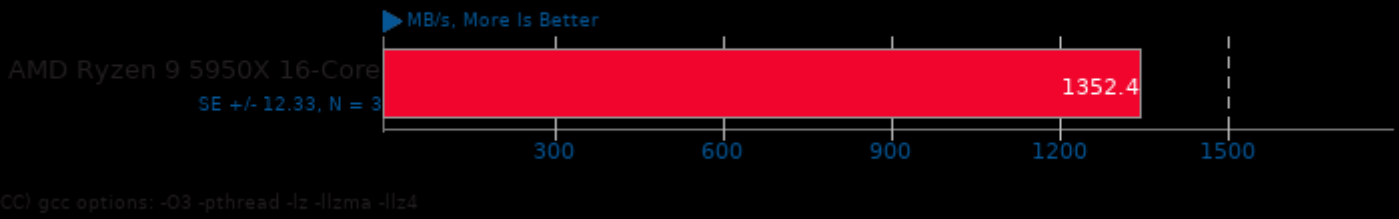


1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4


Zstd Compression 1.5.0
Compression Level: 8 - Decompression Speed
MB/s, More Is Better
AMD Ryzen 9 5950X 16-Core
SE +/- 13.34, N = 15
5189.8
1100
2200
3300
4400
5500
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 19 - Compression Speed
MB/s, More Is Better
AMD Ryzen 9 5950X 16-Core
SE +/- 0.88, N = 4
72.6
16
32
48
64
80
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 19 - Decompression Speed
MB/s, More Is Better
AMD Ryzen 9 5950X 16-Core
SE +/- 63.43, N = 4
4486.7
1000
2000
3000
4000
5000
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 3, Long Mode - Compression Speed
MB/s, More Is Better
AMD Ryzen 9 5950X 16-Core
SE +/- 2.10, N = 3
1382.9
300
600
900
1200
1500
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 3, Long Mode - Decompression Speed
MB/s, More Is Better
AMD Ryzen 9 5950X 16-Core
SE +/- 17.30, N = 3
5402.7
1200
2400
3600
4800
6000
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

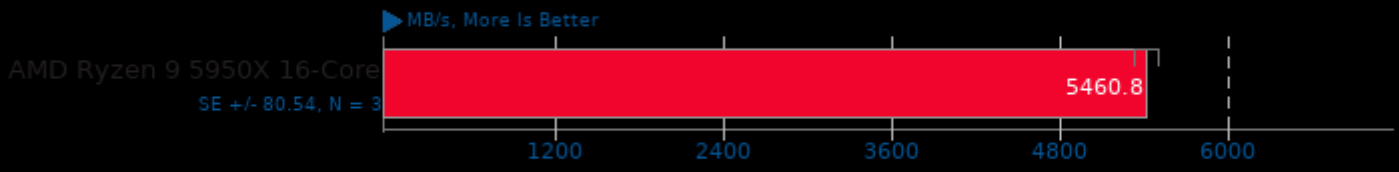
Compression Level: 8, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

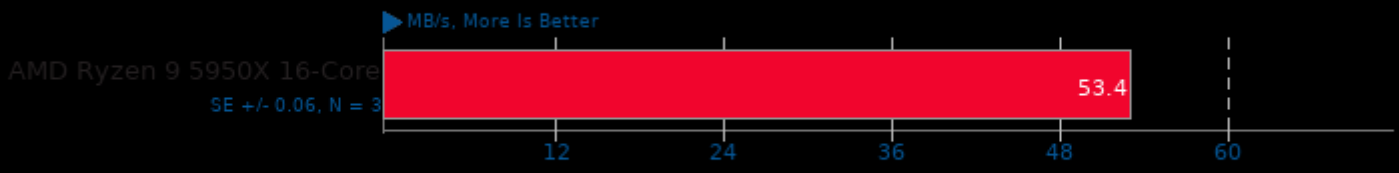
Compression Level: 8, Long Mode - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

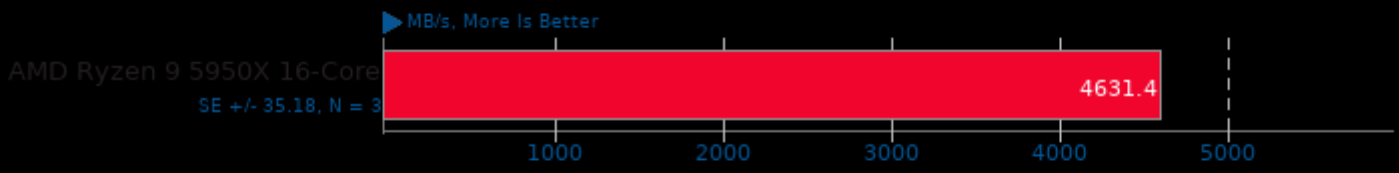
Compression Level: 19, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

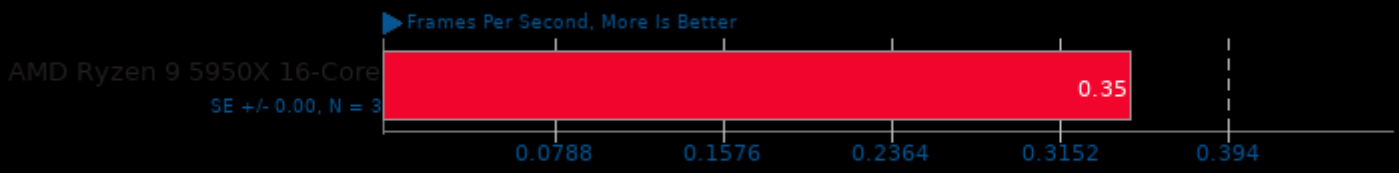
Compression Level: 19, Long Mode - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

AOM AV1 3.5

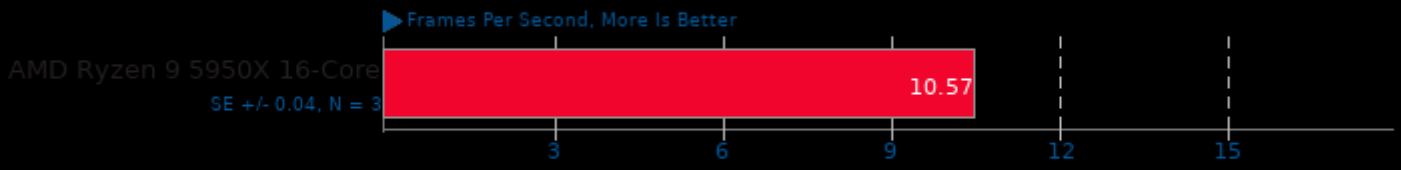
Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 4K



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

AOM AV1 3.5

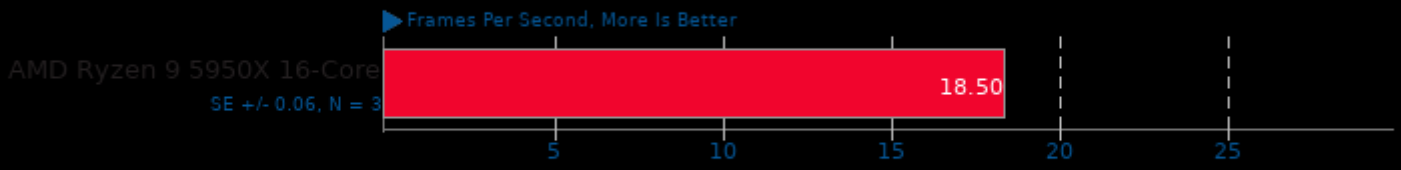
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 4K



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

AOM AV1 3.5

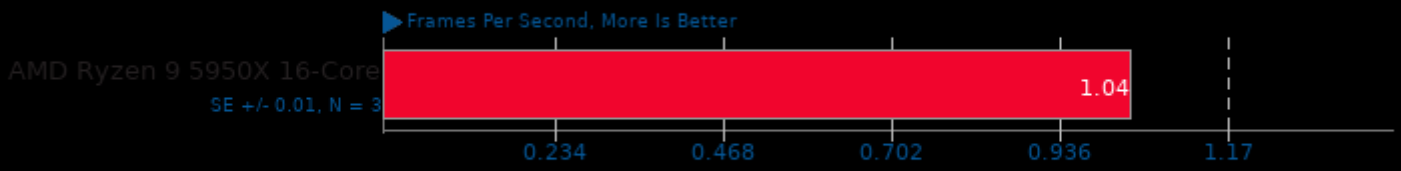
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K



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

AOM AV1 3.5

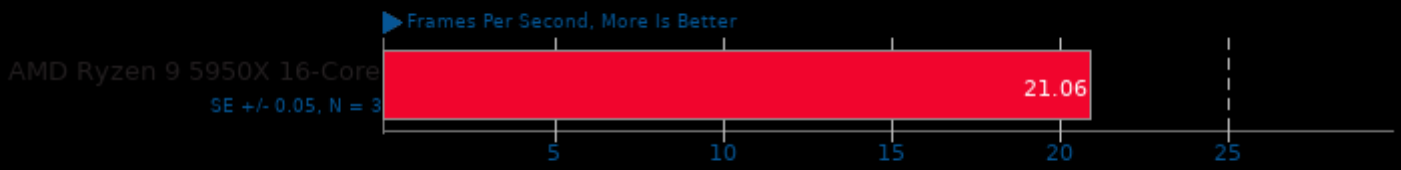
Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 1080p



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

AOM AV1 3.5

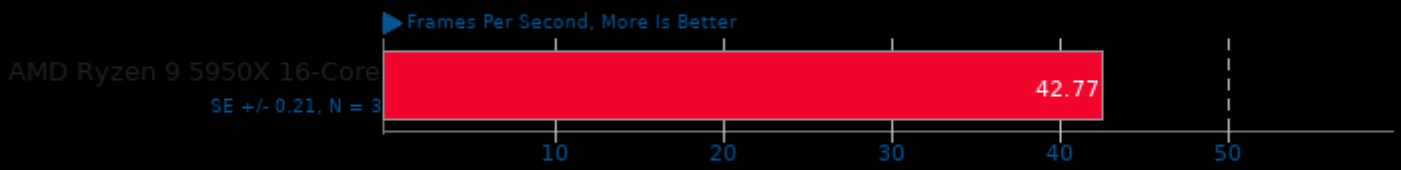
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 1080p



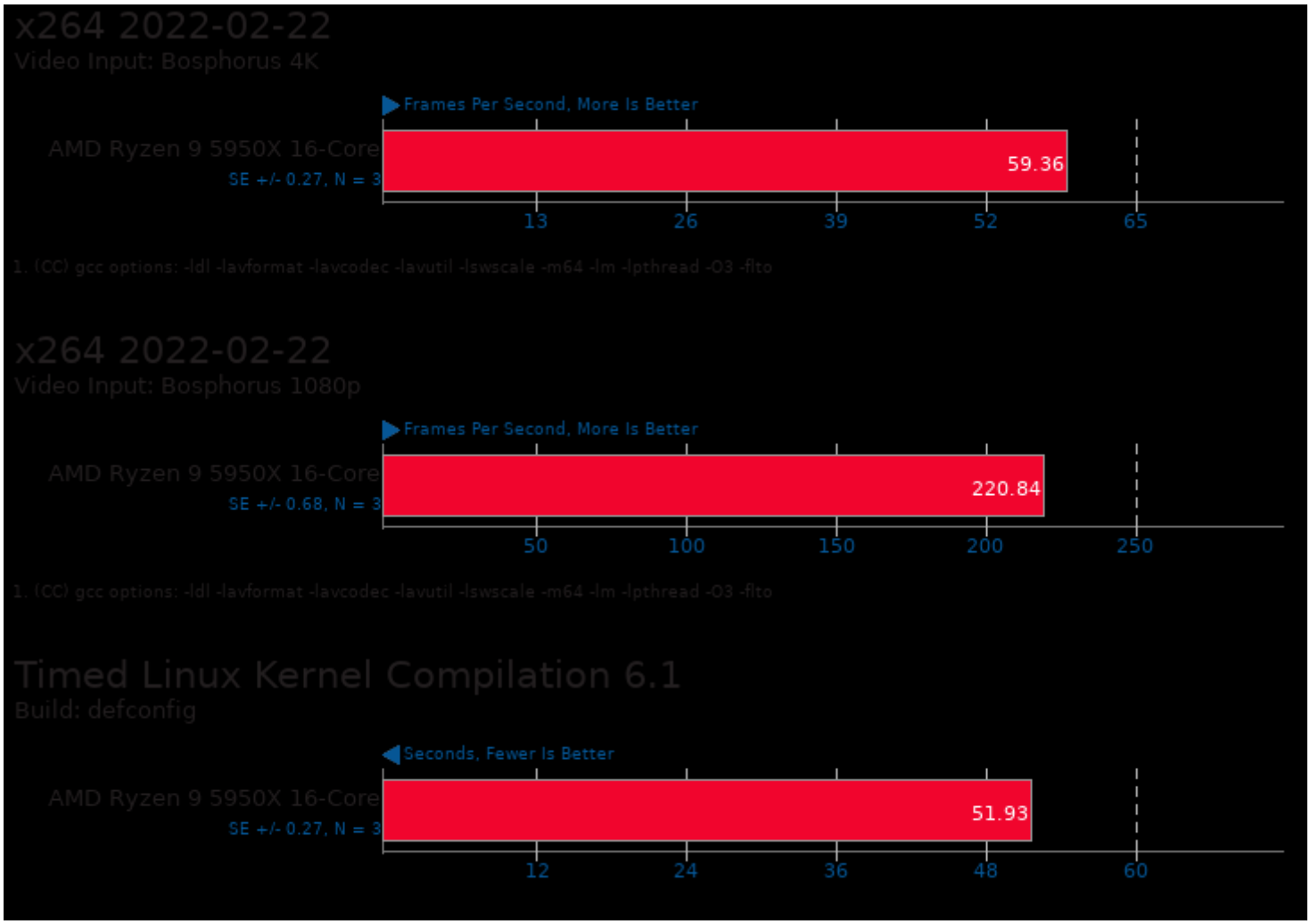
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm

AOM AV1 3.5

Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 1080p



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



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