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9400F sdr

Intel Core i5-9400F testing with a MSI B360M GAMING PLUS (MS-7B19) v1.0 (1.10 BIOS) and MSI NVIDIA NV106 1GB on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

1 had the most wins, coming in first place for 42% of the tests.

Based on the geometric mean of all complete results, the fastest (2) was 1.001x the speed of the slowest (1). 3 was 1x the speed of 2 and 1 was 1x the speed of 3.

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

Zstd Compression (Compression Level: 8, Long Mode - Compression Speed) at 1.016x
Zstd Compression (Compression Level: 8 - Compression Speed) at 1.015x
srsLTE (Test: OFDM_Test) at 1.01x
Liquid-DSP (Threads: 4 - Buffer Length: 256 - Filter Length: 57) at 1.008x
Zstd Compression (Compression Level: 19, Long Mode - Decompression Speed) at 1.006x
Liquid-DSP (Threads: 6 - Buffer Length: 256 - Filter Length: 57) at 1.006x
Liquid-DSP (Threads: 2 - Buffer Length: 256 - Filter Length: 57) at 1.006x
Zstd Compression (Compression Level: 3 - Compression Speed) at 1.006x
srsLTE (Test: PHY_DL_Test) at 1.005x

Liquid-DSP (Threads: 1 - Buffer Length: 256 - Filter Length: 57) at 1.004x.

Test Systems:

1

2

3

Processor: Intel Core i5-9400F @ 4.10GHz (6 Cores), Motherboard: MSI B360M GAMING PLUS (MS-7B19) v1.0 (1.10 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 16GB, Disk: 256GB SAMSUNG MZVPW256HEGL-000H7, Graphics: MSI NVIDIA NV106 1GB, Audio: Realtek ALC887-VD, Monitor: G237HL, Network: Intel I219-V

OS: Ubuntu 20.04, Kernel: 5.9.0-050900rc7daily20200928-generic (x86_64) 20200927, Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: nouveau, OpenGL: 4.3 Mesa 20.0.2, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

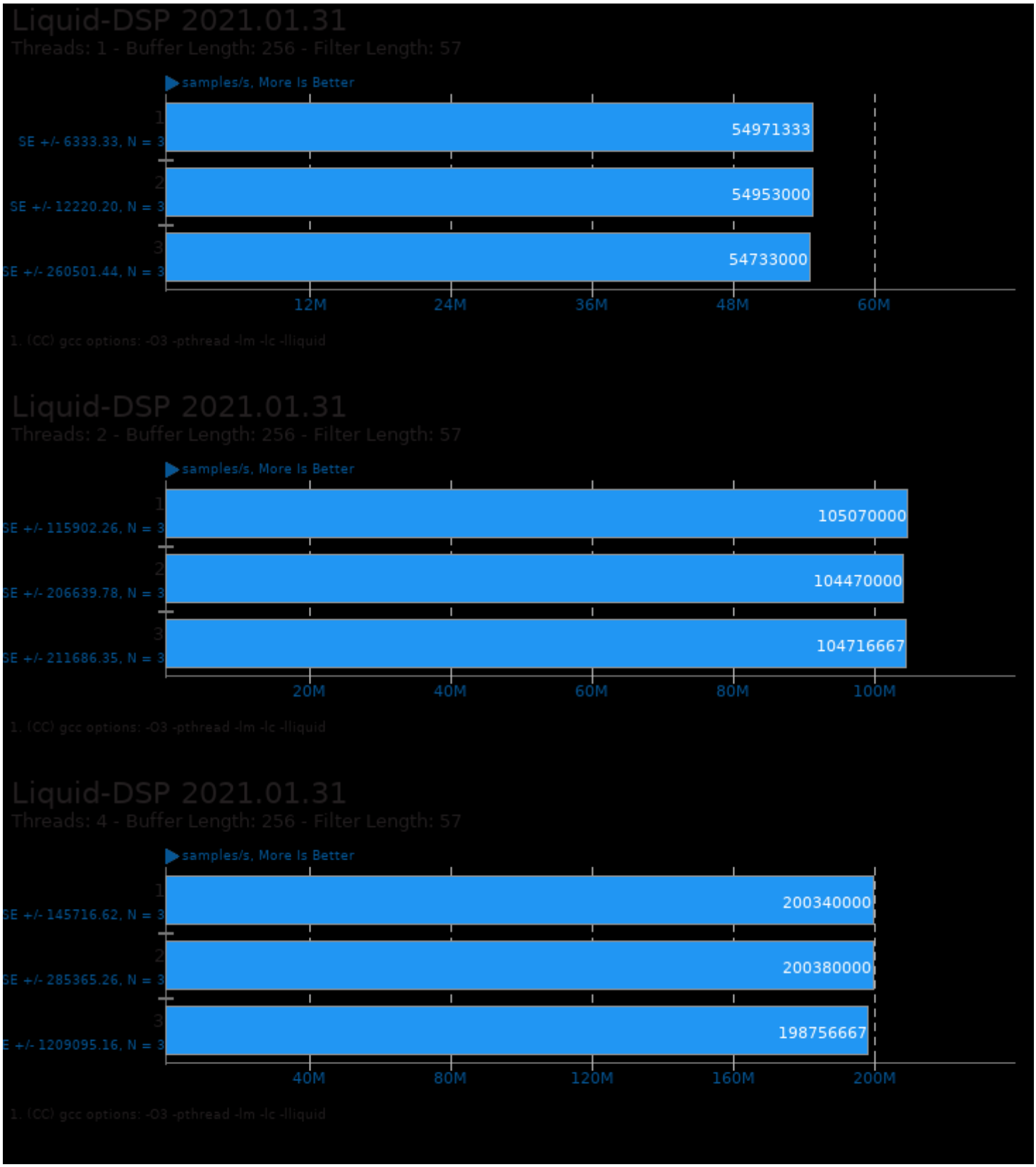
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none,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 powersave - CPU Microcode: 0xca - Thermald 1.9.1
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + 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 Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Vulnerable: No microcode + tsx_async_abort: Not affected

	1	2	3
Liquid-DSP - 1 - 256 - 57 (samples/s)	**54971333**	54953000	**54733000**
Normalized	100%	99.97%	99.57%
Standard Deviation	0%	0%	0.8%
Liquid-DSP - 2 - 256 - 57 (samples/s)	**105070000**	**104470000**	104716667
Normalized	100%	99.43%	99.66%
Standard Deviation	0.2%	0.3%	0.4%
Liquid-DSP - 4 - 256 - 57 (samples/s)	200340000	**200380000**	**198756667**
Normalized	99.98%	100%	99.19%
Standard Deviation	0.1%	0.2%	1.1%
Liquid-DSP - 6 - 256 - 57 (samples/s)	294200000	**294243333**	**292560000**
Normalized	99.99%	100%	99.43%
Standard Deviation	0.2%	0%	1%
srsLTE - OFDM_Test (Samples / Second)	105866667	**105666667**	**106766667**
Normalized	99.16%	98.97%	100%
Standard Deviation	0.5%	0.5%	0.5%

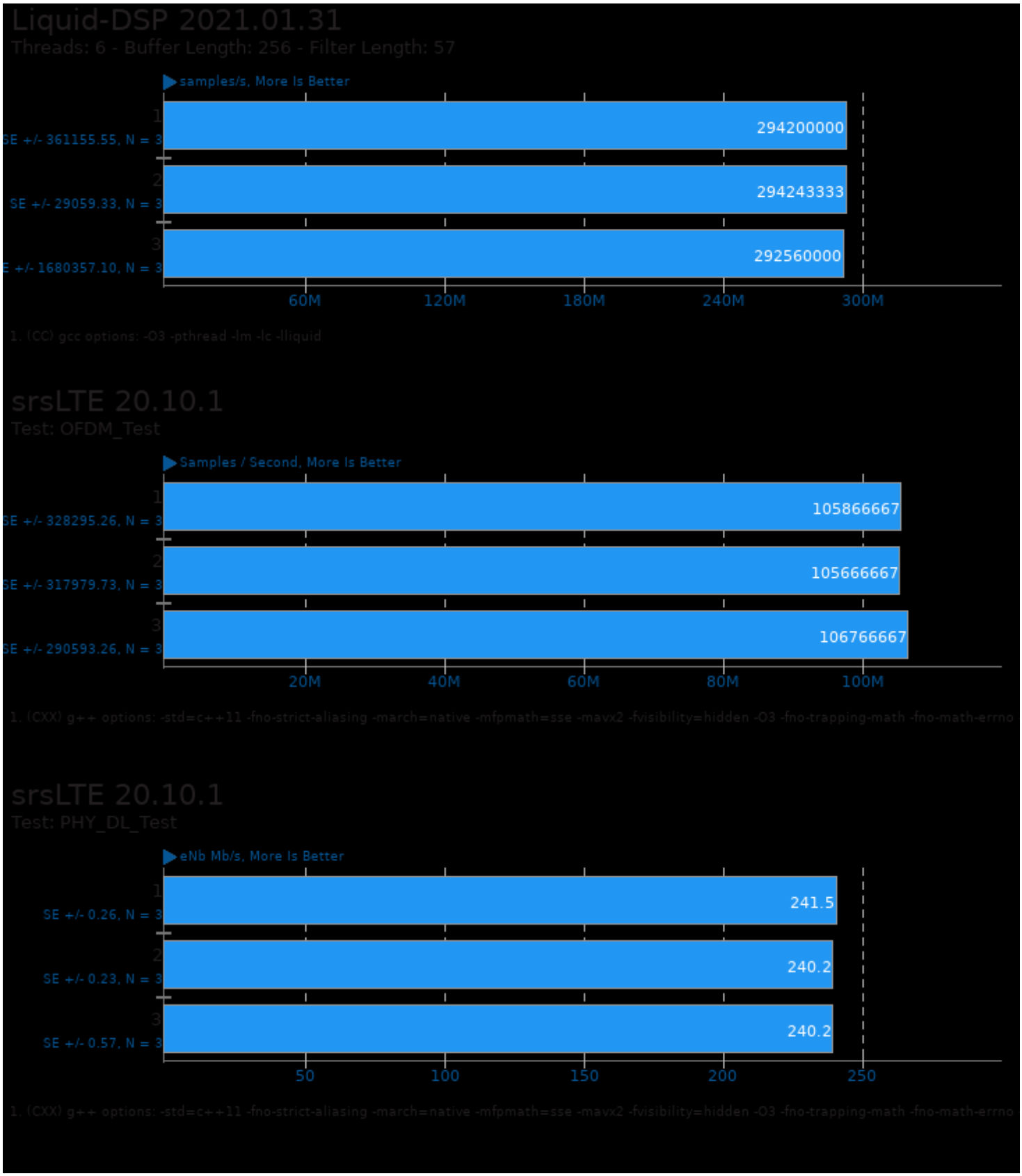
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srsLTE - PHY_DL_Test (eNb Mb/s)	**241.5**	**240.2**	**240.2**
Normalized	100%	99.46%	99.46%
Standard Deviation	0.2%	0.2%	0.4%
srsLTE - PHY_DL_Test (UE Mb/s)	**92.3**	**92.3**	**92.1**
Normalized	100%	100%	99.78%
Standard Deviation	1.9%	0.3%	0.8%
Timed Erlang/OTP Compilation - Time To Compile (sec)	**182.562**	**182.400**	182.539
Normalized	99.91%	100%	99.92%
Standard Deviation	0.2%	0.3%	0.2%
Timed Linux Kernel Compilation - Time To Compile (sec)	**174.248**	**174.694**	174.629
Normalized	100%	99.74%	99.78%
Standard Deviation	1%	1%	1%
Zstd Compression - 3 - Compression Speed (MB/s)	1940	**1935**	**1947**
Normalized	99.65%	99.43%	100%
Standard Deviation	1.2%	0.4%	1.1%
Zstd Compression - 8 - Compression Speed (MB/s)	**235.3**	236.9	**238.9**
Normalized	98.49%	99.16%	100%
Standard Deviation	1.3%	1.3%	1.2%
Zstd Compression - 8 - D.S (MB/s)	3523	**3518**	**3524**
Normalized	99.99%	99.84%	100%
Standard Deviation	0%	0.2%	0.2%
Zstd Compression - 19 - Compression Speed (MB/s)	20.1	20.1	20.1
Standard Deviation	0.3%	0.3%	0.3%
Zstd Compression - 19 - D.S (MB/s)	**3154**	3163	**3165**
Normalized	99.67%	99.95%	100%
Standard Deviation	0.1%	0.3%	0.1%
Zstd Compression - 3, Long Mode - Compression Speed (MB/s)	**922.7**	**923.1**	**922.7**
Normalized	99.96%	100%	99.96%
Standard Deviation	0.1%	0.4%	0.2%
Zstd Compression - 8, Long Mode - Compression Speed (MB/s)	**257.0**	**261.0**	259.0
Normalized	98.47%	100%	99.23%
Standard Deviation	1.5%	1.2%	0.8%
Zstd Compression - 8, Long Mode - D.S	**3744**	**3730**	3744
Normalized	100%	99.62%	99.99%
Standard Deviation	0.1%	0.3%	0.2%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	16.3	16.3	16.3
Standard Deviation	0%	0.4%	0.4%
Zstd Compression - 19, Long Mode - D.S (MB/s)	**3154**	**3174**	3155
Normalized	99.37%	100%	99.4%
Standard Deviation	0.3%	0.3%	0.1%

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Liquid-DSP 2021.01.31
Threads: 1 - Buffer Length: 256 - Filter Length: 57
samples/s, More Is Better
1
SE +/- 6333.33, N = 3
54971333
2
SE +/- 12220.20, N = 3
54953000
3
SE +/- 260501.44, N = 3
54733000
12M
24M
36M
48M
60M
1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid
Liquid-DSP 2021.01.31
Threads: 2 - Buffer Length: 256 - Filter Length: 57
samples/s, More Is Better
1
SE +/- 115902.26, N = 3
105070000
2
SE +/- 206639.78, N = 3
104470000
3
SE +/- 211686.35, N = 3
104716667
20M
40M
60M
80M
100M
1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid
Liquid-DSP 2021.01.31
Threads: 4 - Buffer Length: 256 - Filter Length: 57
samples/s, More Is Better
1
SE +/- 145716.62, N = 3
200340000
2
SE +/- 285365.26, N = 3
200380000
3
E +/- 1209095.16, N = 3
198756667
40M
80M
120M
160M
200M
1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

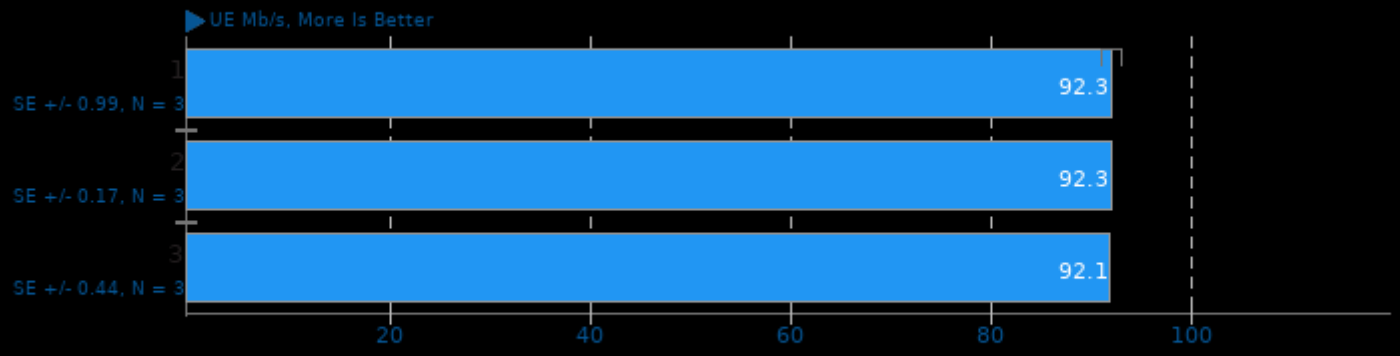
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Liquid-DSP 2021.01.31
Threads: 6 - Buffer Length: 256 - Filter Length: 57
samples/s, More Is Better
1
294200000
SE +/- 361155.55, N = 3
2
294243333
SE +/- 29059.33, N = 3
3
292560000
E +/- 1680357.10, N = 3
60M
120M
180M
240M
300M
1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid
srsLTE 20.10.1
Test: OFDM_Test
Samples / Second, More Is Better
1
105866667
SE +/- 328295.26, N = 3
2
105666667
SE +/- 317979.73, N = 3
3
106766667
SE +/- 290593.26, N = 3
20M
40M
60M
80M
100M
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsLTE 20.10.1
Test: PHY_DL_Test
eNb Mb/s, More Is Better
1
241.5
SE +/- 0.26, N = 3
2
240.2
SE +/- 0.23, N = 3
3
240.2
SE +/- 0.57, N = 3
50
100
150
200
250
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

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srsLTE 20.10.1

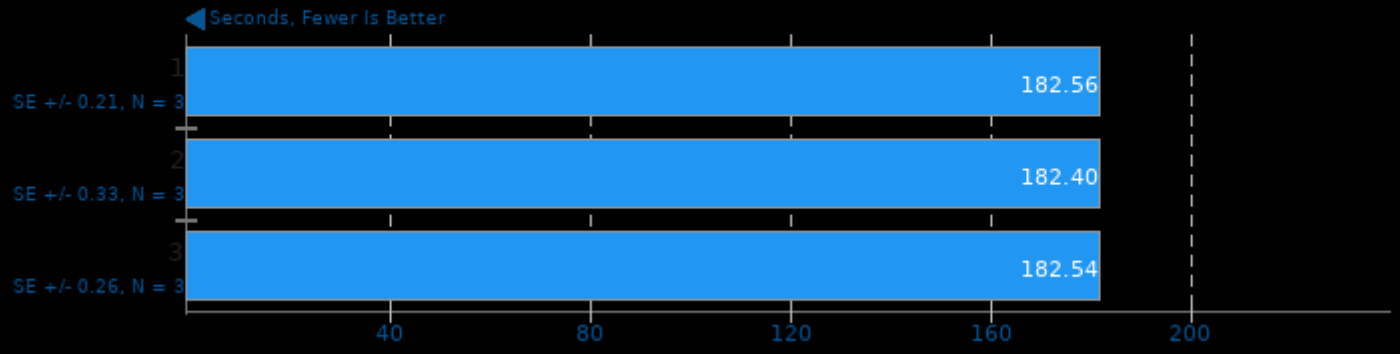
Test: PHY_DL_Test



1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

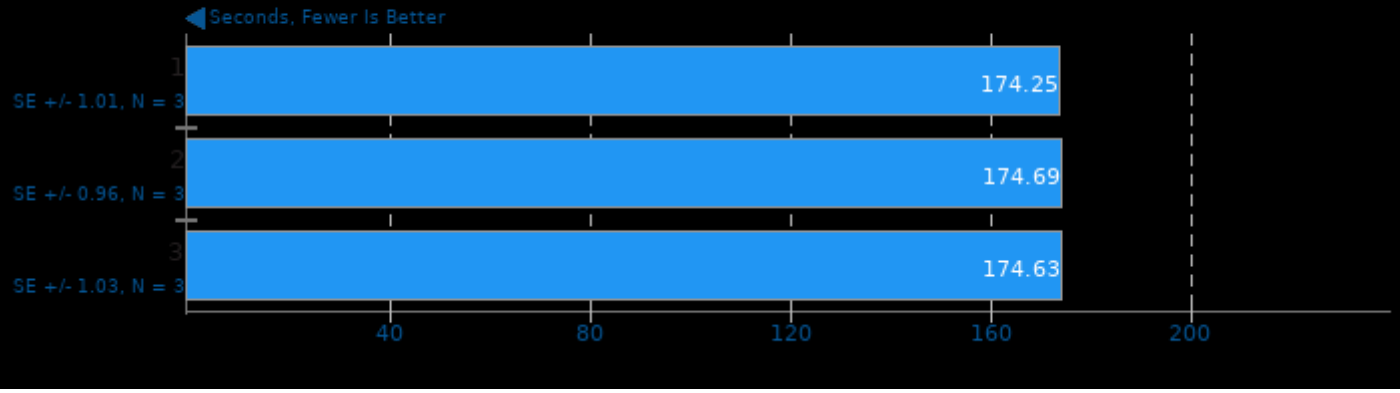
Timed Erlang/OTP Compilation 23.2

Time To Compile

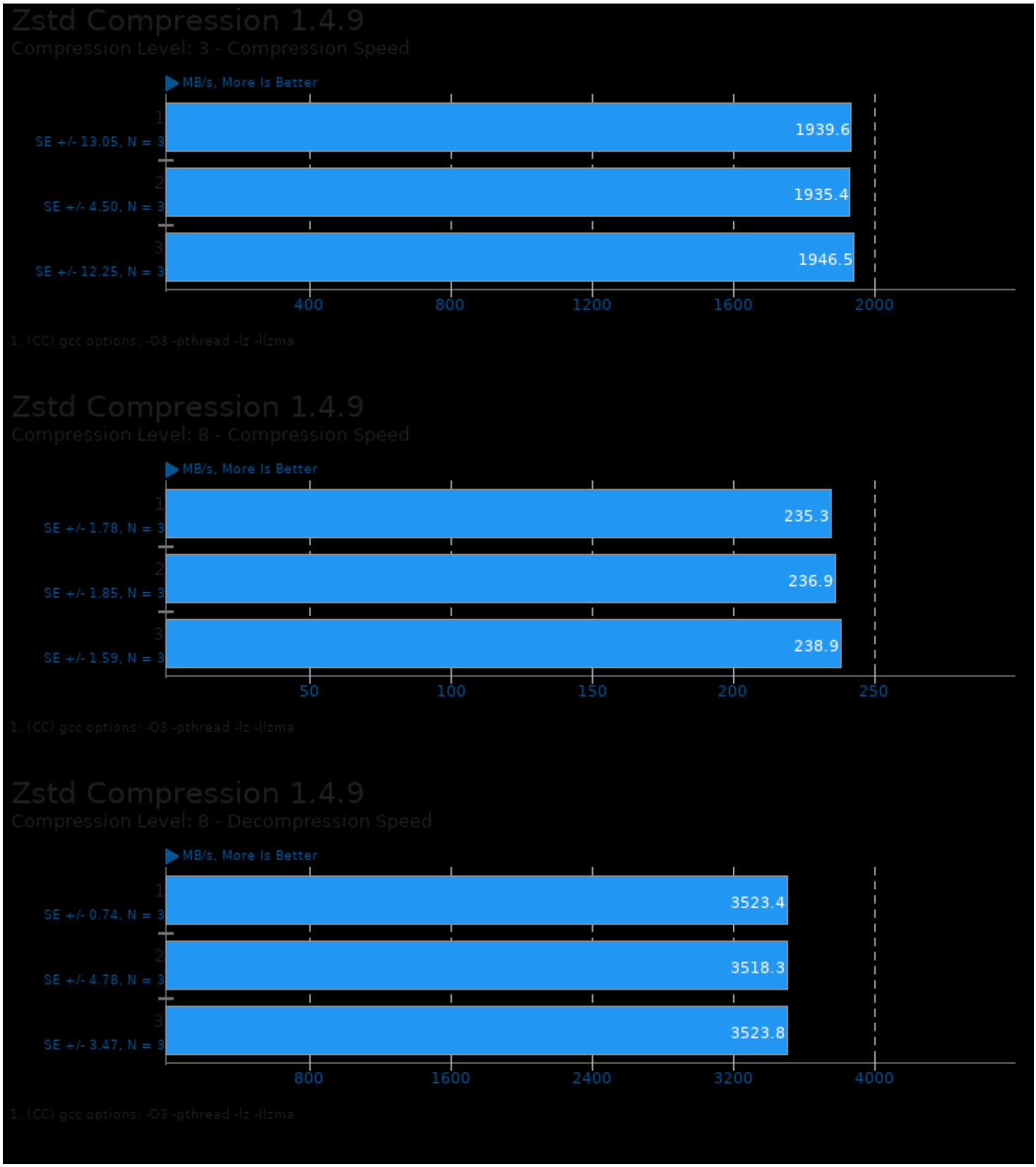


Timed Linux Kernel Compilation 5.10.20

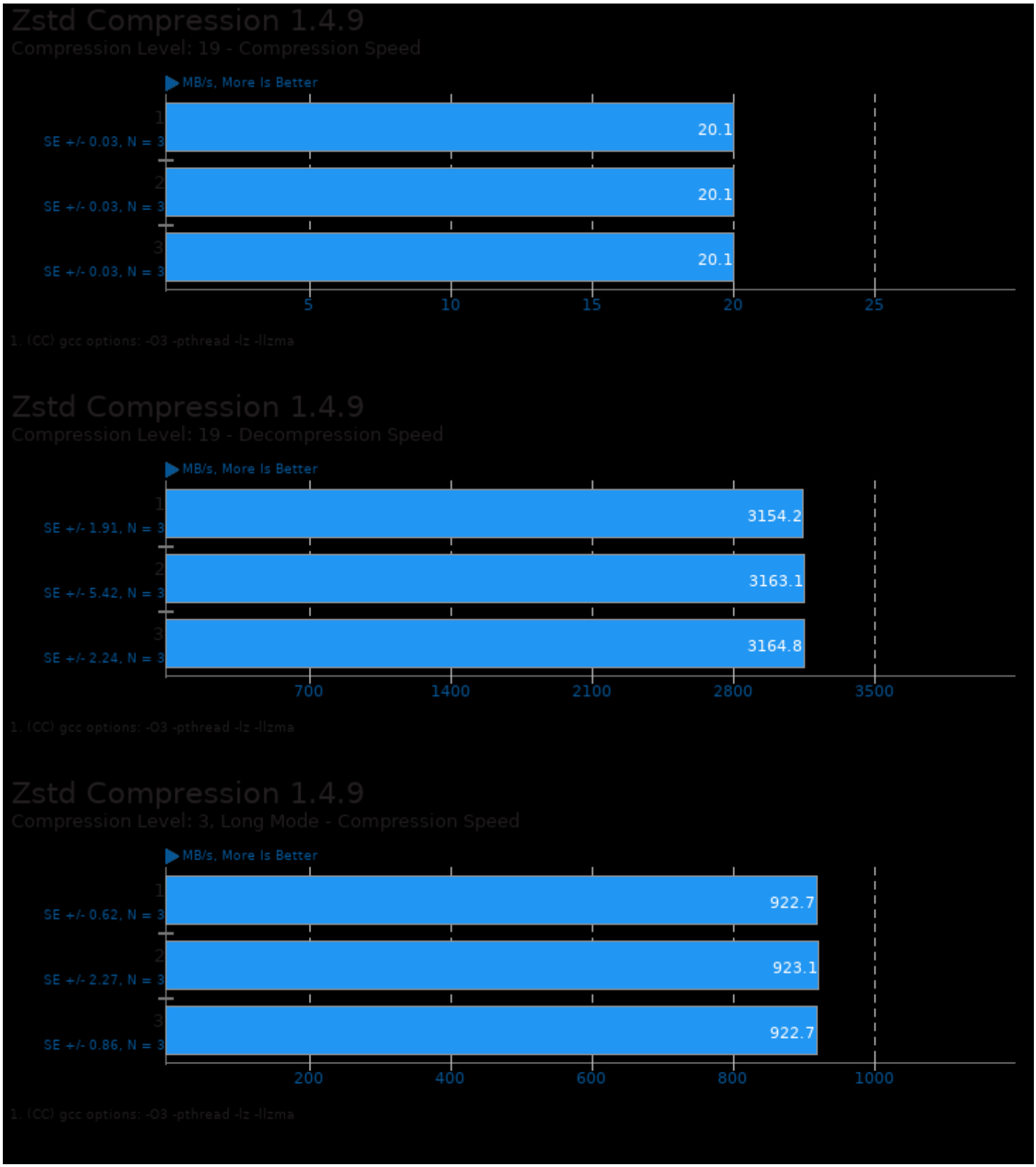
Time To Compile

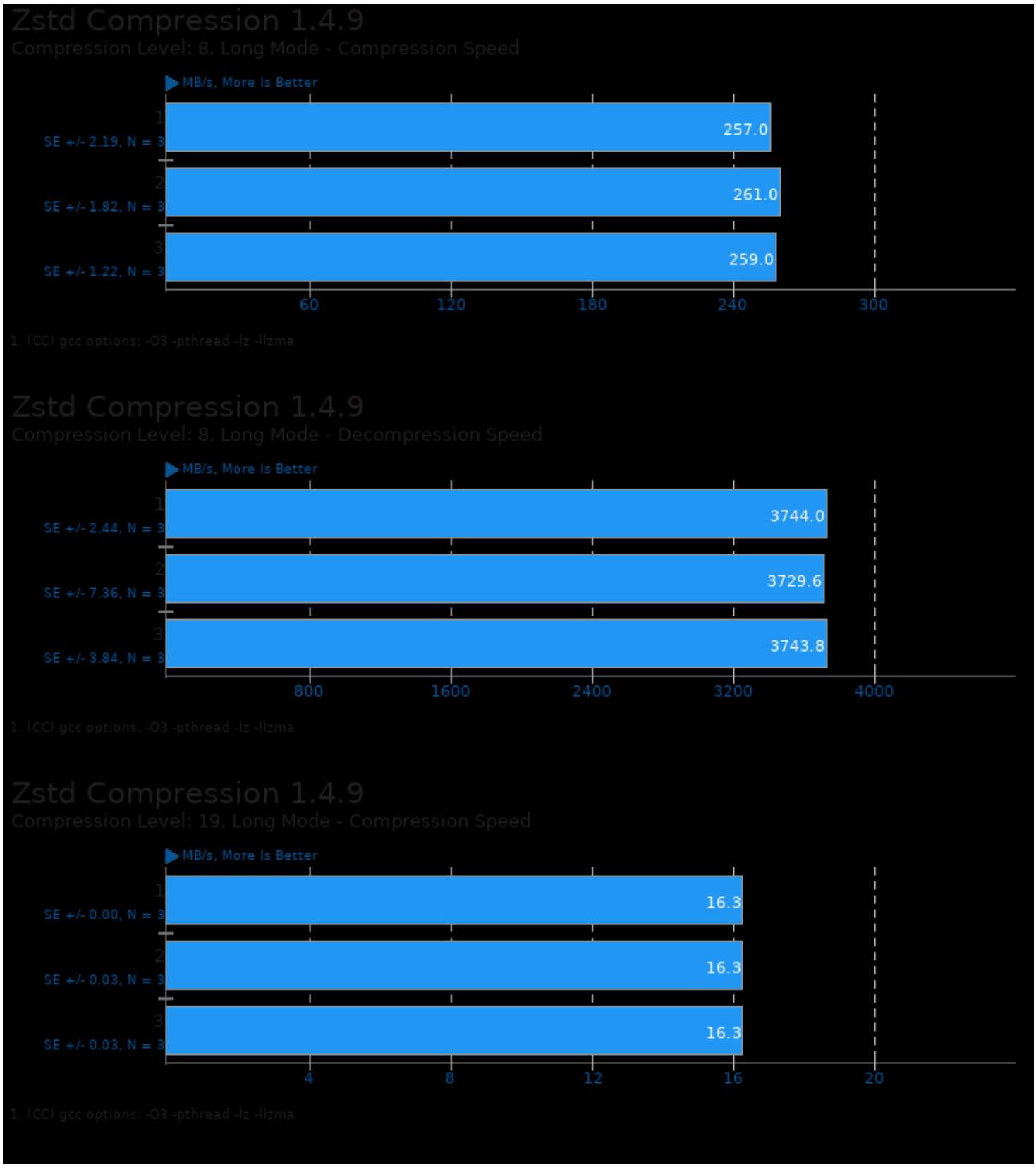


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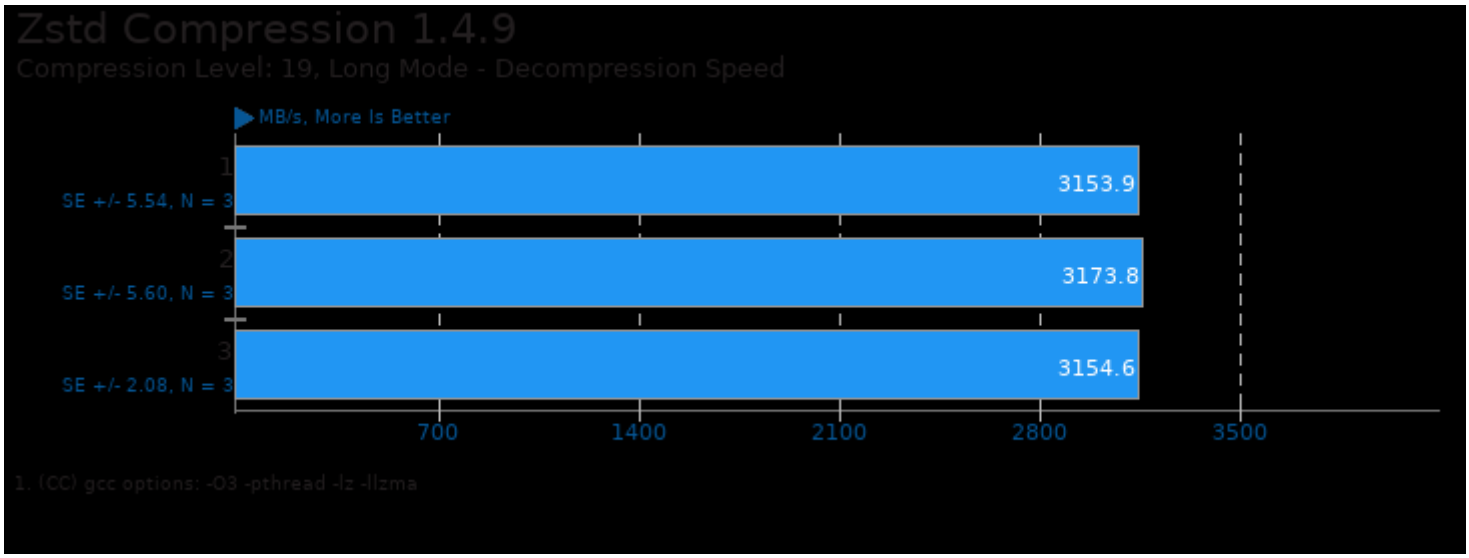

Zstd Compression 1.4.9
Compression Level: 3 - Compression Speed
MB/s, More Is Better
1
SE +/- 13.05, N = 3
1939.6
2
SE +/- 4.50, N = 3
1935.4
3
SE +/- 12.25, N = 3
1946.5
400
800
1200
1600
2000
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.4.9
Compression Level: 8 - Compression Speed
MB/s, More Is Better
1
SE +/- 1.78, N = 3
235.3
2
SE +/- 1.85, N = 3
236.9
3
SE +/- 1.59, N = 3
238.9
50
100
150
200
250
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.4.9
Compression Level: 8 - Decompression Speed
MB/s, More Is Better
1
SE +/- 0.74, N = 3
3523.4
2
SE +/- 4.78, N = 3
3518.3
3
SE +/- 3.47, N = 3
3523.8
800
1600
2400
3200
4000
1. (CC) gcc options: -O3 -pthread -lz -llzma

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Zstd Compression 1.4.9
Compression Level: 19 - Compression Speed
MB/s, More Is Better
1
SE +/- 0.03, N = 3
20.1
2
SE +/- 0.03, N = 3
20.1
3
SE +/- 0.03, N = 3
20.1
5
10
15
20
25
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.4.9
Compression Level: 19 - Decompression Speed
MB/s, More Is Better
1
SE +/- 1.91, N = 3
3154.2
2
SE +/- 5.42, N = 3
3163.1
3
SE +/- 2.24, N = 3
3164.8
700
1400
2100
2800
3500
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.4.9
Compression Level: 3, Long Mode - Compression Speed
MB/s, More Is Better
1
SE +/- 0.62, N = 3
922.7
2
SE +/- 2.27, N = 3
923.1
3
SE +/- 0.86, N = 3
922.7
200
400
600
800
1000
1. (CC) gcc options: -O3 -pthread -lz -llzma

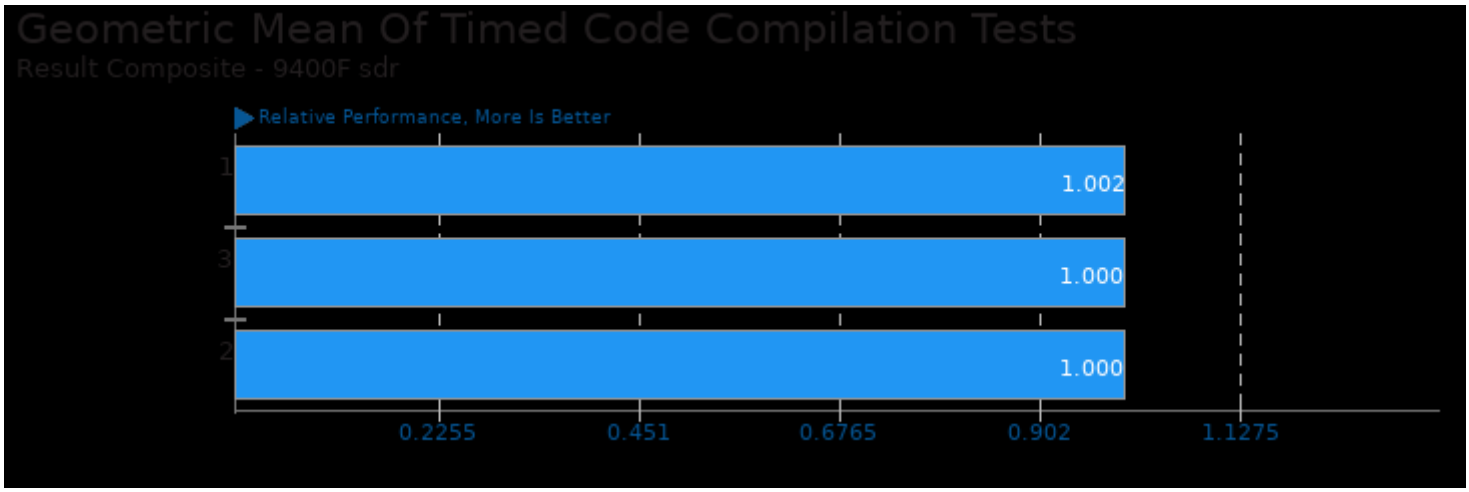

Zstd Compression 1.4.9
Compression Level: 8, Long Mode - Compression Speed
MB/s, More Is Better
1
SE +/- 2.19, N = 3
257.0
2
SE +/- 1.82, N = 3
261.0
3
SE +/- 1.22, N = 3
259.0
60
120
180
240
300
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.4.9
Compression Level: 8, Long Mode - Decompression Speed
MB/s, More Is Better
1
SE +/- 2.44, N = 3
3744.0
2
SE +/- 7.36, N = 3
3729.6
3
SE +/- 3.84, N = 3
3743.8
800
1600
2400
3200
4000
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.4.9
Compression Level: 19, Long Mode - Compression Speed
MB/s, More Is Better
1
SE +/- 0.00, N = 3
16.3
2
SE +/- 0.03, N = 3
16.3
3
SE +/- 0.03, N = 3
16.3
4
8
12
16
20
1. (CC) gcc options: -O3 -pthread -lz -llzma

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Zstd Compression 1.4.9
Compression Level: 19, Long Mode - Decompression Speed
MB/s, More Is Better
1
SE +/- 5.54, N = 3
3153.9
2
SE +/- 5.60, N = 3
3173.8
3
SE +/- 2.08, N = 3
3154.6
700
1400
2100
2800
3500
1. (CC) gcc options: -O3 -pthread -lz -llzma

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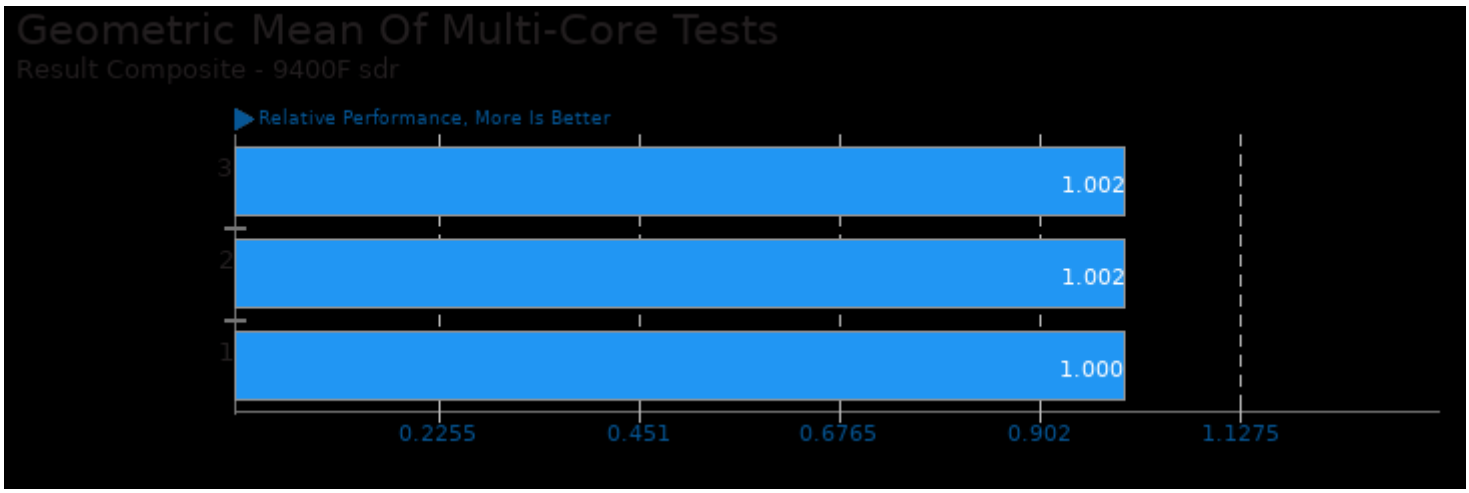
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/build-linux-kernel and pts/build-erlang

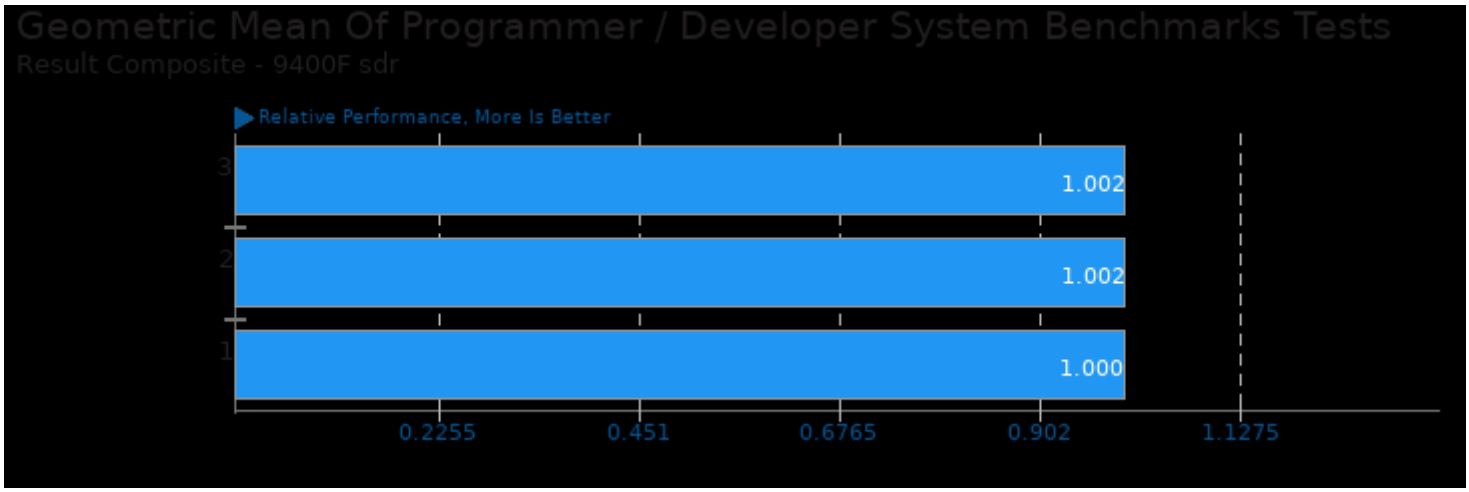


Geometric mean based upon tests: pts/build-linux-kernel and pts/compress-zstd

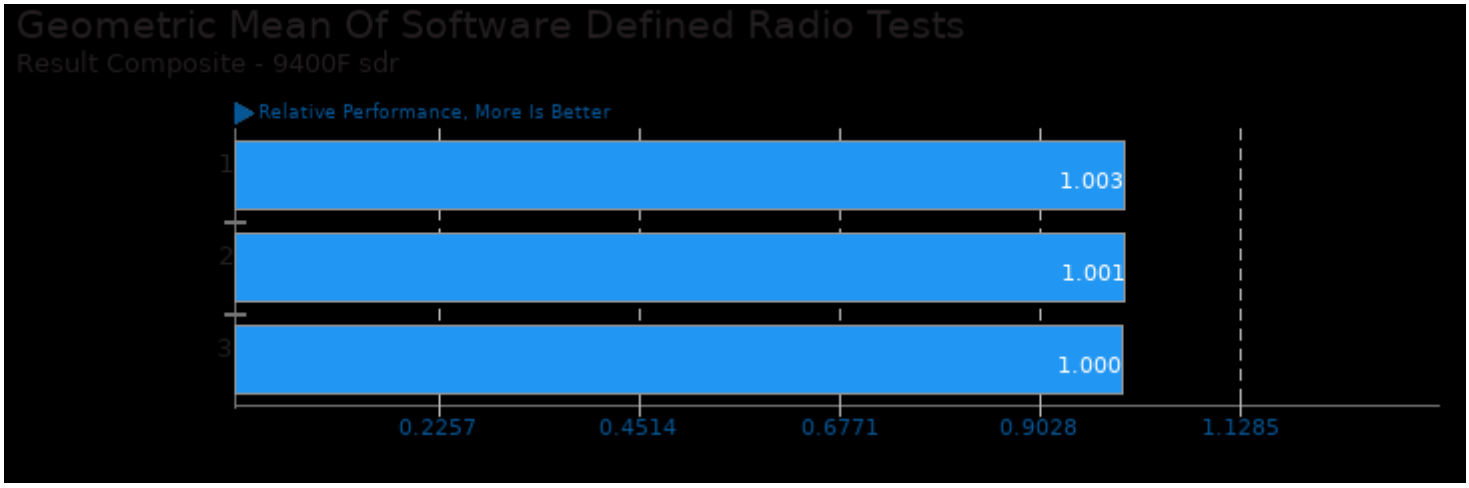


Geometric mean based upon tests: pts/compress-zstd, pts/build-linux-kernel and pts/build-erlang

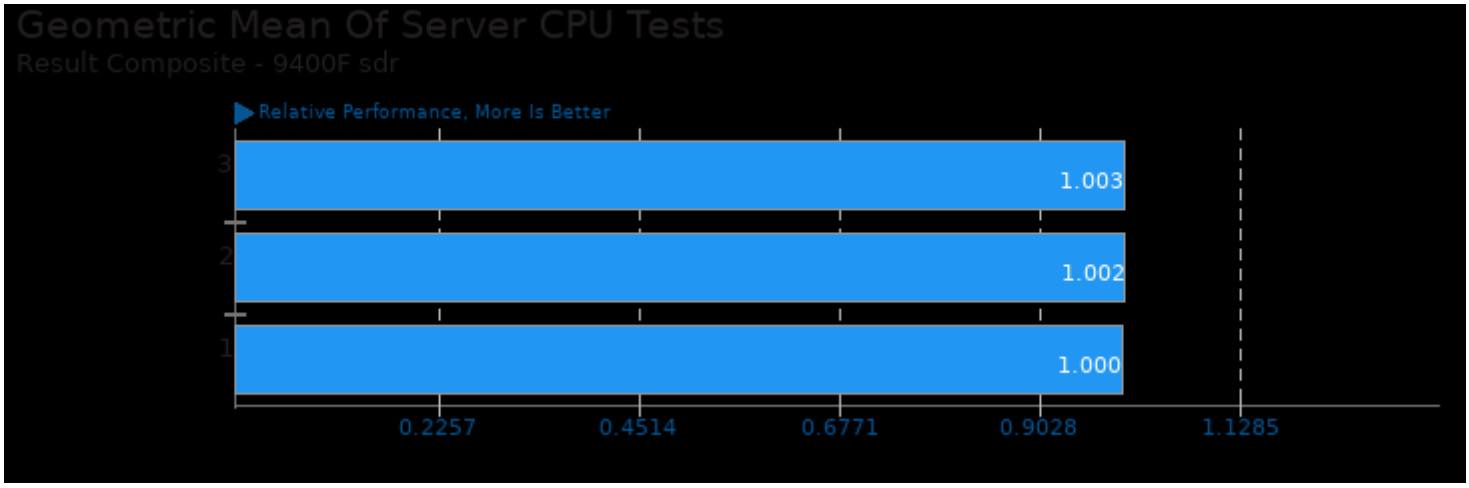
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Geometric mean based upon tests: pts/compress-zstd, pts/build-linux-kernel and pts/build-erlang



Geometric mean based upon tests: pts/liquid-dsp and pts/srslte



Geometric mean based upon tests: pts/build-linux-kernel and pts/compress-zstd

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 10:46.