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clearlinux-ryzen7-2700

AMD Ryzen 7 2700X Eight-Core testing with a ASRock B450M Pro4 (P4.30 BIOS) and AMD Radeon RX 470/480/570/570X/580/580X/590 4GB on Clear Linux OS 35150 via the Phoronix Test Suite.

Test Systems:

cpu 7-2700

Compression 7-2700

Processor: AMD Ryzen 7 2700X Eight-Core @ 3.70GHz (8 Cores / 16 Threads), Motherboard: ASRock B450M Pro4 (P4.30 BIOS), Chipset: AMD 17h, Memory: 16GB, Disk: 2 x 1000GB Western Digital WD1003FBYZ-4 + 512GB TOSHIBA THNSNJ51 + 250GB ASMT1051, Graphics: AMD Radeon RX 470/480/570/570X/580/580X/590 4GB (1266/1950MHz), Audio: AMD Ellesmere HDMI Audio, Monitor: PHL 328E1, Network: Realtek Device 8161 + Realtek RTL8111/8168/8411

OS: Clear Linux OS 35150, Kernel: 5.14.13-1083.native (x86_64), Desktop: GNOME Shell 41.0, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.2.4 (LLVM 11.1.0), Vulkan: 1.2.182, Compiler: GCC 11.2.1 20211015

releases/gcc-11.2.0-353-g6a936be4ad + Clang 11.1.0 + LLVM 11.1.0, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: always
Environment Notes: FFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -m64 -fasynchronous-unwind-tables -Wp,-D_REENTRANT -ftree-loop-distribute-patterns -Wl,-z -Wl,now -Wl,-z -Wl,relro -malign-data=abi -fno-semantic-interposition -ftree-vectorize -ftree-loop-vectorize -Wl,--enable-new-dtags" CXXFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -Wformat -Wformat-security -m64 -fasynchronous-unwind-tables -Wp,-D_REENTRANT -ftree-loop-distribute-patterns -Wl,-z -Wl,now -Wl,-z -Wl,relro -fno-semantic-interposition -ffat-lto-objects -fno-trapping-math -Wl,-sort-common -Wl,--enable-new-dtags -mtune=skylake -fvisibility-inlines-hidden -Wl,--enable-new-dtags" MESA_GLSL_CACHE_DISABLE=0 FCFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -m64 -fasynchronous-unwind-tables -Wp,-D_REENTRANT -ftree-loop-distribute-patterns -Wl,-z -Wl,now -Wl,-z -Wl,relro -malign-data=abi -fno-semantic-interposition -ftree-vectorize -ftree-loop-vectorize -Wl,-sort-common -Wl,--enable-new-dtags" CFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -Wformat -Wformat-security -m64 -fasynchronous-unwind-tables -Wp,-D_REENTRANT -ftree-loop-distribute-patterns -Wl,-z -Wl,now -Wl,-z -Wl,relro -fno-semantic-interposition -ffat-lto-objects -fno-trapping-math -Wl,-sort-common -Wl,--enable-new-dtags -mtune=skylake" THEANO_FLAGS="floatX=float32,openmp=true,gcc.cxxflags="-ftree-vectorize -mavx""
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=x86-64-v3 --with-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=skylake-avx512
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0x800820d
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 Full AMD retpoline IBPB: conditional STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

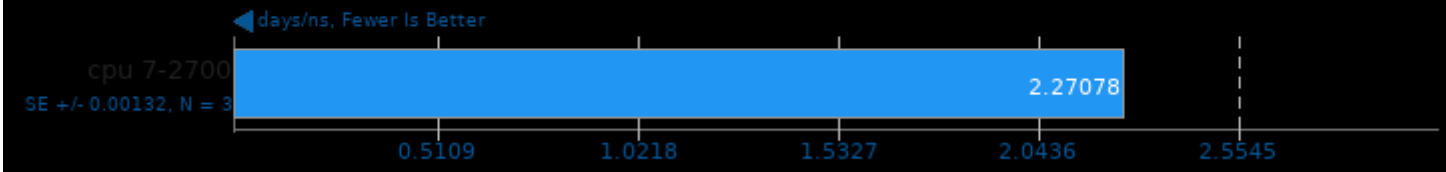
	cpu 7-2700	Compression 7-2700
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	2.27078	
Standard Deviation	0.1%	
Kvazaar - Bosphorus 4K - Slow (FPS)	5.73	
Standard Deviation	0.7%	
Kvazaar - Bosphorus 4K - Medium (FPS)	5.84	
Standard Deviation	0%	
Kvazaar - Bosphorus 1080p - Slow (FPS)	29.82	
Standard Deviation	0.7%	
Kvazaar - Bosphorus 1080p - Medium (FPS)	30.12	
Standard Deviation	2.9%	
Kvazaar - Bosphorus 4K - Very Fast (FPS)	15.57	
Standard Deviation	0%	
Kvazaar - Bosphorus 4K - Ultra Fast (FPS)	26.32	
Standard Deviation	0.3%	
Kvazaar - Bosphorus 1080p - Very Fast (FPS)	66.49	
Standard Deviation	0.2%	
Kvazaar - Bosphorus 1080p - Ultra Fast (FPS)	113.30	
Standard Deviation	0.1%	
x264 - H.2.V.E (FPS)	81.40	
Standard Deviation	2.7%	
x265 - Bosphorus 4K (FPS)	9.07	
Standard Deviation	1.9%	
x265 - Bosphorus 1080p (FPS)	42.27	
Standard Deviation	0.6%	
asmFish - 1.H.M.2.D (Nodes/s)	24301437	
Standard Deviation	2.1%	
POV-Ray - Trace Time (sec)	52.355	
Standard Deviation	0.1%	
Radiance Benchmark - Serial (sec)	730.114	
Radiance Benchmark - SMP Parallel (sec)	232.61	

OpenSSL - R.4.b.P (Signs/sec)	1699	
Standard Deviation	0.3%	
ctx_clock - C.S.T (Clocks)	185	
Standard Deviation	0%	
Sysbench - CPU (Events/sec)	16787	
Standard Deviation	0.2%	
Blender - Barbershop - CPU-Only (sec)	1095	
C-Blosc - blosclz (MB/s)		15130
Standard Deviation		1.3%
lzbench - XZ 0 - Compression (MB/s)		36
Standard Deviation		3.2%
lzbench - XZ 0 - Decompression (MB/s)		115
Standard Deviation		0.9%
lzbench - Zstd 1 - Compression (MB/s)		546
Standard Deviation		0.2%
lzbench - Zstd 1 - Decompression (MB/s)		1715
Standard Deviation		0.1%
lzbench - Zstd 8 - Compression (MB/s)		106
Standard Deviation		1.1%
lzbench - Zstd 8 - Decompression (MB/s)		1898
Standard Deviation		0.3%
lzbench - Crush 0 - Compression (MB/s)		101
Standard Deviation		0%
lzbench - Crush 0 - Decompression (MB/s)		487
Standard Deviation		0.4%
lzbench - Brotli 0 - Compression (MB/s)		518
Standard Deviation		1.6%
lzbench - Brotli 0 - Decompression (MB/s)		578
Standard Deviation		1.5%
lzbench - Brotli 2 - Compression (MB/s)		222
Standard Deviation		0.3%
lzbench - Brotli 2 - Decompression (MB/s)		683
Standard Deviation		1.4%
lzbench - Libdeflate 1 - Compression (MB/s)		236
Standard Deviation		3.2%
lzbench - Libdeflate 1 - Decompression (MB/s)		1250
Standard Deviation		1.2%
LZ4 Compression - 1 - Compression Speed (MB/s)		9201
Standard Deviation		0.4%
LZ4 Compression - 1 - D.S (MB/s)		9674
Standard Deviation		0.3%
LZ4 Compression - 3 - Compression Speed (MB/s)		50.34
Standard Deviation		0.5%
LZ4 Compression - 3 - D.S (MB/s)		9092
Standard Deviation		0.2%
LZ4 Compression - 9 - Compression Speed (MB/s)		48.90
Standard Deviation		3.2%
LZ4 Compression - 9 - D.S (MB/s)		9010
Standard Deviation		1%
Zstd Compression - 3 - Compression Speed (MB/s)		2102
Standard Deviation		0.5%
Zstd Compression - 8 - Compression Speed (MB/s)		185.7
Standard Deviation		2%

Zstd Compression - 8 - D.S (MB/s)	3511
Standard Deviation	0.1%
Zstd Compression - 19 - Compression Speed (MB/s)	24.1
Standard Deviation	1.8%
Zstd Compression - 19 - D.S (MB/s)	3095
Standard Deviation	1%
Zstd Compression - 3, Long Mode - Compression Speed (MB/s)	957.7
Standard Deviation	0.2%
Zstd Compression - 8, Long Mode - Compression Speed (MB/s)	318.7
Standard Deviation	0.6%
Zstd Compression - 8, Long Mode - D.S (MB/s)	3737
Standard Deviation	0.1%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	21.4
Standard Deviation	1%
Zstd Compression - 19, Long Mode - D.S (MB/s)	3135
Standard Deviation	0.5%
7-Zip Compression - C.S.T (MIPS)	40967
Standard Deviation	0.8%
Parallel BZIP2 Compression - 2.F.C (sec)	4.301
Standard Deviation	3.8%
Gzip Compression - L.S.T.A.T.t.g (sec)	4.856
Standard Deviation	1.7%
XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)	35.278
Standard Deviation	0.6%
System GZIP Decompression (sec)	2.054
Standard Deviation	1.1%
System XZ Decompression (sec)	3.556
Standard Deviation	0.7%
System ZLIB Decompression (ms)	1373
Standard Deviation	2%
RAR Compression - L.S.T.A.T.R (sec)	61.376
Standard Deviation	1.3%

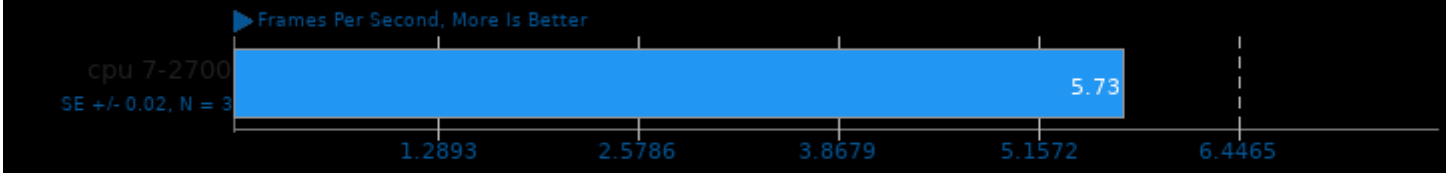
NAMD 2.13b1

ATPase Simulation - 327,506 Atoms



Kvazaar 2.1

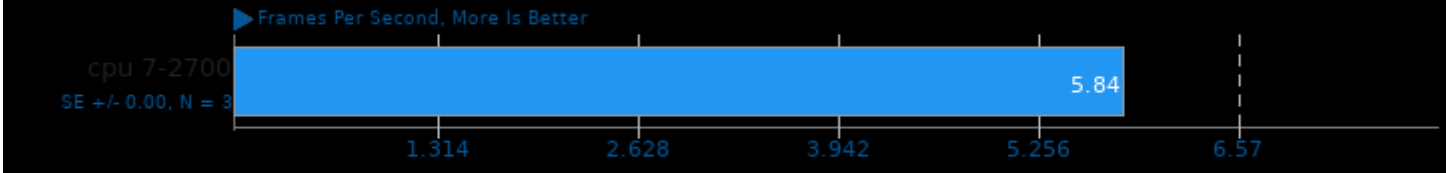
Video Input: Bosphorus 4K - Video Preset: Slow



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -lpthre

Kvazaar 2.1

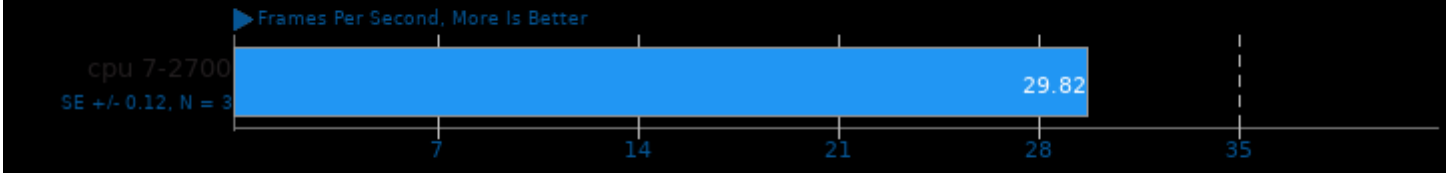
Video Input: Bosphorus 4K - Video Preset: Medium



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -lpthre

Kvazaar 2.1

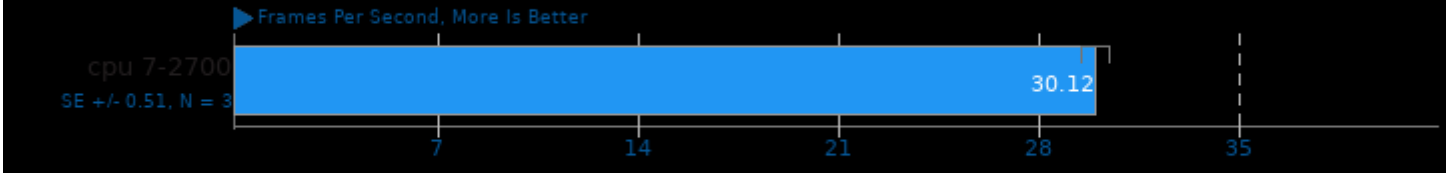
Video Input: Bosphorus 1080p - Video Preset: Slow



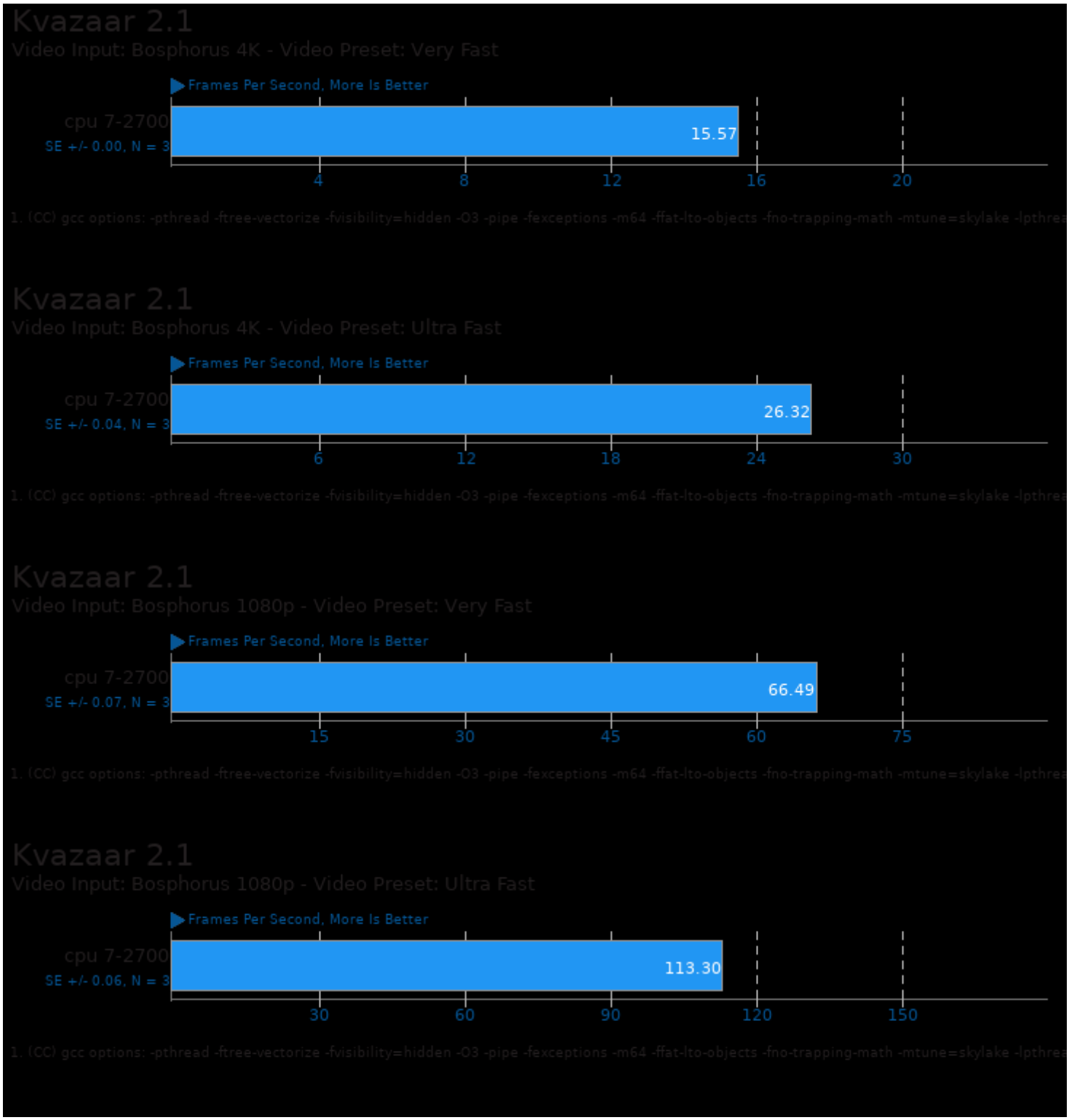
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -lpthre

Kvazaar 2.1

Video Input: Bosphorus 1080p - Video Preset: Medium

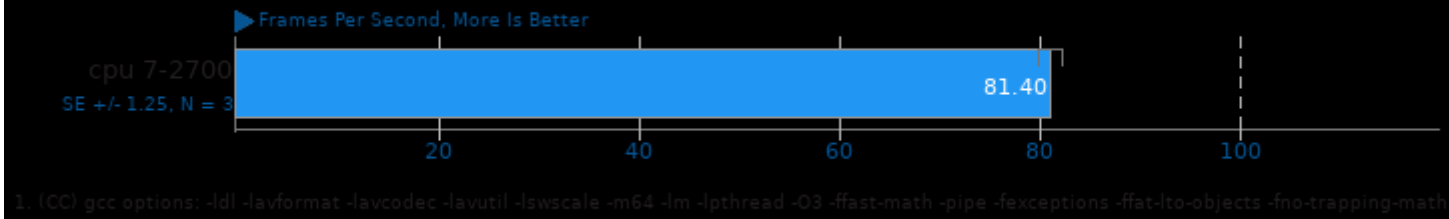


1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -lpthre


Kvazaar 2.1
Video Input: Bosphorus 4K - Video Preset: Very Fast
Frames Per Second, More Is Better
cpu 7-2700
SE +/- 0.00, N = 3
15.57
4
8
12
16
20
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -lpthre
Kvazaar 2.1
Video Input: Bosphorus 4K - Video Preset: Ultra Fast
Frames Per Second, More Is Better
cpu 7-2700
SE +/- 0.04, N = 3
26.32
6
12
18
24
30
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -lpthre
Kvazaar 2.1
Video Input: Bosphorus 1080p - Video Preset: Very Fast
Frames Per Second, More Is Better
cpu 7-2700
SE +/- 0.07, N = 3
66.49
15
30
45
60
75
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -lpthre
Kvazaar 2.1
Video Input: Bosphorus 1080p - Video Preset: Ultra Fast
Frames Per Second, More Is Better
cpu 7-2700
SE +/- 0.06, N = 3
113.30
30
60
90
120
150
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -lpthre

x264 2018-09-25

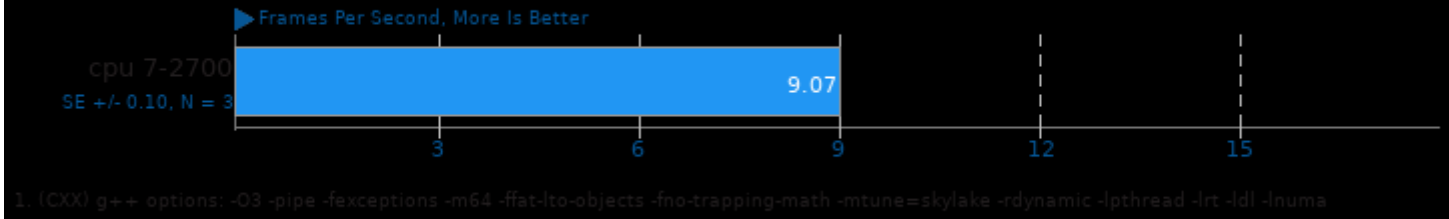
H.264 Video Encoding



1. (CC) gcc options: -ldl -lavformat -lavcodec -lavutil -lswscale -m64 -lm -lpthread -O3 -ffast-math -pipe -fexceptions -ffat-lto-objects -fno-trapping-math -

x265 3.4

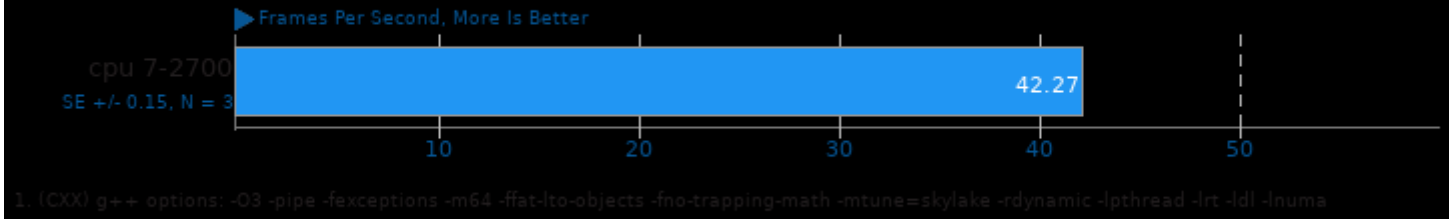
Video Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -rdynamic -lpthread -lrt -ldl -lnuma

x265 3.4

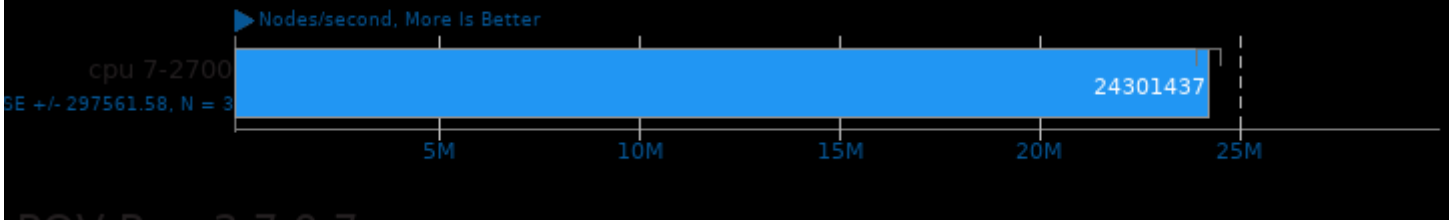
Video Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -rdynamic -lpthread -lrt -ldl -lnuma

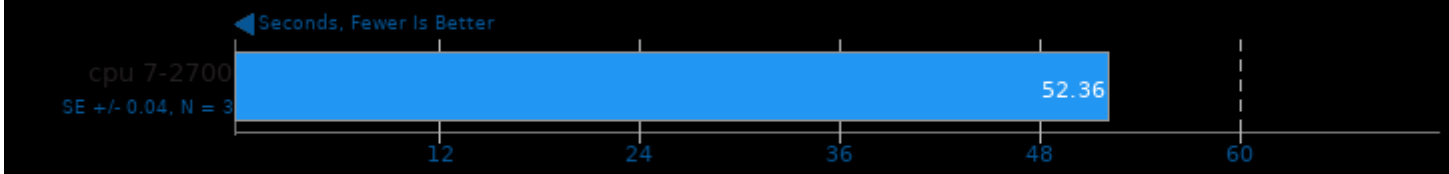
asmFish 2018-07-23

1024 Hash Memory, 26 Depth



POV-Ray 3.7.0.7

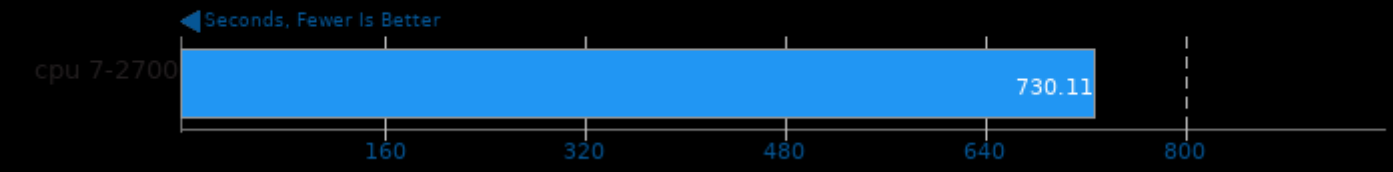
Trace Time



1. (CXX) g++ options: -pipe -O3 -ffast-math -march=native -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -R/usr/lib -lSDL -lpthre

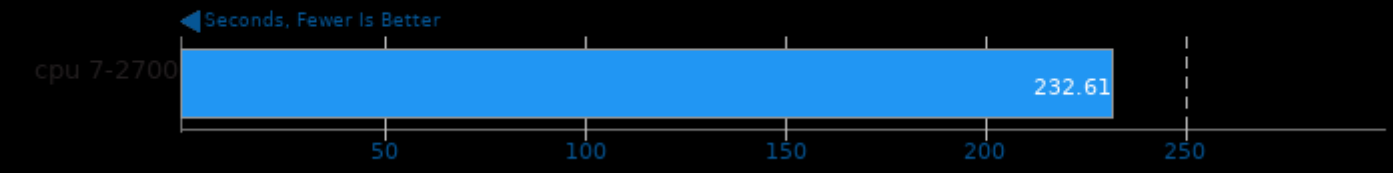
Radiance Benchmark 5.0

Test: Serial



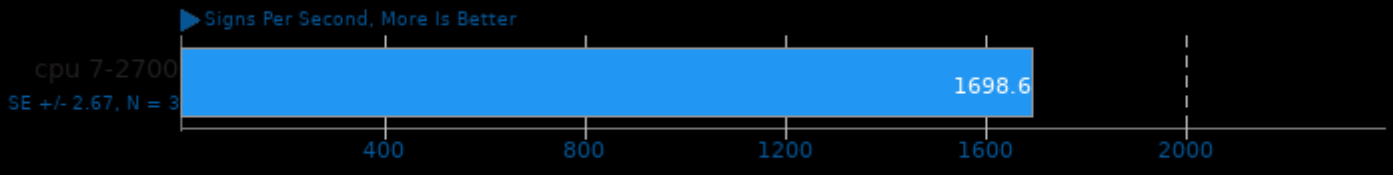
Radiance Benchmark 5.0

Test: SMP Parallel



OpenSSL 1.1.1

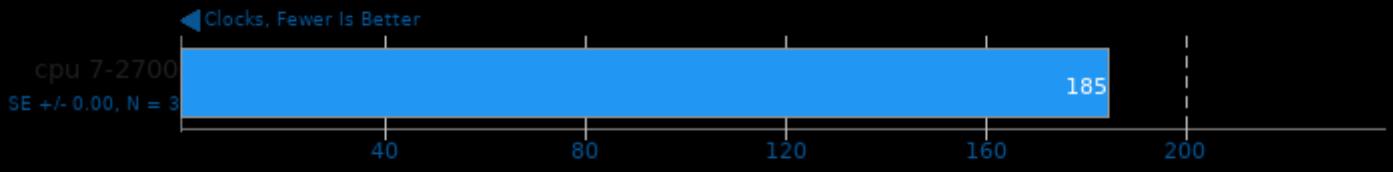
RSA 4096-bit Performance



1. (CC) gcc options: -pthread -m64 -O3 -pipe -fexceptions -fstack-protector -ffat-lto-objects -fno-trapping-math -mtune=skylake -lssl -lcrypto -ldl

ctx_clock

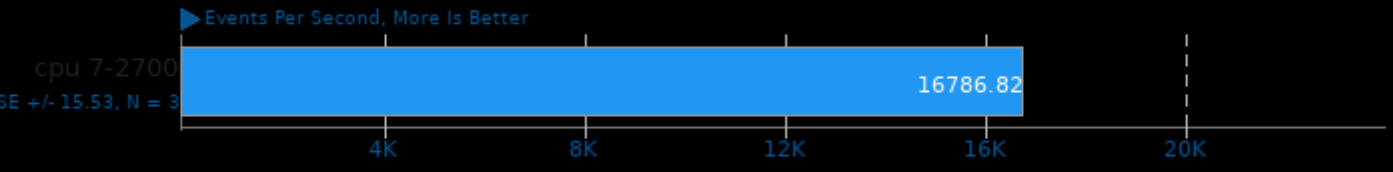
Context Switch Time



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake

Sysbench 2018-07-28

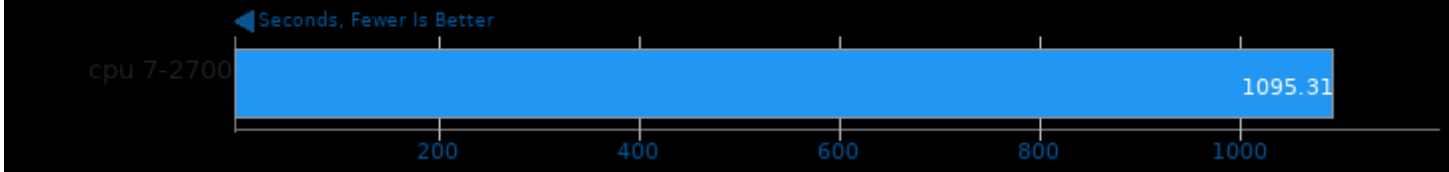
Test: CPU



1. (CC) gcc options: -O3 -funroll-loops -ggdb3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -march=amdfam10 -rdynamic

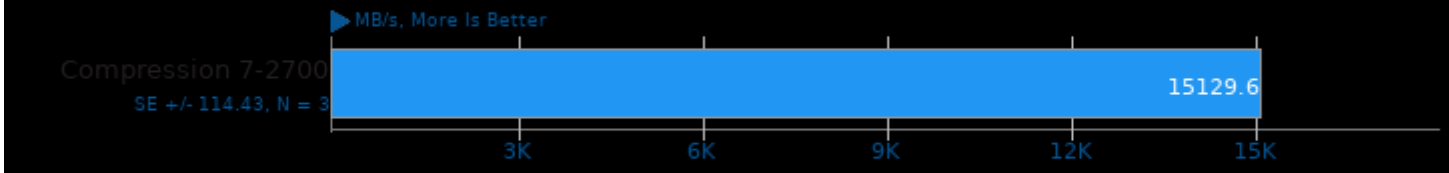
Blender 2.79a

Blend File: Barbershop - Compute: CPU-Only



C-Blosc 2.0

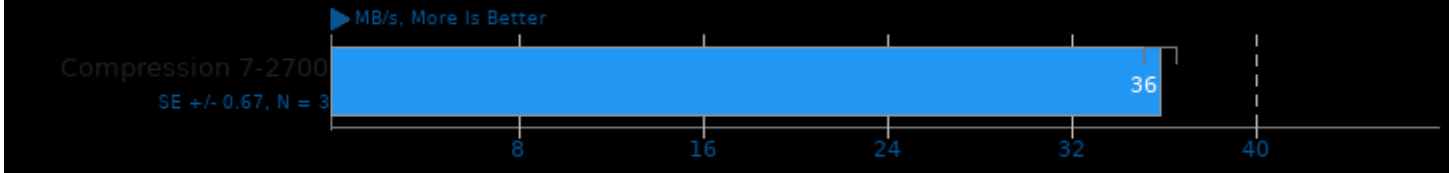
Compressor: blosclz



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

lzbench 1.8

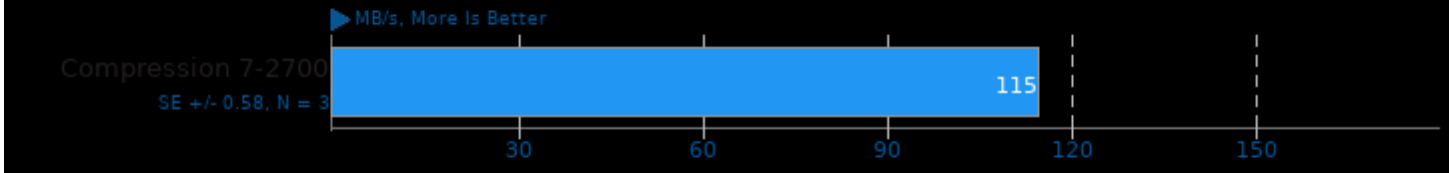
Test: XZ 0 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

lzbench 1.8

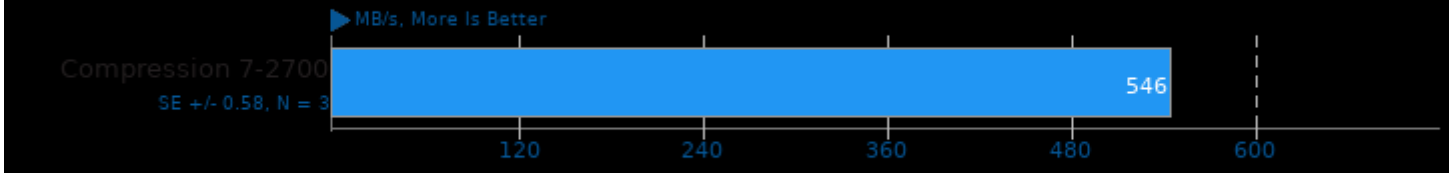
Test: XZ 0 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

lzbench 1.8

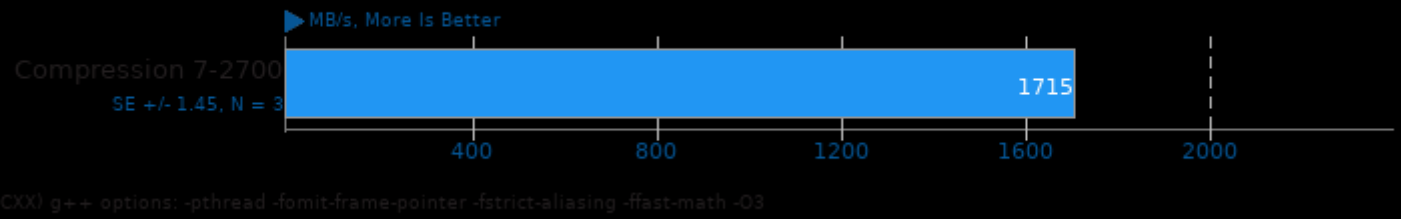
Test: Zstd 1 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

lzbench 1.8

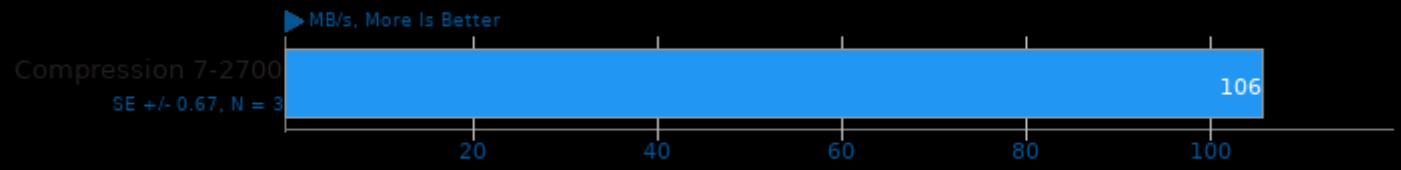
Test: Zstd 1 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

lzbench 1.8

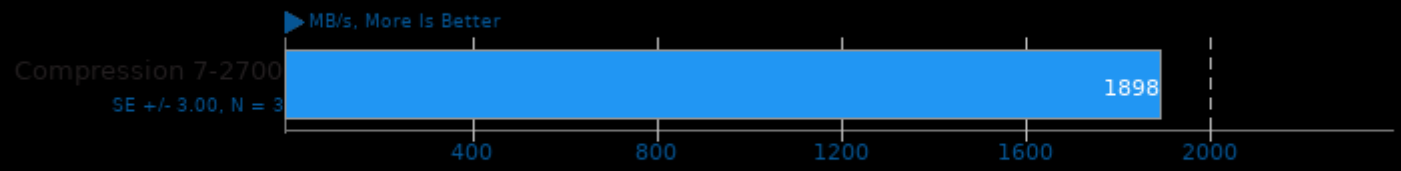
Test: Zstd 8 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

lzbench 1.8

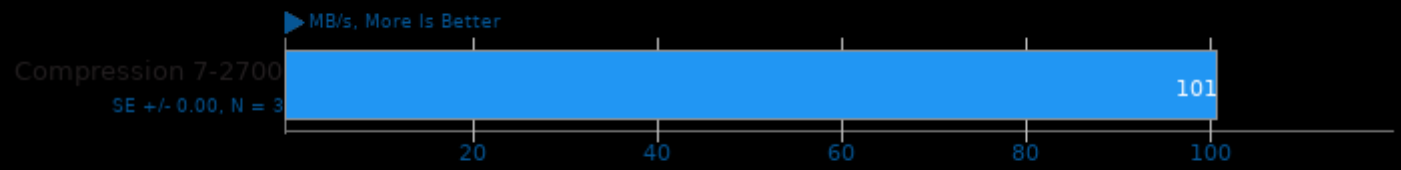
Test: Zstd 8 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

lzbench 1.8

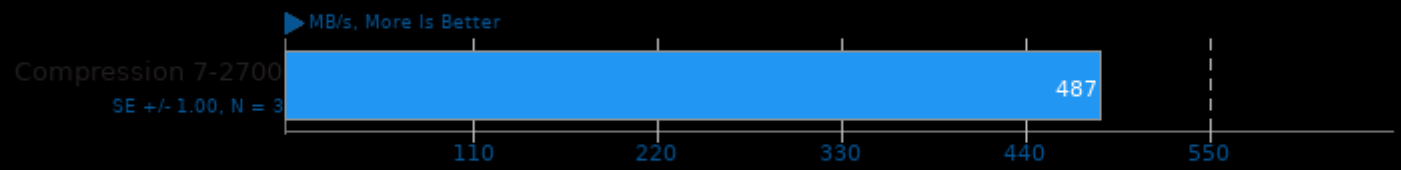
Test: Crush 0 - Process: Compression



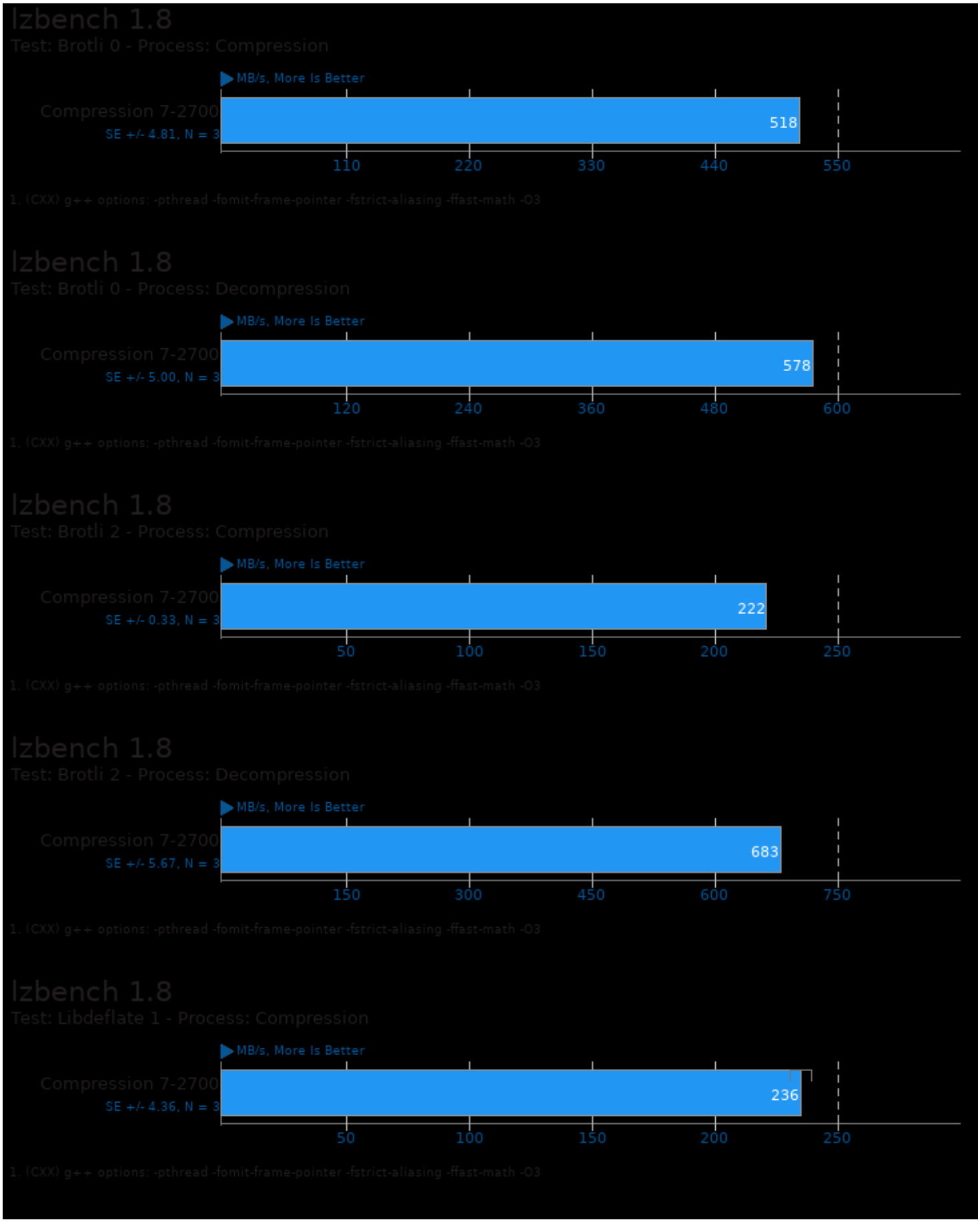
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

lzbench 1.8

Test: Crush 0 - Process: Decompression

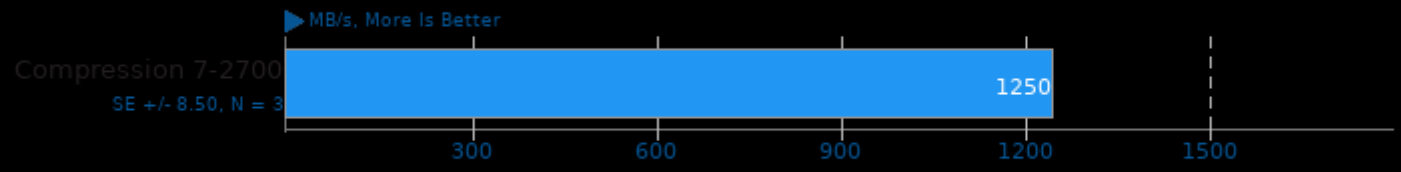


1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3


lzbench 1.8
Test: Brotli 0 - Process: Compression
MB/s, More Is Better
Compression 7-2700
SE +/- 4.81, N = 3
518
110
220
330
440
550
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Brotli 0 - Process: Decompression
MB/s, More Is Better
Compression 7-2700
SE +/- 5.00, N = 3
578
120
240
360
480
600
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Brotli 2 - Process: Compression
MB/s, More Is Better
Compression 7-2700
SE +/- 0.33, N = 3
222
50
100
150
200
250
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Brotli 2 - Process: Decompression
MB/s, More Is Better
Compression 7-2700
SE +/- 5.67, N = 3
683
150
300
450
600
750
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3
lzbench 1.8
Test: Libdeflate 1 - Process: Compression
MB/s, More Is Better
Compression 7-2700
SE +/- 4.36, N = 3
236
50
100
150
200
250
1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

lzbench 1.8

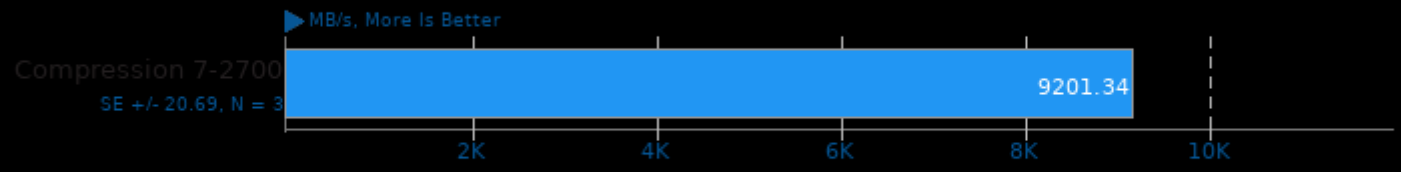
Test: Libdeflate 1 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

LZ4 Compression 1.9.3

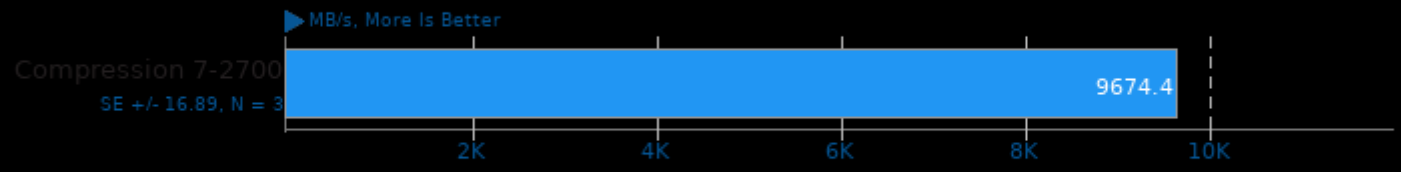
Compression Level: 1 - Compression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

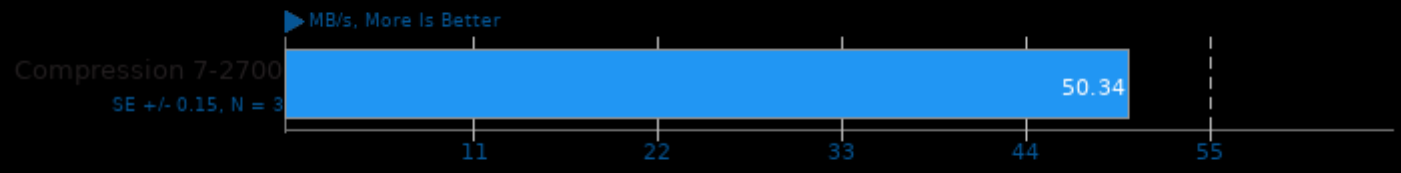
Compression Level: 1 - Decompression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

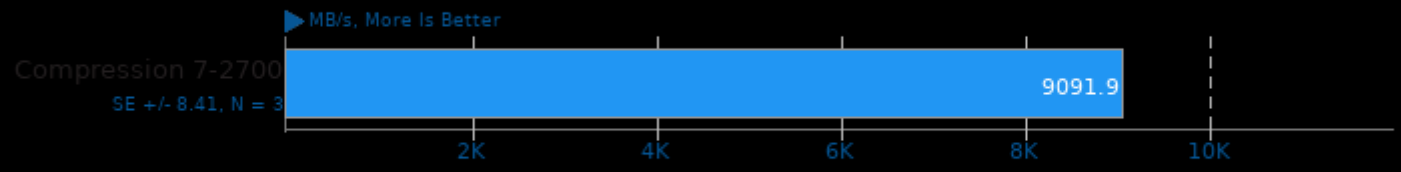
Compression Level: 3 - Compression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

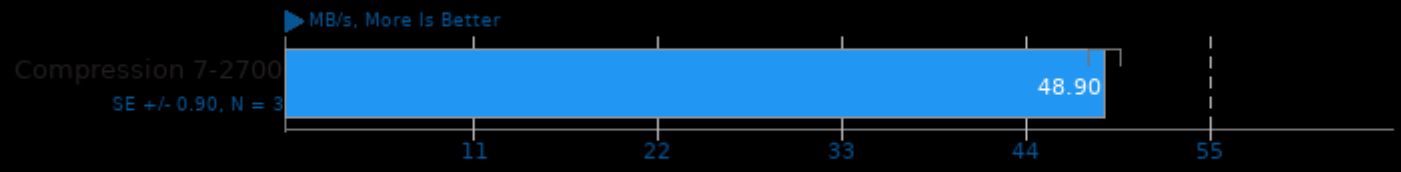
Compression Level: 3 - Decompression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

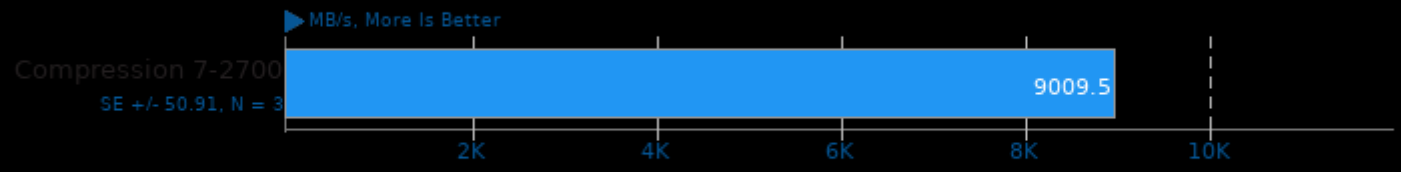
Compression Level: 9 - Compression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

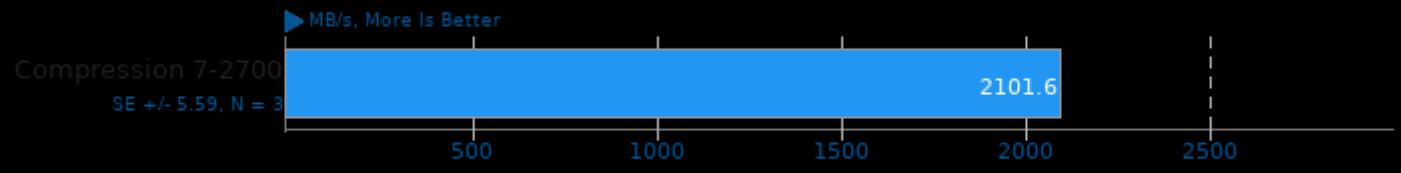
Compression Level: 9 - Decompression Speed



1. (CC) gcc options: -O3

Zstd Compression 1.5.0

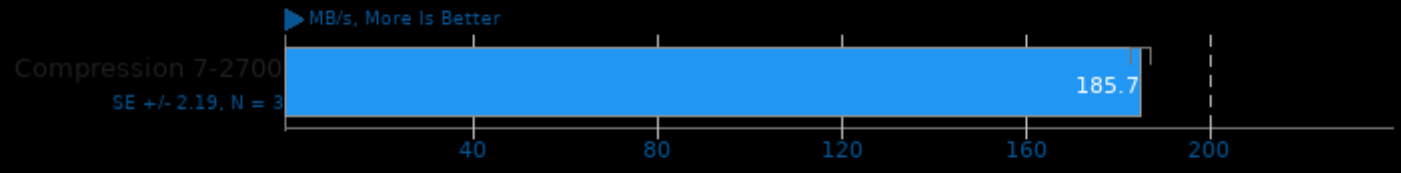
Compression Level: 3 - Compression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

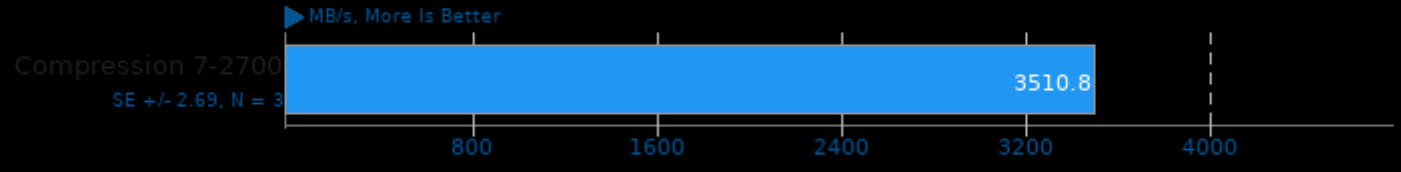
Compression Level: 8 - Compression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

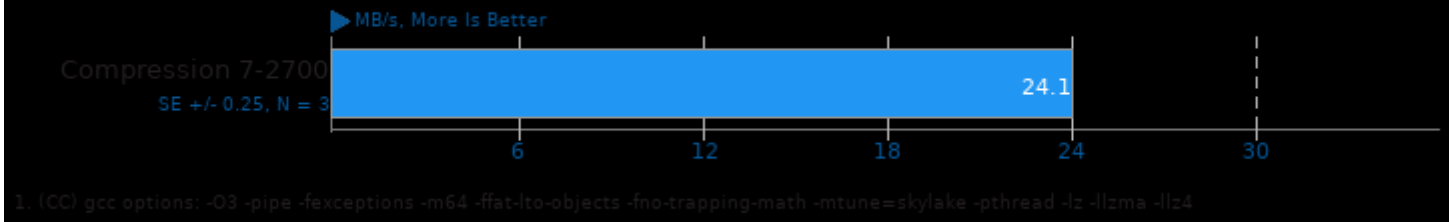
Compression Level: 8 - Decompression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

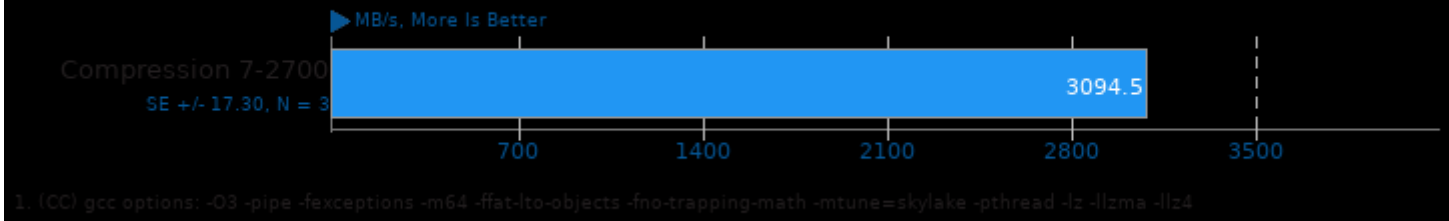
Compression Level: 19 - Compression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

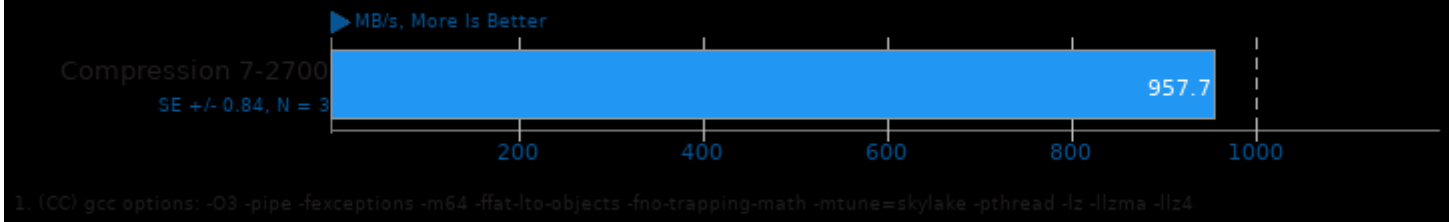
Compression Level: 19 - Decompression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

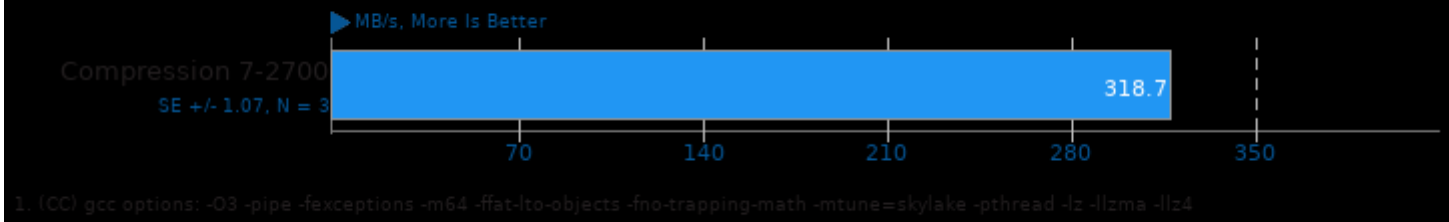
Compression Level: 3, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

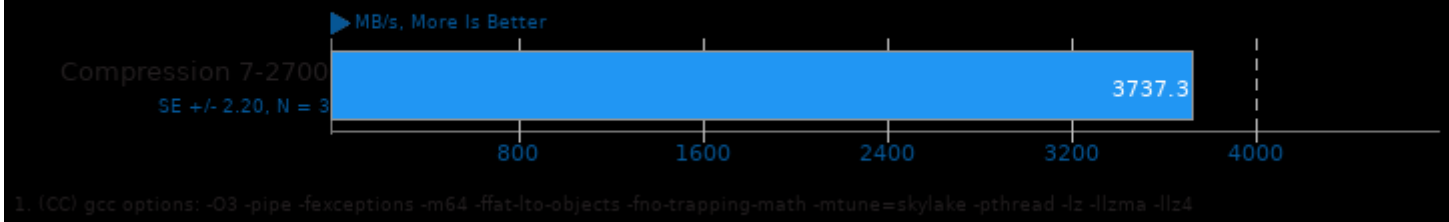
Compression Level: 8, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

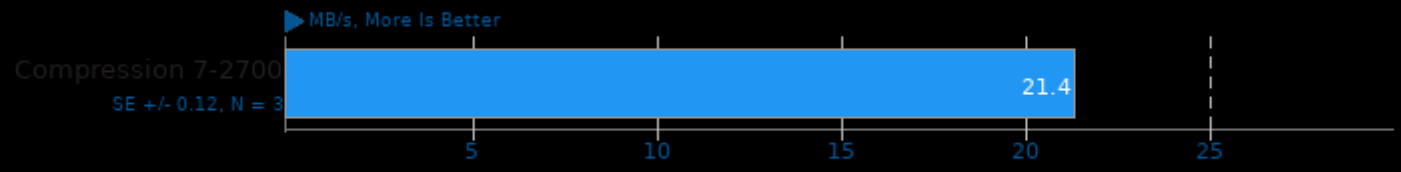
Compression Level: 8, Long Mode - Decompression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

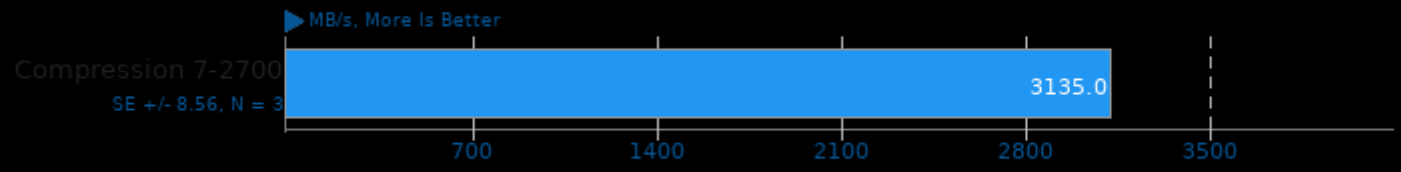
Compression Level: 19, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

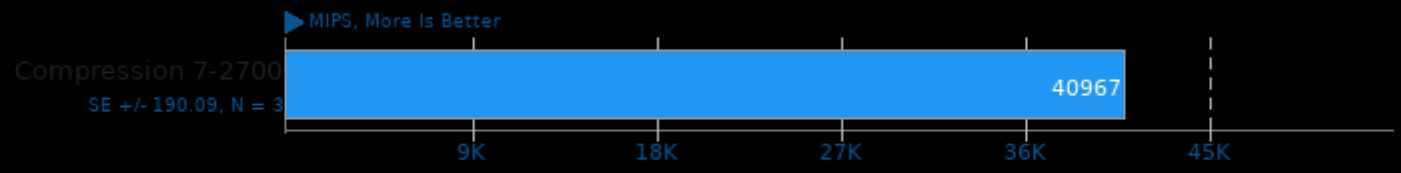
Compression Level: 19, Long Mode - Decompression Speed



1. (CC) gcc options: -O3 -pipe -fexceptions -m64 -ffat-lto-objects -fno-trapping-math -mtune=skylake -pthread -lz -llzma -llz4

7-Zip Compression 16.02

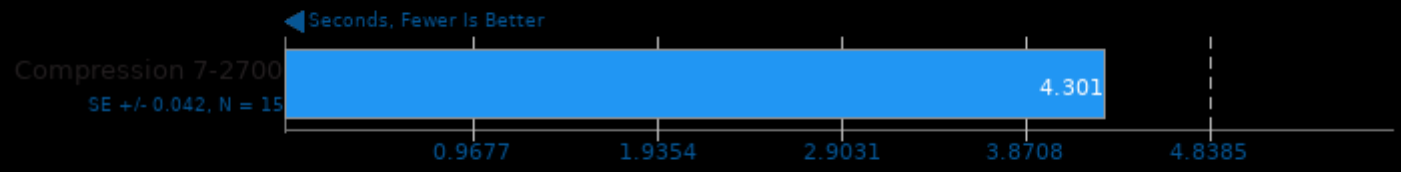
Compress Speed Test



1. (CXX) g++ options: -pipe -lpthread

Parallel BZIP2 Compression 1.1.12

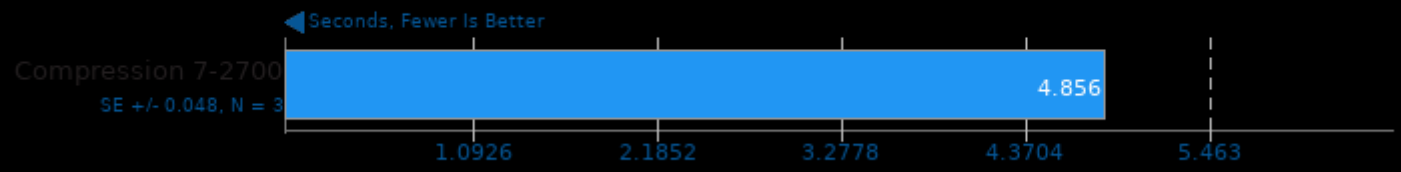
256MB File Compression

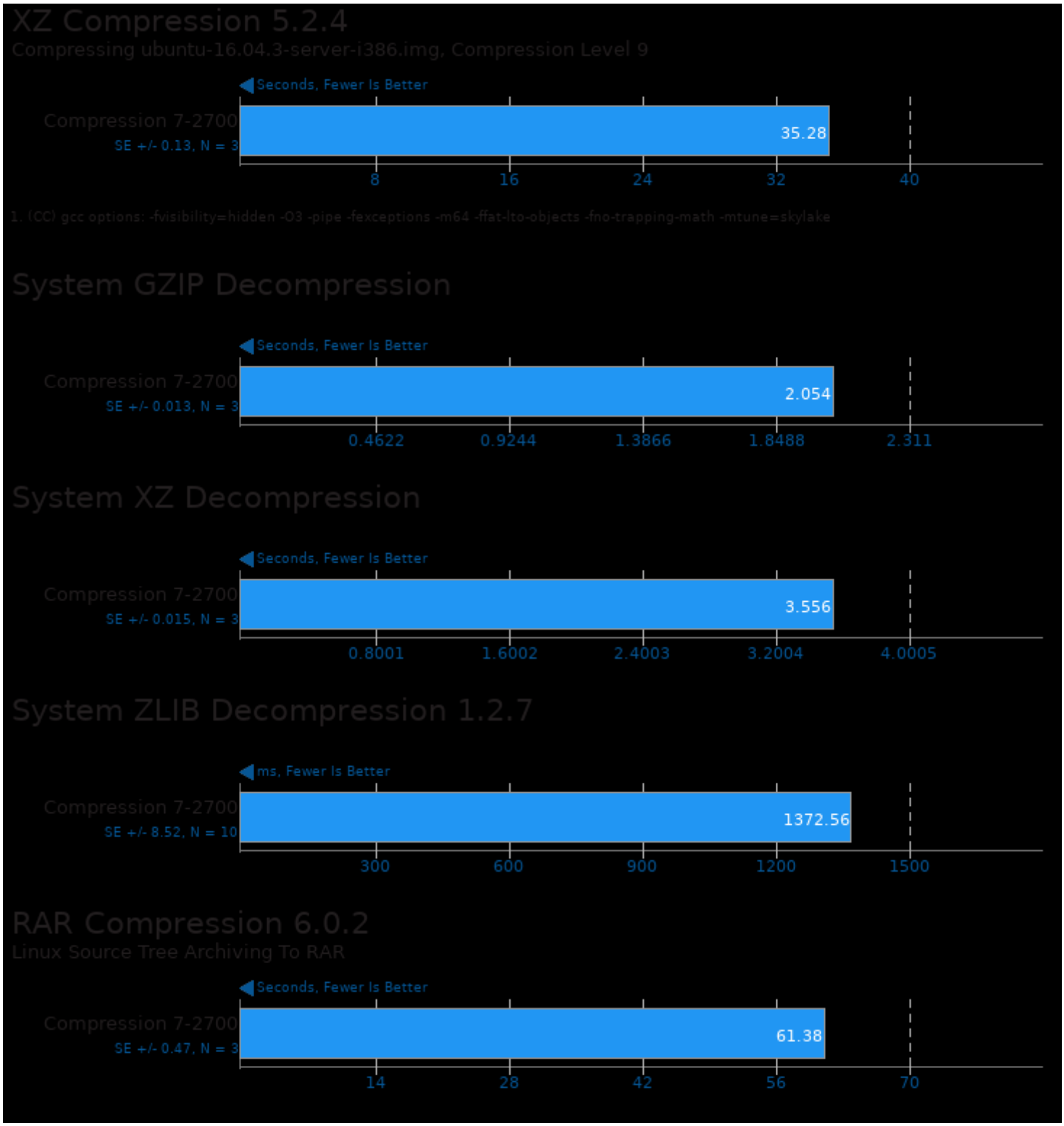


1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread

Gzip Compression

Linux Source Tree Archiving To .tar.gz





This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 09:18.