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5950xCPU

AMD Ryzen 9 5950X 16-Core testing with a MSI MAG B550M MORTAR (MS-7C94) v1.0 (1.70 BIOS) and Zotac NVIDIA GeForce GT 710 2GB on Debian GNU/Linux 11 via the Phoronix Test Suite.

Test Systems:

dajeCPU

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: MSI MAG B550M MORTAR (MS-7C94) v1.0 (1.70 BIOS), Chipset: AMD Starship/Matisse, Memory: 2 x 8 GB DDR4-3200MT/s LD4BU008G-3200XG, Disk: 1000GB Sabrent Rocket 4.0 1TB + 1000GB Western Digital WDS100T1B0A-, Graphics: Zotac NVIDIA GeForce GT 710 2GB, Audio: NVIDIA GK208 HDMI/DP, Monitor: DELL P1917S, Network: Realtek RTL8125 2.5GbE

OS: Debian GNU/Linux 11, Kernel: 5.15.83-1-pve (x86_64), Display Server: X Server, Vulkan: 1.0.2, Compiler: GCC 10.2.1 20210110, File-System: ext4, Screen Resolution: 1280x1024

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-Km9U7s/gcc-10-10.2.1/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-Km9U7s/gcc-10-10.2.1/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: 0x0
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 and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

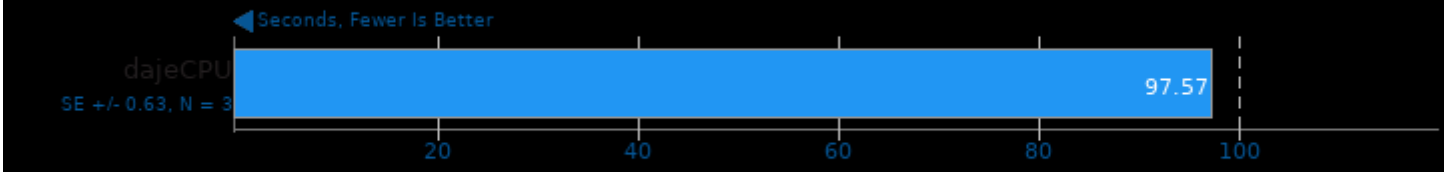
	dajeCPU
Rodinia - OpenMP LavaMD (sec)	97.565
Standard Deviation	1.1%
Rodinia - OpenMP CFD Solver (sec)	11.104
Standard Deviation	0.8%
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	1.00772
Standard Deviation	0.3%
Kvazaar - Bosphorus 4K - Slow (FPS)	16.98
Standard Deviation	1.6%
Kvazaar - Bosphorus 4K - Medium (FPS)	17.55
Standard Deviation	0.1%
Kvazaar - Bosphorus 1080p - Slow (FPS)	69.66
Standard Deviation	0.1%
Kvazaar - Bosphorus 1080p - Medium (FPS)	72.48
Standard Deviation	0.1%
Kvazaar - Bosphorus 4K - Very Fast (FPS)	38.46
Standard Deviation	0.3%
Kvazaar - Bosphorus 4K - Ultra Fast (FPS)	62.58
Standard Deviation	0.3%
Kvazaar - Bosphorus 1080p - Very Fast (FPS)	150.89
Standard Deviation	0.2%
Kvazaar - Bosphorus 1080p - Ultra Fast (FPS)	237.15
Standard Deviation	0.2%
x264 - Bosphorus 4K (FPS)	52.29
Standard Deviation	15.9%
x264 - Bosphorus 1080p (FPS)	213.15
Standard Deviation	16.3%
x265 - Bosphorus 4K (FPS)	28.10
Standard Deviation	3.2%
x265 - Bosphorus 1080p (FPS)	93.29
Standard Deviation	0.9%
7-Zip Compression - Compression Rating (MIPS)	95850
Standard Deviation	0.2%
7-Zip Compression - D.R (MIPS)	149990
Standard Deviation	0.2%
Stockfish - Total Time (Nodes/s)	56065368
Standard Deviation	1.8%
asmFish - 1.H.M.2.D (Nodes/s)	63855244
Standard Deviation	1.6%
Timed GCC Compilation - Time To Compile (sec)	637.364
Standard Deviation	0.4%

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Timed Linux Kernel Compilation - defconfig (sec)	52.493
Standard Deviation	1.5%
Timed Linux Kernel Compilation - allmodconfig (sec)	659.635
Standard Deviation	0.5%
POV-Ray - Trace Time (sec)	20.951
Standard Deviation	0.9%
Radiance Benchmark - Serial (sec)	421.588
Radiance Benchmark - SMP Parallel (sec)	133.619
OpenSSL - SHA256 (byte/s)	28831228430
Standard Deviation	0.2%
OpenSSL - RSA4096 (sign/s)	5198
Standard Deviation	0.3%
OpenSSL - RSA4096 (verify/s)	339156
Standard Deviation	0.1%
ctx_clock - C.S.T (Clocks)	170
Sysbench - CPU (Events/sec)	94434
Standard Deviation	0.1%

Rodinia 3.1

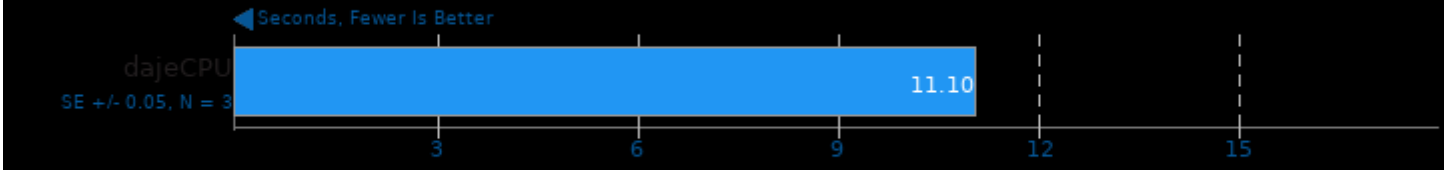
Test: OpenMP LavaMD



1. (CXX) g++ options: -O2 -lOpenCL

Rodinia 3.1

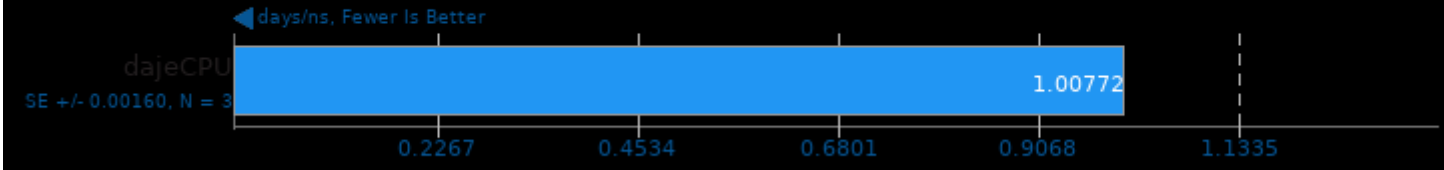
Test: OpenMP CFD Solver



1. (CXX) g++ options: -O2 -lOpenCL

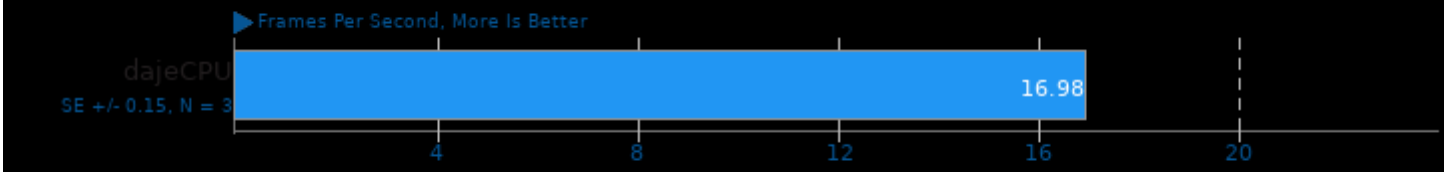
NAMD 2.14

ATPase Simulation - 327,506 Atoms



Kvazaar 2.2

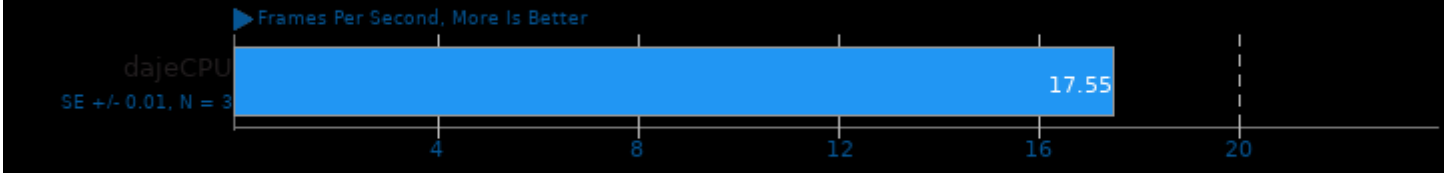
Video Input: Bosphorus 4K - Video Preset: Slow



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

Video Input: Bosphorus 4K - Video Preset: Medium



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

Video Input: Bosphorus 1080p - Video Preset: Slow



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

Video Input: Bosphorus 1080p - Video Preset: Medium



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

Video Input: Bosphorus 4K - Video Preset: Very Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

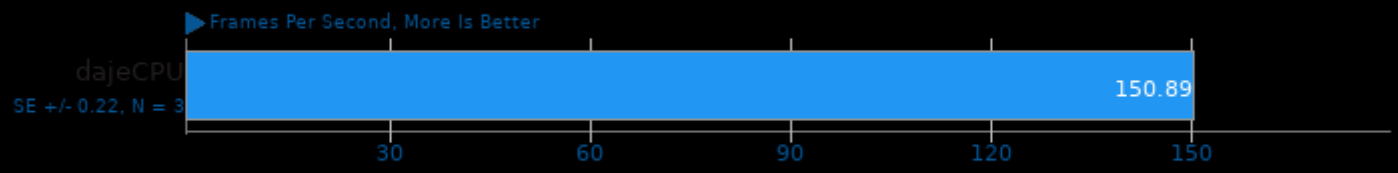
Video Input: Bosphorus 4K - Video Preset: Ultra Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

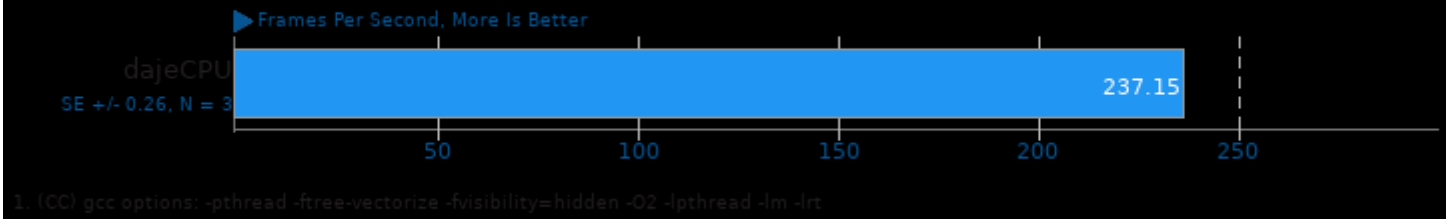
Video Input: Bosphorus 1080p - Video Preset: Very Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.2

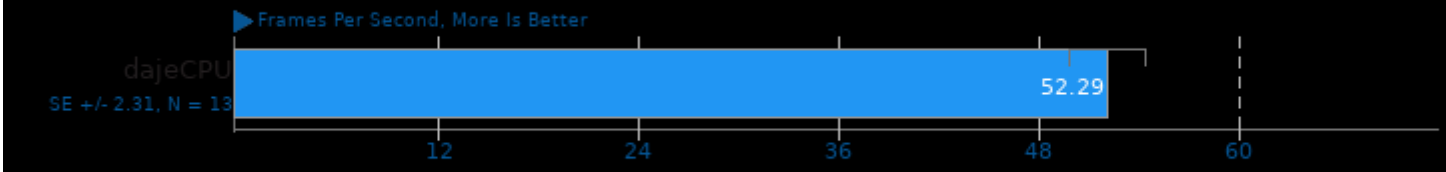
Video Input: Bosphorus 1080p - Video Preset: Ultra Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

x264 2022-02-22

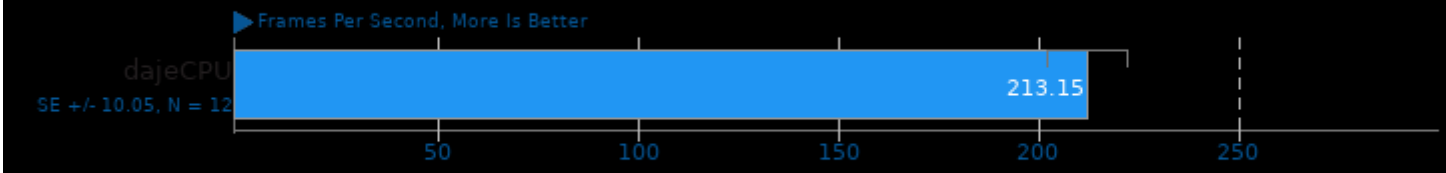
Video Input: Bosphorus 4K



1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -flto

x264 2022-02-22

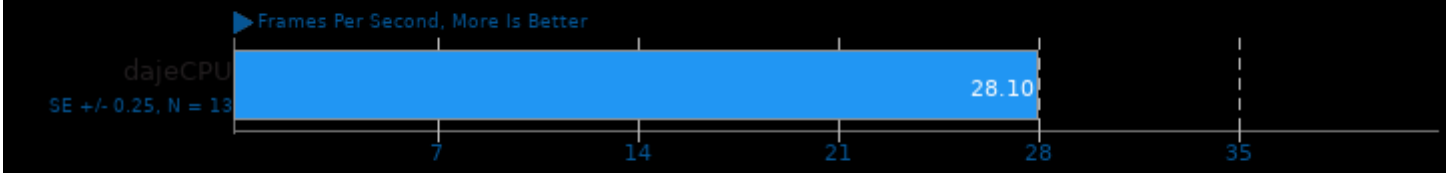
Video Input: Bosphorus 1080p



1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -flto

x265 3.4

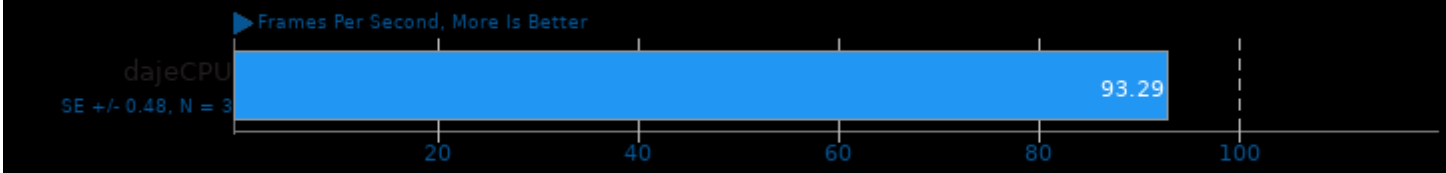
Video Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

x265 3.4

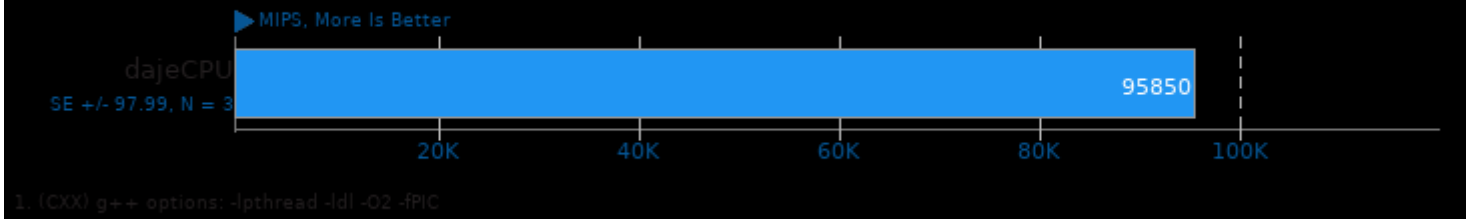
Video Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

7-Zip Compression 22.01

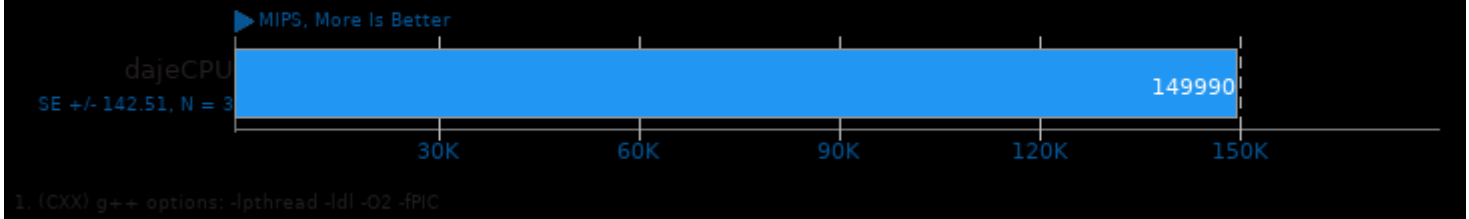
Test: Compression Rating



1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

7-Zip Compression 22.01

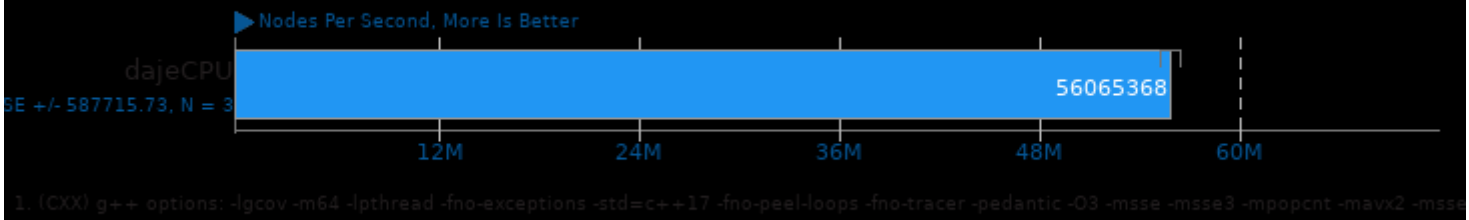
Test: Decompression Rating



1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

Stockfish 15

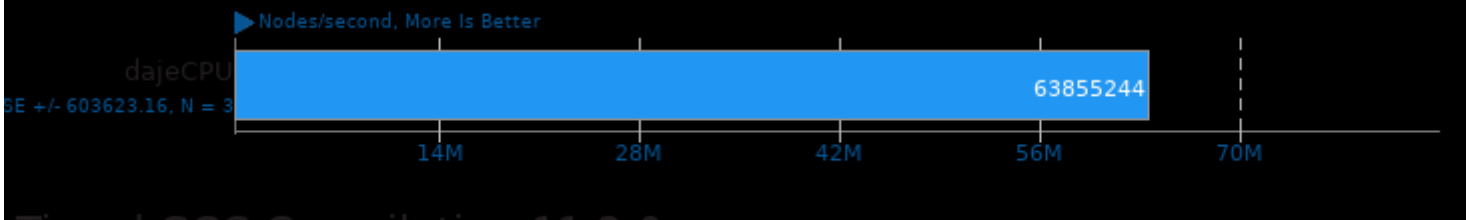
Total Time



1. (CXX) g++ options: -lgcov -m64 -lpthread -fno-exceptions -std=c++17 -fno-peel-loops -fno-tracer -pedantic -O3 -msse -msse3 -mpopcnt -mavx2 -msse

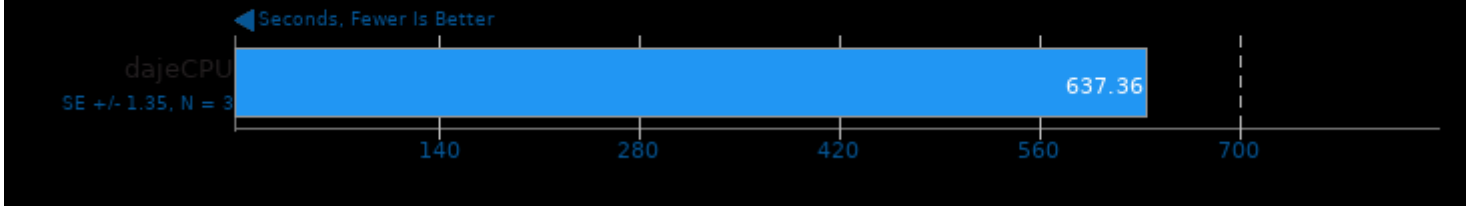
asmFish 2018-07-23

1024 Hash Memory, 26 Depth



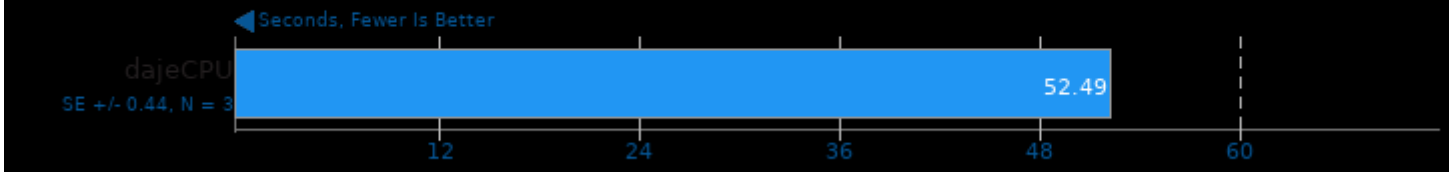
Timed GCC Compilation 11.2.0

Time To Compile



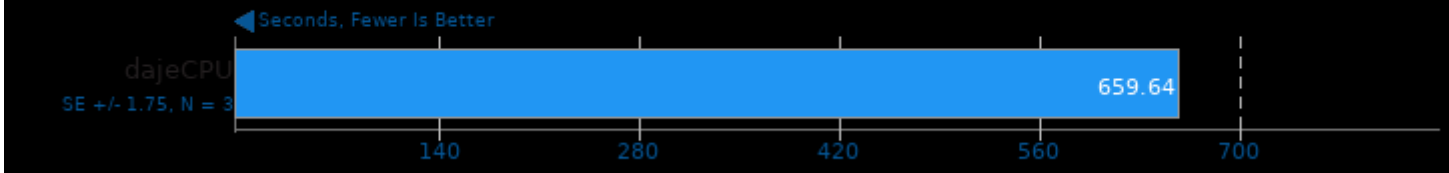
Timed Linux Kernel Compilation 6.1

Build: defconfig



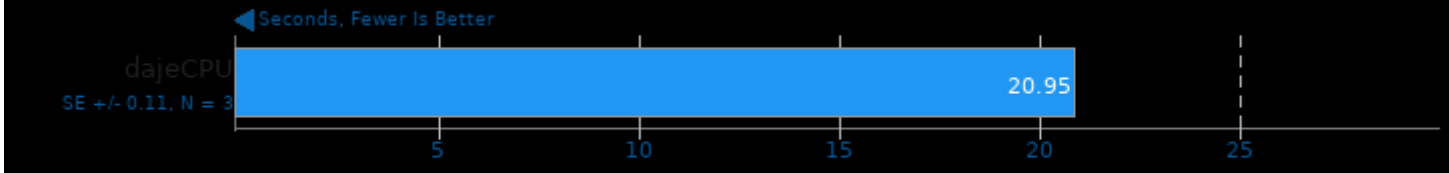
Timed Linux Kernel Compilation 6.1

Build: allmodconfig



POV-Ray 3.7.0.7

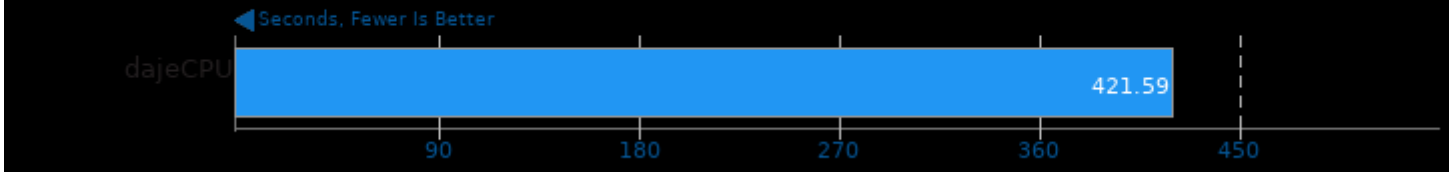
Trace Time



1. (CXX) g++ options: -pipe -O3 -ffast-math -march=native -pthread -lSM -lICE -lX11 -ltiff -ljpeg -lpng -lz -lrt -lm -lboost_thread -lboost_system

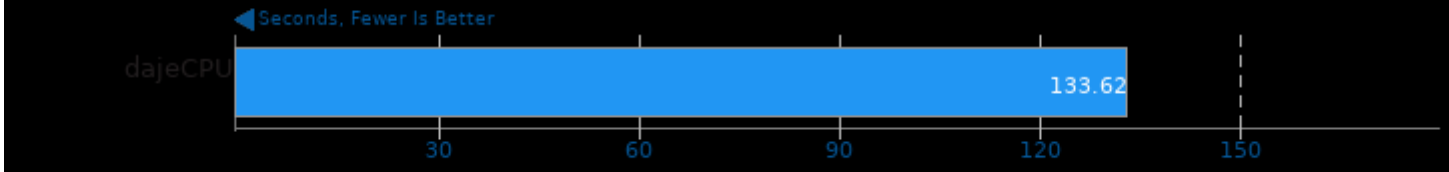
Radiance Benchmark 5.0

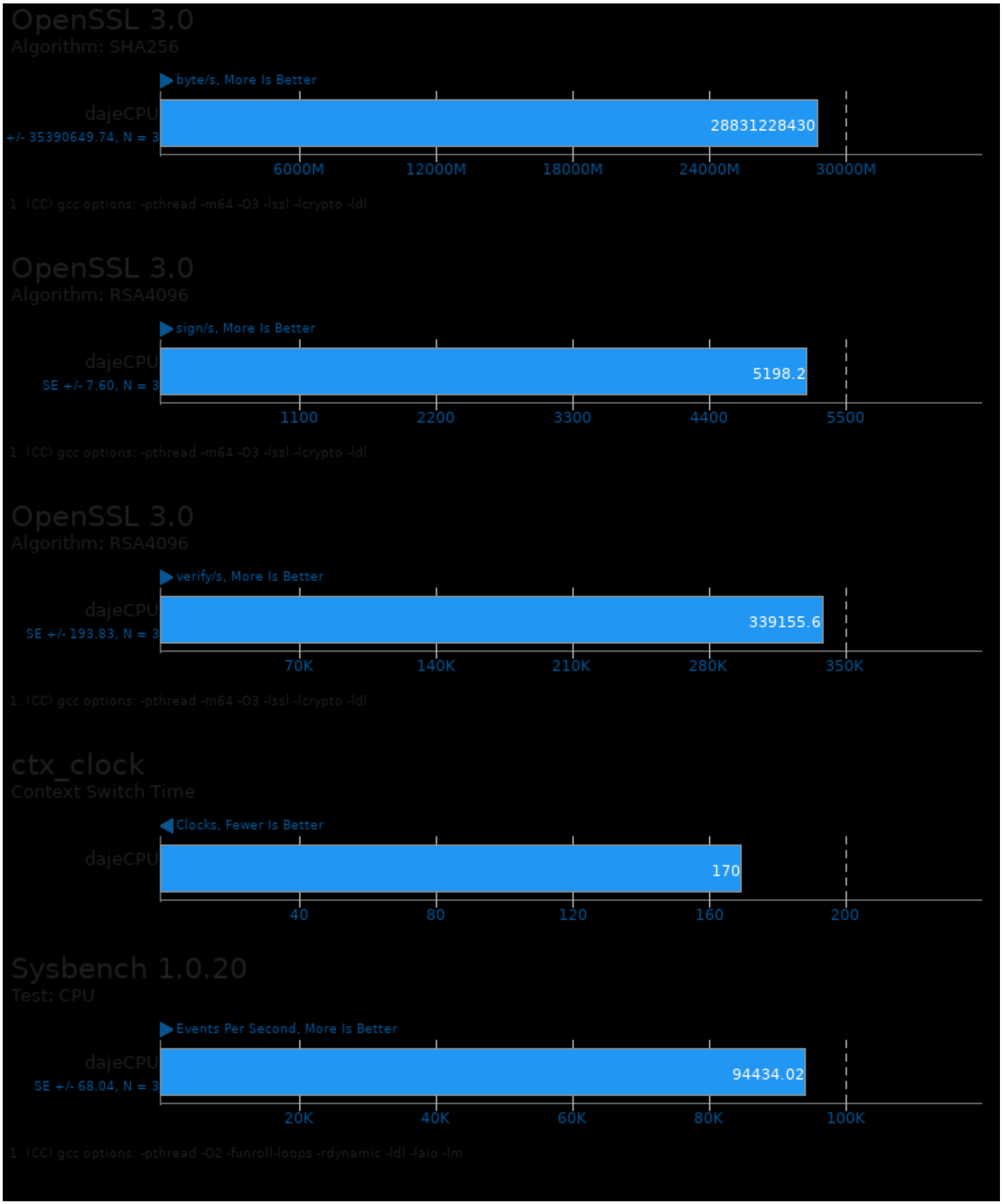
Test: Serial



Radiance Benchmark 5.0

Test: SMP Parallel





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