



www.phoronix-test-suite.com

chess.txt

Docker testing on Ubuntu 20.04.1 LTS via the Phoronix Test Suite.

Automated Executive Summary

Optiplex3060 had the most wins, coming in first place for 51% of the tests.

Based on the geometric mean of all complete results, the fastest (Optiplex3060) was 1.193x the speed of the slowest (AMD Ryzen 5 3400G).

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

NGINX Benchmark (Static Web Page Serving) at 28.311x

Apache Benchmark (Static Web Page Serving) at 3.656x

Timed MrBayes Analysis (Primate Phylogeny Analysis) at 3.44x

GraphicsMagick (Operation: Sharpen) at 2.333x

GraphicsMagick (Operation: HWB Color Space) at 1.87x

GraphicsMagick (Operation: Resizing) at 1.835x

GraphicsMagick (Operation: Rotate) at 1.825x

SciMark (Computational Test: Dense LU Matrix Factorization) at 1.724x

Zstd Compression (Compression Level: 19) at 1.557x

AOBench (Size: 2048 x 2048 - Total Time) at 1.551x.

Test Systems:

AMD Ryzen 5 3400G

Processor: AMD Ryzen 5 3400G @ 4.10GHz (4 Cores / 8 Threads), Motherboard: ASUS TUF B450-PLUS GAMING (2008 BIOS), Memory: 2 x 16384 MB 2933MHz F4-3200C16-16GVK, Disk: 4658GB ST5000DM000-1FK178 + 1863GB ST2000DX001-1CM164 + 60GB ADATA SP900, Graphics: AMD Radeon RX Vega 11 2GB, Network: Realtek PCIe GbE

OS: Microsoft Windows 10 Enterprise Build 17763, Kernel: 10.0 (x86_64), Display Driver: 27.20.14501.28009, OpenCL: OpenCL 2.1 AMD-APP (3188.4), File-System: NTFS, Screen Resolution: 1920x1080

Security Notes: __user pointer sanitization: Disabled + Retpoline: Full + IBPB: Always

Optiplex3060

Processor: Intel Core i5-8500T @ 3.50GHz (6 Cores), Motherboard: Dell 03KWTW (1.7.1 BIOS), Memory: 8GB, Disk: 500GB KINGSTON SA2000M8500G + 3001GB EZRZ-00Z5HB0 + 31GB SanDisk 3.2Gen1, Graphics: i915drmfb (1100MHz), Audio: Realtek ALC3234, Monitor: SAMSUNG

OS: Ubuntu 20.04.1 LTS, Kernel: 5.4.0-65-generic (x86_64), Compiler: GCC 9.3.0, File-System: overlayfs, Screen Resolution: 1920x1080, System Layer: Docker

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=/build/gcc-9-HskZEa/gcc-9.3.0/debian/tmp-nvptx/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-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: 0xde

Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + I1tf: 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/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbs: Mitigation of Microcode + tsx_async_abort: Mitigation of Clear buffers; SMT disabled

	AMD Ryzen 5 3400G	Optiplex3060
Timed MrBayes Analysis - P.P.A (sec)	443.324	128.887
Normalized	29.07%	100%
Standard Deviation	0.4%	0.6%
Zstd Compression - 3 (MB/s)	2350	1662
Normalized	100%	70.72%
Standard Deviation	0.4%	0.9%
Zstd Compression - 19 (MB/s)	16.1	10.34
Normalized	100%	64.22%
Standard Deviation	0.4%	0.6%
SciMark - Composite (Mflops)	538.31	417.17
Normalized	100%	77.5%
Standard Deviation	0.8%	0.2%
SciMark - Monte Carlo (Mflops)	132.47	89.07
Normalized	100%	67.24%
Standard Deviation	0.4%	0.2%
SciMark - F.F.T (Mflops)	127.01	151.68
Normalized	83.74%	100%

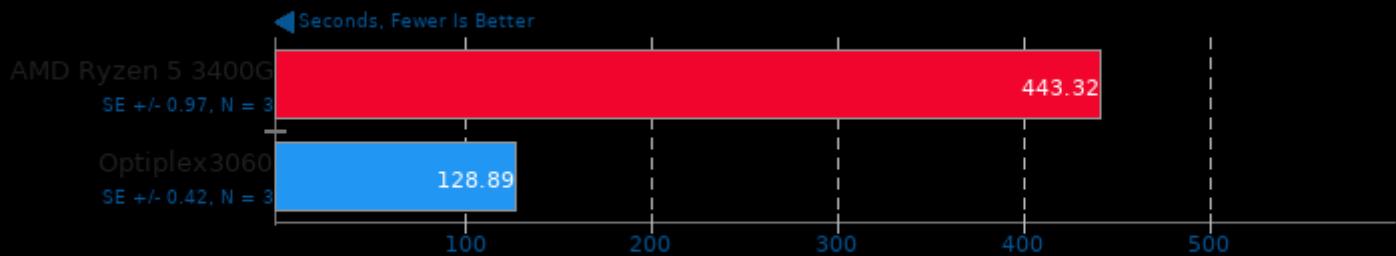
chess.txt

Standard Deviation	2.4%	0.4%
SciMark - S.M.M (Mflops)	653.15	545.41
Normalized	100%	83.5%
Standard Deviation	0.8%	0.3%
SciMark - D.L.M.F (Mflops)	670.14	388.73
Normalized	100%	58.01%
Standard Deviation	0.4%	0.5%
SciMark - J.S.O.R (Mflops)	1109	910.96
Normalized	100%	82.16%
Standard Deviation	1.7%	0.5%
TSCP - A.C.P (Nodes/s)	986708	997796
Normalized	98.89%	100%
Standard Deviation	0.2%	0.4%
John The Ripper - Blowfish (Real C/S)	8676	6526
Normalized	100%	75.22%
Standard Deviation	0.2%	0.3%
John The Ripper - MD5 (Real C/S)	261089	392891
Normalized	66.45%	100%
Standard Deviation	2.4%	0.2%
GraphicsMagick - Swirl (Iterations/min)	183	165
Normalized	100%	90.16%
GraphicsMagick - Rotate (Iterations/min)	314	573
Normalized	54.8%	100%
Standard Deviation		3.4%
GraphicsMagick - Sharpen (Iterations/min)	27	63
Normalized	42.86%	100%
Standard Deviation		0.9%
GraphicsMagick - Enhanced (Iterations/min)	79	94
Normalized	84.04%	100%
GraphicsMagick - Resizing (Iterations/min)	249	457
Normalized	54.49%	100%
GraphicsMagick - Noise-Gaussian (Iterations/min)	80	99
Normalized	80.81%	100%
GraphicsMagick - HWB Color Space (Iterations/min)	315	589
Normalized	53.48%	100%
Standard Deviation	0.3%	0.3%
dav1d - Chimera 1080p (FPS)	241.27	240.52
Normalized	100%	99.69%
Standard Deviation	0.5%	1.7%
dav1d - Summer Nature 4K (FPS)	76.09	67.51
Normalized	100%	88.72%
Standard Deviation	0.9%	0.7%
dav1d - S.N.1 (FPS)	309.35	231.60
Normalized	100%	74.87%
Standard Deviation	0.4%	0.7%
dav1d - C.1.1.b (FPS)	54.22	63.87
Normalized	84.89%	100%
Standard Deviation	0.3%	4.8%
SVT-AV1 - Enc Mode 4 - 1080p (FPS)	1.302	1.293
Normalized	100%	99.31%
Standard Deviation	0.4%	0.1%
SVT-AV1 - Enc Mode 8 - 1080p (FPS)	10.556	10.981
Normalized	96.13%	100%
Standard Deviation	0.7%	0.2%
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS)	67.78	72.19

Normalized	93.89%	100%
Standard Deviation	13.8%	2.4%
SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS)	55.67	59.71
Normalized	93.23%	100%
Standard Deviation	0.9%	0.4%
x264 - H.2.V.E (FPS)	37.95	43.42
Normalized	87.4%	100%
Standard Deviation	4.3%	2.3%
7-Zip Compression - C.S.T (MIPS)	20230	19761
Normalized	100%	97.68%
Standard Deviation	0.5%	0.7%
Stockfish - Total Time (Nodes/s)	8484501	
Normalized	2.4%	
C-Ray - Total Time - 4.1.R.P.P (sec)	130.704	150.202
Normalized	100%	87.02%
Standard Deviation	0.3%	0.2%
AOBench - 2048 x 2048 - Total Time (sec)	64.125	41.352
Normalized	64.49%	100%
Standard Deviation	1.3%	0.1%
XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)	68.158	70.961
Normalized	100%	96.05%
Standard Deviation	0.7%	0.2%
FLAC Audio Encoding - WAV To FLAC (sec)	9.596	11.402
Normalized	100%	84.16%
Standard Deviation	0.8%	1.7%
LAME MP3 Encoding - WAV To MP3 (sec)	11.141	10.617
Normalized	95.3%	100%
Standard Deviation	0%	0.1%
Basis Universal - ETC1S (sec)	95.015	83.342
Normalized	87.71%	100%
Standard Deviation	0.8%	0.3%
Basis Universal - UASTC Level 0 (sec)	11.742	13.159
Normalized	100%	89.23%
Standard Deviation	0.5%	0.1%
Basis Universal - UASTC Level 3 (sec)	130.909	144.579
Normalized	100%	90.54%
Standard Deviation	0.3%	0.3%
NGINX Benchmark - S.W.P.S (Req/sec)	745.68	21111
Normalized	3.53%	100%
Standard Deviation	0.8%	0.1%
Apache Benchmark - S.W.P.S (Req/sec)	6388	23357
Normalized	27.35%	100%
Standard Deviation	0.1%	0.9%

Timed MrBayes Analysis 3.2.7

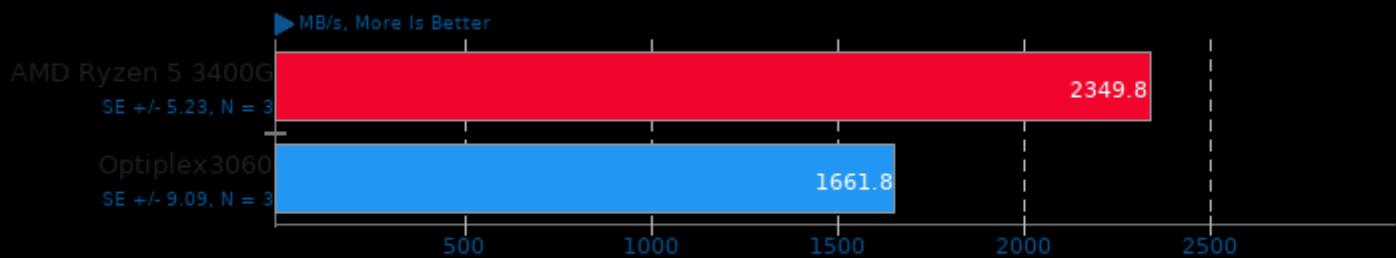
Primate Phylogeny Analysis



1. (CC) gcc options: -mmmx -msse -msse2 -msse3 -mssse3 -msse4.1 -msse4.2 -maes -mavx -mfma -mavx2 -mrdrnd -mbmi -mbmi2 -madx -mmpx -mabm

Zstd Compression 1.4.5

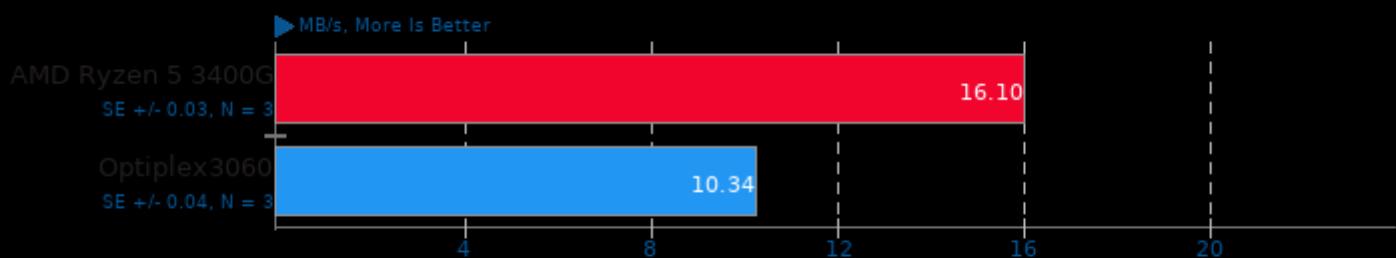
Compression Level: 3



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

Zstd Compression 1.4.5

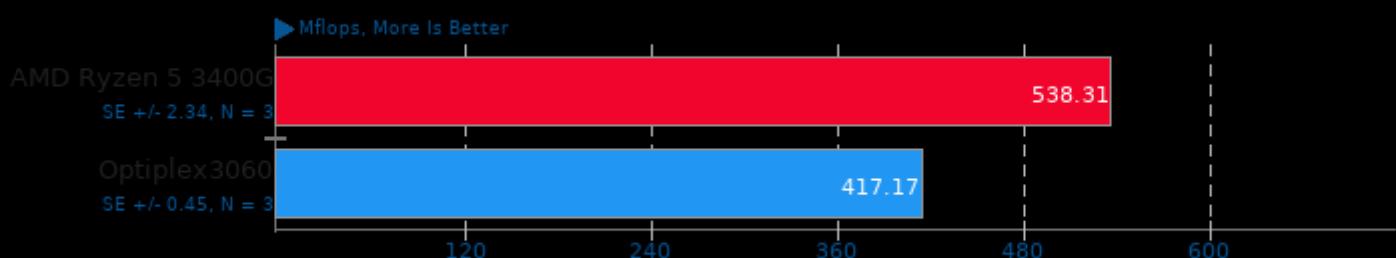
Compression Level: 19



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

SciMark 2.0

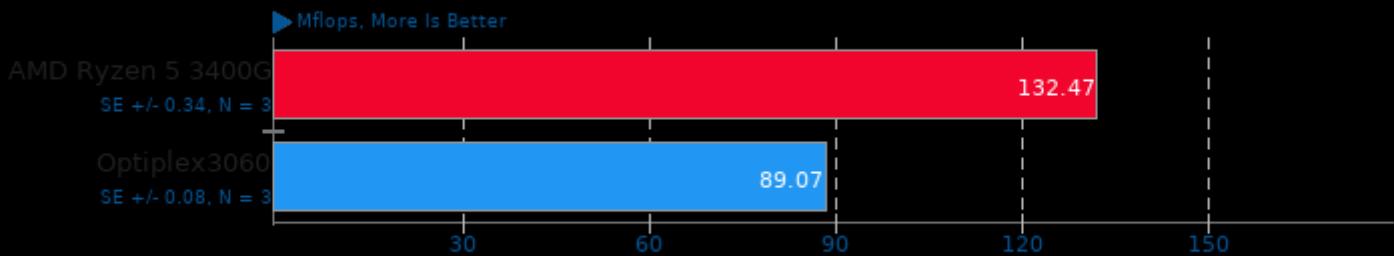
Computational Test: Composite



1. (CC) gcc options: -lm

SciMark 2.0

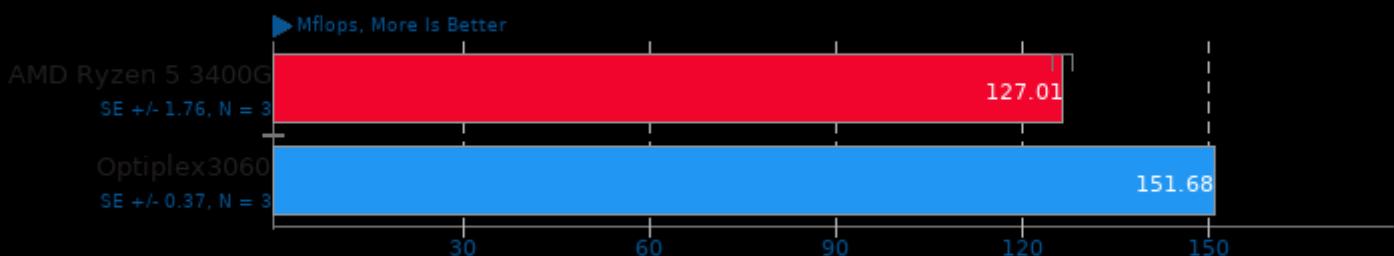
Computational Test: Monte Carlo



1. (CC) gcc options: -lm

SciMark 2.0

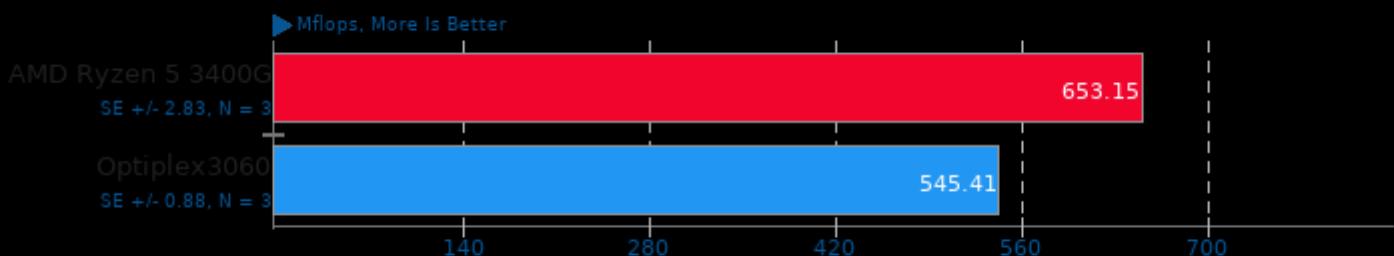
Computational Test: Fast Fourier Transform



1. (CC) gcc options: -lm

SciMark 2.0

Computational Test: Sparse Matrix Multiply



1. (CC) gcc options: -lm

SciMark 2.0

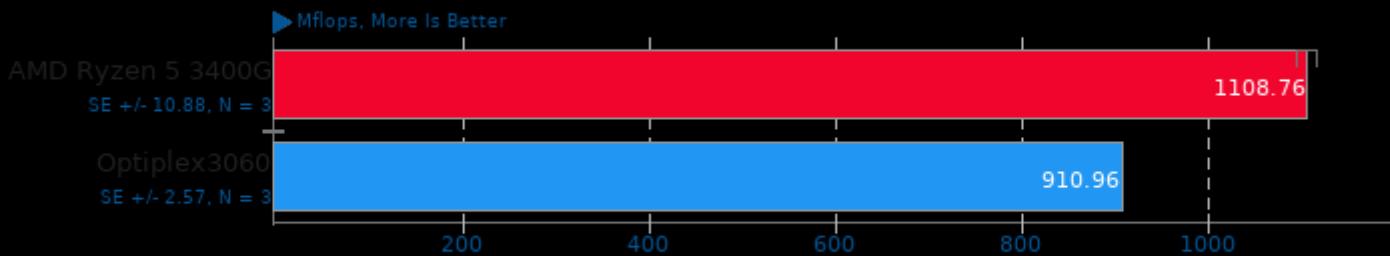
Computational Test: Dense LU Matrix Factorization



1. (CC) gcc options: -lm

SciMark 2.0

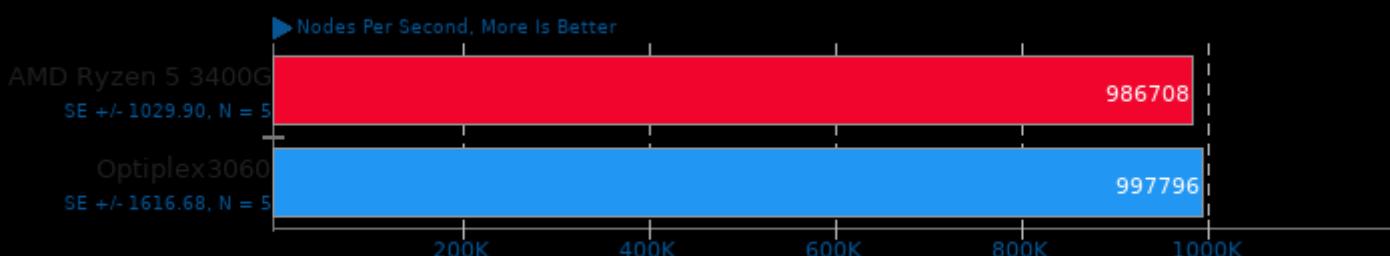
Computational Test: Jacobi Successive Over-Relaxation



1. (CC) gcc options: -lm

TSCP 1.81

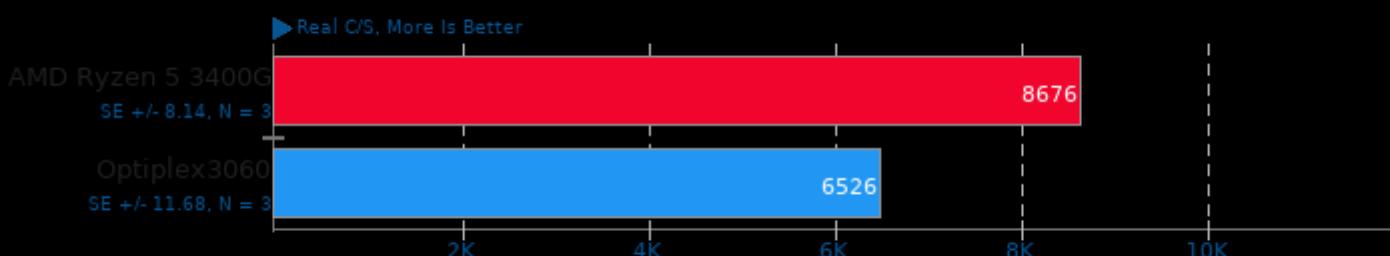
AI Chess Performance



1. (CC) gcc options: -O3 -march=native

John The Ripper 1.9.0-jumbo-1

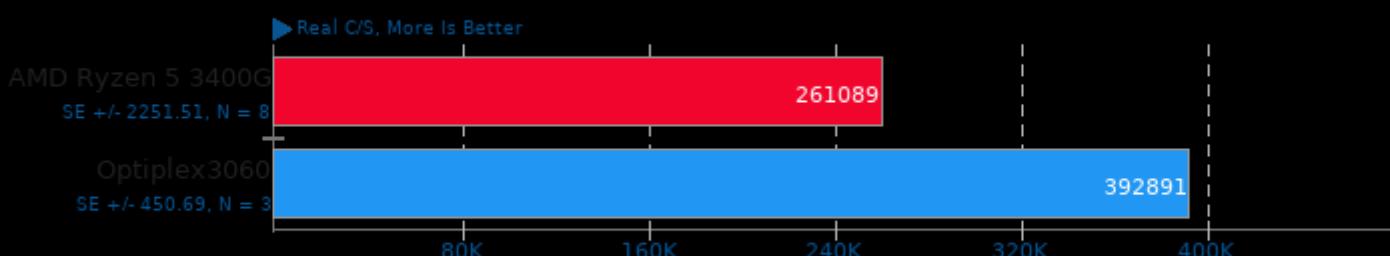
Test: Blowfish



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -pthread -lm -lz -ldl -lcrypt

John The Ripper 1.9.0-jumbo-1

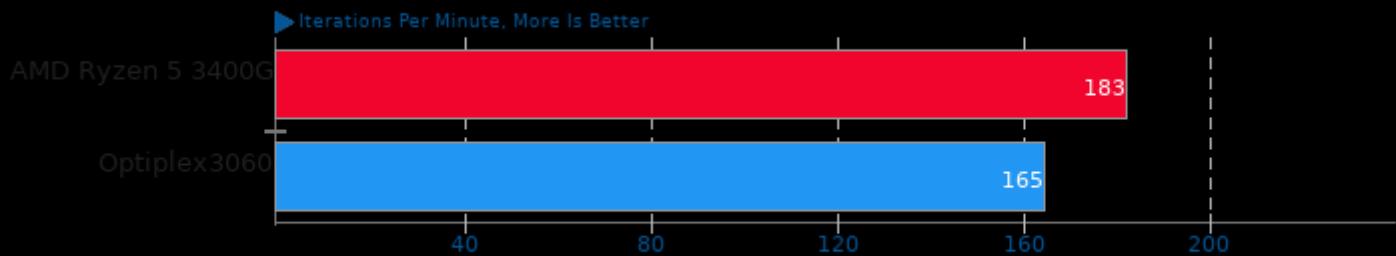
Test: MD5



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -pthread -lm -lz -ldl -lcrypt

GraphicsMagick 1.3.33

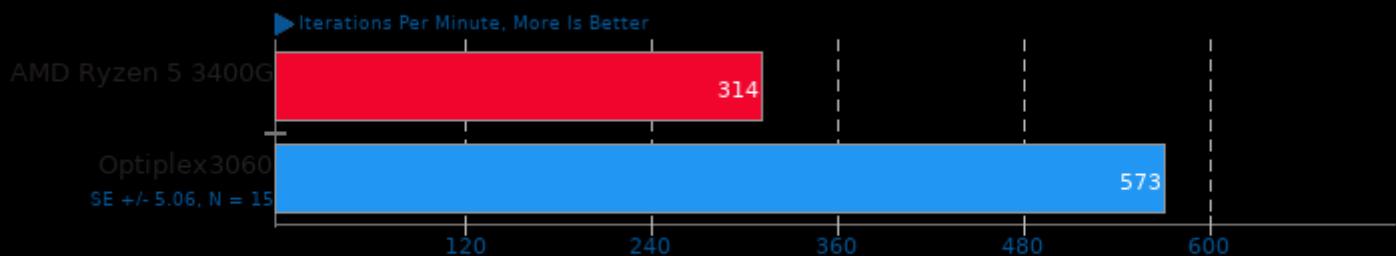
Operation: Swirl



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

GraphicsMagick 1.3.33

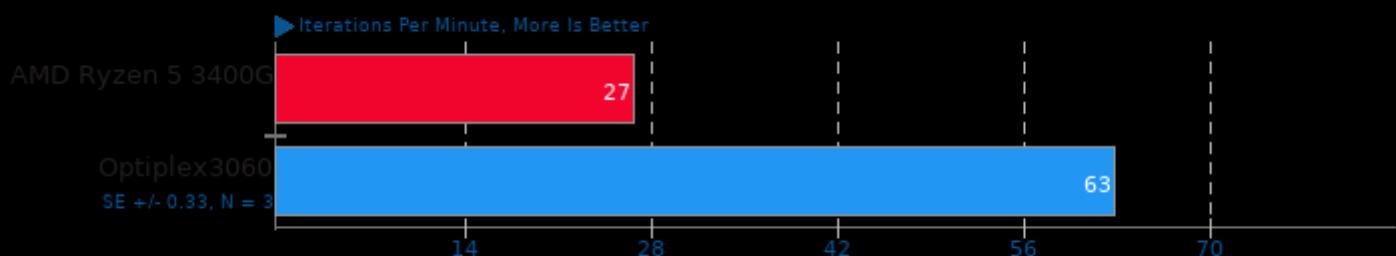
Operation: Rotate



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

GraphicsMagick 1.3.33

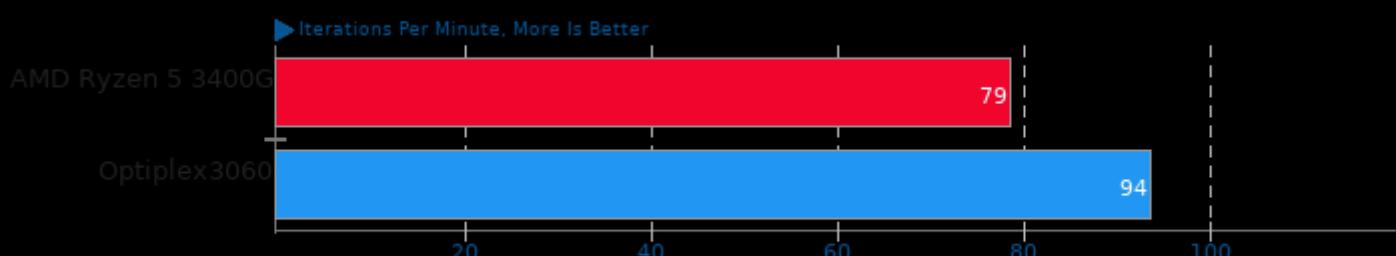
Operation: Sharpen



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

GraphicsMagick 1.3.33

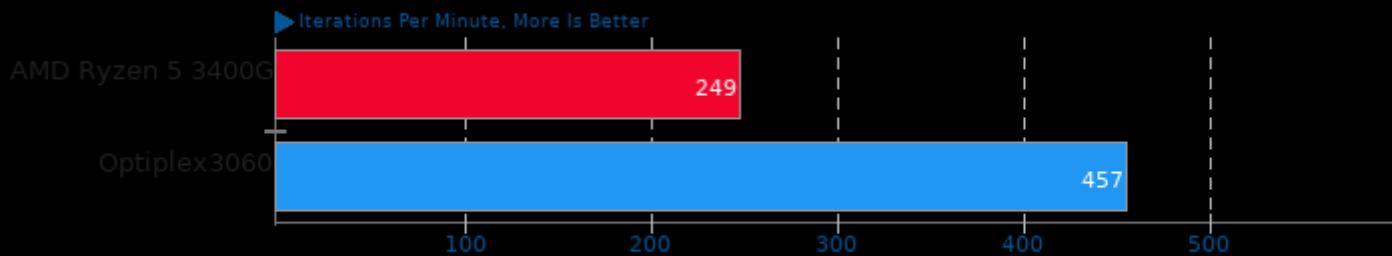
Operation: Enhanced



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

GraphicsMagick 1.3.33

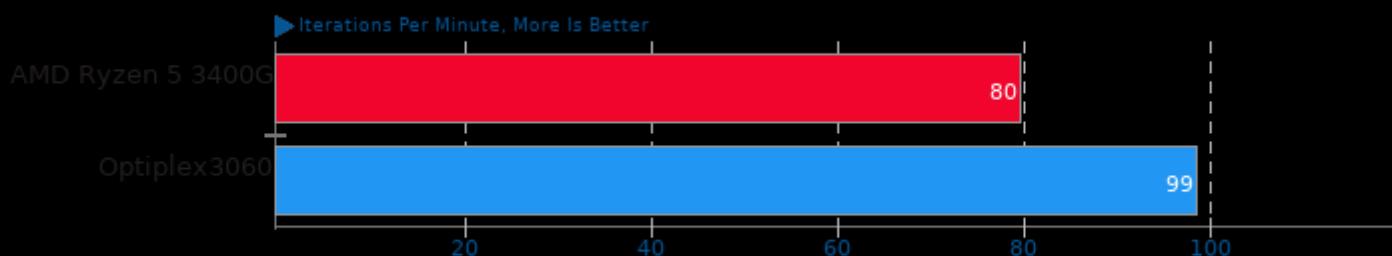
Operation: Resizing



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

GraphicsMagick 1.3.33

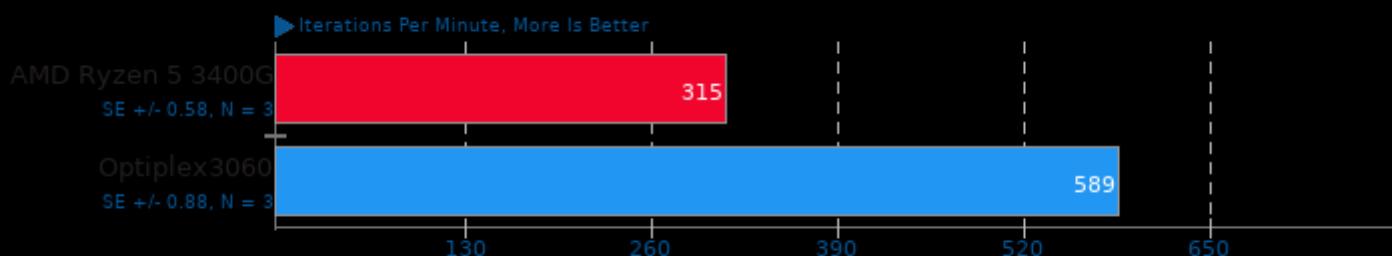
Operation: Noise-Gaussian



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

GraphicsMagick 1.3.33

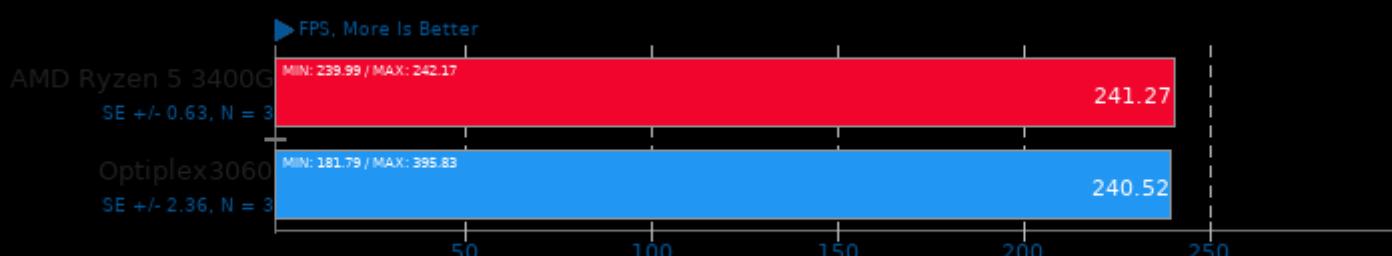
Operation: HWB Color Space



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

dav1d 0.8.1

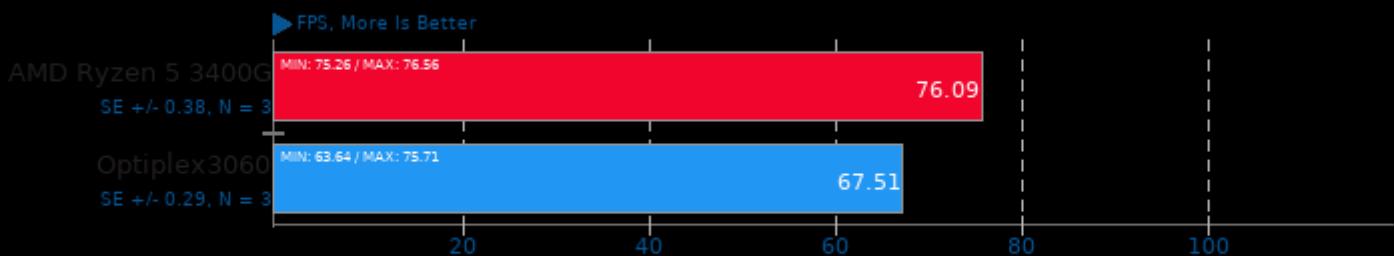
Video Input: Chimera 1080p



1. (CC) gcc options: -pthread

dav1d 0.8.1

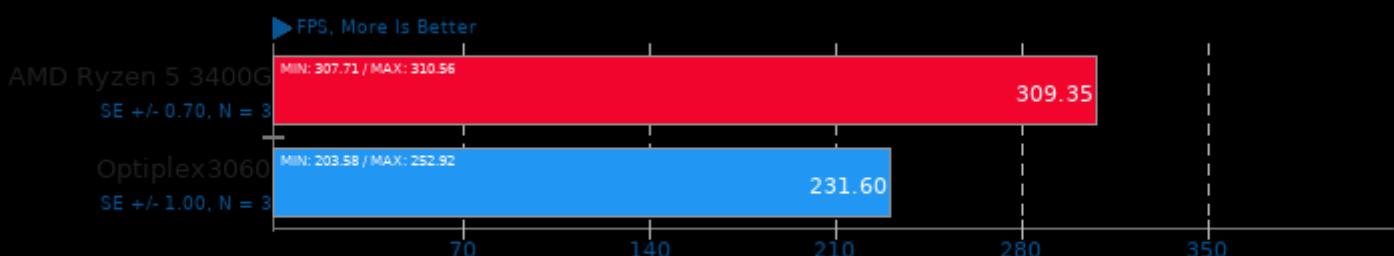
Video Input: Summer Nature 4K



1. (CC) gcc options: -pthread

dav1d 0.8.1

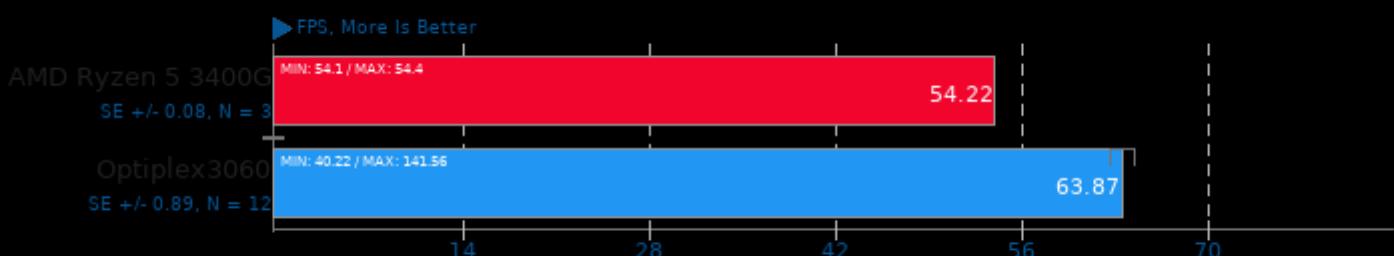
Video Input: Summer Nature 1080p



1. (CC) gcc options: -pthread

dav1d 0.8.1

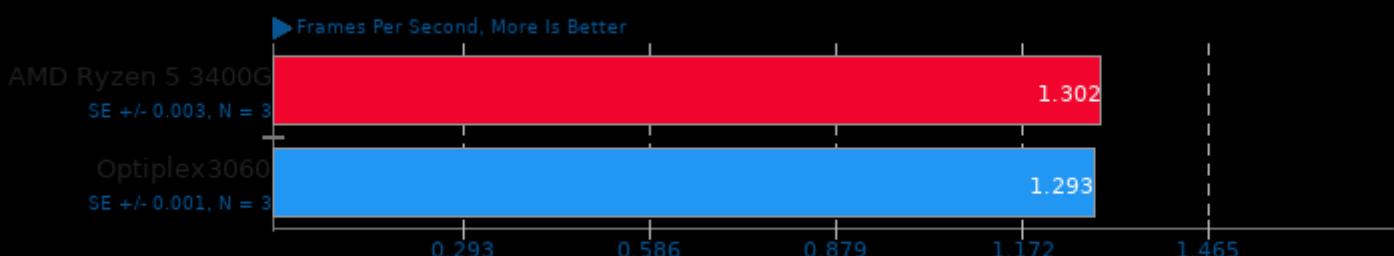
Video Input: Chimera 1080p 10-bit



1. (CC) gcc options: -pthread

SVT-AV1 0.8

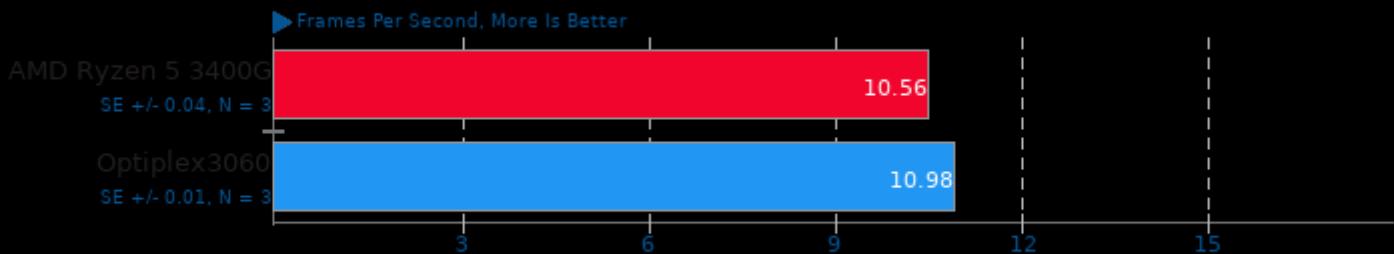
Encoder Mode: Enc Mode 4 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

SVT-AV1 0.8

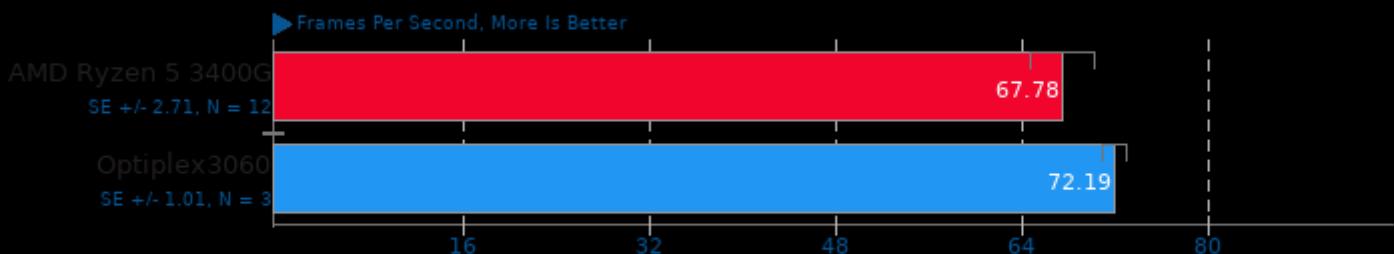
Encoder Mode: Enc Mode 8 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

SVT-VP9 0.1

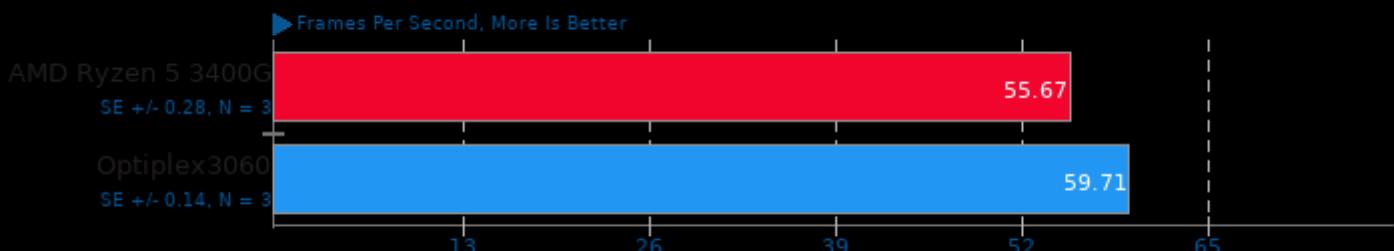
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-VP9 0.1

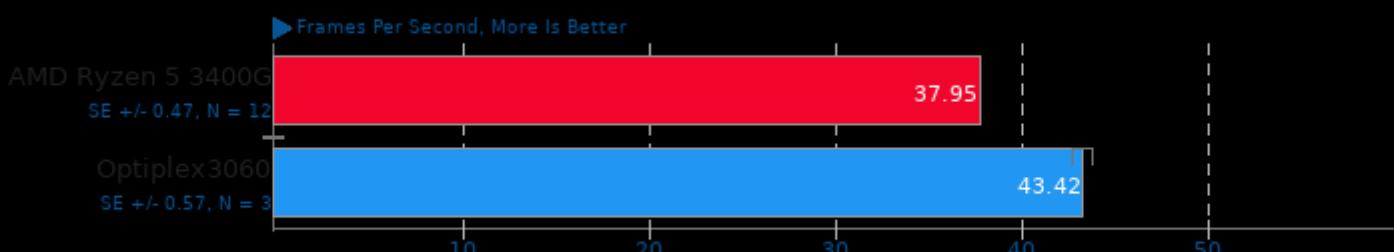
Tuning: Visual Quality Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

x264 2019-12-17

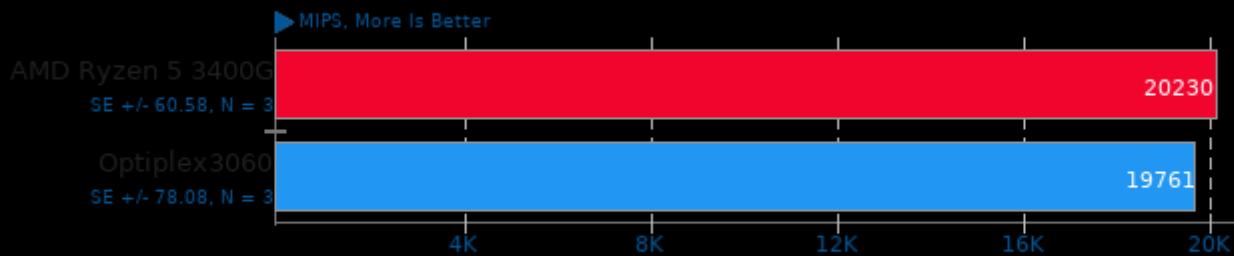
H.264 Video Encoding



1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fPIC -fomit-frame-pointer -fno-tree-vectorize

7-Zip Compression 16.02

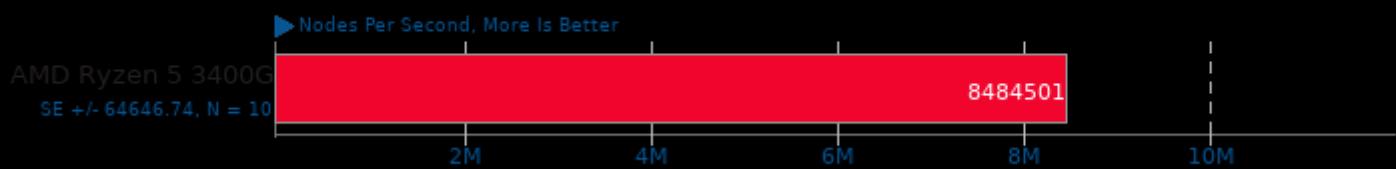
Compress Speed Test



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

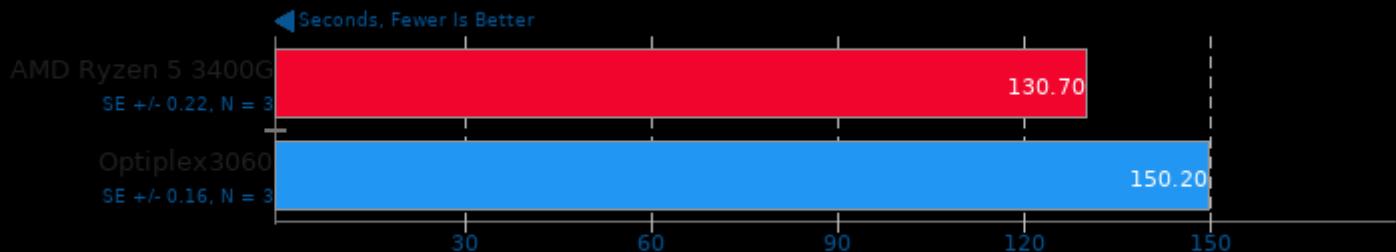
Stockfish 12

Total Time



C-Ray 1.1

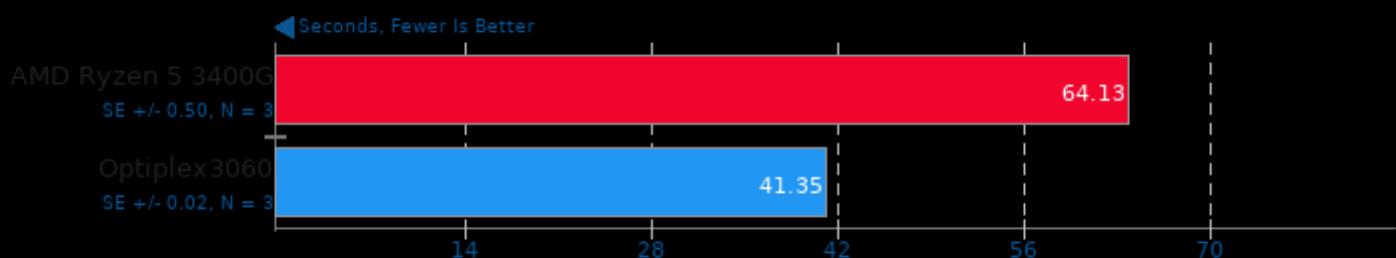
Total Time - 4K, 16 Rays Per Pixel



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

AOBench

Size: 2048 x 2048 - Total Time

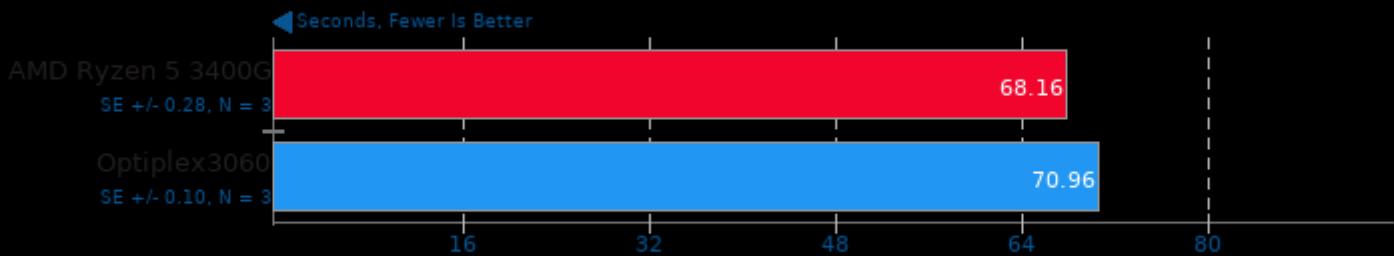


1. (CC) gcc options: -lm -O3

chess.txt

XZ Compression 5.2.4

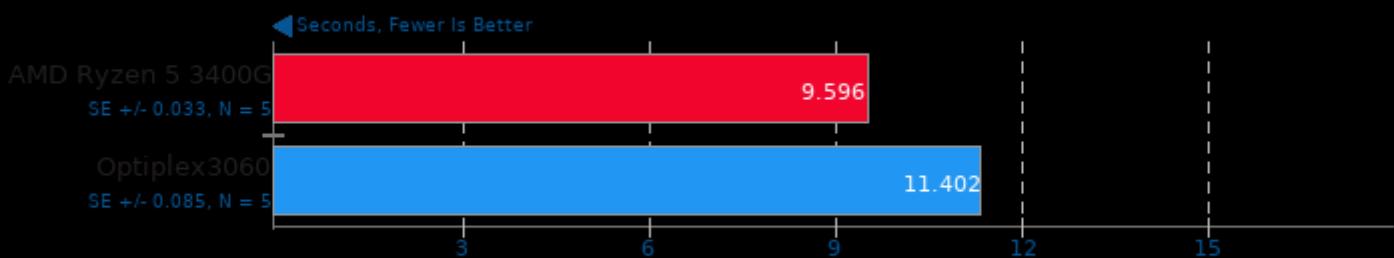
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 9



1. (CC) gcc options: -pthread -fvisibility=hidden -O2

FLAC Audio Encoding 1.3.2

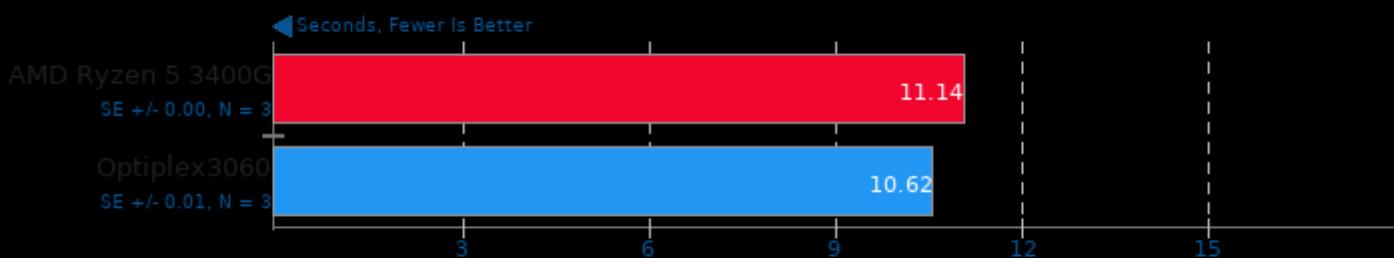
WAV To FLAC



1. (CXX) g++ options: -O2 -fvisibility=hidden -lm

LAME MP3 Encoding 3.100

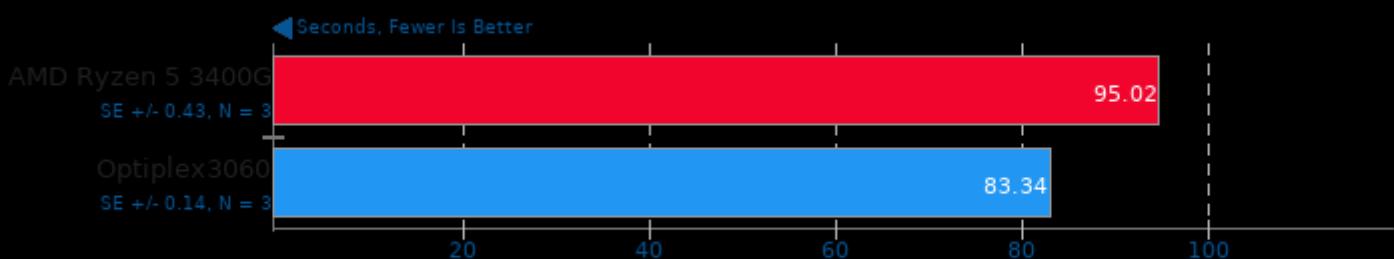
WAV To MP3



1. (CC) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr-pipe -lm

Basis Universal 1.12

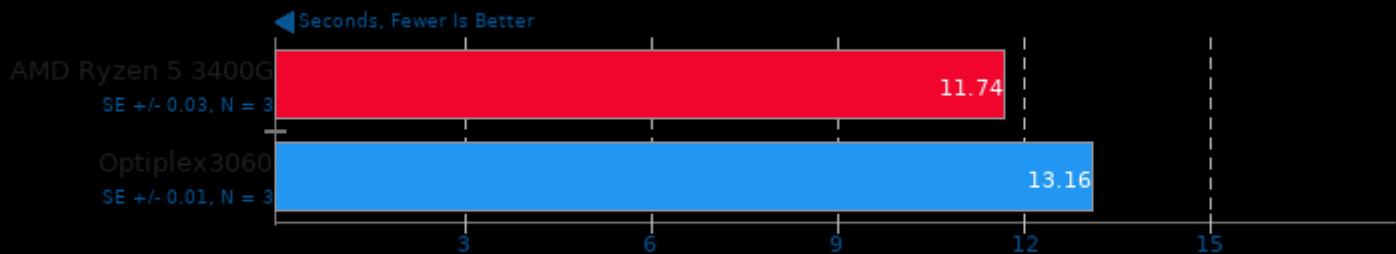
Settings: ETC1S



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

Basis Universal 1.12

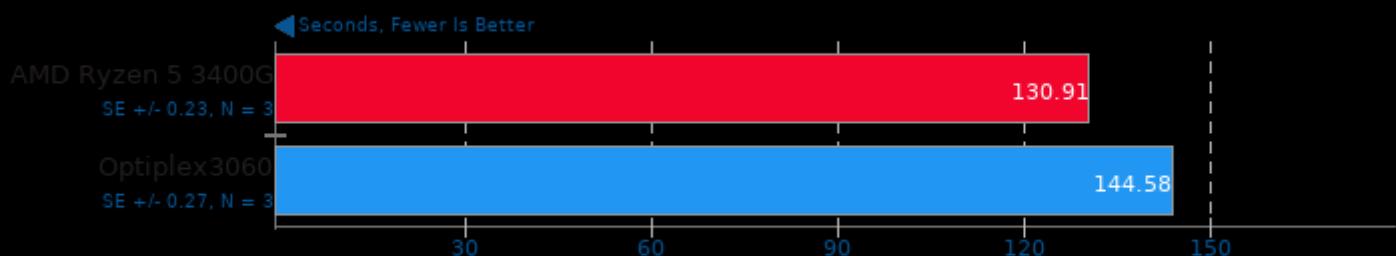
Settings: UASTC Level 0



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

Basis Universal 1.12

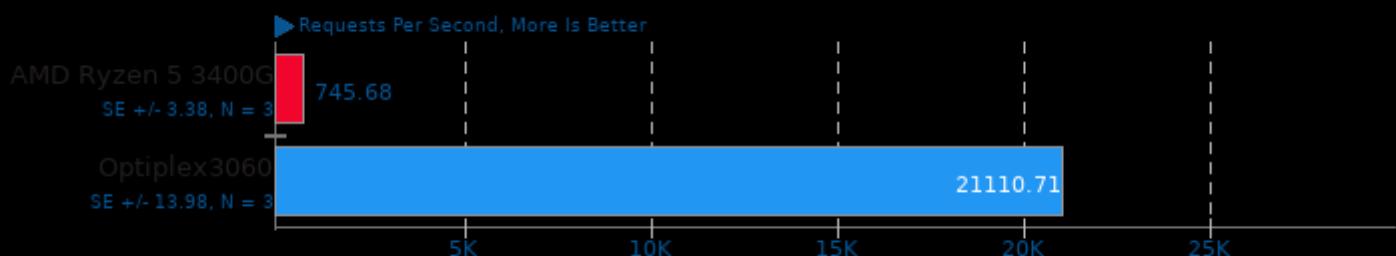
Settings: UASTC Level 3



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

NGINX Benchmark 1.9.9

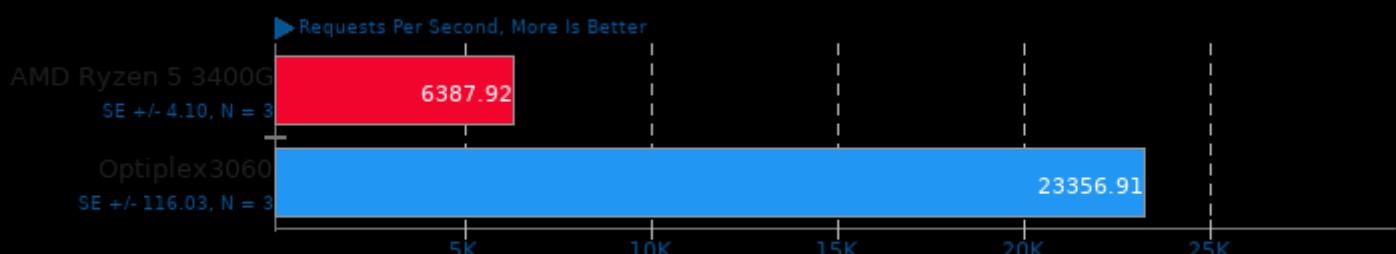
Static Web Page Serving



1. (CC) gcc options: -lpthread -lcrypt -lcrypto -lz -O3 -march=native

Apache Benchmark 2.4.29

Static Web Page Serving

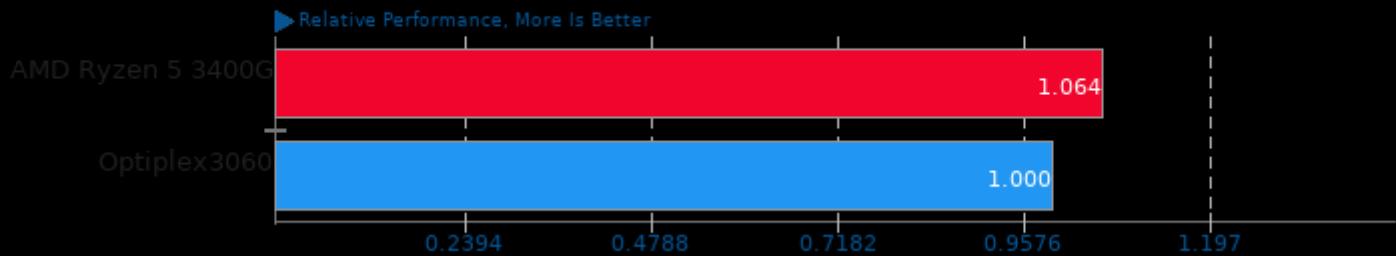


1. (CC) gcc options: -shared -fPIC -O2 -pthread

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

Geometric Mean Of Audio Encoding Tests

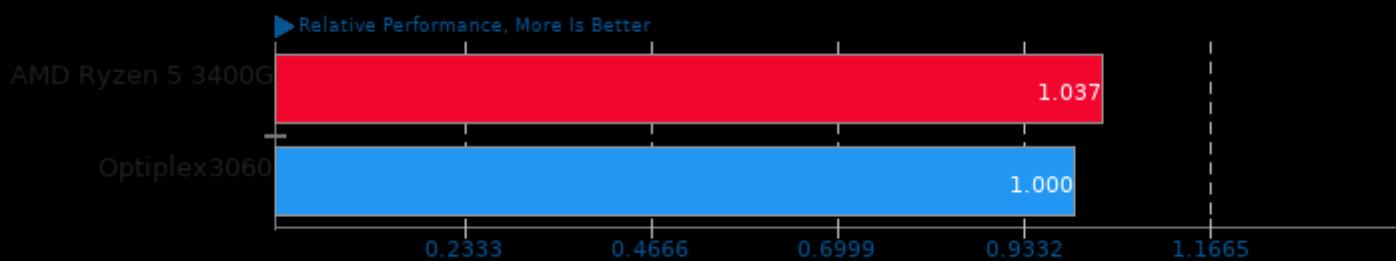
Result Composite - chess.txt



Geometric mean based upon tests: pts/encode-mp3 and pts/encode-flac

Geometric Mean Of AV1 Tests

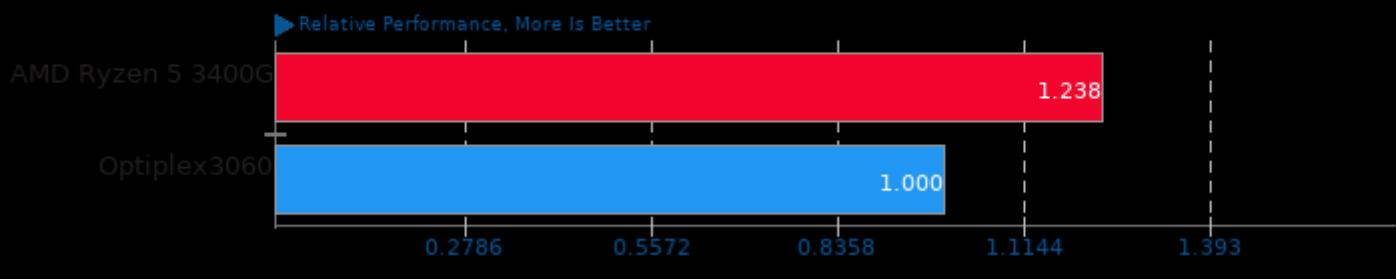
Result Composite - chess.txt



Geometric mean based upon tests: pts/dav1d and pts/svt-av1

Geometric Mean Of Compression Tests

Result Composite - chess.txt



Geometric mean based upon tests: pts/compress-7zip, pts/compress-zstd and pts/compress-xz

chess.txt

Geometric Mean Of CPU Massive Tests

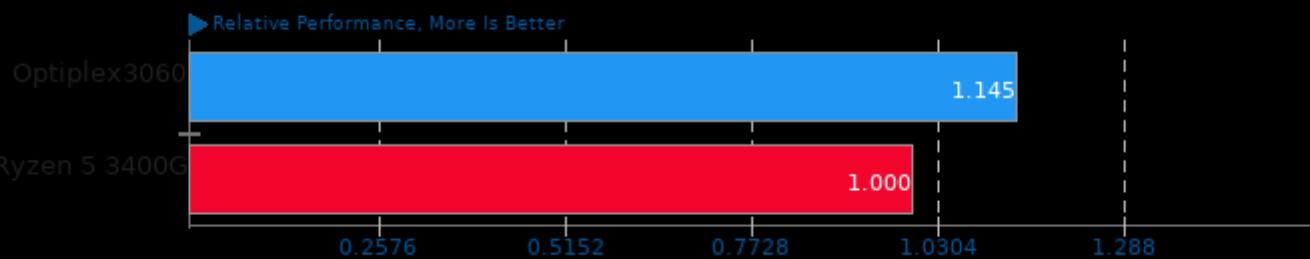
Result Composite - chess.txt



Geometric mean based upon tests: pts/apache, pts/c-ray, pts/compress-7zip, pts/compress-xz, pts/compress-zstd, pts/dav1d, pts/svt-av1, pts/svt-vp9, pts/x264, pts/encode-flac, pts/encode-mp3, pts/graphics-magick, pts/john-the-ripper, pts/mrbayes, pts/nginx and pts/stockfish

Geometric Mean Of Creator Workloads Tests

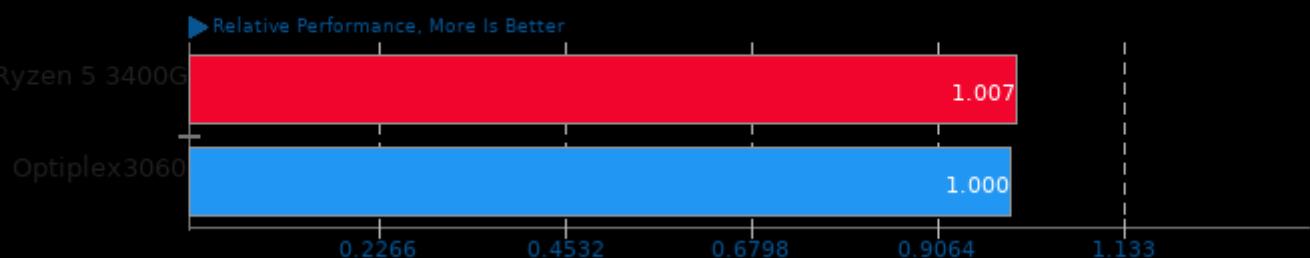
Result Composite - chess.txt



Geometric mean based upon tests: pts/c-ray, pts/aobench, pts/svt-vp9, pts/x264, pts/dav1d, pts/svt-av1, pts/encode-mp3, pts/encode-flac, pts/graphics-magick and pts/basis

Geometric Mean Of Encoding Tests

Result Composite - chess.txt

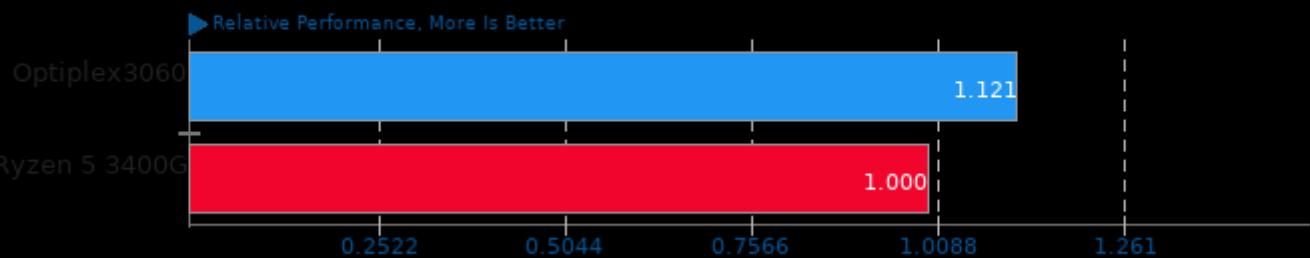


Geometric mean based upon tests: pts/encode-mp3, pts/encode-flac, pts/svt-vp9, pts/x264, pts/dav1d and pts/svt-av1

chess.txt

Geometric Mean Of Multi-Core Tests

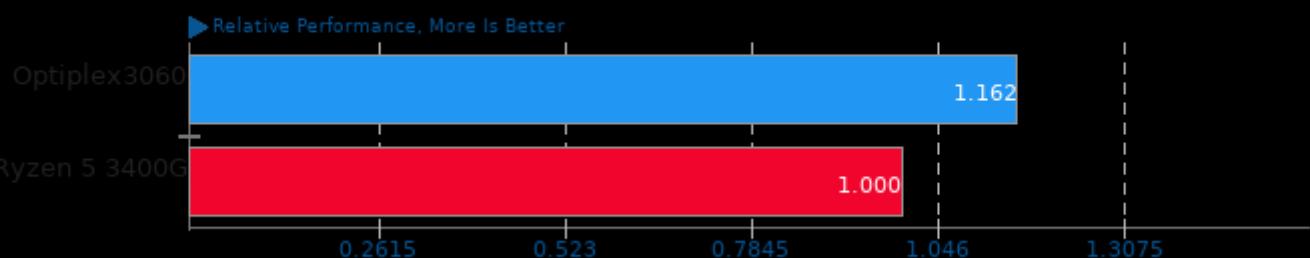
Result Composite - chess.txt



Geometric mean based upon tests: pts/c-ray, pts/stockfish, pts/svt-vp9, pts/x264, pts/dav1d, pts/svt-av1, pts/john-the-ripper, pts/graphics-magick, pts/compress-7zip, pts/compress-zstd and pts/aobench

Geometric Mean Of Renderers Tests

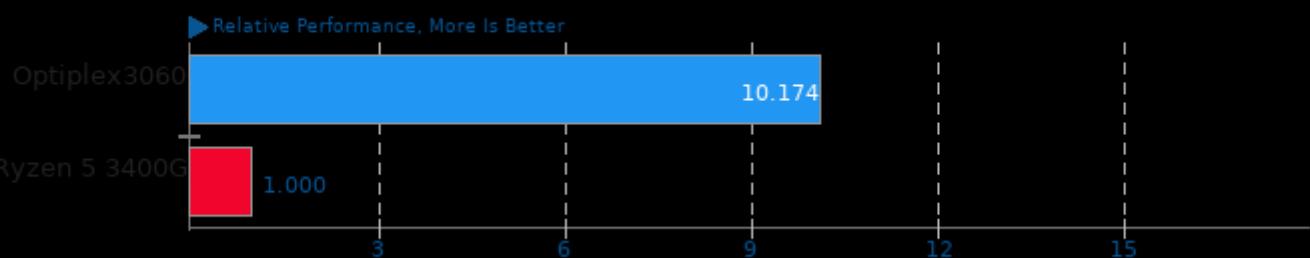
Result Composite - chess.txt



Geometric mean based upon tests: pts/c-ray and pts/aobench

Geometric Mean Of Server Tests

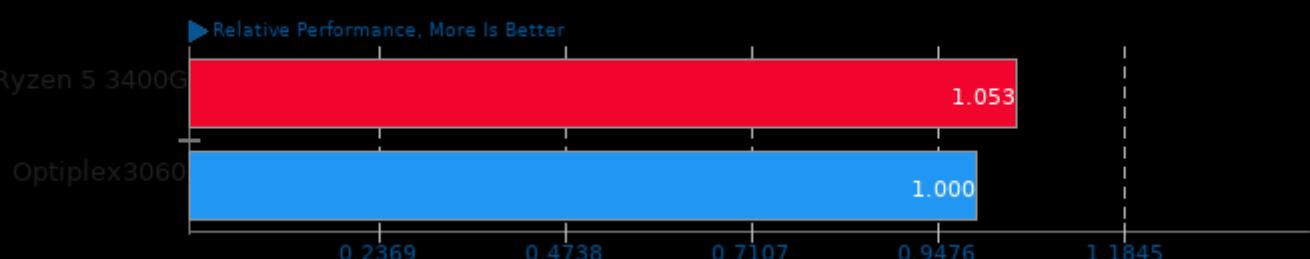
Result Composite - chess.txt



Geometric mean based upon tests: pts/apache and pts/nginx

Geometric Mean Of Server CPU Tests

Result Composite - chess.txt



Geometric mean based upon tests: pts/john-the-ripper, pts/svt-av1, pts/svt-vp9, pts/x264, pts/dav1d, pts/compress-7zip, pts/stockfish, pts/c-ray and pts/compress-zstd



Geometric mean based upon tests: pts/scimark2, pts/encode-flac, pts/encode-mp3 and pts/nginx



Geometric mean based upon tests: pts/svt-vp9, pts/x264, pts/dav1d and pts/svt-av1

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 08:30.