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10900K January

Intel Core i9-10900K testing with a Gigabyte Z490 AORUS MASTER (F21c BIOS) and Sapphire AMD Radeon RX 5600 XT 6GB on Ubuntu 21.10 via the Phoronix Test Suite.

Automated Executive Summary

B had the most wins, coming in first place for 71% of the tests.

Based on the geometric mean of all complete results, the fastest (B) was 1.005x the speed of the slowest (A). B was 1x the speed of C, D was 0.998x the speed of B, A was 0.998x the speed of D.

Test Systems:

A

B

C

D

Processor: Intel Core i9-10900K @ 5.30GHz (10 Cores / 20 Threads), Motherboard: Gigabyte Z490 AORUS MASTER (F21c BIOS), Chipset: Intel Comet Lake PCH, Memory: 16GB, Disk: Samsung SSD 970 EVO 500GB, Graphics: Sapphire AMD Radeon RX 5600 XT 6GB (1780/875MHz), Audio: Realtek ALC1220, Monitor: MX279, Network: Intel I225-V + Intel Comet Lake PCH CNVi WiFi

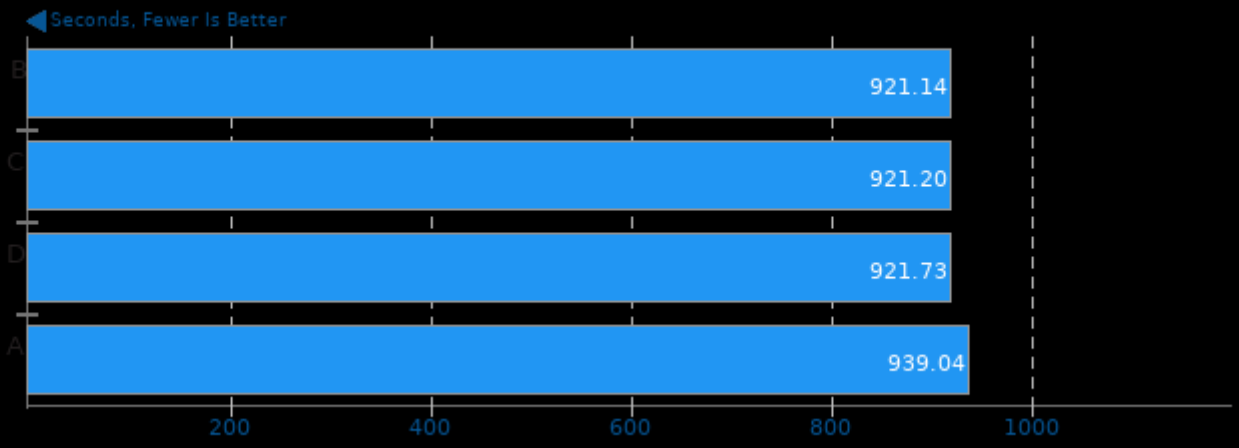
OS: Ubuntu 21.10, Kernel: 5.15.0-051500daily20211114-generic (x86_64), Desktop: GNOME Shell 40.5, Display Server: X Server 1.20.13 + Wayland, OpenGL: 4.6 Mesa 21.2.2 (LLVM 12.0.1), Vulkan: 1.2.182, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --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-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-ZPT0kp/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-ZPT0kp/gcc-11-11.2.0/debian/tmp-gcn/usr --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: intel_pstate powersave (EPP: balance_performance) - CPU Microcode: 0xec - Thermald 2.4.6
Graphics Notes: GLAMOR - BAR1 / Visible vRAM Size: 256 MB
Python Notes: Python 3.9.7
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	A	B	C	D
Timed Linux Kernel Compilation - allmodconfig (sec)	**939.04**	**921.138**	921.196	921.73
Normalized	98.09%	100%	99.99%	99.94%
Timed Node.js Compilation - Time To Compile (sec)	480.486	**478.63**	479.887	**480.776**
Normalized	99.61%	100%	99.74%	99.55%
GravityMark - 1920 x 1080 - OpenGL (FPS)	80.1	**79.9**	80.8	**81**
Normalized	98.89%	98.64%	99.75%	100%
GravityMark - 1920 x 1080 - Vulkan (FPS)	**80.3**	**80.7**	**80.7**	**80.7**
Normalized	99.5%	100%	100%	100%
Tachyon - Total Time (sec)	116.5524	**116.3927**	**116.7169**	116.4231
Normalized	99.86%	100%	99.72%	99.97%
Timed Linux Kernel Compilation - defconfig (sec)	**71.481**	71.663	71.609	**73.463**
Normalized	100%	99.75%	99.82%	97.3%
OpenJPEG - N.C.P.M (ms)	**56837**	**56497**	56717	56743
Normalized	99.4%	100%	99.61%	99.57%

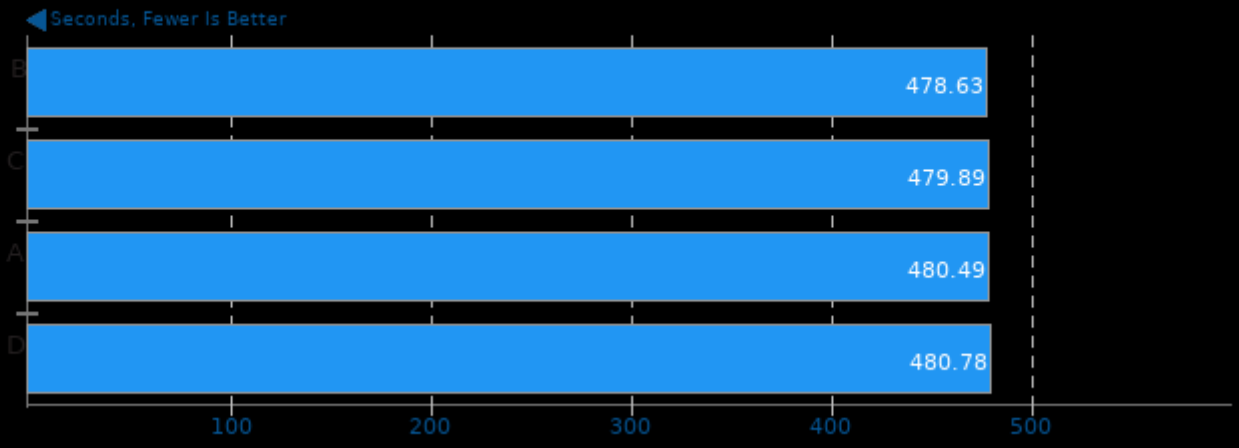
Timed Linux Kernel Compilation 5.16

Build: allmodconfig



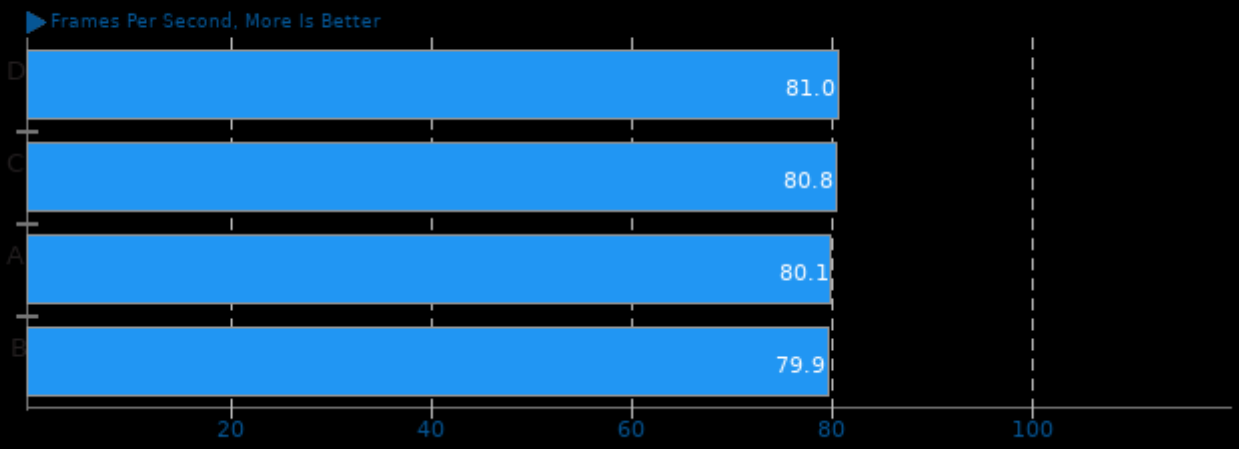
Timed Node.js Compilation 17.3

Time To Compile



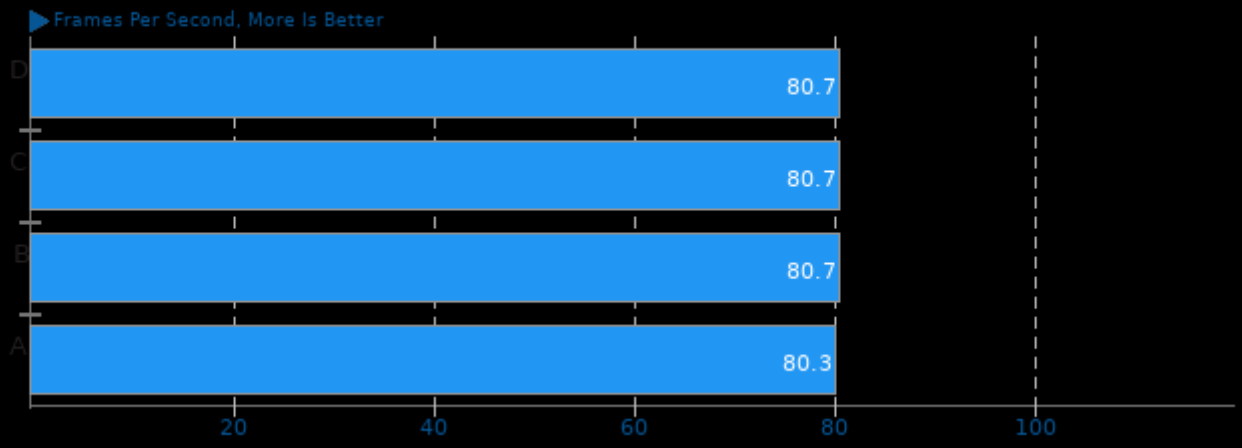
GravityMark 1.44

Resolution: 1920 x 1080 - Renderer: OpenGL



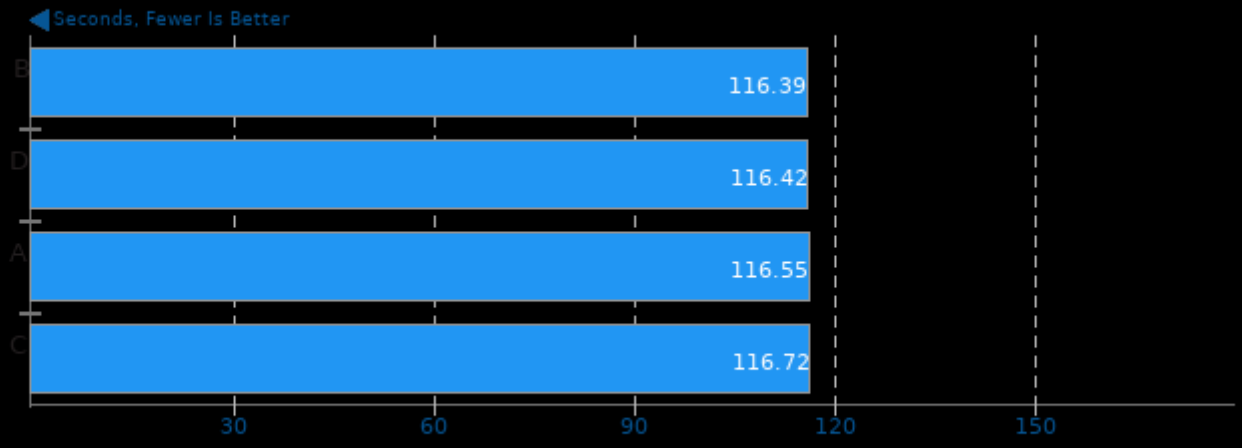
GravityMark 1.44

Resolution: 1920 x 1080 - Renderer: Vulkan



Tachyon 0.99.2

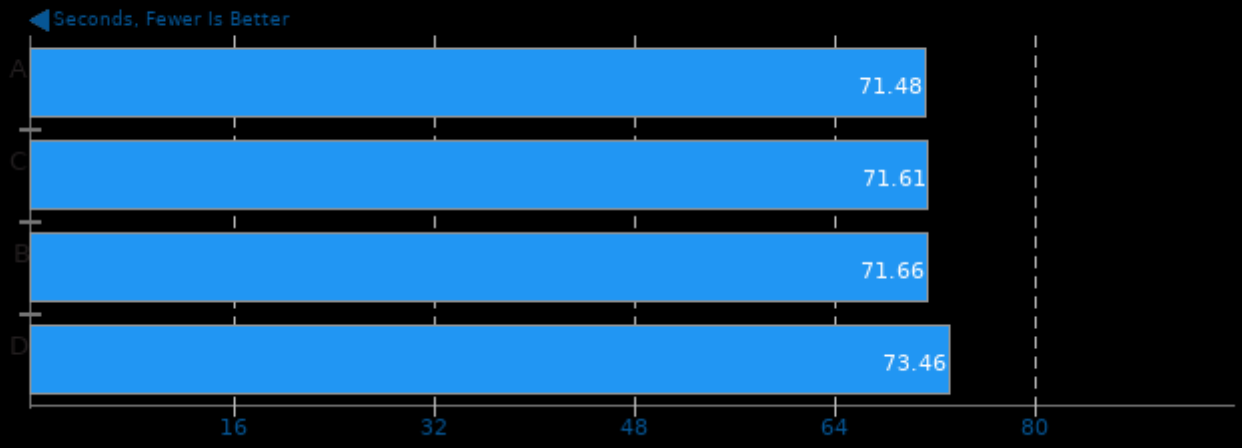
Total Time

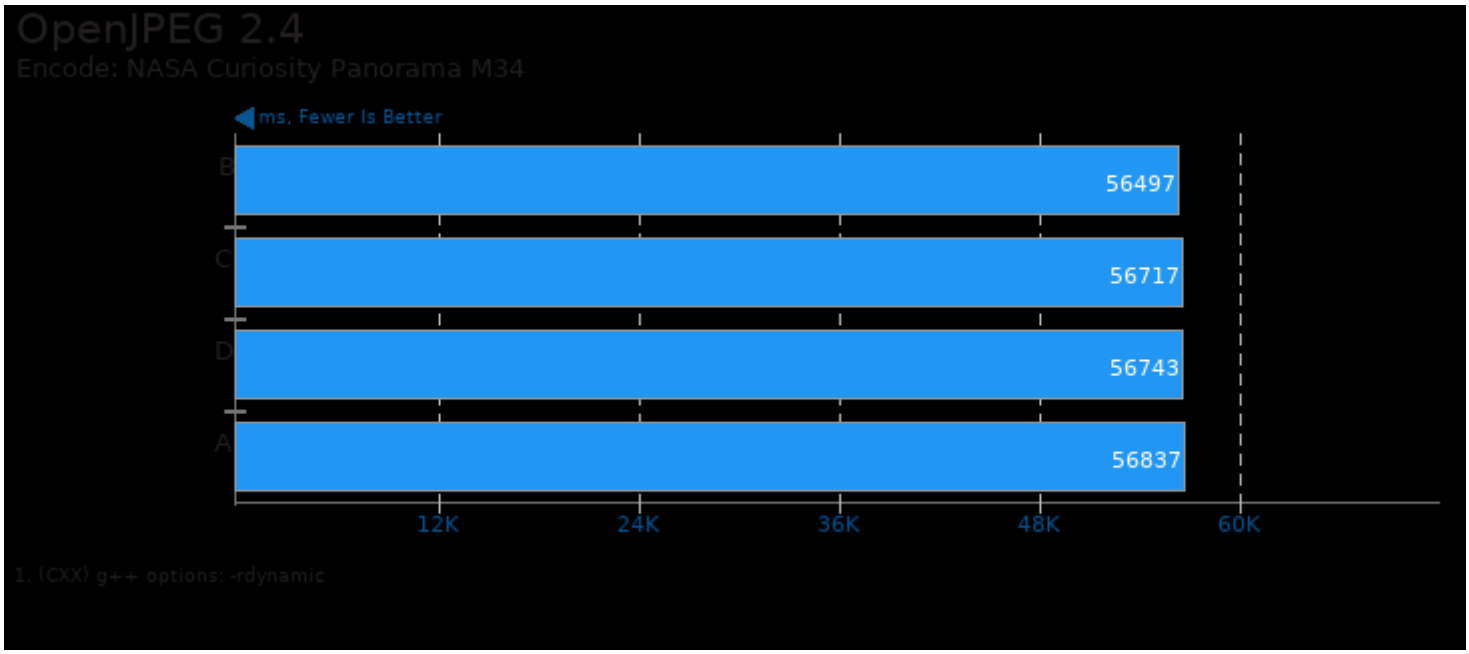


1. (CC) gcc options: -m64 -O3 -fomit-frame-pointer -ffast-math -ltachyon -lm -lpthread

Timed Linux Kernel Compilation 5.16

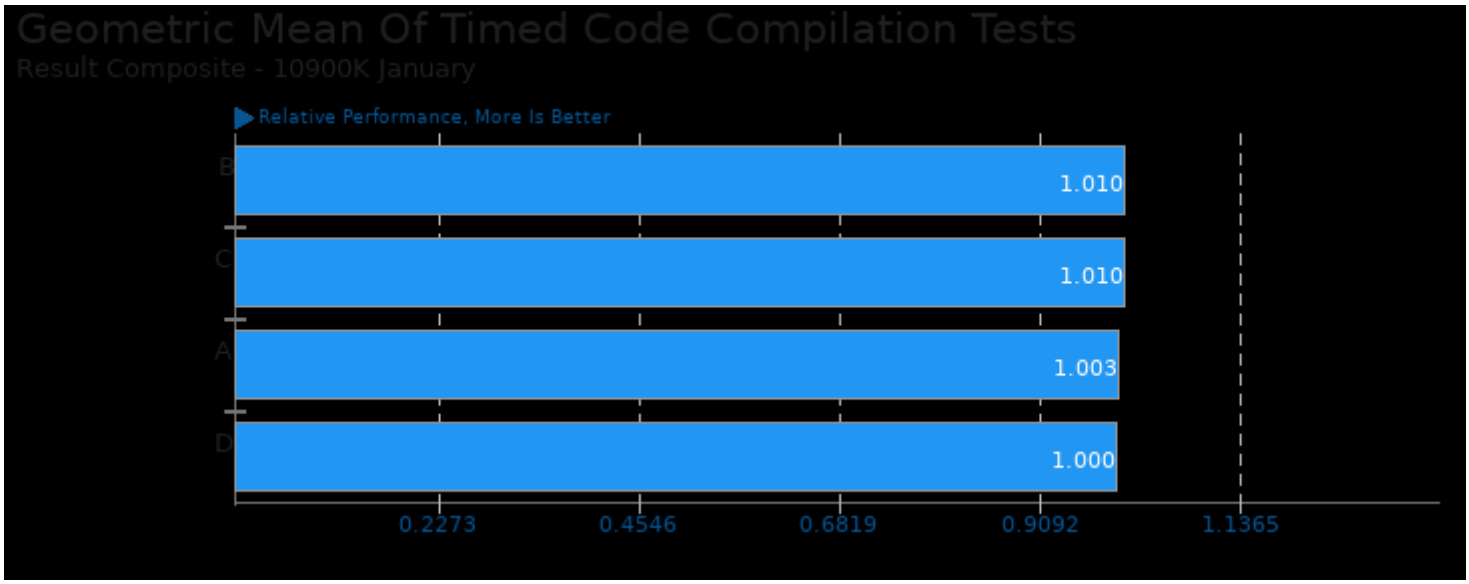
Build: defconfig



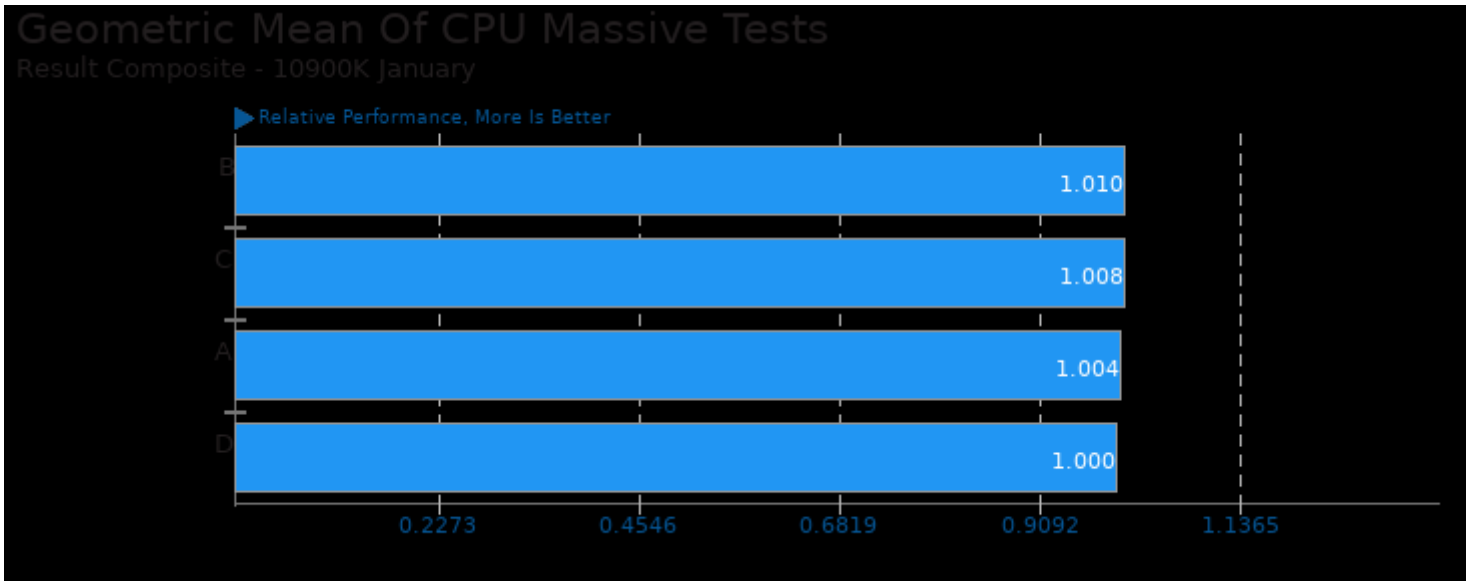

OpenJPEG 2.4
Encode: NASA Curiosity Panorama M34
ms, Fewer Is Better
B
C
D
A
56497
56717
56743
56837
12K
24K
36K
48K
60K
1. (CXX) g++ options: -rdynamic

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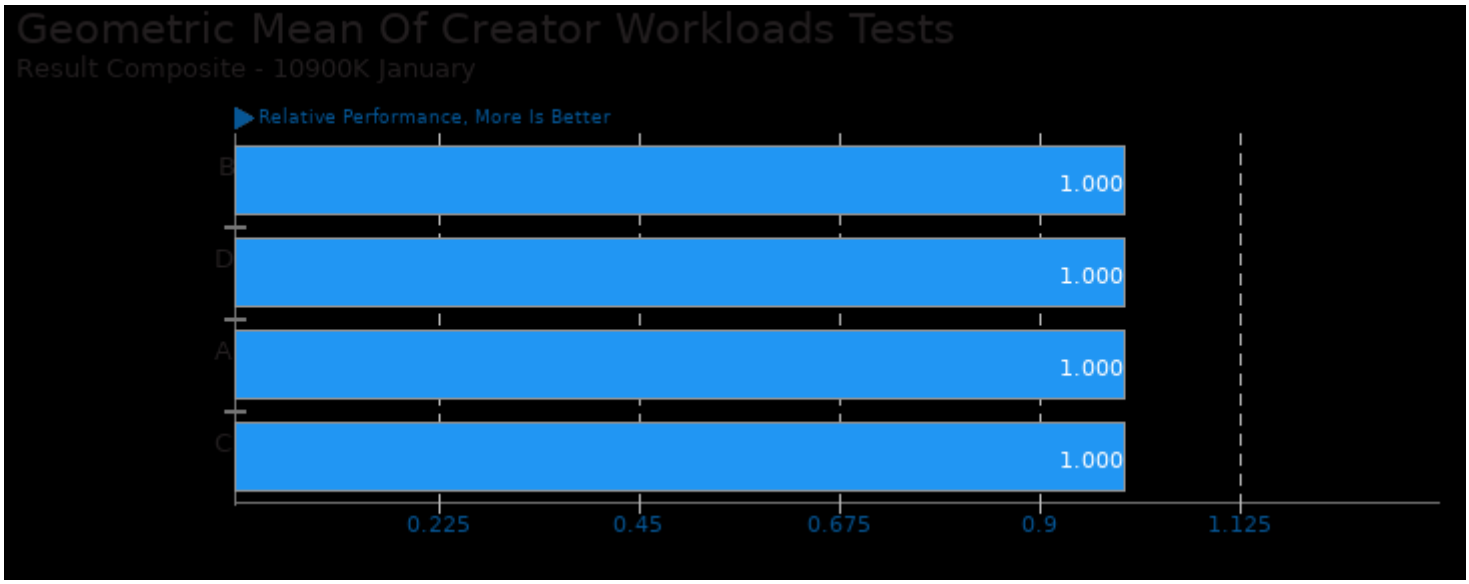
These geometric means are based upon test groupings / test suites for this result file.



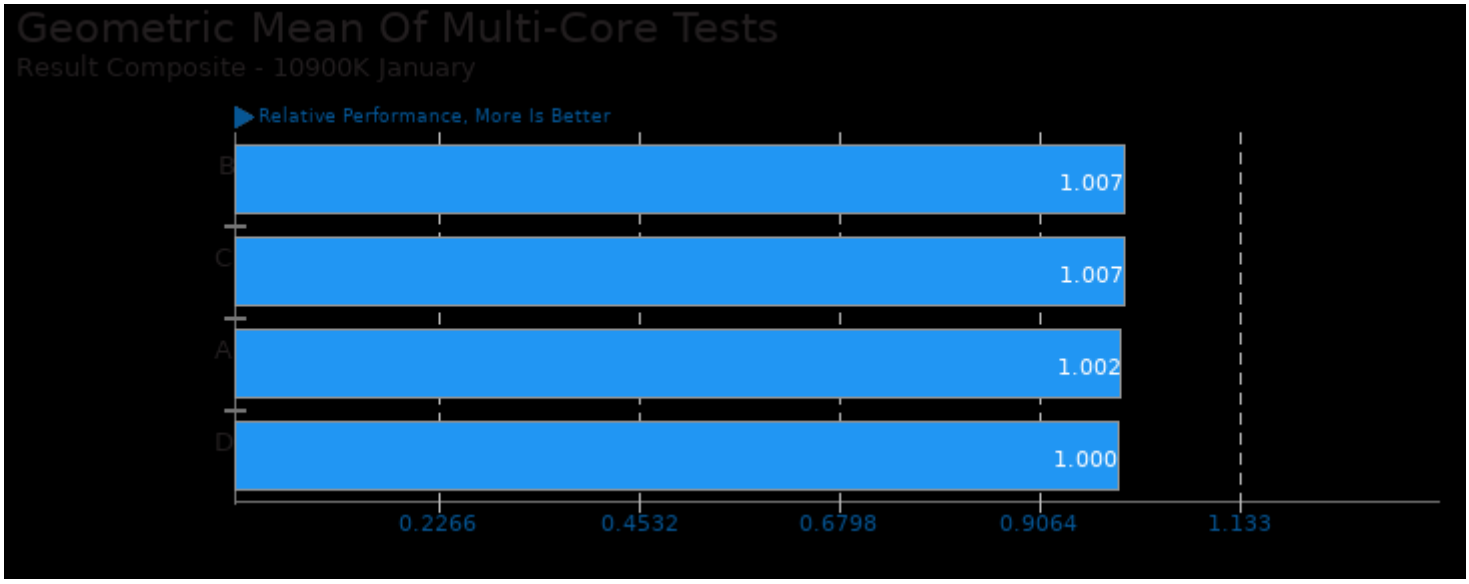
Geometric mean based upon tests: pts/build-linux-kernel and pts/build-nodejs



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

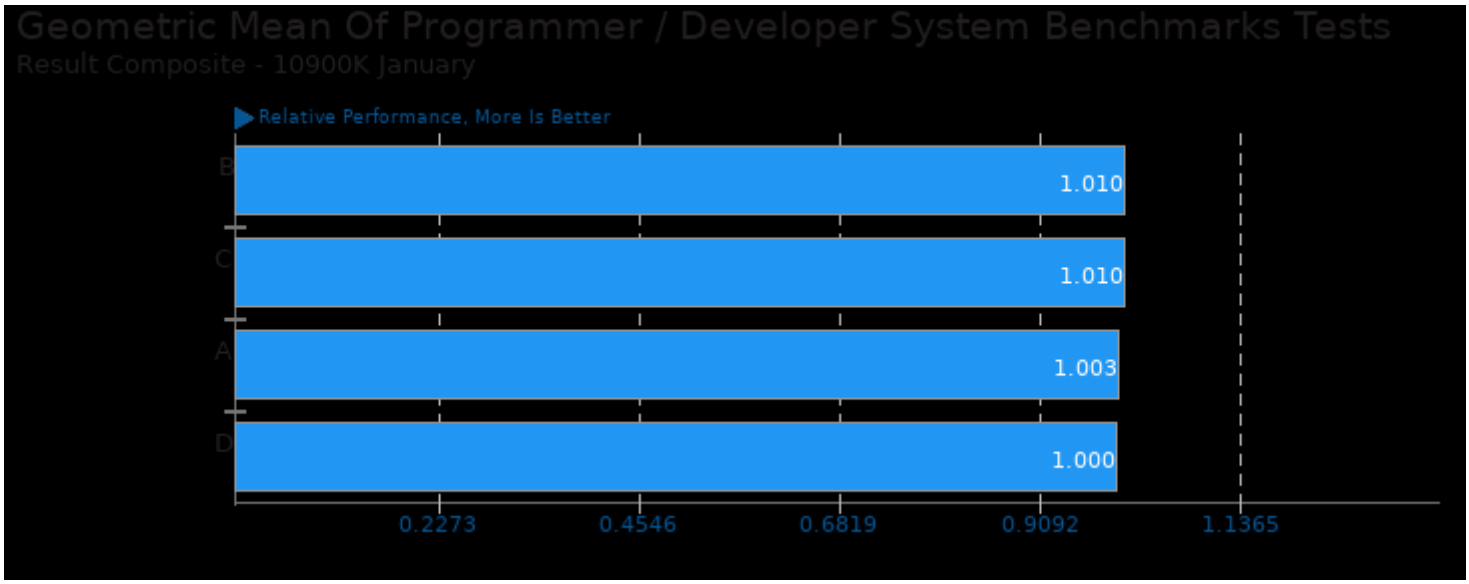


Geometric mean based upon tests: pts/tachyon and pts/openjpeg



Geometric mean based upon tests: pts/tachyon, pts/build-linux-kernel and pts/build-nodejs

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

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 19:52.