



## renderer EPYC 7F72

AMD EPYC 7F72 24-Core testing with a ASRockRack EPYCD8 (P2.10 BIOS) and ASPEED on Ubuntu 20.04 via the Phoronix Test Suite.

### Automated Executive Summary

*EPYC 7F72 had the most wins, coming in first place for 33% of the tests.*

*Based on the geometric mean of all complete results, the fastest (7F72) was 1.003x the speed of the slowest (AMD EPYC 7F72). EPYC 7F72 was 0.998x the speed of 7F72 and AMD EPYC 7F72 was 0.999x the speed of EPYC 7F72.*

### Test Systems:

**EPYC 7F72**

**AMD EPYC 7F72**

7F72

Processor: AMD EPYC 7F72 24-Core @ 3.20GHz (24 Cores / 48 Threads), Motherboard: ASRockRack EPYCD8 (P2.10 BIOS), Chipset: AMD Starship/Matisse, Memory: 126GB, Disk: 3841GB Micron\_9300\_MTFDHAL3T8TDP + 32GB Flash Disk, Graphics: ASPEED, Audio: AMD Starship/Matisse, Network: 2 x Intel I350

OS: Ubuntu 20.04, Kernel: 5.9.0-rc5-14sep-patch (x86\_64) 20200914, Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 3.3 Mesa 20.0.8 (LLVM 10.0.0 128 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1024x768

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: acpi-cpufreq ondemand - CPU Microcode: 0x830101c  
 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/swaps barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS\_FW STIBP: always-on RSB filling + srbds: Not affected + tsx\_async\_abort: Not affected

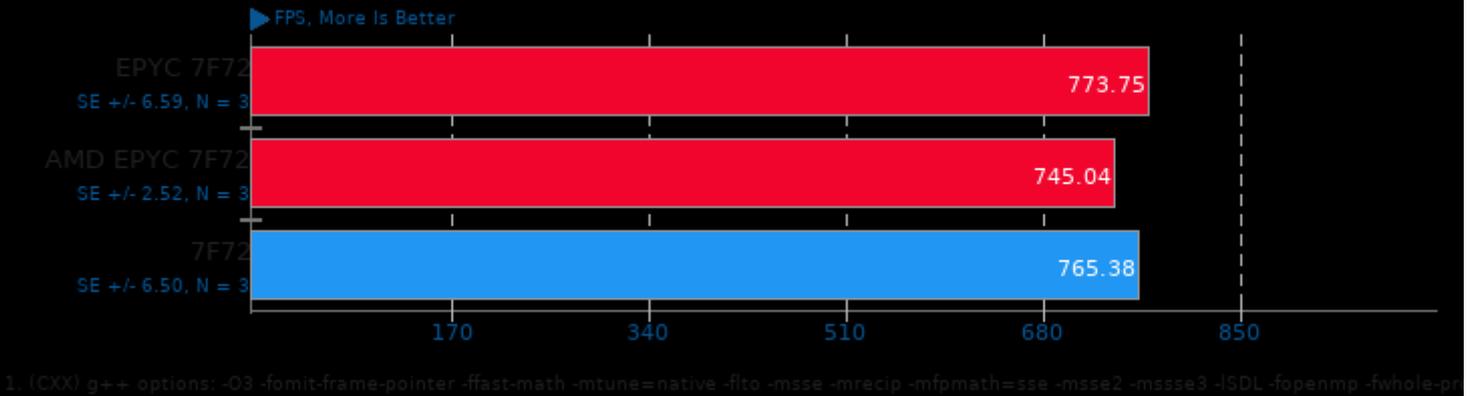
	EPYC 7F72	AMD EPYC 7F72	7F72
<b>TTSIOD 3D Renderer - P.R.W.S.S.M (FPS)</b>	<b>773.748</b>	<b>745.044</b>	765.377
Normalized	100%	96.29%	98.92%
Standard Deviation	1.5%	0.6%	1.5%
<b>Intel Open Image Denoise - Memorial (Images / Sec)</b>	<b>18.14</b>	18.23	<b>18.44</b>
Normalized	98.37%	98.86%	100%
Standard Deviation	0.5%	1.1%	1.2%
<b>OpenVKL - vkIBenchmark (Items / Sec)</b>	<b>291.02</b>	<b>291.78</b>	291.59
Normalized	99.74%	100%	99.93%
Standard Deviation	0.8%	0.4%	0.2%
<b>C-Ray - Total Time - 4.1.R.P.P (sec)</b>	23.682	<b>23.649</b>	<b>23.684</b>
Normalized	99.86%	100%	99.85%
Standard Deviation	0.2%	0.4%	0.5%
<b>POV-Ray - Trace Time (sec)</b>	19.544	<b>19.590</b>	<b>19.516</b>
Normalized	99.86%	99.62%	100%
Standard Deviation	0.8%	0.1%	0.4%
<b>Smallpt - G.I.R.1.S (sec)</b>	<b>4.021</b>	4.026	<b>4.035</b>
Normalized	100%	99.88%	99.65%
Standard Deviation	0.2%	0.1%	0.1%
<b>Chaos Group V-RAY - CPU (Ksamples)</b>	34582	<b>34677</b>	<b>34576</b>
Normalized	99.73%	100%	99.71%
Standard Deviation	1.6%	1.1%	1.3%
<b>IndigoBench - Bedroom (M samples/s)</b>	<b>3.478</b>	3.463	<b>3.452</b>
Normalized	100%	99.57%	99.25%
Standard Deviation	0.7%	0.5%	0.1%
<b>IndigoBench - Supercar (M samples/s)</b>	<b>7.220</b>	7.244	<b>7.247</b>
Normalized	99.63%	99.96%	100%
Standard Deviation	0.3%	0.3%	0.4%
<b>Appleseed - Emily (sec)</b>	<b>187.586256</b>	<b>184.004604</b>	185.315034
Normalized	98.09%	100%	99.29%
<b>Appleseed - Disney Material (sec)</b>	<b>100.242494</b>	100.372994	<b>101.559574</b>
Normalized	100%	99.87%	98.7%

Appleseed - Material Tester (sec) 177.864653  
Normalized 98.12%

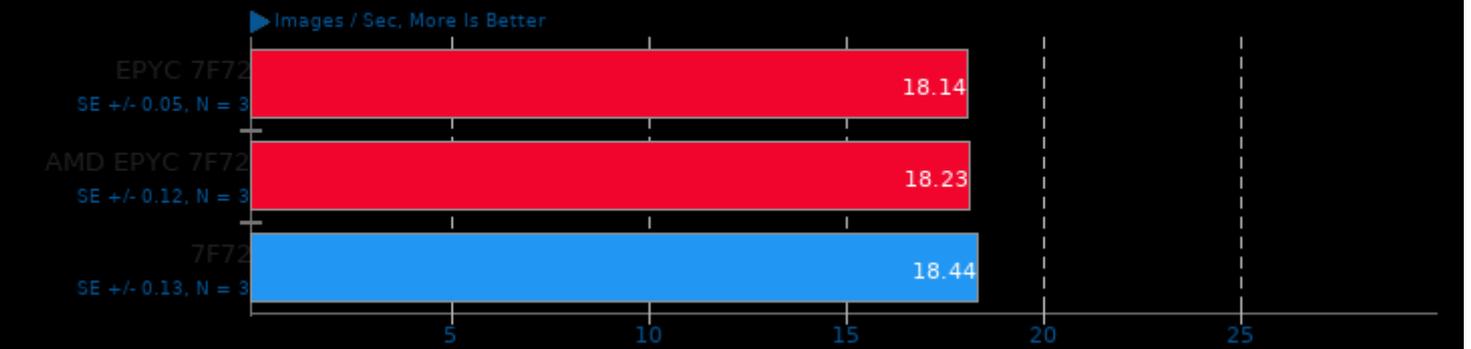
**178.619289**  
97.7%

**174.519493**  
100%

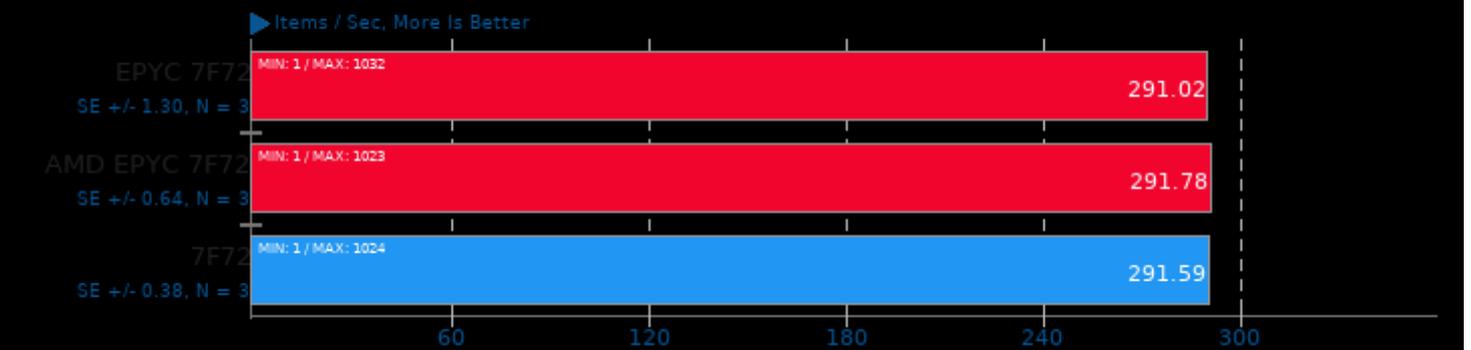
TTSIOD 3D Renderer 2.3b  
Phong Rendering With Soft-Shadow Mapping



Intel Open Image Denoise 1.2.0  
Scene: Memorial



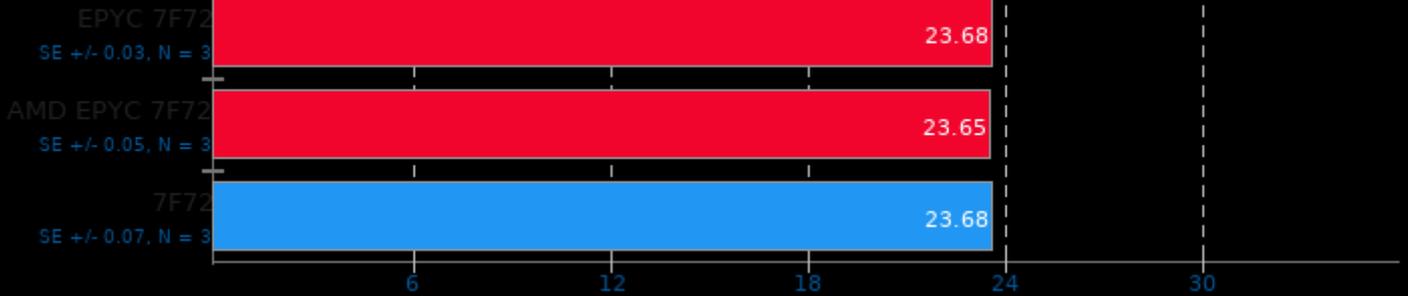
OpenVKL 0.9  
Benchmark: vklBenchmark



### C-Ray 1.1

Total Time - 4K, 16 Rays Per Pixel

← Seconds, Fewer Is Better

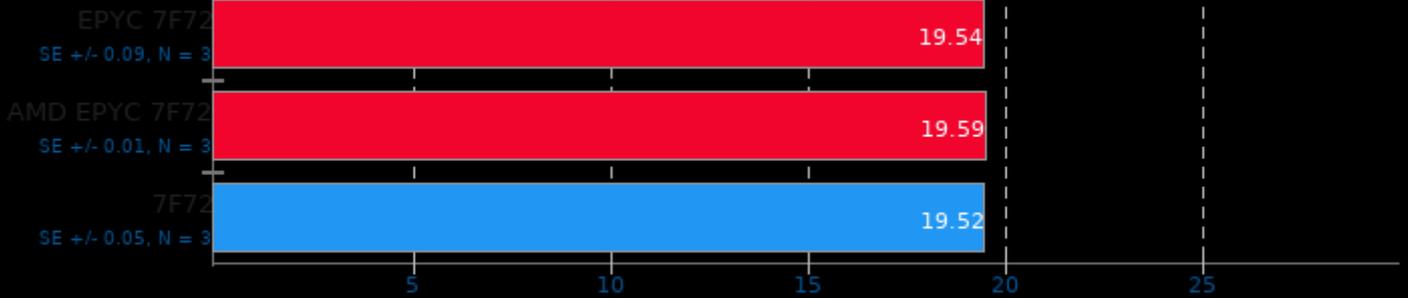


1. (GCC) gcc options: -lm -lpthread -O3

### POV-Ray 3.7.0.7

Trace Time

← Seconds, Fewer Is Better

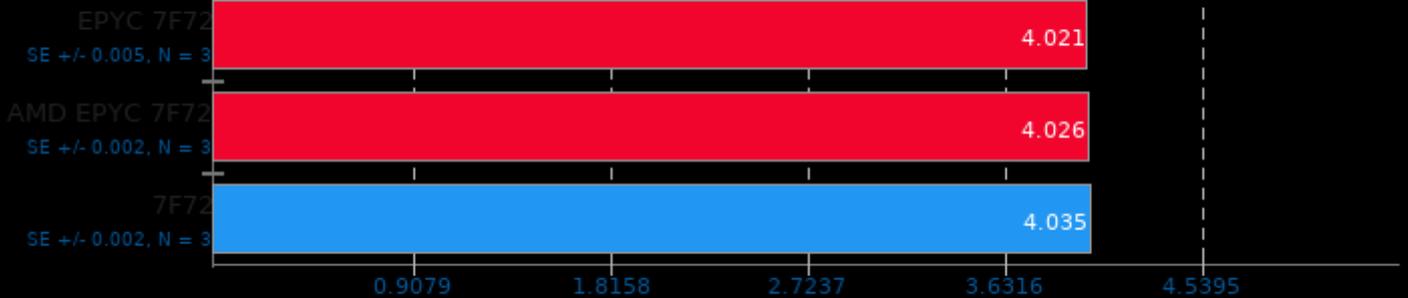


1. (CXX) g++ options: -pipe -O3 -ffast-math -march=native -pthread -fSDXL -fSM -fICE -fX11 -fllmImf -fImath -fHalf -fIex -fIexMath -fllmThread -lpthread -ltiff

### Smallpt 1.0

Global Illumination Renderer; 128 Samples

← Seconds, Fewer Is Better

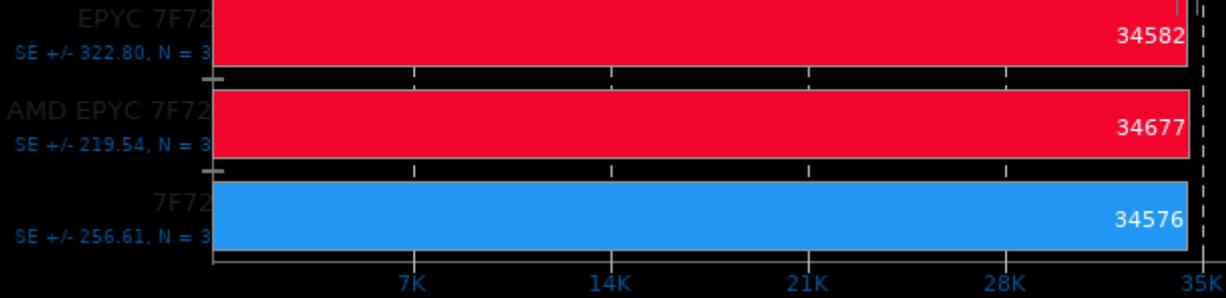


1. (CXX) g++ options: -fopenmp -O3

### Chaos Group V-RAY 4.10.07

Mode: CPU

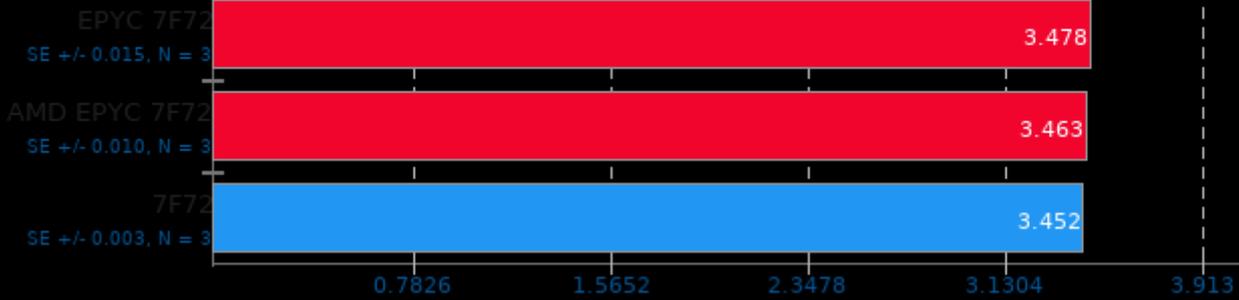
► Ksamples, More Is Better



### IndigoBench 4.0.64

Scene: Bedroom

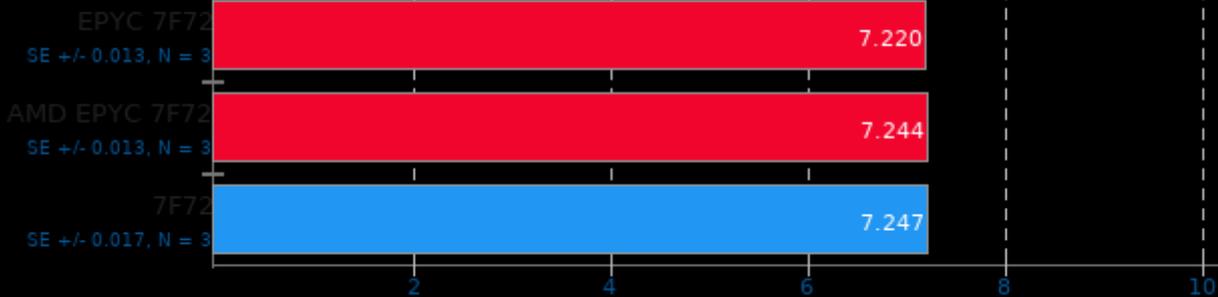
► M samples/s, More Is Better



### IndigoBench 4.0.64

Scene: Supercar

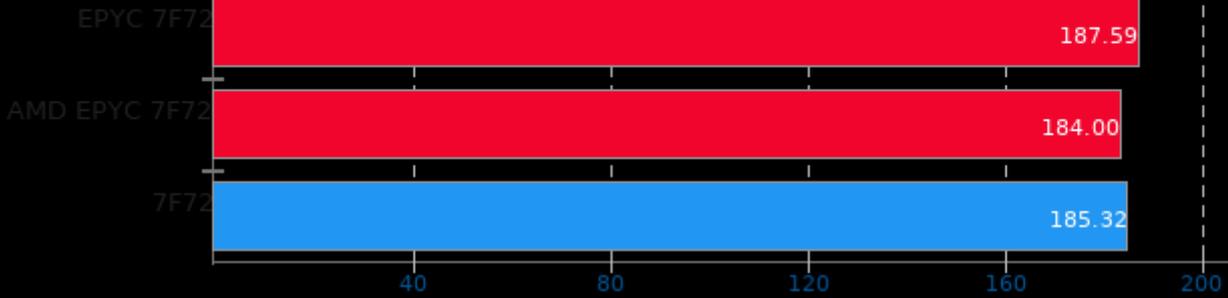
► M samples/s, More Is Better



### Appleseed 2.0 Beta

Scene: Emily

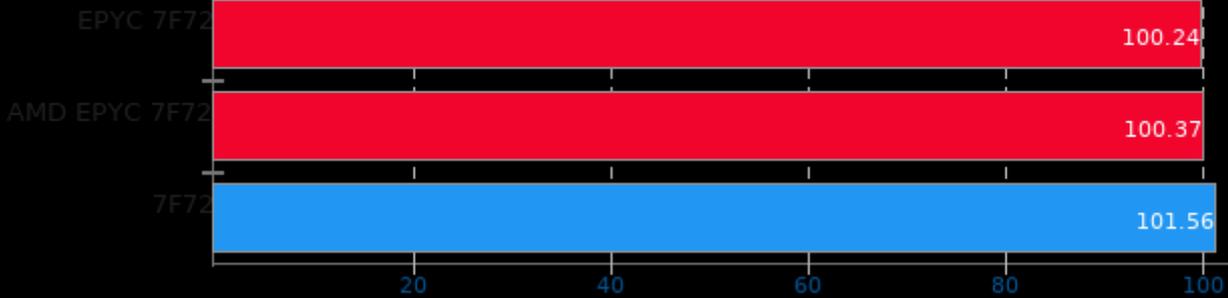
← Seconds, Fewer Is Better



### Appleseed 2.0 Beta

Scene: Disney Material

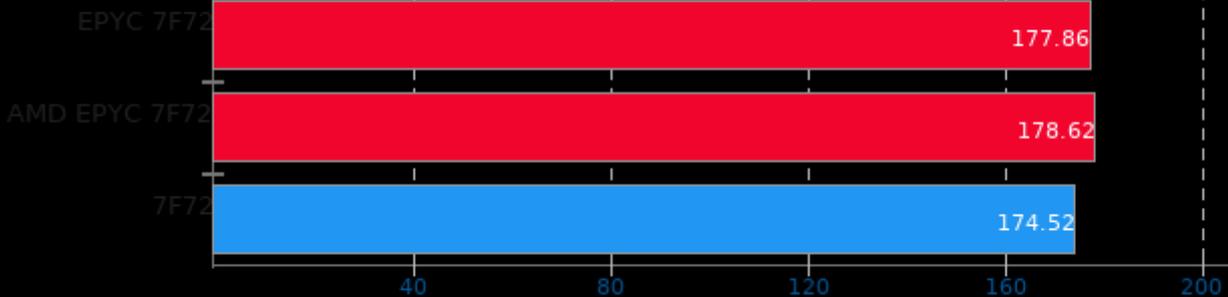
← Seconds, Fewer Is Better



### Appleseed 2.0 Beta

Scene: Material Tester

← Seconds, Fewer Is Better



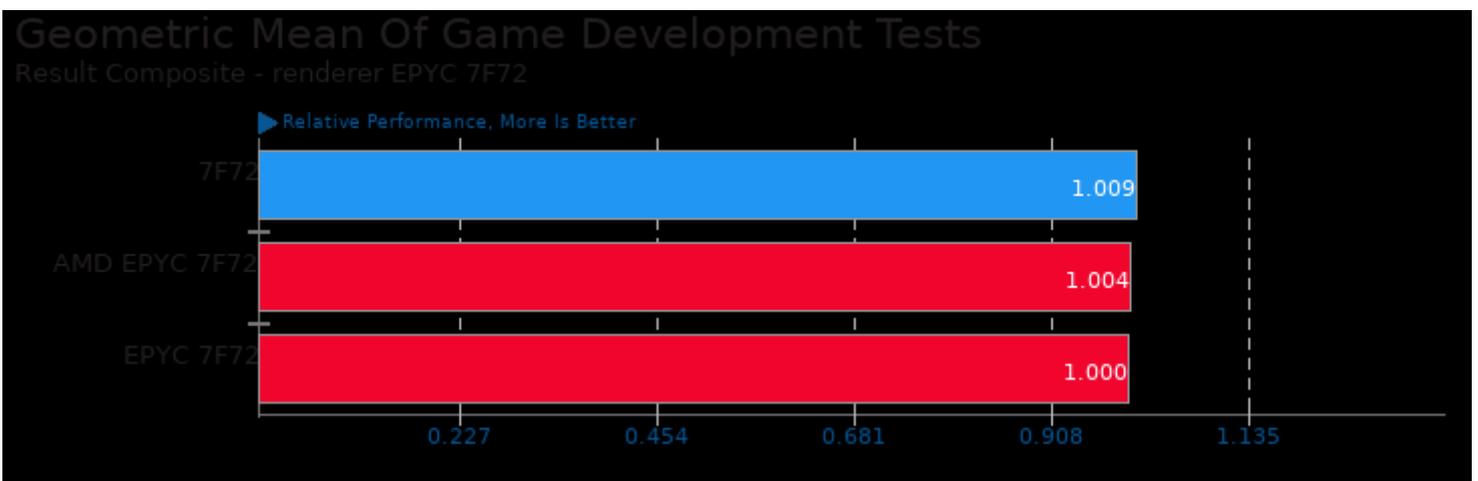
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/c-ray, pts/povray, pts/ttsiod-renderer and pts/v-ray



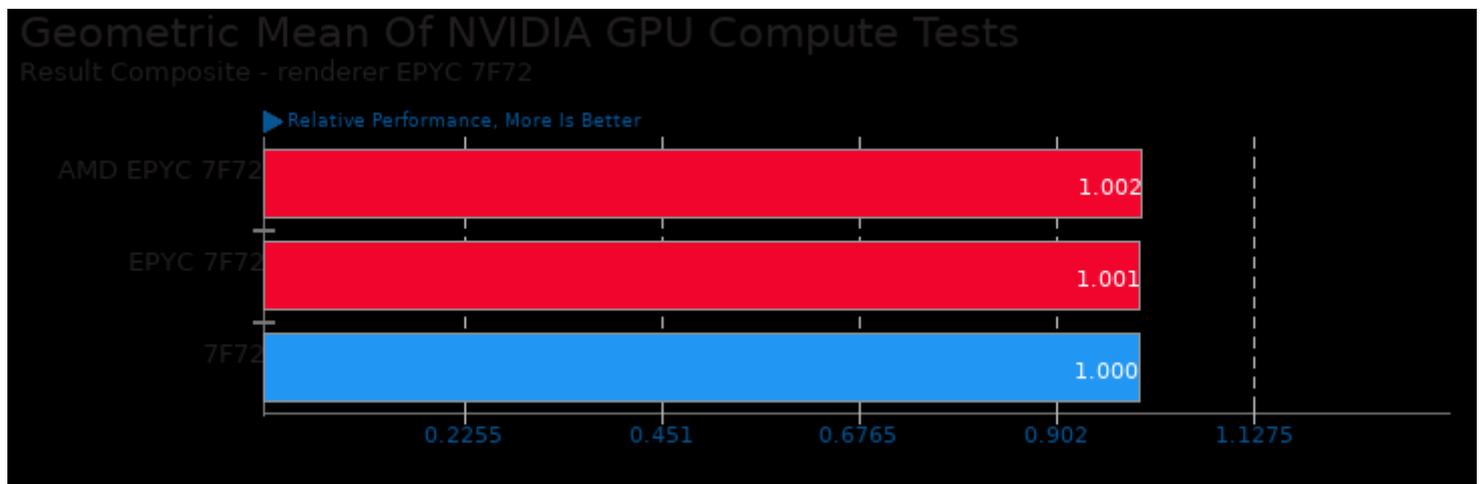
Geometric mean based upon tests: pts/c-ray, pts/povray, pts/appleseed, pts/smallpt, pts/ttsiod-renderer, pts/v-ray, pts/indigobench, pts/oidn and pts/opencv1



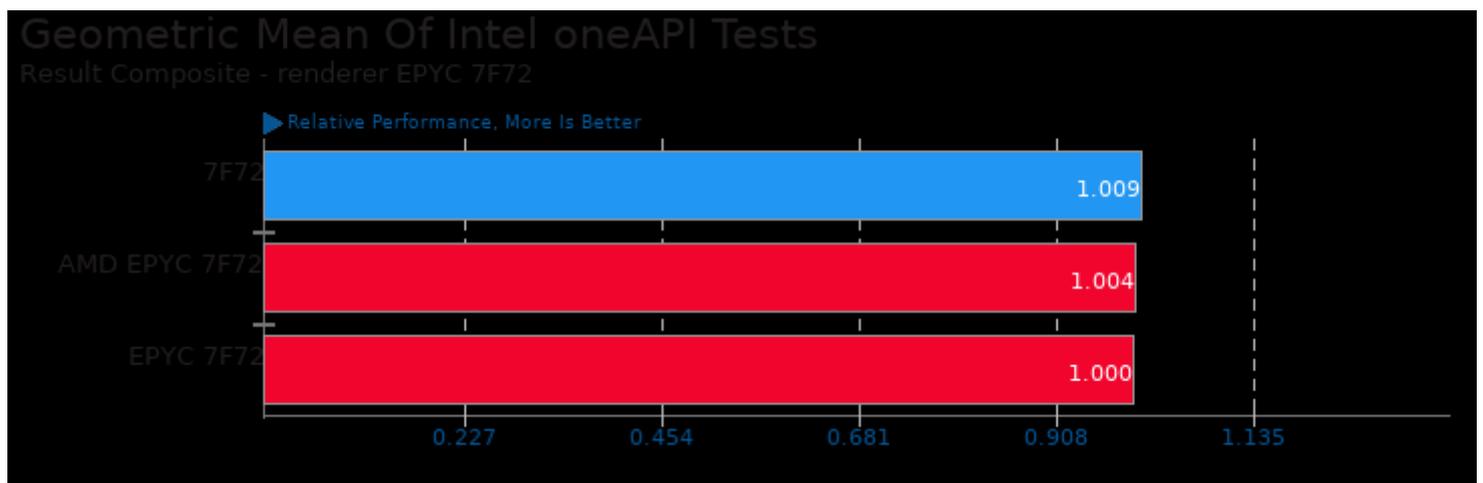
Geometric mean based upon tests: pts/oidn and pts/opencv1



Geometric mean based upon tests: pts/c-ray, pts/povray, pts/smallpt, pts/appleseed, pts/tsiod-renderer, pts/v-ray, pts/indigobench, pts/oidn and pts/openvkl



Geometric mean based upon tests: pts/indigobench and pts/v-ray



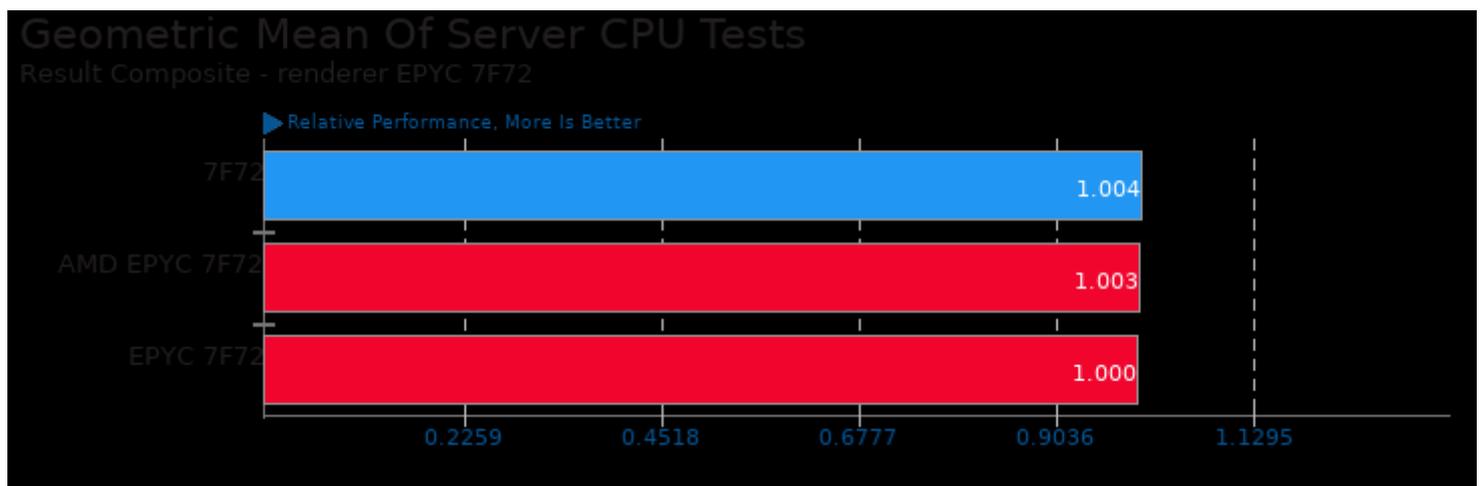
Geometric mean based upon tests: pts/oidn and pts/openvkl



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



Geometric mean based upon tests: pts/c-ray, pts/povray, pts/appleseed, pts/smallpt, pts/ttsiod-renderer, pts/v-ray and pts/indigobench



Geometric mean based upon tests: pts/c-ray, pts/povray and pts/appleseed

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 8 March 2024 17:20.