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# cc AMD Ryzen 9 5900HX

AMD Ryzen 9 5900HX testing with a ASUS G513QY v1.0 (G513QY.311 BIOS) and ASUS AMD Cezanne 512MB on Ubuntu 21.04 via the Phoronix Test Suite.

**Automated Executive Summary**

*Ryzen 9 5900HX had the most wins, coming in first place for 57% of the tests.*

*Based on the geometric mean of all complete results, the fastest (2) was 1.006x the speed of the slowest (Ryzen 9 5900HX).*

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

*LuxCoreRender (Scene: LuxCore Benchmark - Acceleration: CPU) at 1.293x*
*Ngspice (Circuit: C7552) at 1.264x*
*OpenVKL (Benchmark: vklBenchmark) at 1.257x*
*Betsy GPU Compressor (Codec: ETC1 - Quality: Highest) at 1.252x*
*GraphicsMagick (Operation: Rotate) at 1.192x*
*GraphicsMagick (Operation: HWB Color Space) at 1.167x*
*Betsy GPU Compressor (Codec: ETC2 RGB - Quality: Highest) at 1.152x*
*Intel Open Image Denoise (Run: RT.ldr_alb_nrm.3840x2160) at 1.148x*
*OSPray (Demo: Magnetic Reconnection - Renderer: Path Tracer) at 1.143x*

*Intel Open Image Denoise (Run: RTLightmap.hdr.4096x4096) at 1.143x.*

# Test Systems:

## Ryzen 9 5900HX

Processor: AMD Ryzen 9 5900HX @ 3.30GHz (8 Cores / 16 Threads), Motherboard: ASUS G513QY v1.0 (G513QY.311 BIOS), Chipset: AMD Renoir Root Complex, Memory: 16GB, Disk: 512GB SAMSUNG MZVLQ512HBLU-00B00, Graphics: ASUS AMD Cezanne 512MB, Audio: AMD Navi 21 HDMI Audio, Monitor: LQ156M1JW25, Network: Realtek RTL8111/8168/8411 + MEDIATEK Device 7961

OS: Ubuntu 21.04, Kernel: 5.13.0-051300-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.3.0-devel (git-66213ab 2021-07-20 hirsute-oibaf-ppa) (LLVM 12.0.1), Vulkan: 1.2.182, Compiler: GCC 10.3.0, 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-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-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/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 schedutil (Boost: Enabled) - CPU Microcode: 0xa50000c
Python Notes: Python 3.9.5
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 IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

## 2

Processor: AMD Ryzen 9 5900HX @ 3.30GHz (8 Cores / 16 Threads), Motherboard: ASUS G513QY v1.0 (G513QY.311 BIOS), Chipset: AMD Renoir Root Complex, Memory: 16GB, Disk: 512GB SAMSUNG MZVLQ512HBLU-00B00, Graphics: ASUS AMD Cezanne 512MB (2600/1000MHz), Audio: AMD Navi 21 HDMI Audio, Monitor: LQ156M1JW25, Network: Realtek RTL8111/8168/8411 + MEDIATEK Device 7961

OS: Ubuntu 21.04, Kernel: 5.13.0-051300-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.3.0-devel (git-66213ab 2021-07-20 hirsute-oibaf-ppa) (LLVM 12.0.1), Vulkan: 1.2.182, Compiler: GCC 10.3.0, 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-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-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/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 schedutil (Boost: Enabled) - CPU Microcode: 0xa50000c
Python Notes: Python 3.9.5
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 IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

# cc AMD Ryzen 9 5900HX

| | Ryzen 9 5900HX | 2 |
|---|---|---|
| Betsy GPU Compressor - ETC1 - Highest (sec) | 13.481 | 10.768 |
| Normalized | 79.88% | 100% |
| Betsy GPU Compressor - ETC2 RGB - Highest (sec) | 19.537 | 16.961 |
| Normalized | 86.81% | 100% |
| Etcpak - DXT1 (Mpx/s) | 1469 | 1461 |
| Normalized | 100% | 99.51% |
| Etcpak - ETC1 (Mpx/s) | 368.754 | 368.138 |
| Normalized | 100% | 99.83% |
| Etcpak - ETC2 (Mpx/s) | 227.266 | 227.187 |
| Normalized | 100% | 99.97% |
| Etcpak - ETC1 + Dithering (Mpx/s) | 333.19 | 331.003 |
| Normalized | 100% | 99.34% |
| WebP Image Encode - Default (Encode Time - sec) | 1.149 | 1.162 |
| Normalized | 100% | 98.88% |
| WebP Image Encode - Quality 100 (Encode Time - sec) | 1.834 | 1.863 |
| Normalized | 100% | 98.44% |
| WebP Image Encode - Q.1.L (Encode Time - sec) | 16.025 | 15.768 |
| Normalized | 98.4% | 100% |
| WebP Image Encode - Q.1.H.C (Encode Time - sec) | 5.717 | 5.667 |
| Normalized | 99.13% | 100% |
| WebP Image Encode - Q.1.L.H.C (Encode Time - sec) | 39.373 | 38.906 |
| Normalized | 98.81% | 100% |
| libgav1 - Chimera 1080p (FPS) | 150.58 | 156.82 |
| Normalized | 96.02% | 100% |
| libgav1 - Summer Nature 4K (FPS) | 50.34 | 53.74 |
| Normalized | 93.67% | 100% |
| libgav1 - S.N.1 (FPS) | 179.61 | 185.98 |
| Normalized | 96.57% | 100% |
| libgav1 - C.1.1.b (FPS) | 54.65 | 55.87 |
| Normalized | 97.82% | 100% |
| LuaJIT - Composite (Mflops) | 1775 | 1753 |
| Normalized | 100% | 98.76% |
| LuaJIT - Monte Carlo (Mflops) | 572.87 | 569.56 |
| Normalized | 100% | 99.42% |
| LuaJIT - F.F.T (Mflops) | 377.84 | 374.51 |
| Normalized | 100% | 99.12% |
| LuaJIT - S.M.M (Mflops) | 1631 | 1621 |
| Normalized | 100% | 99.4% |
| LuaJIT - D.L.M.F (Mflops) | 3994 | 3930 |
| Normalized | 100% | 98.39% |
| LuaJIT - J.S.O.R (Mflops) | 2302 | 2272 |
| Normalized | 100% | 98.72% |
| LibRaw - P.P.B (Mpix/sec) | 47.66 | 48.11 |
| Normalized | 99.06% | 100% |
| LuxCoreRender - DLSC - CPU (M samples/sec) | 1.96 | 1.95 |
| Normalized | 100% | 99.49% |
| LuxCoreRender - Danish Mood - CPU (M samples/sec) | 1.35 | 1.33 |
| Normalized | 100% | 98.52% |
| LuxCoreRender - Orange Juice - CPU (M samples/sec) | 2.74 | 2.97 |
| Normalized | 92.26% | 100% |

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|---|---|---|
| LuxCoreRender - LuxCore Benchmark - CPU (M samples/sec) | 1.16 | 1.5 |
| Normalized | 77.33% | 100% |
| LuxCoreRender - R.C.a.P - CPU (M samples/sec) | 8.08 | 8.66 |
| Normalized | 93.3% | 100% |
| GraphicsMagick - Swirl (Iterations/min) | 556 | 576 |
| Normalized | 96.53% | 100% |
| GraphicsMagick - Rotate (Iterations/min) | 656 | 782 |
| Normalized | 83.89% | 100% |
| GraphicsMagick - Sharpen (Iterations/min) | 117 | 117 |
| GraphicsMagick - Enhanced (Iterations/min) | 222 | 225 |
| Normalized | 98.67% | 100% |
| GraphicsMagick - Resizing (Iterations/min) | 1001 | 1051 |
| Normalized | 95.24% | 100% |
| GraphicsMagick - Noise-Gaussian (Iterations/min) | 264 | 280 |
| Normalized | 94.29% | 100% |
| GraphicsMagick - HWB Color Space (Iterations/min) | 744 | 868 |
| Normalized | 85.71% | 100% |
| dav1d - Chimera 1080p (FPS) | 338.76 | 374.87 |
| Normalized | 90.37% | 100% |
| dav1d - Summer Nature 4K (FPS) | 89.93 | 96.48 |
| Normalized | 93.21% | 100% |
| dav1d - S.N.1 (FPS) | 353.01 | 390.17 |
| Normalized | 90.48% | 100% |
| dav1d - C.1.1.b (FPS) | 205.51 | 223.4 |
| Normalized | 91.99% | 100% |
| OSPray - San Miguel - SciVis (FPS) | 15.38 | 15.38 |
| OSPray - XFrog Forest - SciVis (FPS) | 2.72 | 2.74 |
| Normalized | 99.27% | 100% |
| OSPray - San Miguel - Path Tracer (FPS) | 1.17 | 1.17 |
| OSPray - NASA Streamlines - SciVis (FPS) | 20.83 | 20.83 |
| OSPray - XFrog Forest - Path Tracer (FPS) | 1.45 | 1.45 |
| OSPray - M.R - SciVis (FPS) | 10.99 | 11.11 |
| Normalized | 98.92% | 100% |
| OSPray - NASA Streamlines - Path Tracer (FPS) | 4.03 | 4.05 |
| Normalized | 99.51% | 100% |
| OSPray - M.R - Path Tracer (FPS) | 125 | 142.86 |
| Normalized | 87.5% | 100% |
| TTSIOD 3D Renderer - P.R.W.S.S.M (FPS) | 686.342 | 682.361 |
| Normalized | 100% | 99.42% |
| AOM AV1 - Speed 0 Two-Pass - Bosphorus 4K (FPS) | 0.15 | 0.15 |
| AOM AV1 - Speed 4 Two-Pass - Bosphorus 4K (FPS) | 3.36 | 3.49 |
| Normalized | 96.28% | 100% |
| AOM AV1 - Speed 6 Realtime - Bosphorus 4K (FPS) | 12.39 | 13.06 |
| Normalized | 94.87% | 100% |
| AOM AV1 - Speed 6 Two-Pass - Bosphorus 4K (FPS) | 6.13 | 6.36 |
| Normalized | 96.38% | 100% |
| AOM AV1 - Speed 8 Realtime - Bosphorus 4K (FPS) | 30.33 | 34.03 |
| Normalized | 89.13% | 100% |
| AOM AV1 - Speed 9 Realtime - Bosphorus 4K (FPS) | 36.97 | 42.07 |
| Normalized | 87.88% | 100% |
| AOM AV1 - Speed 0 Two-Pass - Bosphorus 1080p (FPS) | 0.45 | 0.45 |

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|---|---|---|
| **AOM AV1 - Speed 4 Two-Pass - Bosphorus 1080p** | **6.27** | **6.45** |
| **Normalized** | 97.21% | 100% |
| **AOM AV1 - Speed 6 Realtime - Bosphorus 1080p** | **20.38** | **21.16** |
| **Normalized** | 96.31% | 100% |
| **AOM AV1 - Speed 6 Two-Pass - Bosphorus 1080p** | **16.41** | **16.59** |
| **Normalized** | 98.92% | 100% |
| **AOM AV1 - Speed 8 Realtime - Bosphorus 1080p** | **72.72** | **77.52** |
| **Normalized** | 93.81% | 100% |
| **AOM AV1 - Speed 9 Realtime - Bosphorus 1080p** | **80.33** | **86.4** |
| **Normalized** | 92.97% | 100% |
| **Embree - Pathtracer - Crown (FPS)** | **11.4486** | **11.5786** |
| **Normalized** | 98.88% | 100% |
| **Embree - Pathtracer ISPC - Crown (FPS)** | **10.8065** | **10.899** |
| **Normalized** | 99.15% | 100% |
| **Embree - Pathtracer - Asian Dragon (FPS)** | **12.4236** | **12.3696** |
| **Normalized** | 100% | 99.57% |
| **Embree - Pathtracer - Asian Dragon Obj (FPS)** | **11.0373** | **11.18** |
| **Normalized** | 98.72% | 100% |
| **Embree - Pathtracer ISPC - Asian Dragon (FPS)** | **11.6908** | **11.7744** |
| **Normalized** | 99.29% | 100% |
| **Embree - Pathtracer ISPC - Asian Dragon Obj (FPS)** | **10.4072** | **10.3356** |
| **Normalized** | 100% | 99.31% |
| **Kvazaar - Bosphorus 4K - Slow (FPS)** | **5.95** | **5.96** |
| **Normalized** | 99.83% | 100% |
| **Kvazaar - Bosphorus 4K - Medium (FPS)** | **6.05** | **6.07** |
| **Normalized** | 99.67% | 100% |
| **Kvazaar - Bosphorus 1080p - Slow (FPS)** | **25.06** | **24.97** |
| **Normalized** | 100% | 99.64% |
| **Kvazaar - Bosphorus 1080p - Medium (FPS)** | **25.78** | **25.59** |
| **Normalized** | 100% | 99.26% |
| **Kvazaar - Bosphorus 4K - Very Fast (FPS)** | **15.99** | **16** |
| **Normalized** | 99.94% | 100% |
| **Kvazaar - Bosphorus 4K - Ultra Fast (FPS)** | **25.81** | **25.95** |
| **Normalized** | 99.46% | 100% |
| **Kvazaar - Bosphorus 1080p - Very Fast (FPS)** | **58.6** | **58.1** |
| **Normalized** | 100% | 99.15% |
| **Kvazaar - Bosphorus 1080p - Ultra Fast (FPS)** | **93.54** | **93.23** |
| **Normalized** | 100% | 99.67% |
| **rav1e - 1 (FPS)** | **0.553** | **0.558** |
| **Normalized** | 99.1% | 100% |
| **rav1e - 5 (FPS)** | **1.626** | **1.628** |
| **Normalized** | 99.88% | 100% |
| **rav1e - 6 (FPS)** | **2.177** | **2.175** |
| **Normalized** | 100% | 99.91% |
| **rav1e - 10 (FPS)** | **4.824** | **4.849** |
| **Normalized** | 99.48% | 100% |
| **SVT-AV1 - Preset 4 - Bosphorus 4K (FPS)** | **1.405** | **1.413** |
| **Normalized** | 99.43% | 100% |
| **SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)** | **12.902** | **13.044** |
| **Normalized** | 98.91% | 100% |
| **SVT-AV1 - Preset 4 - Bosphorus 1080p (FPS)** | **4.707** | **4.741** |
| **Normalized** | 99.28% | 100% |
| **SVT-AV1 - Preset 8 - Bosphorus 1080p (FPS)** | **39.554** | **40.166** |

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|---|---|---|
| Normalized | 98.48% | 100% |
| SVT-HEVC - 1 - Bosphorus 1080p (FPS) | 8.29 | 8.25 |
| Normalized | 100% | 99.52% |
| SVT-HEVC - 7 - Bosphorus 1080p (FPS) | 64.63 | 65.11 |
| Normalized | 99.26% | 100% |
| SVT-HEVC - 10 - Bosphorus 1080p (FPS) | 136.24 | 134.62 |
| Normalized | 100% | 98.81% |
| SVT-VP9 - VMAF Optimized - Bosphorus 1080p (FPS) | 82.7 | 83.32 |
| Normalized | 99.26% | 100% |
| SVT-VP9 - P.S.O - Bosphorus 1080p (FPS) | 84.63 | 84.01 |
| Normalized | 100% | 99.27% |
| SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS) | 73.98 | 73.67 |
| Normalized | 100% | 99.58% |
| VP9 libvpx Encoding - Speed 0 - Bosphorus 4K (FPS) | 6.34 | 6.37 |
| Normalized | 99.53% | 100% |
| VP9 libvpx Encoding - Speed 5 - Bosphorus 4K (FPS) | 13 | 13.21 |
| Normalized | 98.41% | 100% |
| VP9 libvpx Encoding - Speed 0 - Bosphorus 1080p | 13.14 | 13.14 |
| VP9 libvpx Encoding - Speed 5 - Bosphorus 1080p | 27.94 | 27.86 |
| Normalized | 100% | 99.71% |
| x264 - H.2.V.E (FPS) | 90.82 | 91.24 |
| Normalized | 99.54% | 100% |
| x265 - Bosphorus 4K (FPS) | 9.96 | 9.76 |
| Normalized | 100% | 97.99% |
| x265 - Bosphorus 1080p (FPS) | 40.59 | 41.68 |
| Normalized | 97.38% | 100% |
| Intel Open Image Denoise - RT.hdr_alb_nrm.3840x2160 (Images / Sec) | 0.31 | 0.30 |
| Normalized | 100% | 96.77% |
| Intel Open Image Denoise - RT.ldr_alb_nrm.3840x2160 (Images / Sec) | 0.31 | 0.27 |
| Normalized | 100% | 87.1% |
| Intel Open Image Denoise - RTLightmap.hdr.4096x4096 (Images / Sec) | 0.16 | 0.14 |
| Normalized | 100% | 87.5% |
| OpenVKL - vklBenchmark (Items / Sec) | 142 | 113 |
| Normalized | 100% | 79.58% |
| OpenVKL - vklBenchmarkVdbVolume (Items / Sec) | 15022122 | 14936305 |
| Normalized | 100% | 99.43% |
| OpenVKL - vklBenchmarkStructuredVolume (Items / | 62578005 | 62530787 |
| Normalized | 100% | 99.92% |
| OpenVKL - vklBenchmarkUnstructuredVolume (Items / Sec) | 2293880 | 2295929 |
| Normalized | 99.91% | 100% |
| libavif avifenc - 0 (sec) | 63.137 | 63.409 |
| Normalized | 100% | 99.57% |
| libavif avifenc - 2 (sec) | 33.025 | 33.219 |
| Normalized | 100% | 99.42% |
| libavif avifenc - 6 (sec) | 11.579 | 11.546 |
| Normalized | 99.72% | 100% |
| libavif avifenc - 10 (sec) | 3.021 | 3.084 |
| Normalized | 100% | 97.96% |

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|---|---|---|
| libavif avifenc - 6, Lossless (sec) | 51.677 | 52.595 |
| Normalized | 100% | 98.25% |
| libavif avifenc - 10, Lossless (sec) | 5.211 | 5.279 |
| Normalized | 100% | 98.71% |
| Timed Godot Game Engine Compilation - Time To Compile (sec) | 148.028 | 147.897 |
| Normalized | 99.91% | 100% |
| C-Ray - Total Time - 4.1.R.P.P (sec) | 59.623 | 59.909 |
| Normalized | 100% | 99.52% |
| POV-Ray - Trace Time (sec) | 42.528 | 42.641 |
| Normalized | 100% | 99.73% |
| Smallpt - G.I.R.1.S (sec) | 9.118 | 9.148 |
| Normalized | 100% | 99.67% |
| YafaRay - T.T.F.S.S (sec) | 121.47 | 121.595 |
| Normalized | 100% | 99.9% |
| rays1bench - Large Scene (mrays/s) | 70.67 | 70.52 |
| Normalized | 100% | 99.79% |
| oneDNN - IP Shapes 1D - f32 - CPU (ms) | 3.91196 | 3.93177 |
| Normalized | 100% | 99.5% |
| oneDNN - IP Shapes 3D - f32 - CPU (ms) | 14.445 | 15.3112 |
| Normalized | 100% | 94.34% |
| oneDNN - IP Shapes 1D - u8s8f32 - CPU (ms) | 1.44276 | 1.44655 |
| Normalized | 100% | 99.74% |
| oneDNN - IP Shapes 3D - u8s8f32 - CPU (ms) | 3.34567 | 3.53979 |
| Normalized | 100% | 94.52% |
| oneDNN - C.B.S.A - f32 - CPU (ms) | 31.0924 | 31.2788 |
| Normalized | 100% | 99.4% |
| oneDNN - D.B.s - f32 - CPU (ms) | 8.34905 | 8.07154 |
| Normalized | 96.68% | 100% |
| oneDNN - D.B.s - f32 - CPU (ms) | 6.33551 | 6.35099 |
| Normalized | 100% | 99.76% |
| oneDNN - C.B.S.A - u8s8f32 - CPU (ms) | 32.3988 | 32.8554 |
| Normalized | 100% | 98.61% |
| oneDNN - D.B.s - u8s8f32 - CPU (ms) | 1.90314 | 1.90463 |
| Normalized | 100% | 99.92% |
| oneDNN - D.B.s - u8s8f32 - CPU (ms) | 2.7144 | 2.66654 |
| Normalized | 98.24% | 100% |
| oneDNN - R.N.N.T - f32 - CPU (ms) | 3939 | 3938 |
| Normalized | 99.98% | 100% |
| oneDNN - R.N.N.I - f32 - CPU (ms) | 2783 | 2814 |
| Normalized | 100% | 98.9% |
| oneDNN - R.N.N.T - u8s8f32 - CPU (ms) | 3907 | 3930 |
| Normalized | 100% | 99.4% |
| oneDNN - R.N.N.I - u8s8f32 - CPU (ms) | 2780 | 2791 |
| Normalized | 100% | 99.6% |
| oneDNN - M.M.B.S.T - f32 - CPU (ms) | 6.19051 | 6.27565 |
| Normalized | 100% | 98.64% |
| oneDNN - R.N.N.T - bf16bf16bf16 - CPU (ms) | 3918 | 3926 |
| Normalized | 100% | 99.79% |
| oneDNN - R.N.N.I - bf16bf16bf16 - CPU (ms) | 2775 | 2813 |
| Normalized | 100% | 98.64% |
| oneDNN - M.M.B.S.T - u8s8f32 - CPU (ms) | 3.19462 | 3.21874 |
| Normalized | 100% | 99.25% |

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|---|---|---|
| **AOBench - 2048 x 2048 - Total Time (sec)** | **28.884** | **28.836** |
| Normalized | 99.83% | 100% |
| **dcraw - R.T.P.I.C (sec)** | **36.695** | **37.069** |
| Normalized | 100% | 98.99% |
| **DeepSpeech - CPU (sec)** | **86.2994** | **87.12534** |
| Normalized | 100% | 99.05% |
| **Monkey Audio Encoding - WAV To APE (sec)** | **10.255** | **10.256** |
| Normalized | 100% | 99.99% |
| **FLAC Audio Encoding - WAV To FLAC (sec)** | **6.657** | **6.736** |
| Normalized | 100% | 98.83% |
| **LAME MP3 Encoding - WAV To MP3 (sec)** | **6.021** | **6.022** |
| Normalized | 100% | 99.98% |
| **Ogg Audio Encoding - WAV To Ogg (sec)** | **15.627** | **15.598** |
| Normalized | 99.81% | 100% |
| **Opus Codec Encoding - WAV To Opus Encode (sec)** | **6.562** | **6.481** |
| Normalized | 98.77% | 100% |
| **eSpeak-NG Speech Engine - T.T.S.S (sec)** | **21.743** | **22.175** |
| Normalized | 100% | 98.05% |
| **FFmpeg - H.2.H.T.N.D (sec)** | **5.431** | **5.415** |
| Normalized | 99.71% | 100% |
| **Ngspice - C2670 (sec)** | **149.586** | **154.993** |
| Normalized | 100% | 96.51% |
| **Ngspice - C7552 (sec)** | **117.152** | **148.124** |
| Normalized | 100% | 79.09% |
| **Radiance Benchmark - Serial (sec)** | **463.394** | **472.448** |
| Normalized | 100% | 98.08% |
| **Radiance Benchmark - SMP Parallel (sec)** | **153.523** | **148.598** |
| Normalized | 96.79% | 100% |
| **RNNoise (sec)** | **15.881** | **15.89** |
| Normalized | 100% | 99.94% |
| **Tachyon - Total Time (sec)** | **83.114** | **83.2323** |
| Normalized | 100% | 99.86% |
| **VOSK Speech Recognition Toolkit (sec)** | **17.685** | **17.21** |
| Normalized | 97.31% | 100% |
| **WebP2 Image Encode - Default (sec)** | **3.465** | **3.493** |
| Normalized | 100% | 99.2% |
| **WebP2 Image Encode - Q.7.C.E.7 (sec)** | **208.149** | **207.997** |
| Normalized | 99.93% | 100% |
| **WebP2 Image Encode - Q.9.C.E.7 (sec)** | **371.629** | **373.401** |
| Normalized | 100% | 99.53% |
| **WebP2 Image Encode - Q.1.C.E.5 (sec)** | **11.826** | **11.781** |
| Normalized | 99.62% | 100% |
| **WebP2 Image Encode - Q.1.L.C (sec)** | **739.223** | **731.99** |
| Normalized | 99.02% | 100% |
| **Google SynthMark - VoiceMark_100 (Voices)** | **796.196** | **792.402** |
| Normalized | 100% | 99.52% |
| **libjpeg-turbo tjbench - D.T (Megapixels/sec)** | **253.833085** | **236.345501** |
| Normalized | 100% | 93.11% |
| **ASTC Encoder - Medium (sec)** | **4.0564** | **4.086** |
| Normalized | 100% | 99.28% |
| **ASTC Encoder - Thorough (sec)** | **7.1049** | **7.0997** |
| Normalized | 99.93% | 100% |
| **ASTC Encoder - Exhaustive (sec)** | **69.7223** | **69.787** |

# cc AMD Ryzen 9 5900HX

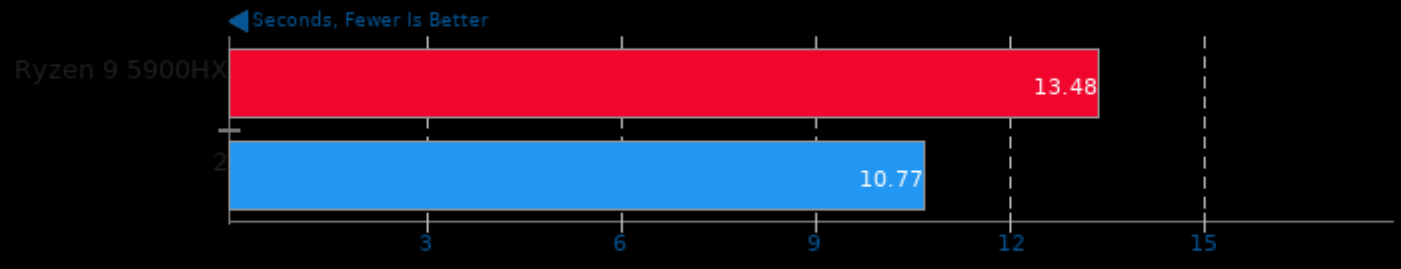
| | | |
|---|---|---|
| Normalized | 100% | 99.91% |
| **Basis Universal - ETC1S (sec)** | **23.507** | **23.777** |
| Normalized | 100% | 98.86% |
| **Basis Universal - UASTC Level 0 (sec)** | **5.858** | **5.856** |
| Normalized | 99.97% | 100% |
| **Basis Universal - UASTC Level 2 (sec)** | **26.234** | **26.246** |
| Normalized | 100% | 99.95% |
| **Basis Universal - UASTC Level 3 (sec)** | **49.895** | **49.902** |
| Normalized | 100% | 99.99% |
| **KTX-Software toktx - UASTC 3 (sec)** | **10.347** | **10.342** |
| Normalized | 99.95% | 100% |
| **KTX-Software toktx - Zstd Compression 9 (sec)** | **2.911** | **3.134** |
| Normalized | 100% | 92.88% |
| **KTX-Software toktx - Z.C.1 (sec)** | **23.435** | **23.714** |
| Normalized | 100% | 98.82% |
| **KTX-Software toktx - U.3.Z.C.1 (sec)** | **17.546** | **17.588** |
| Normalized | 100% | 99.76% |
| **KTX-Software toktx - U.4.Z.C.1 (sec)** | **301.06** | **301.759** |
| Normalized | 100% | 99.77% |
| **Darktable - Boat - CPU-only (sec)** | **6.282** | **6.393** |
| Normalized | 100% | 98.26% |
| **Darktable - Masskrug - CPU-only (sec)** | **7.176** | **7.262** |
| Normalized | 100% | 98.82% |
| **Darktable - Server Rack - CPU-only (sec)** | **0.231** | **0.23** |
| Normalized | 99.57% | 100% |
| **Darktable - Server Room - CPU-only (sec)** | **5.693** | **5.747** |
| Normalized | 100% | 99.06% |
| **GEGL - Crop (sec)** | **7.393** | **7.372** |
| Normalized | 99.72% | 100% |
| **GEGL - Scale (sec)** | **5.13** | **5.144** |
| Normalized | 100% | 99.73% |
| **GEGL - Cartoon (sec)** | **71.156** | **71.2** |
| Normalized | 100% | 99.94% |
| **GEGL - Reflect (sec)** | **24.798** | **24.859** |
| Normalized | 100% | 99.75% |
| **GEGL - Antialias (sec)** | **29.556** | **29.58** |
| Normalized | 100% | 99.92% |
| **GEGL - Tile Glass (sec)** | **23.165** | **23.231** |
| Normalized | 100% | 99.72% |
| **GEGL - Wavelet Blur (sec)** | **46.366** | **46.583** |
| Normalized | 100% | 99.53% |
| **GEGL - Color Enhance (sec)** | **43.895** | **43.829** |
| Normalized | 99.85% | 100% |
| **GEGL - Rotate 90 Degrees (sec)** | **32.099** | **32.271** |
| Normalized | 100% | 99.47% |
| **GIMP - resize (sec)** | **6.9** | **6.936** |
| Normalized | 100% | 99.48% |
| **GIMP - rotate (sec)** | **10.044** | **9.999** |
| Normalized | 99.55% | 100% |
| **GIMP - auto-levels (sec)** | **10.297** | **10.346** |
| Normalized | 100% | 99.53% |
| **GIMP - unsharp-mask (sec)** | **12.658** | **13.203** |
| Normalized | 100% | 95.87% |

# cc AMD Ryzen 9 5900HX

| | | |
|---|---|---|
| **G'MIC - 2.F.P.1.T (sec)** | **97.14** | **105.183** |
| **Normalized** | 100% | 92.35% |
| **G'MIC - P.I.O.A.3.V.1.T (sec)** | **11.495** | **11.448** |
| **Normalized** | 99.59% | 100% |
| **G'MIC - 3.E.F.I.R.C.1.T (sec)** | **42.26** | **42.772** |
| **Normalized** | 100% | 98.8% |
| **Hugin - P.P.A.S.T (sec)** | **38.859** | **39.627** |
| **Normalized** | 100% | 98.06% |
| **OCRMyPDF - P.6.P.P.D (sec)** | **17.811** | **17.853** |
| **Normalized** | 100% | 99.76% |

## Betsy GPU Compressor 1.1 Beta

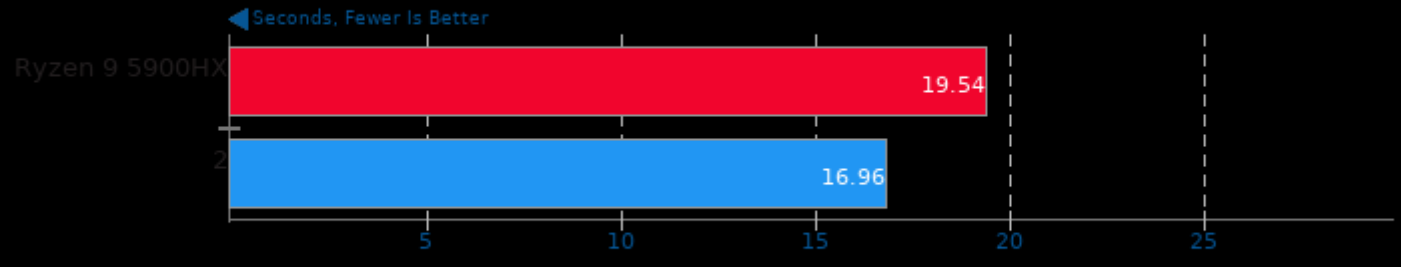
Codec: ETC1 - Quality: Highest




1. (CXX) g++ options: -O3 -O2 -lpthread -ldl

## Betsy GPU Compressor 1.1 Beta

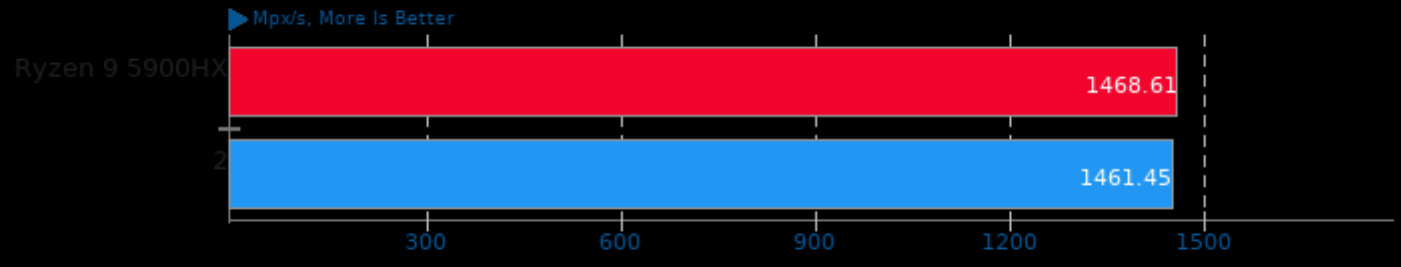
Codec: ETC2 RGB - Quality: Highest




1. (CXX) g++ options: -O3 -O2 -lpthread -ldl

## Etcpak 0.7

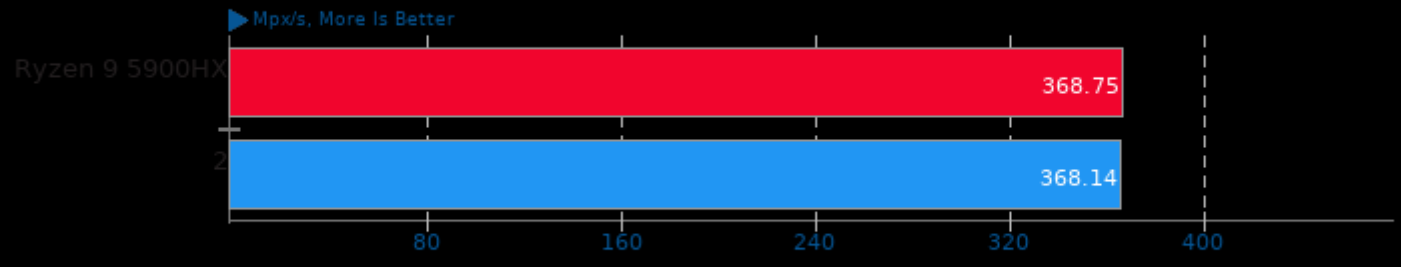
Configuration: DXT1




1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

## Etcpak 0.7

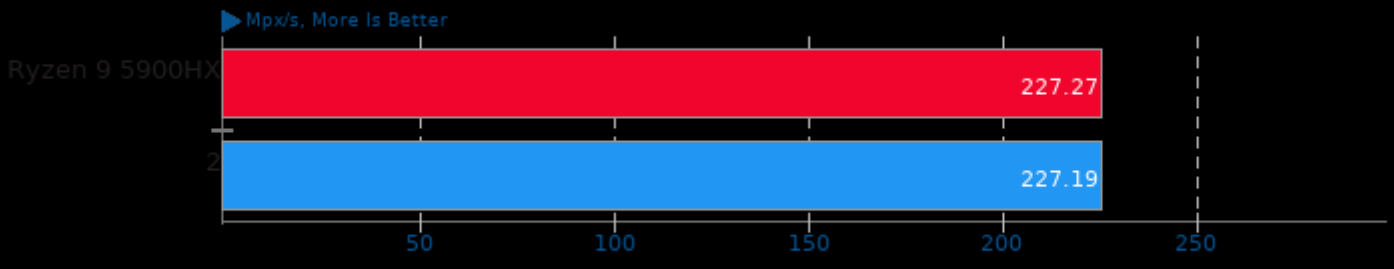
Configuration: ETC1




1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

## Etcpak 0.7

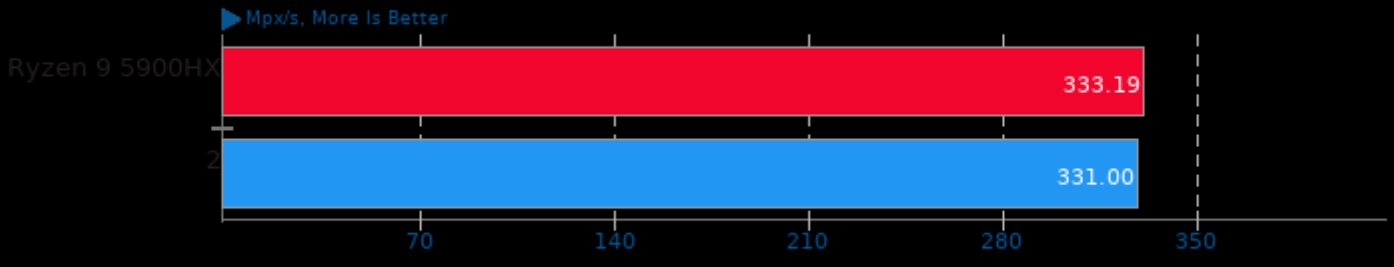
Configuration: ETC2




1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

## Etcpak 0.7

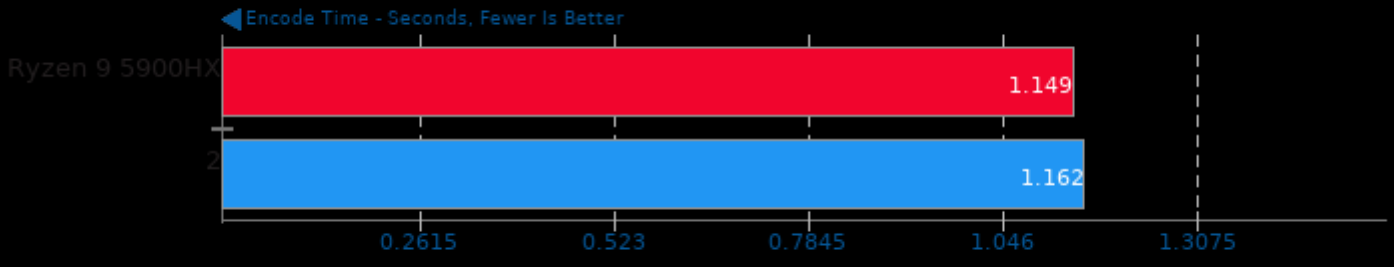
Configuration: ETC1 + Dithering




1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

## WebP Image Encode 1.1

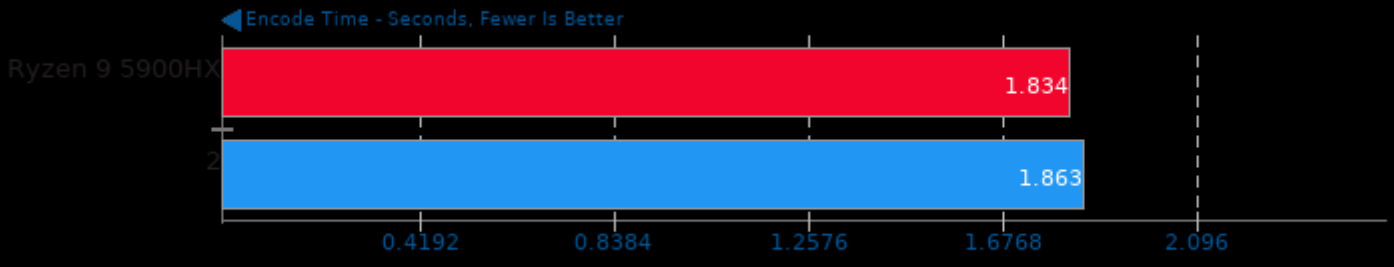
Encode Settings: Default




1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

## WebP Image Encode 1.1

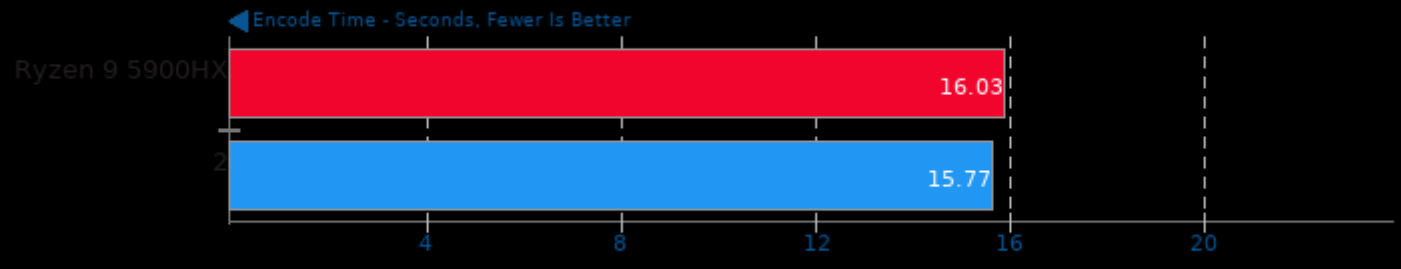
Encode Settings: Quality 100




1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

## WebP Image Encode 1.1

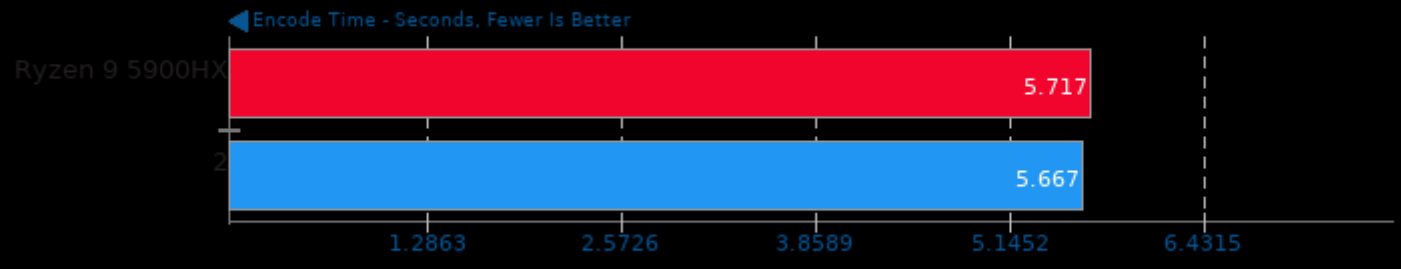
Encode Settings: Quality 100, Lossless




1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

## WebP Image Encode 1.1

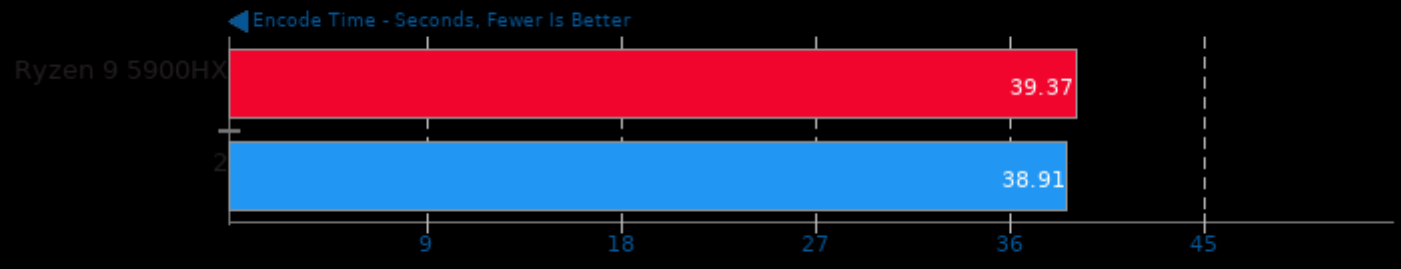
Encode Settings: Quality 100, Highest Compression




1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

## WebP Image Encode 1.1

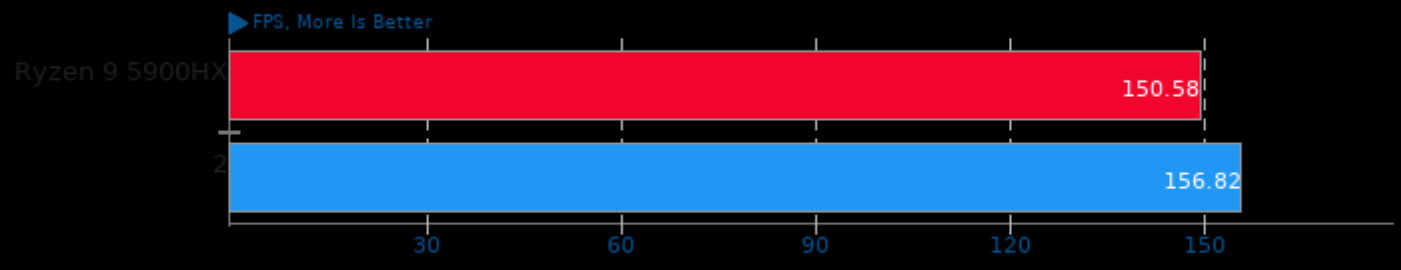
Encode Settings: Quality 100, Lossless, Highest Compression



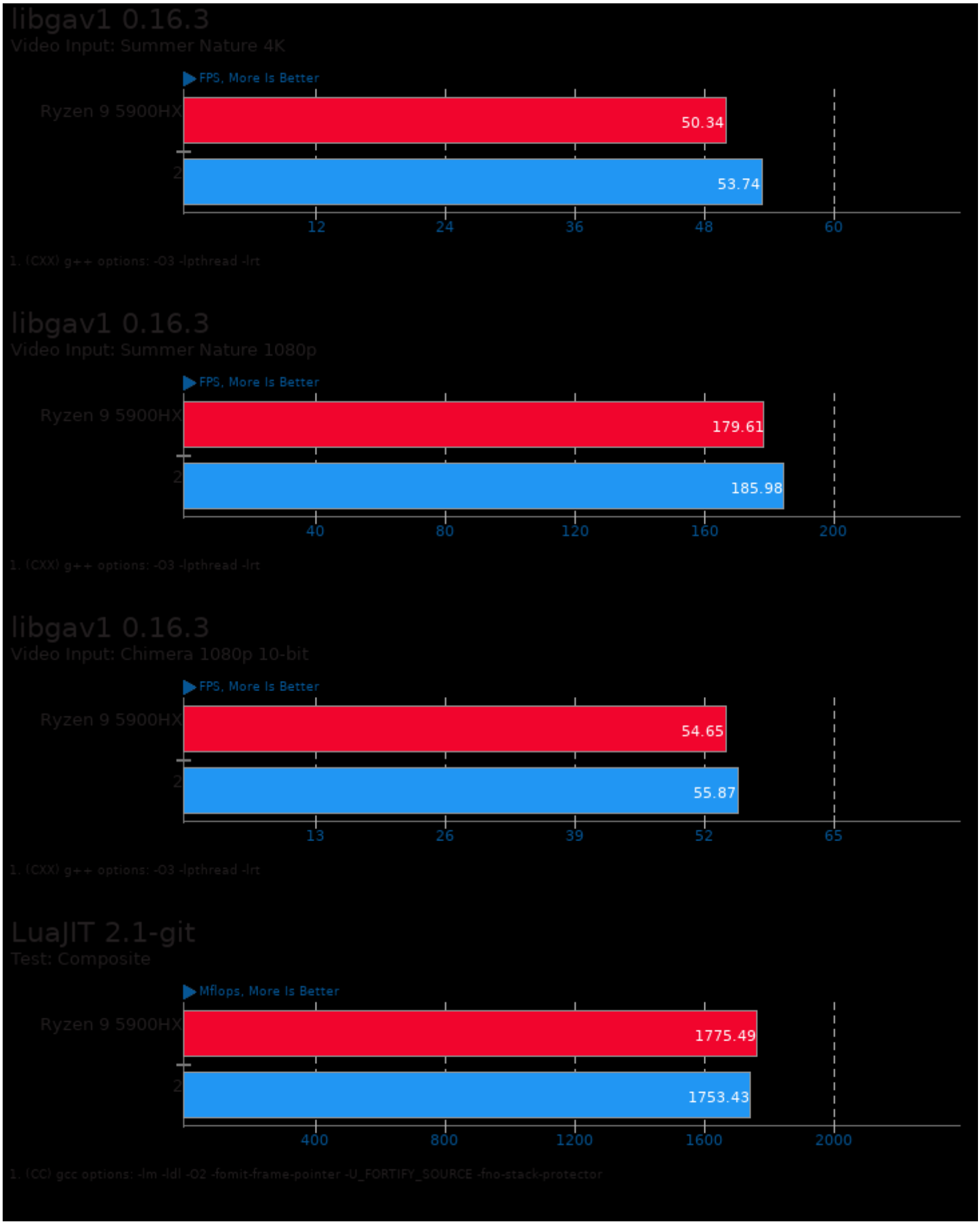

1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

## libgav1 0.16.3

Video Input: Chimera 1080p

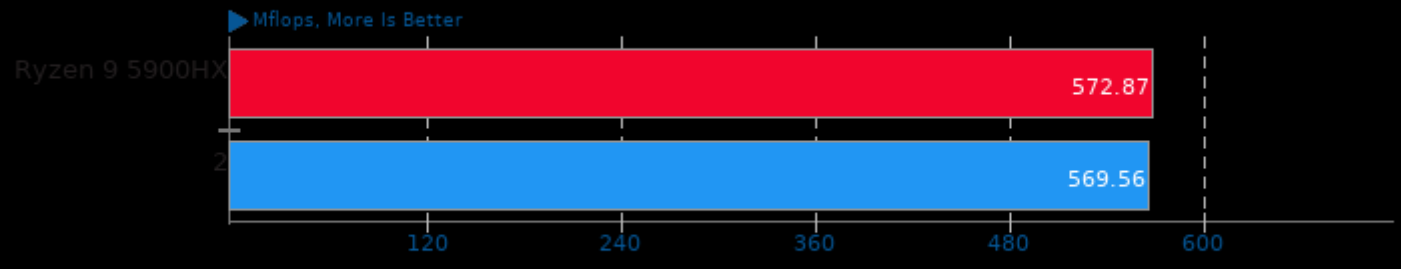



1. (CXX) g++ options: -O3 -lpthread -lrt


libgav1 0.16.3
Video Input: Summer Nature 4K
FPS, More Is Better
Ryzen 9 5900HX
50.34
53.74
12
24
36
48
60
1. (CXX) g++ options: -O3 -lpthread -lrt
libgav1 0.16.3
Video Input: Summer Nature 1080p
FPS, More Is Better
Ryzen 9 5900HX
179.61
185.98
40
80
120
160
200
1. (CXX) g++ options: -O3 -lpthread -lrt
libgav1 0.16.3
Video Input: Chimera 1080p 10-bit
FPS, More Is Better
Ryzen 9 5900HX
54.65
55.87
13
26
39
52
65
1. (CXX) g++ options: -O3 -lpthread -lrt
LuaJIT 2.1-git
Test: Composite
Mflops, More Is Better
Ryzen 9 5900HX
1775.49
1753.43
400
800
1200
1600
2000
1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

## LuaJIT 2.1-git

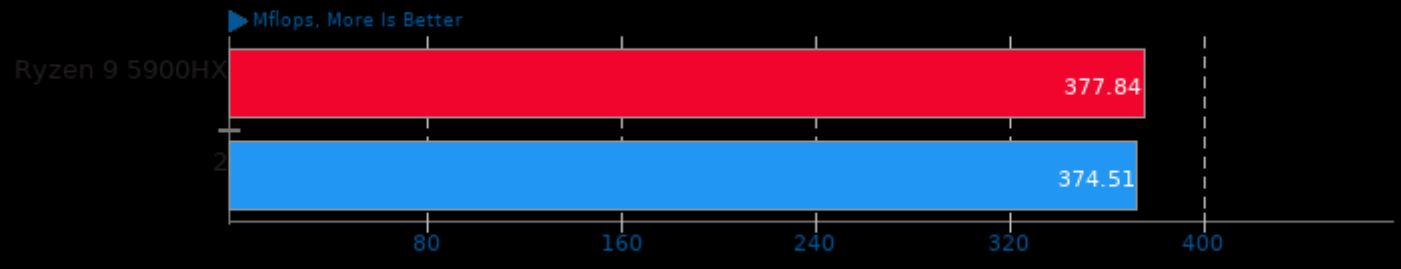
Test: Monte Carlo




1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

## LuaJIT 2.1-git

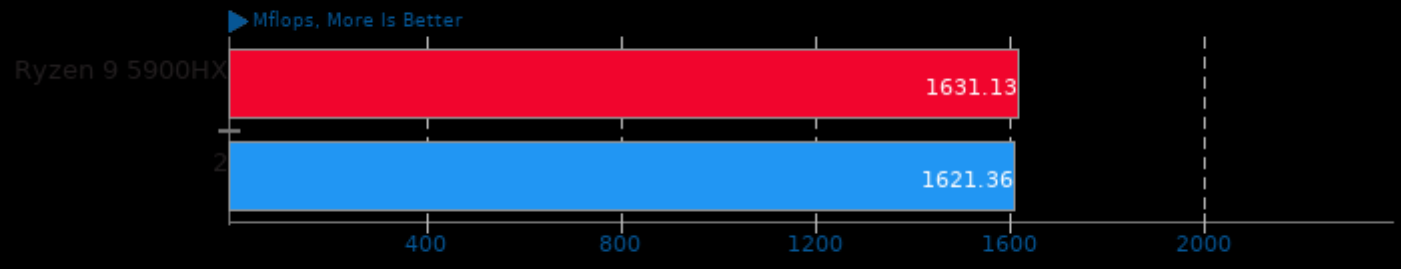
Test: Fast Fourier Transform




1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

## LuaJIT 2.1-git

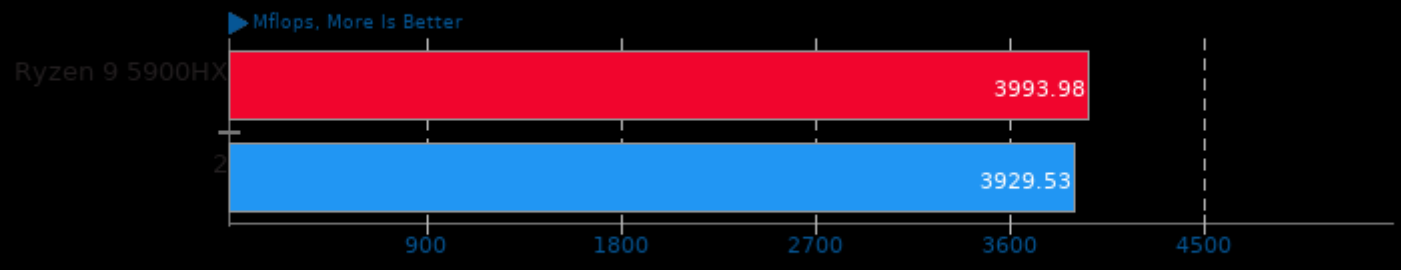
Test: Sparse Matrix Multiply




1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

## LuaJIT 2.1-git

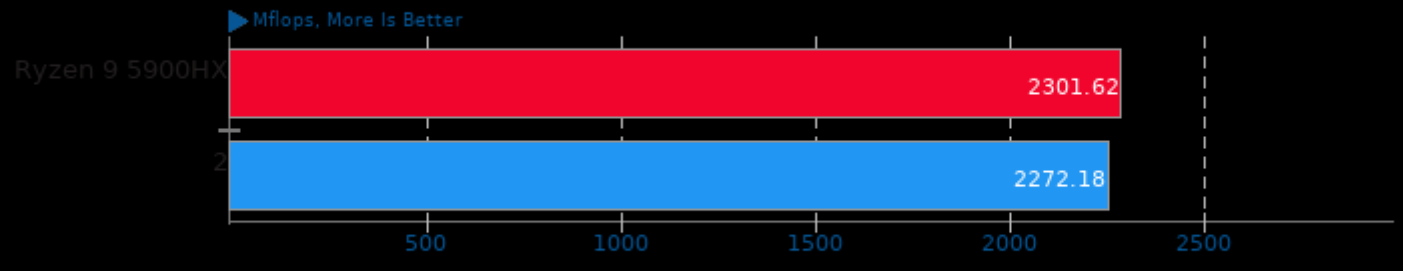
Test: Dense LU Matrix Factorization




1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

## LuaJIT 2.1-git

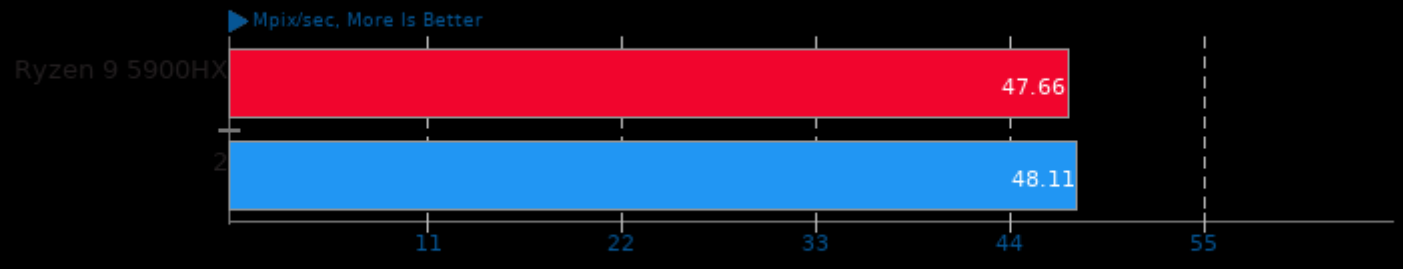
Test: Jacobi Successive Over-Relaxation




1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

## LibRaw 0.20

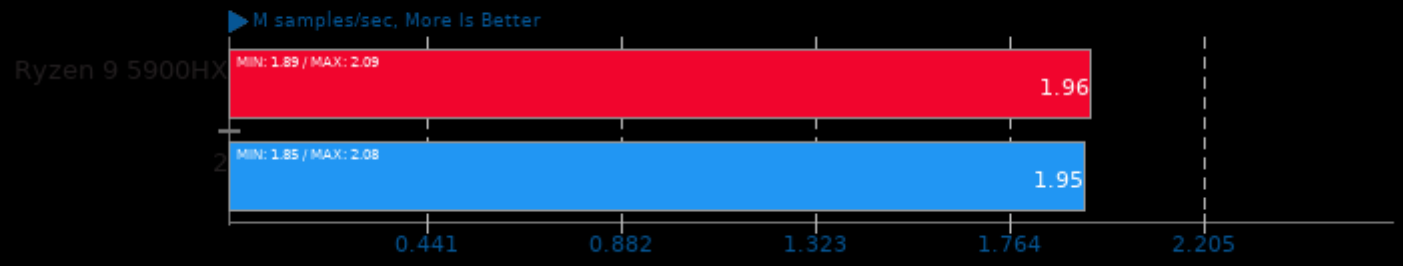
Post-Processing Benchmark




1. (CXX) g++ options: -O2 -fopenmp -ljpeg -lz -lm

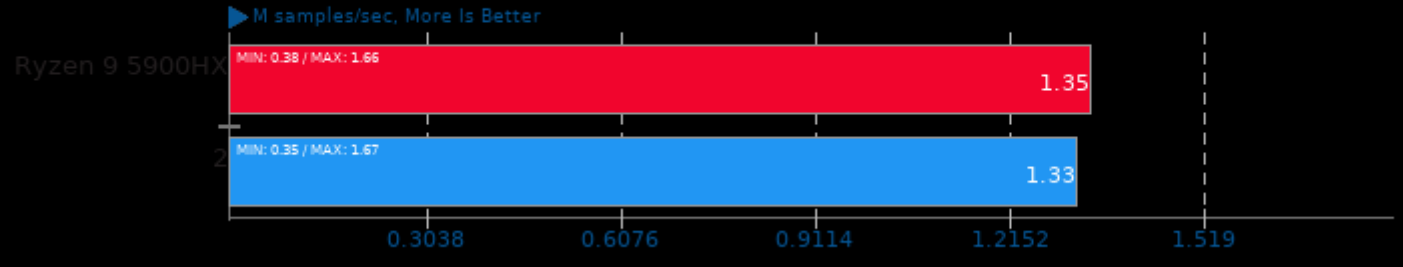
## LuxCoreRender 2.5

Scene: DLSC - Acceleration: CPU

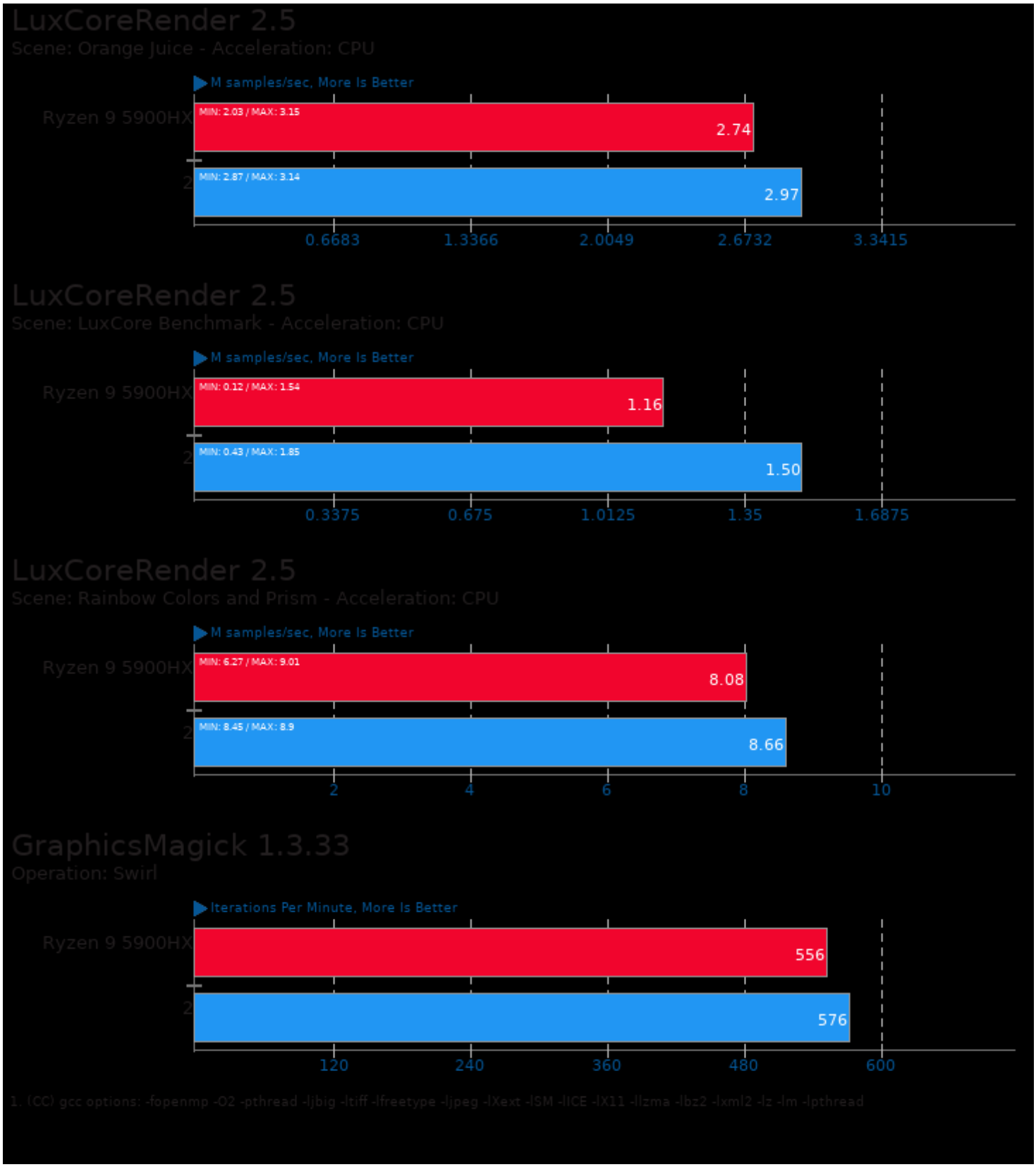


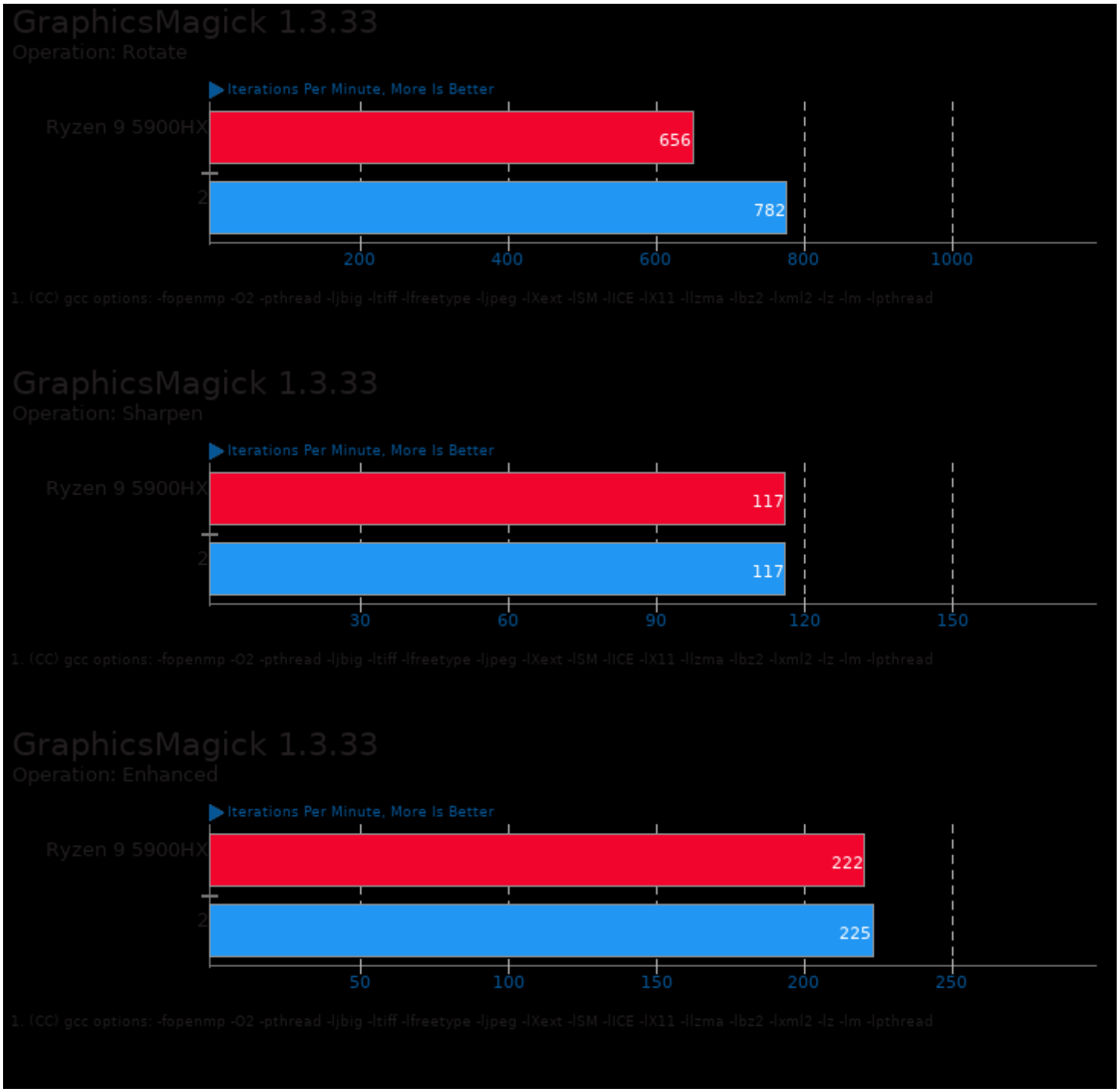

## LuxCoreRender 2.5

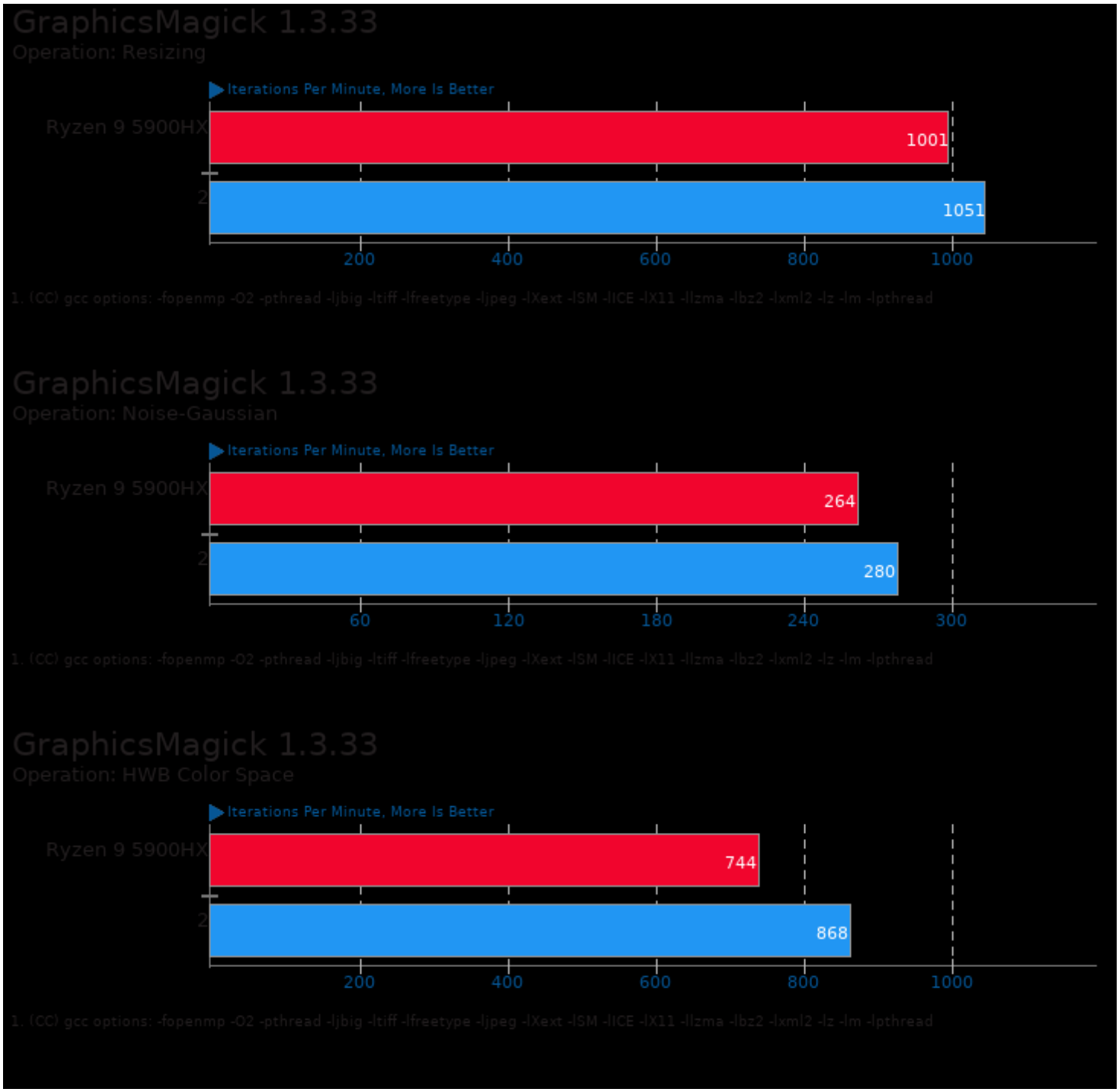
Scene: Danish Mood - Acceleration: CPU

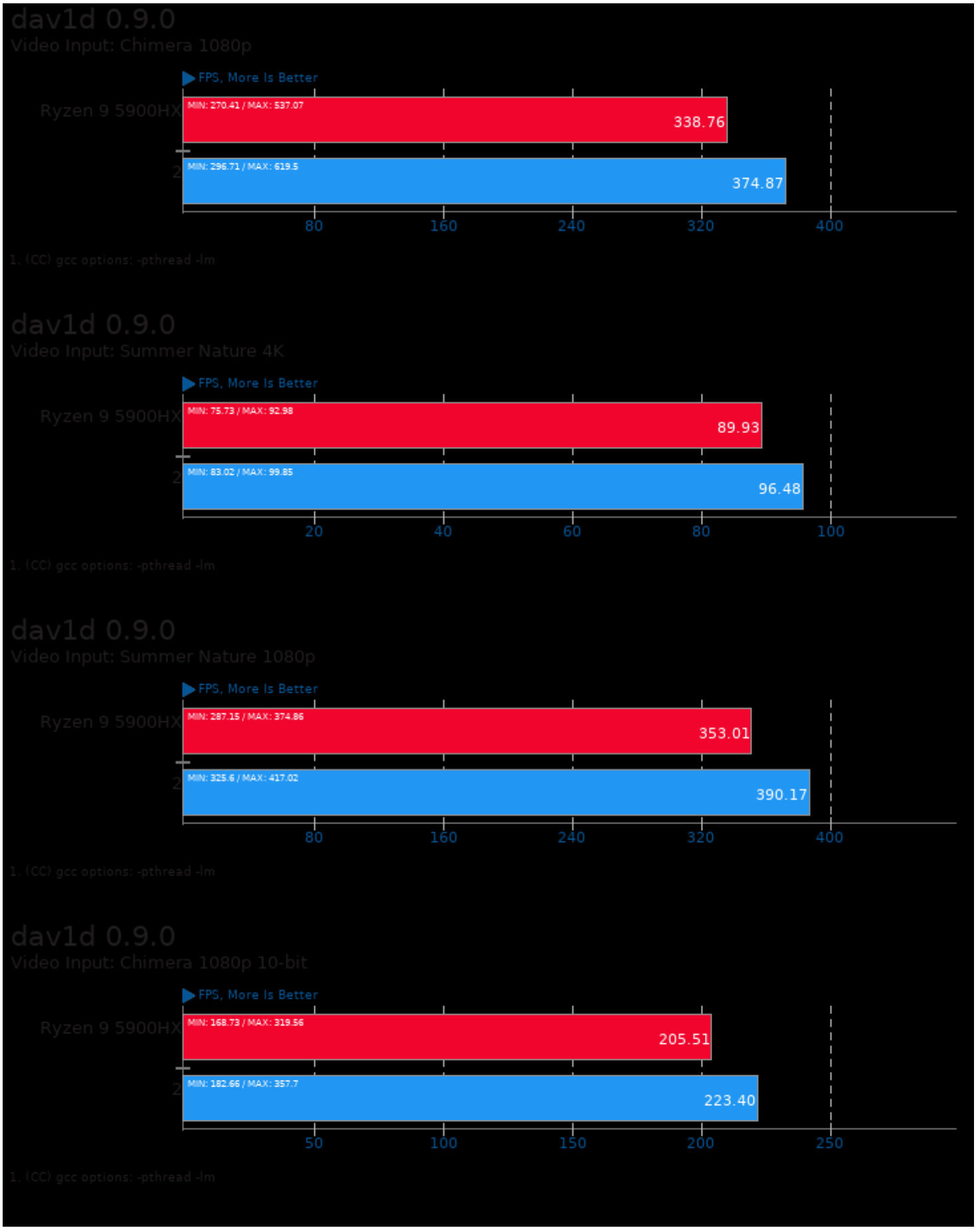


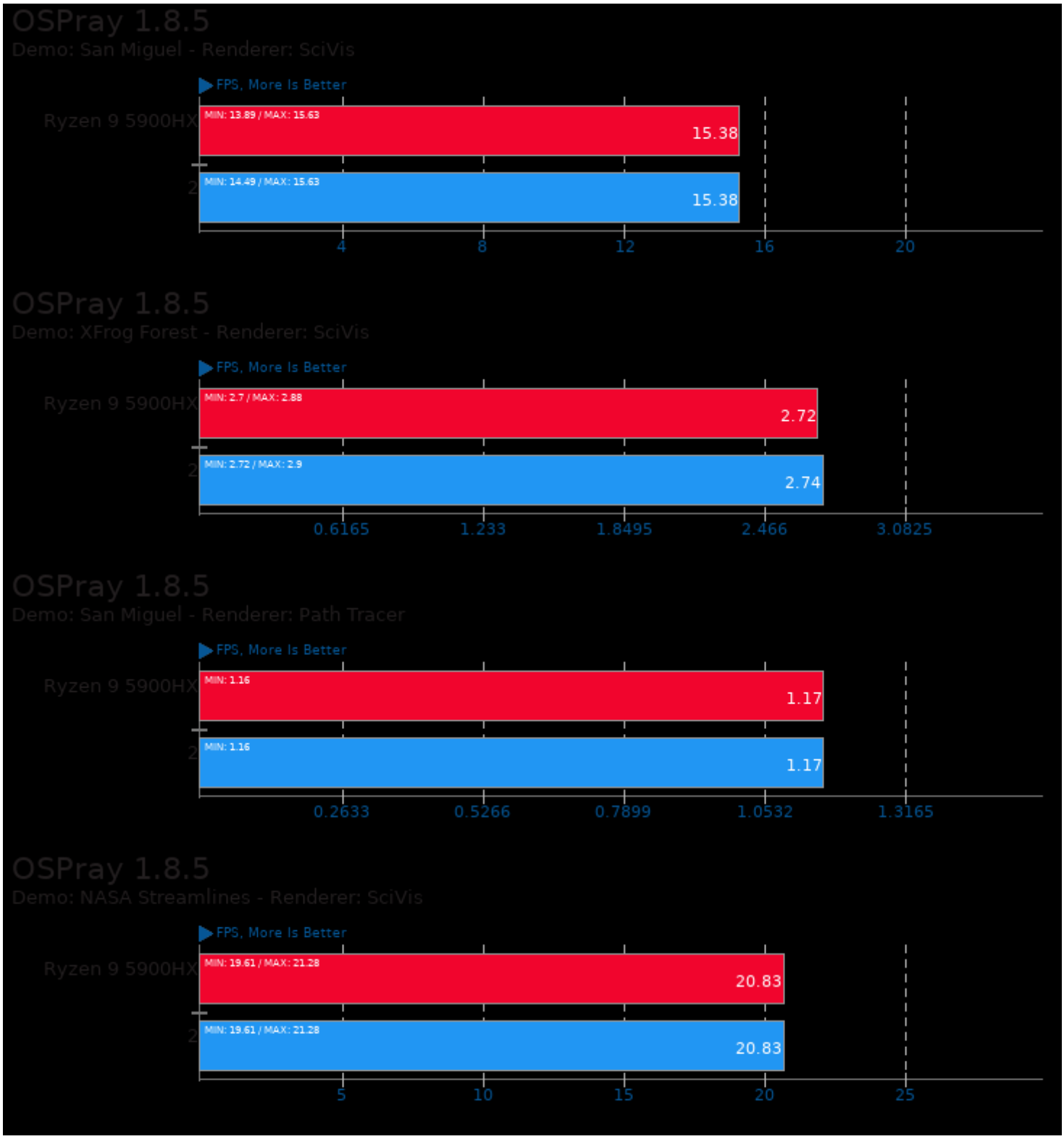
# cc AMD Ryzen 9 5900HX



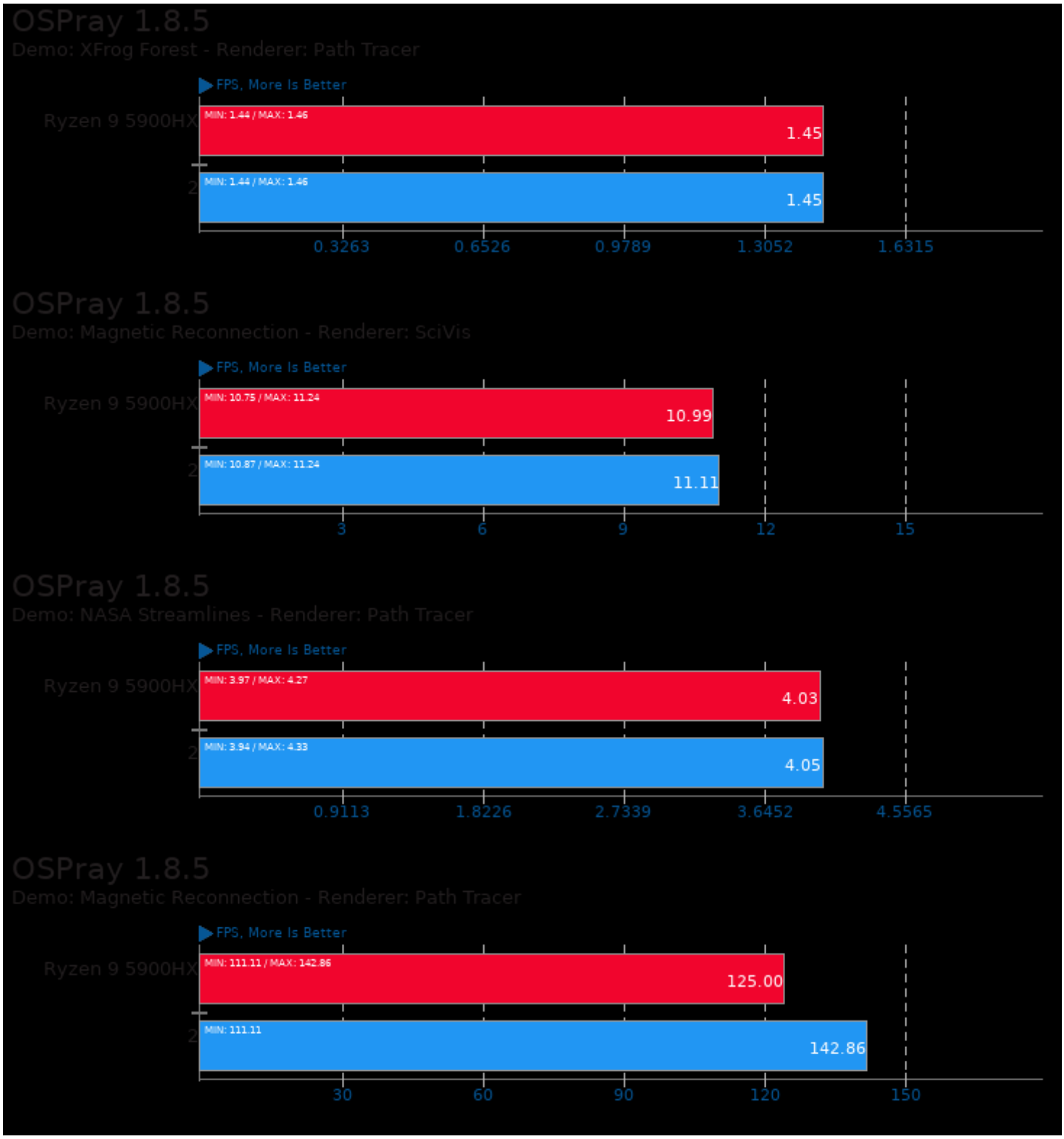

GraphicsMagick 1.3.33
Operation: Rotate
Iterations Per Minute, More Is Better
Ryzen 9 5900HX
656
782
200
400
600
800
1000
1. (CC) gcc options: -fopenmp -O2 -pthread -ljbig -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread
GraphicsMagick 1.3.33
Operation: Sharpen
Iterations Per Minute, More Is Better
Ryzen 9 5900HX
117
117
30
60
90
120
150
1. (CC) gcc options: -fopenmp -O2 -pthread -ljbig -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread
GraphicsMagick 1.3.33
Operation: Enhanced
Iterations Per Minute, More Is Better
Ryzen 9 5900HX
222
225
50
100
150
200
250
1. (CC) gcc options: -fopenmp -O2 -pthread -ljbig -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread


GraphicsMagick 1.3.33
Operation: Resizing
Iterations Per Minute, More Is Better
Ryzen 9 5900HX
1001
1051
200
400
600
800
1000
1. (CC) gcc options: -fopenmp -O2 -pthread -ljbig -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread
GraphicsMagick 1.3.33
Operation: Noise-Gaussian
Iterations Per Minute, More Is Better
Ryzen 9 5900HX
264
280
60
120
180
240
300
1. (CC) gcc options: -fopenmp -O2 -pthread -ljbig -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread
GraphicsMagick 1.3.33
Operation: HWB Color Space
Iterations Per Minute, More Is Better
Ryzen 9 5900HX
744
868
200
400
600
800
1000
1. (CC) gcc options: -fopenmp -O2 -pthread -ljbig -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread


dav1d 0.9.0
Video Input: Chimera 1080p
FPS, More Is Better
Ryzen 9 5900HX
MIN: 270.41 / MAX: 537.07
338.76
MIN: 296.71 / MAX: 619.5
374.87
80
160
240
320
400
1. (CC) gcc options: -pthread -lm
dav1d 0.9.0
Video Input: Summer Nature 4K
FPS, More Is Better
Ryzen 9 5900HX
MIN: 75.73 / MAX: 92.98
89.93
MIN: 83.02 / MAX: 99.85
96.48
20
40
60
80
100
1. (CC) gcc options: -pthread -lm
dav1d 0.9.0
Video Input: Summer Nature 1080p
FPS, More Is Better
Ryzen 9 5900HX
MIN: 287.15 / MAX: 374.86
353.01
MIN: 325.6 / MAX: 417.02
390.17
80
160
240
320
400
1. (CC) gcc options: -pthread -lm
dav1d 0.9.0
Video Input: Chimera 1080p 10-bit
FPS, More Is Better
Ryzen 9 5900HX
MIN: 168.73 / MAX: 319.56
205.51
MIN: 182.66 / MAX: 357.7
223.40
50
100
150
200
250
1. (CC) gcc options: -pthread -lm

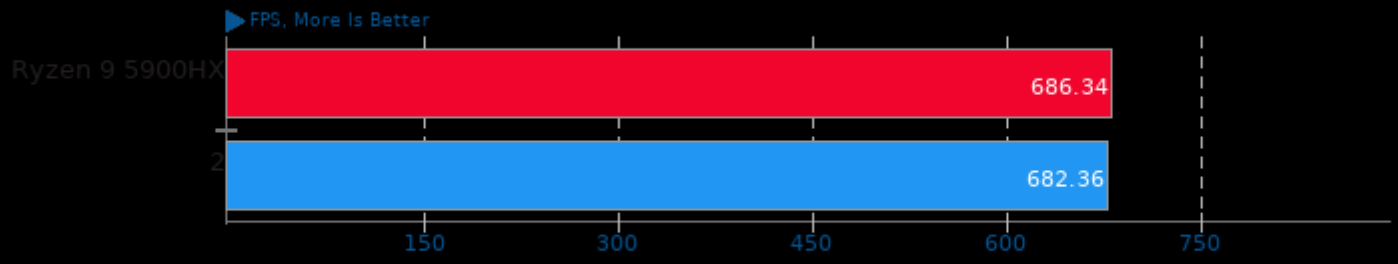

OSPray 1.8.5
Demo: San Miguel - Renderer: SciVis
FPS, More Is Better
Ryzen 9 5900HX
MIN: 13.89 / MAX: 15.63
15.38
MIN: 14.49 / MAX: 15.63
15.38
4
8
12
16
20
OSPray 1.8.5
Demo: XFrog Forest - Renderer: SciVis
FPS, More Is Better
Ryzen 9 5900HX
MIN: 2.7 / MAX: 2.88
2.72
MIN: 2.72 / MAX: 2.9
2.74
0.6165
1.233
1.8495
2.466
3.0825
OSPray 1.8.5
Demo: San Miguel - Renderer: Path Tracer
FPS, More Is Better
Ryzen 9 5900HX
MIN: 1.16
1.17
MIN: 1.16
1.17
0.2633
0.5266
0.7899
1.0532
1.3165
OSPray 1.8.5
Demo: NASA Streamlines - Renderer: SciVis
FPS, More Is Better
Ryzen 9 5900HX
MIN: 19.61 / MAX: 21.28
20.83
MIN: 19.61 / MAX: 21.28
20.83
5
10
15
20
25

# cc AMD Ryzen 9 5900HX



## TTSIOD 3D Renderer 2.3b

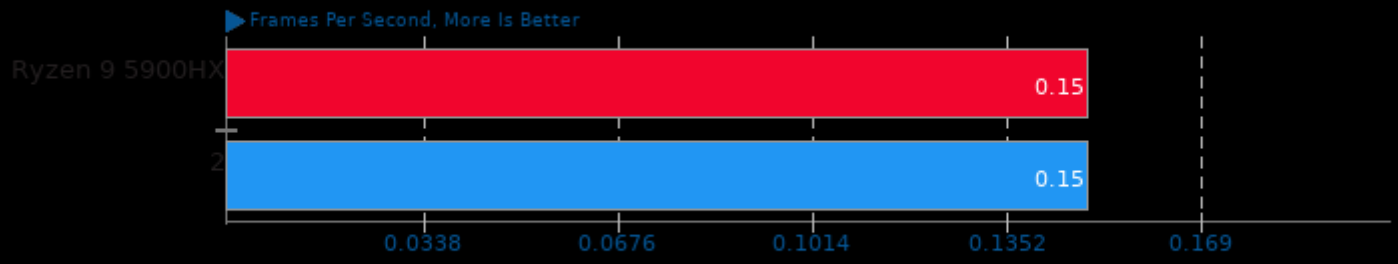
Phong Rendering With Soft-Shadow Mapping




1. (CXX) g++ options: -O3 -fomit-frame-pointer -ffast-math -mtune=native -flto -msse -mrecip -mfpmath=sse -msse2 -mssse3 -lSDL -fopenmp -fwhole-pr

## AOM AV1 3.1

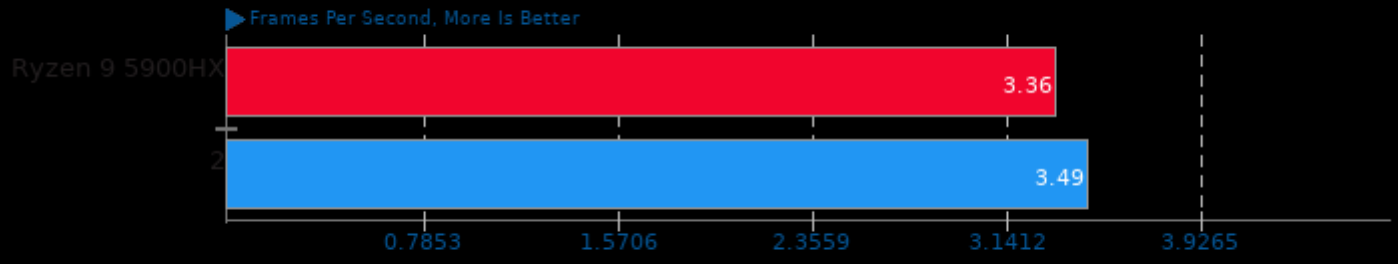
Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 4K




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

## AOM AV1 3.1

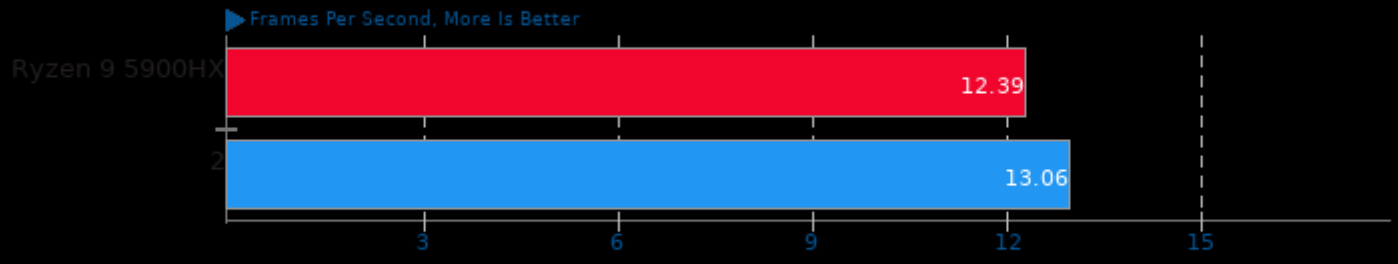
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 4K




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

## AOM AV1 3.1

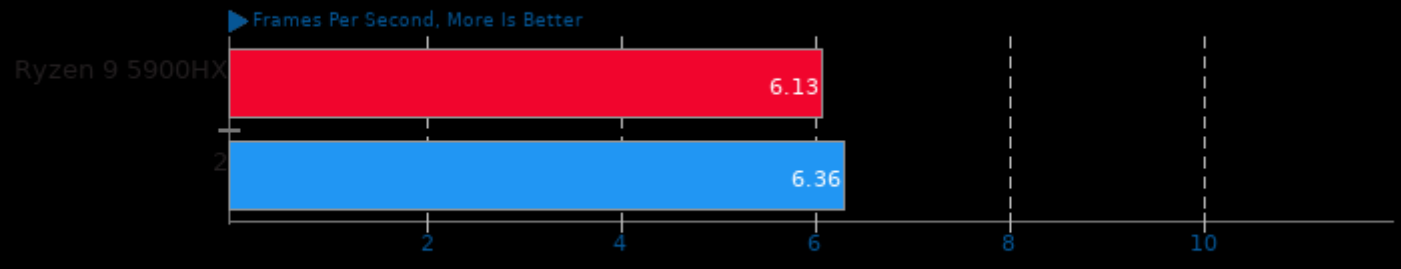
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 4K




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.1

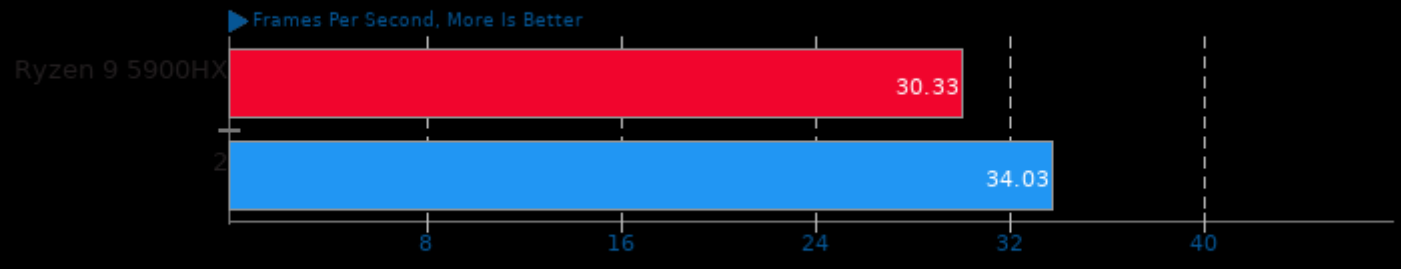
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.1

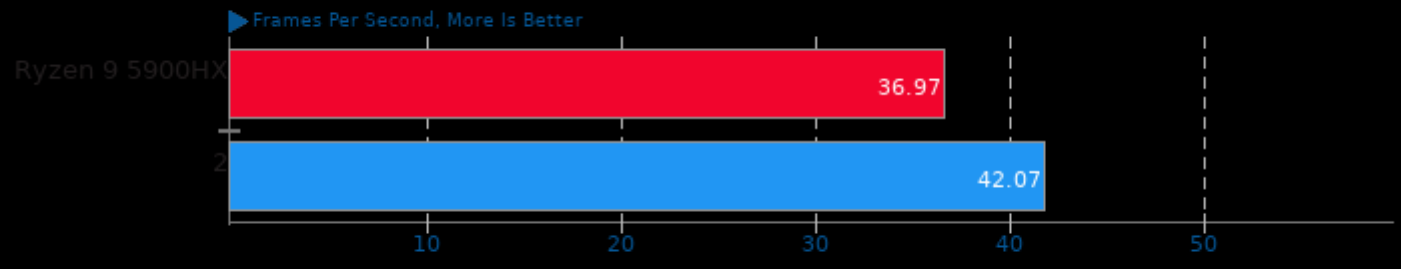
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 4K




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.1

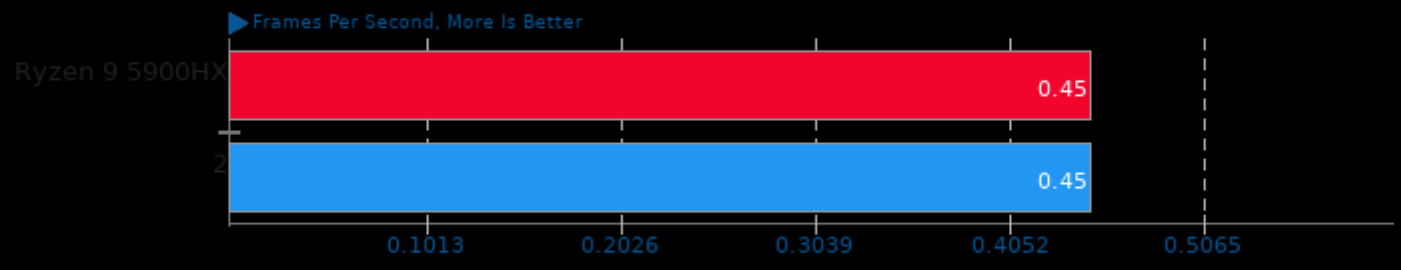
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 4K




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.1

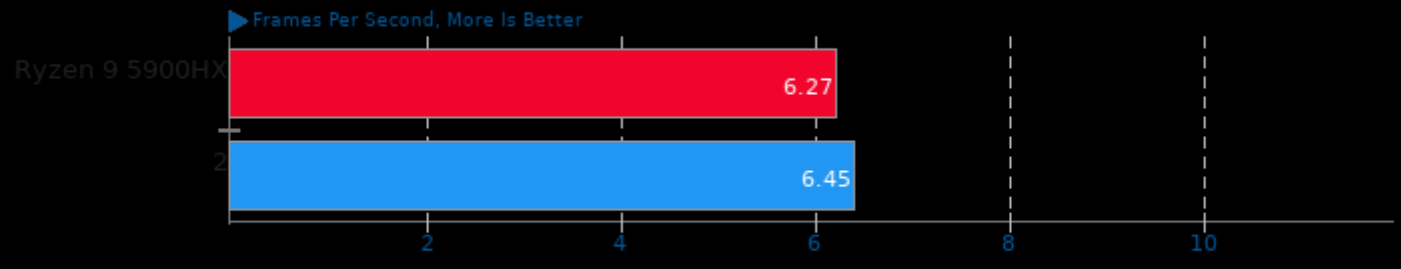
Encoder Mode: Speed 0 Two-Pass - Input: Bosphorus 1080p




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.1

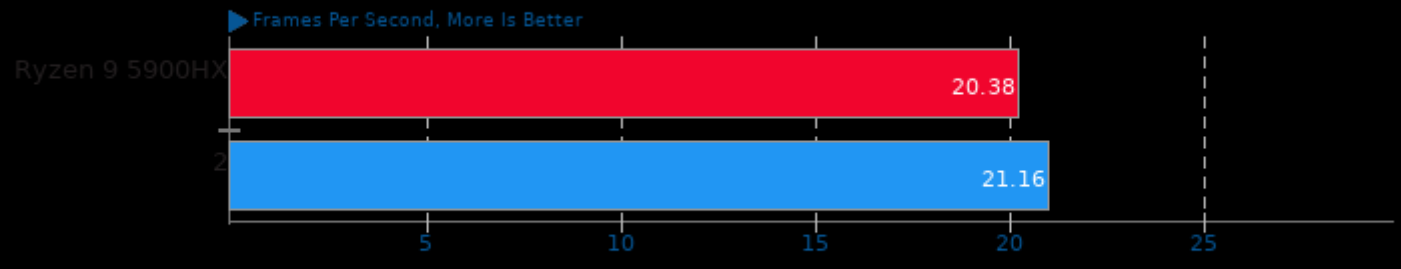
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 1080p




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.1

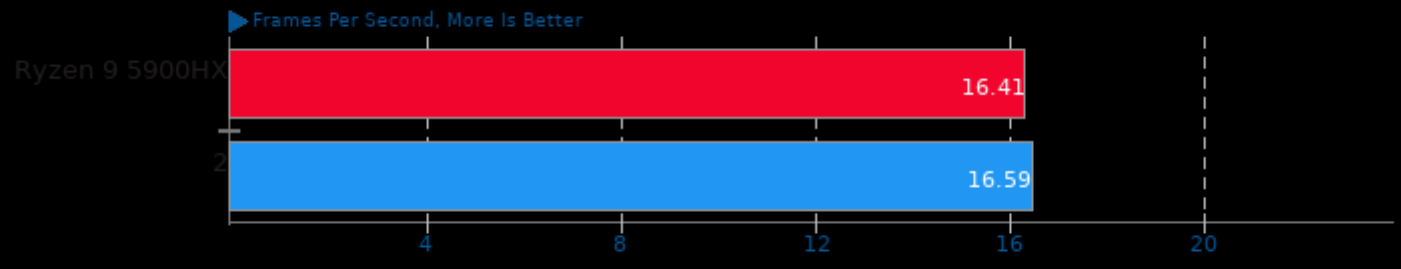
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 1080p




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.1

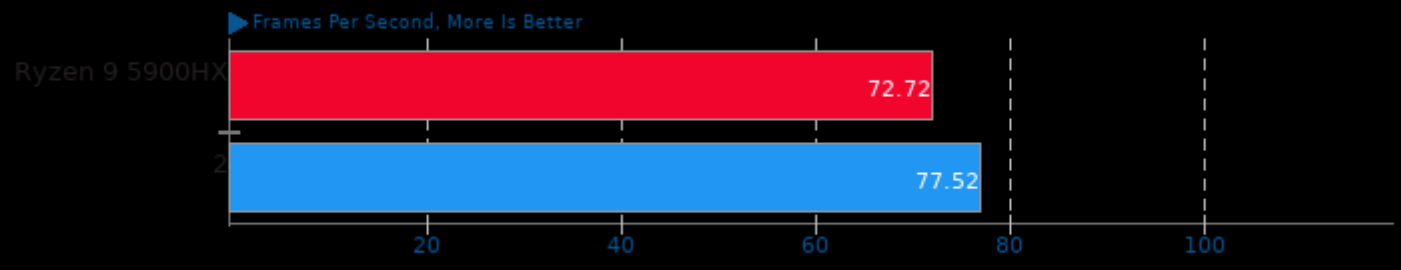
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 1080p




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

AOM AV1 3.1

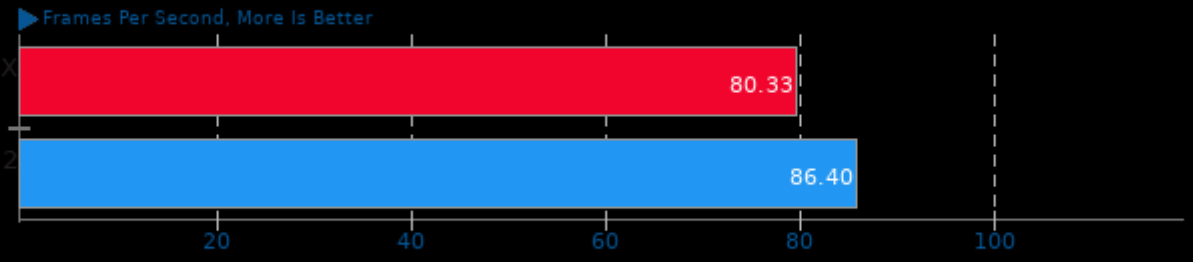
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 1080p




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

## AOM AV1 3.1

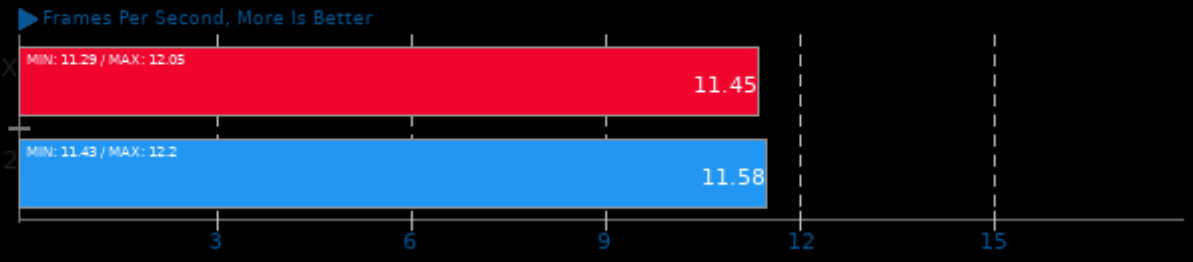
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 1080p




1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm -lpthread

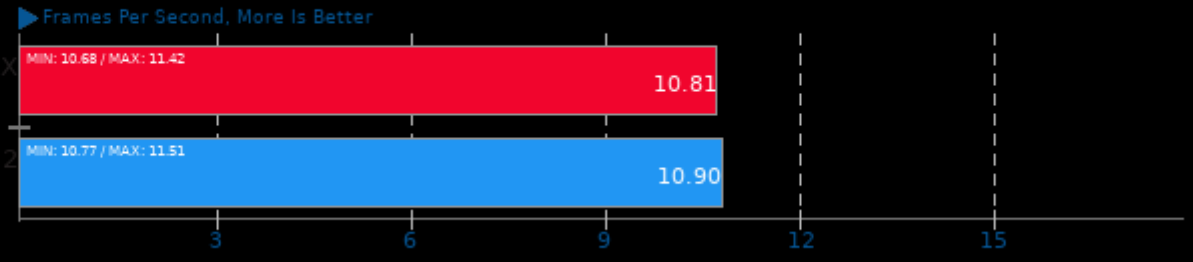
## Embree 3.13

Binary: Pathtracer - Model: Crown



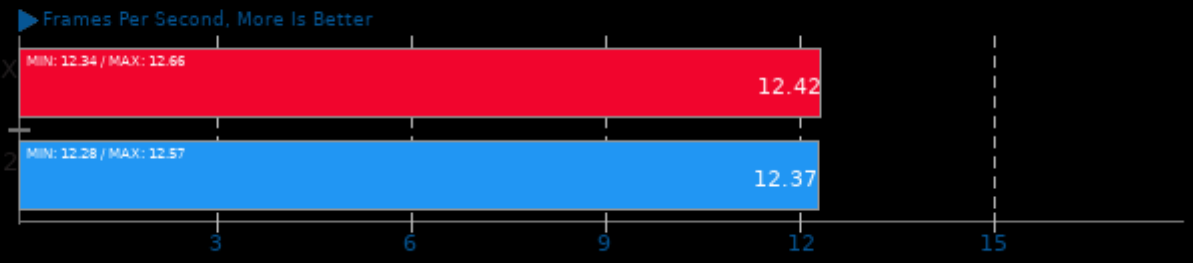

## Embree 3.13

Binary: Pathtracer ISPC - Model: Crown

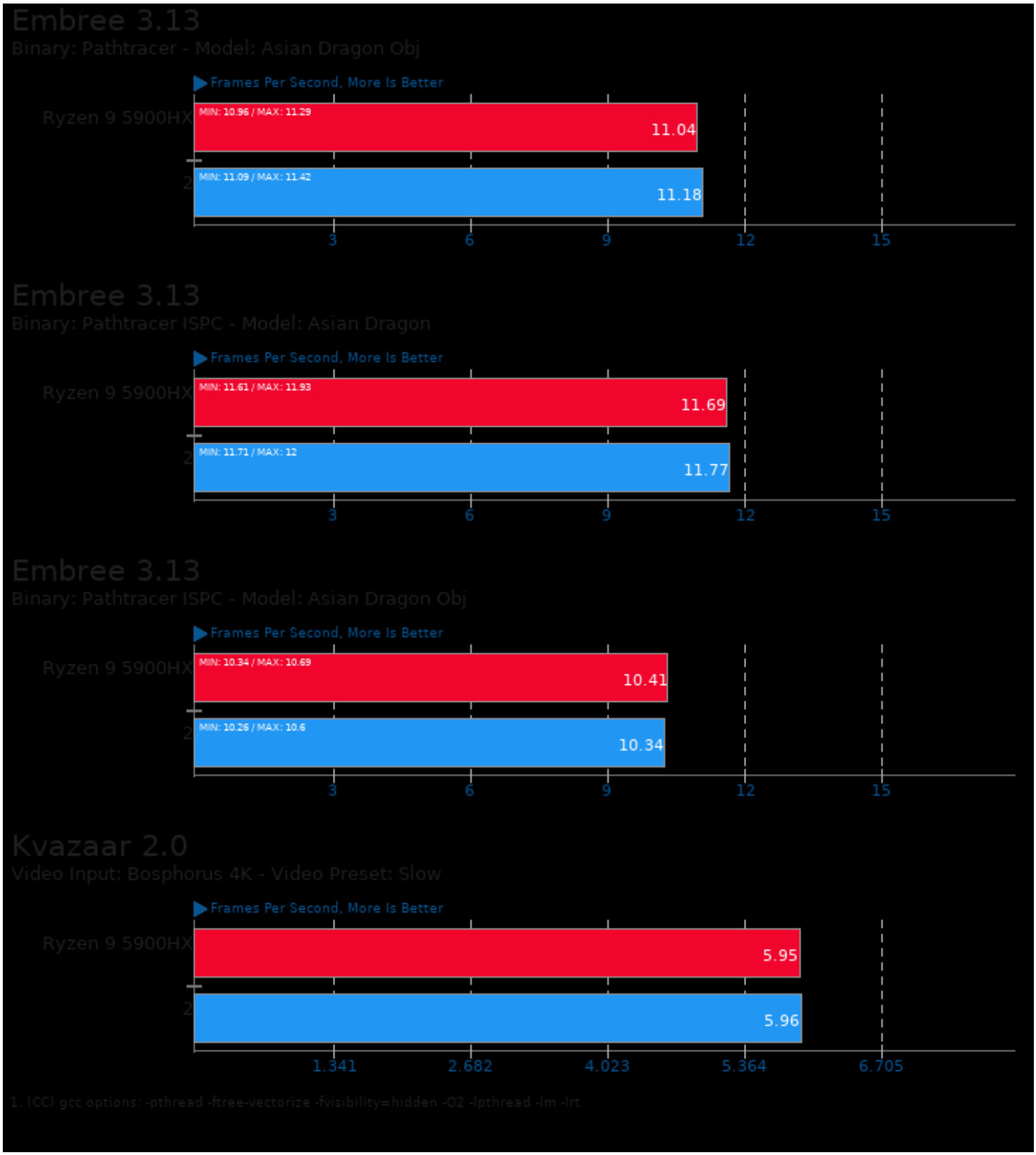



## Embree 3.13

Binary: Pathtracer - Model: Asian Dragon

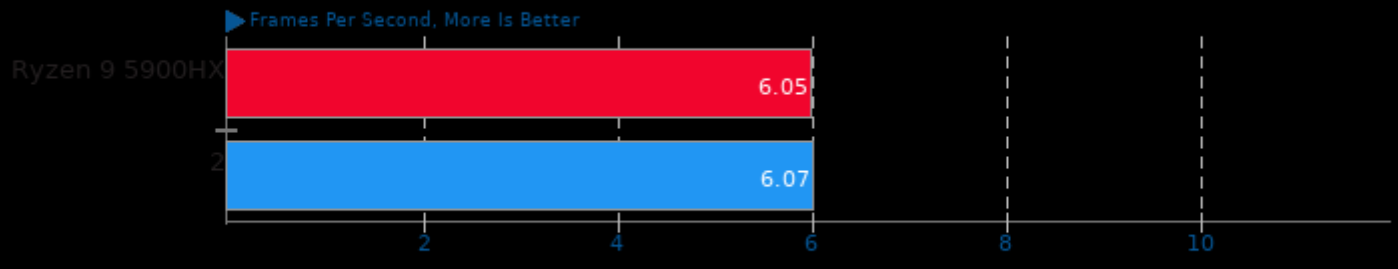


# cc AMD Ryzen 9 5900HX



## Kvazaar 2.0

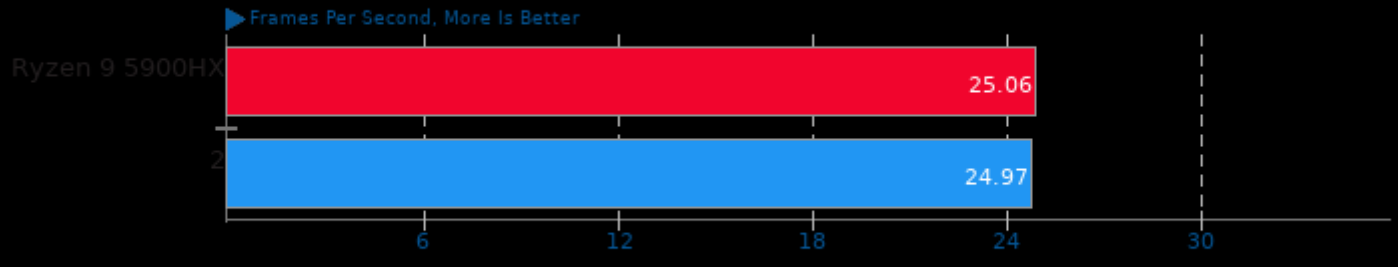
Video Input: Bosphorus 4K - Video Preset: Medium




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

## Kvazaar 2.0

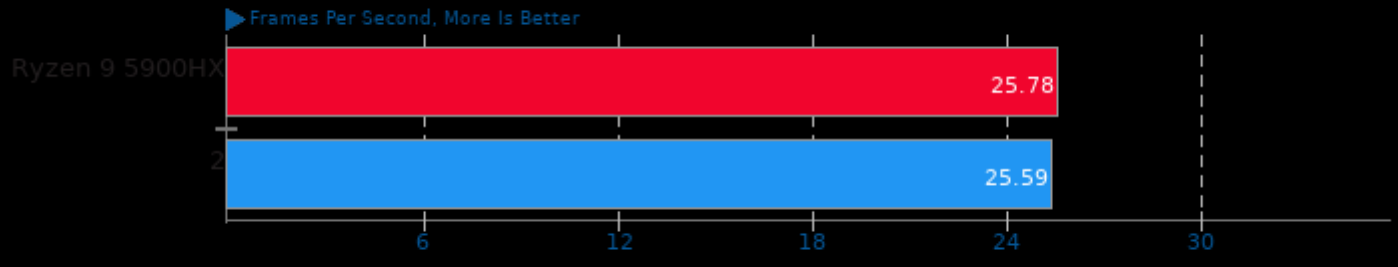
Video Input: Bosphorus 1080p - Video Preset: Slow




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

## Kvazaar 2.0

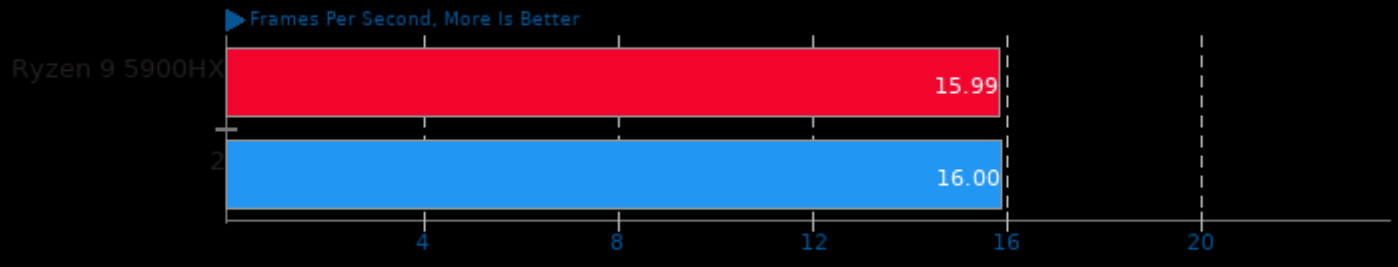
Video Input: Bosphorus 1080p - Video Preset: Medium




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

## Kvazaar 2.0

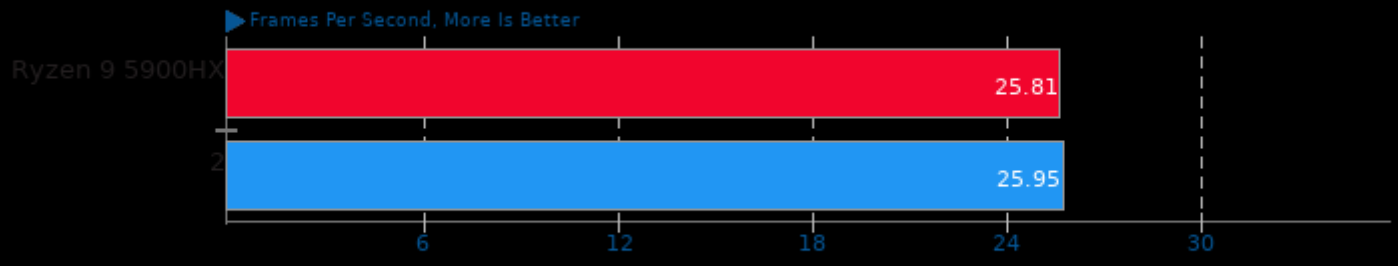
Video Input: Bosphorus 4K - Video Preset: Very Fast




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

## Kvazaar 2.0

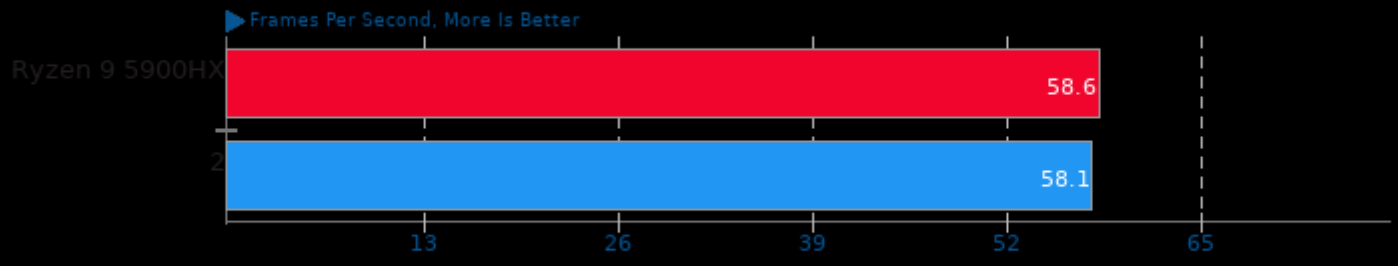
Video Input: Bosphorus 4K - Video Preset: Ultra Fast




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

## Kvazaar 2.0

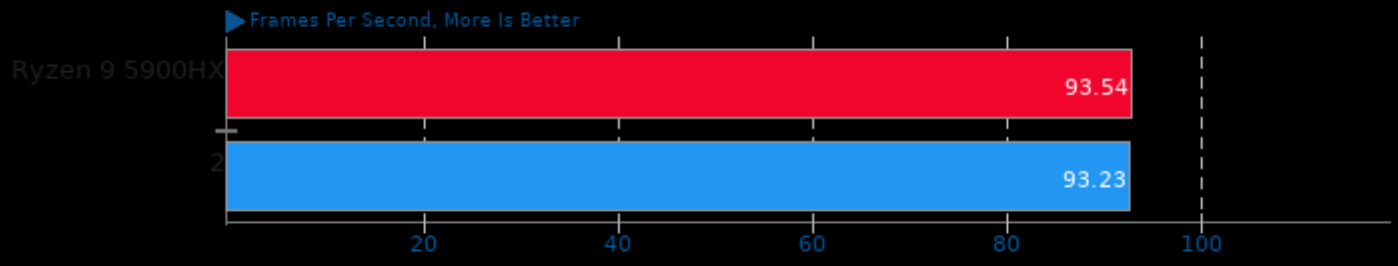
Video Input: Bosphorus 1080p - Video Preset: Very Fast




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

## Kvazaar 2.0

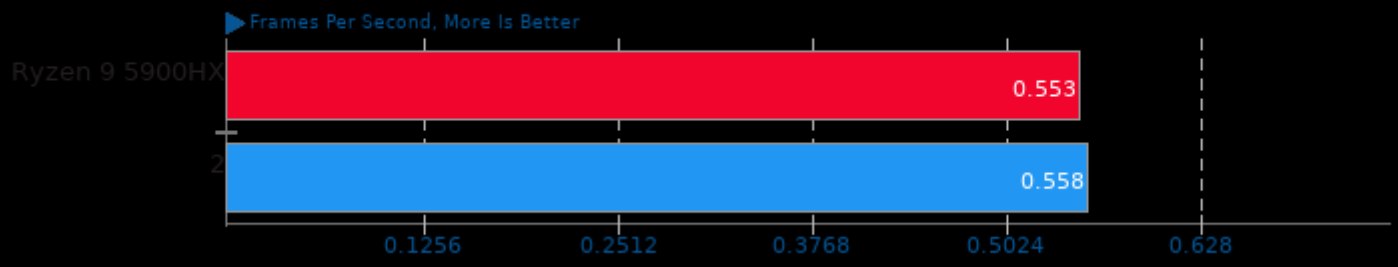
Video Input: Bosphorus 1080p - Video Preset: Ultra Fast

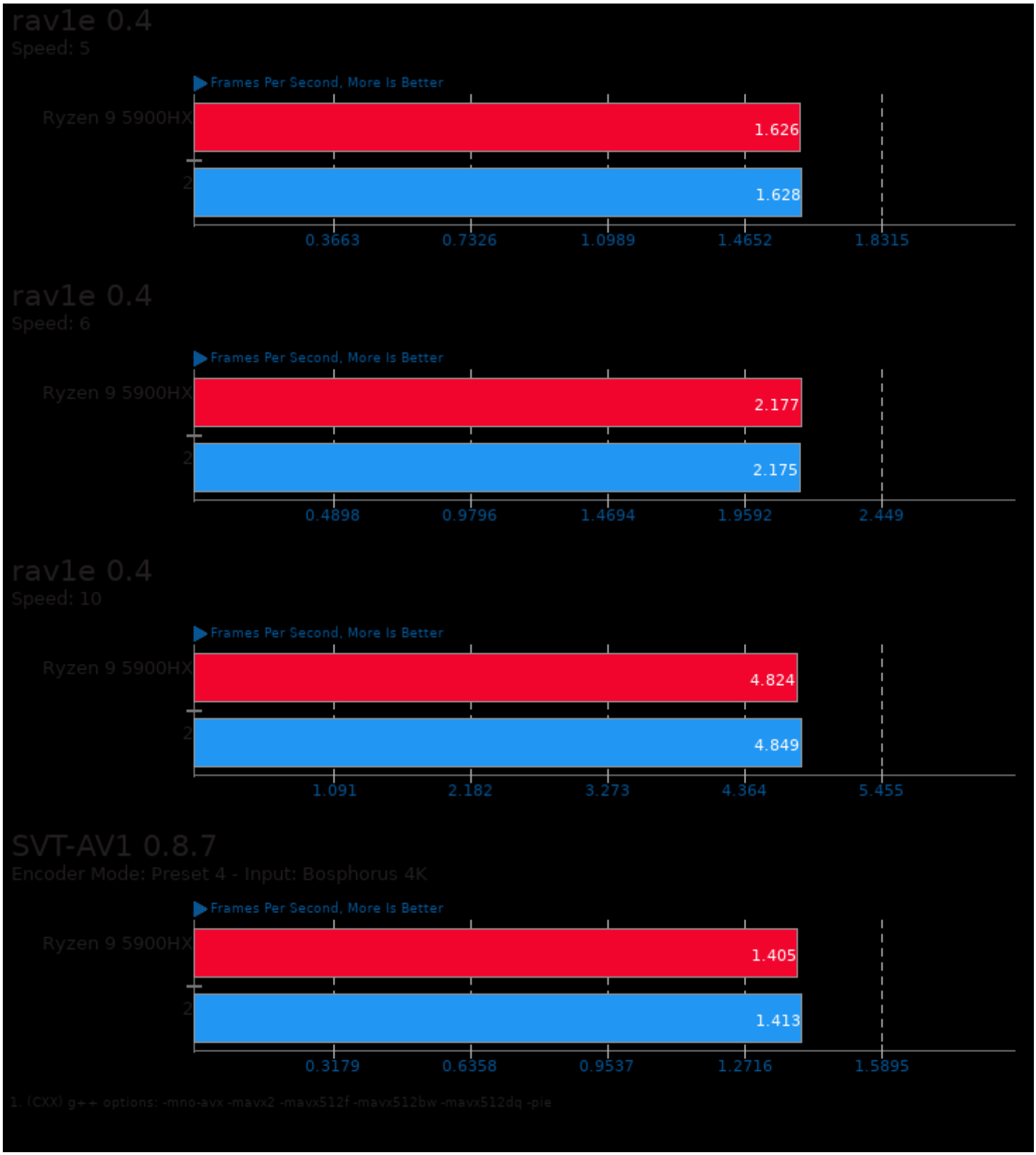



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

## rav1e 0.4

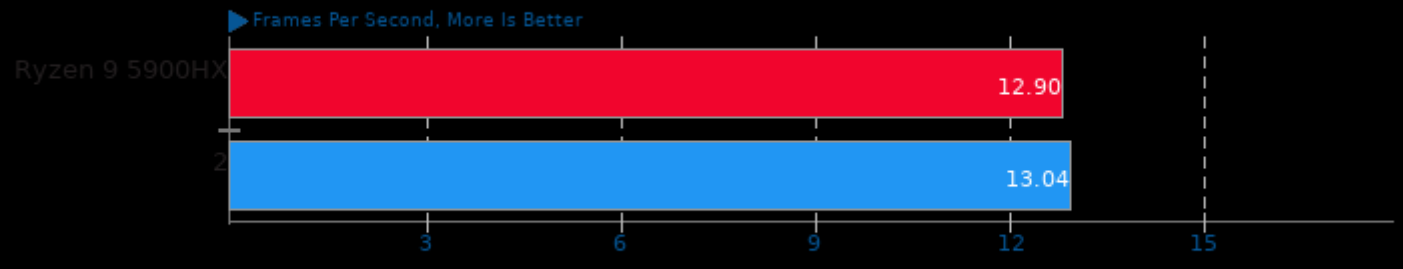
Speed: 1




rav1e 0.4
Speed: 5
Frames Per Second, More Is Better
Ryzen 9 5900HX
1.626
1.628
0.3663
0.7326
1.0989
1.4652
1.8315
rav1e 0.4
Speed: 6
Frames Per Second, More Is Better
Ryzen 9 5900HX
2.177
2.175
0.4898
0.9796
1.4694
1.9592
2.449
rav1e 0.4
Speed: 10
Frames Per Second, More Is Better
Ryzen 9 5900HX
4.824
4.849
1.091
2.182
3.273
4.364
5.455
SVT-AV1 0.8.7
Encoder Mode: Preset 4 - Input: Bosphorus 4K
Frames Per Second, More Is Better
Ryzen 9 5900HX
1.405
1.413
0.3179
0.6358
0.9537
1.2716
1.5895
1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

## SVT-AV1 0.8.7

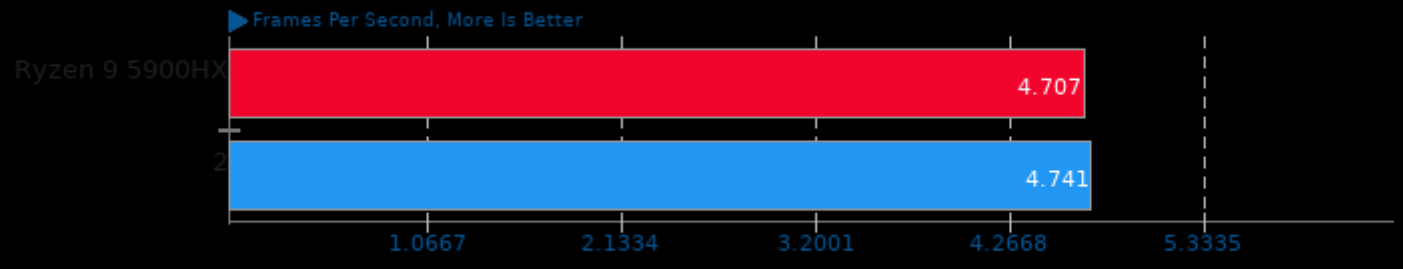
Encoder Mode: Preset 8 - Input: Bosphorus 4K




1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

## SVT-AV1 0.8.7

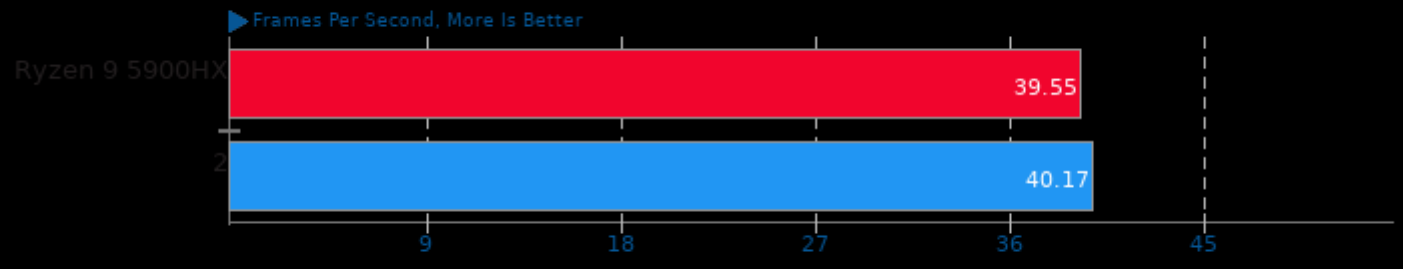
Encoder Mode: Preset 4 - Input: Bosphorus 1080p




1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

## SVT-AV1 0.8.7

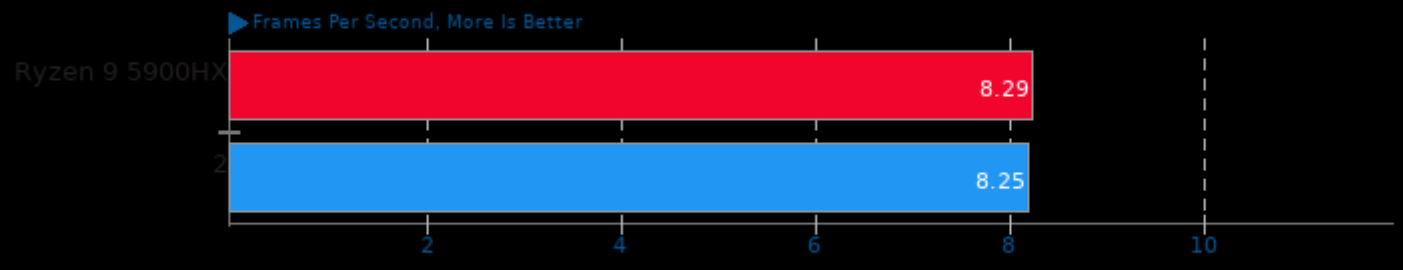
Encoder Mode: Preset 8 - Input: Bosphorus 1080p




1. (CXX) g++ options: -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

## SVT-HEVC 1.5.0

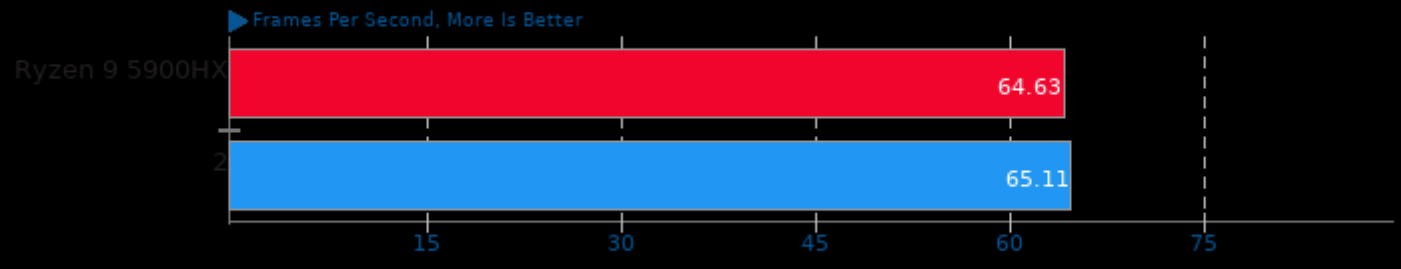
Tuning: 1 - Input: Bosphorus 1080p




1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

## SVT-HEVC 1.5.0

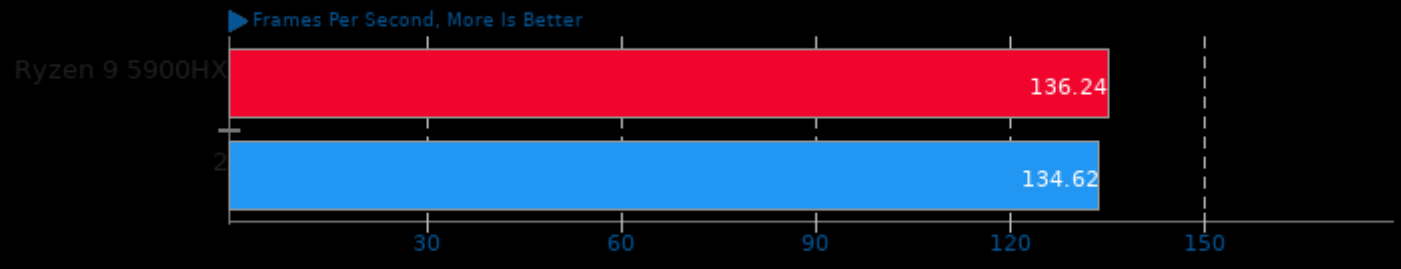
Tuning: 7 - Input: Bosphorus 1080p




1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

## SVT-HEVC 1.5.0

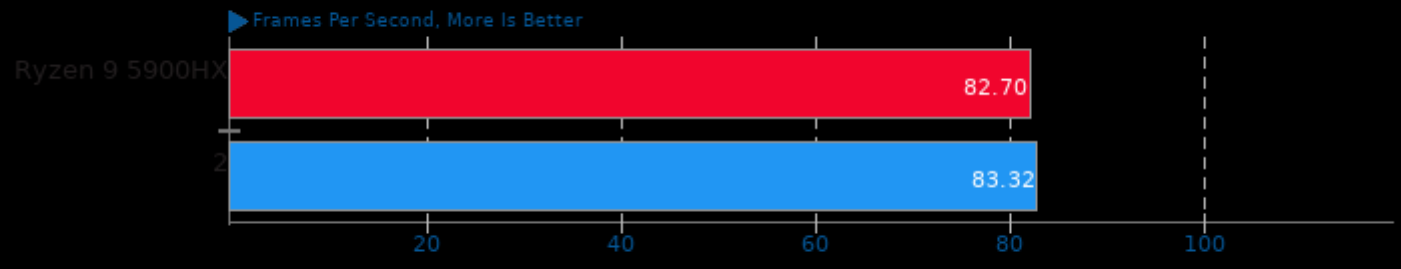
Tuning: 10 - Input: Bosphorus 1080p




1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt

## SVT-VP9 0.3

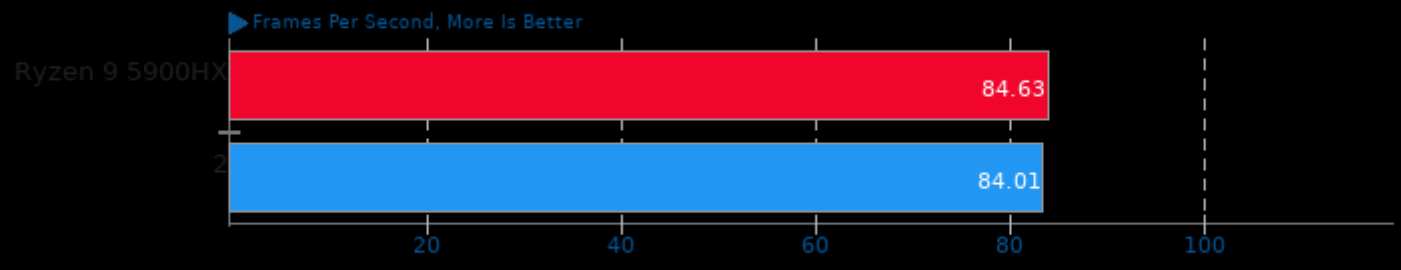
Tuning: VMAF Optimized - Input: Bosphorus 1080p




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

## SVT-VP9 0.3

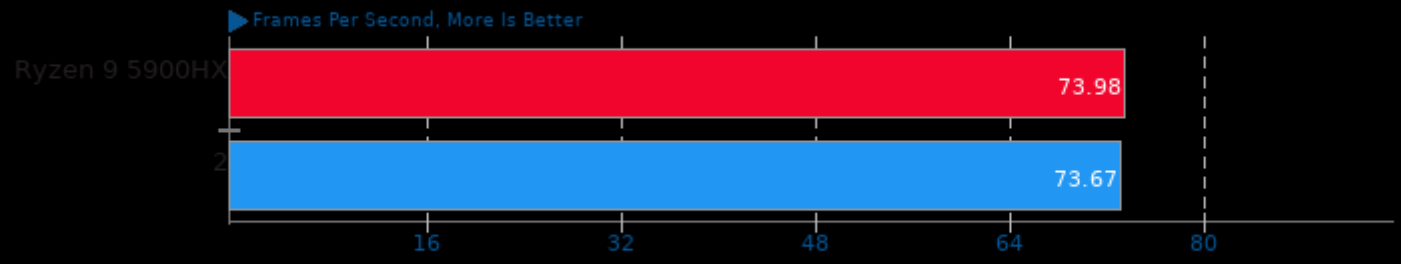
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p




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

## SVT-VP9 0.3

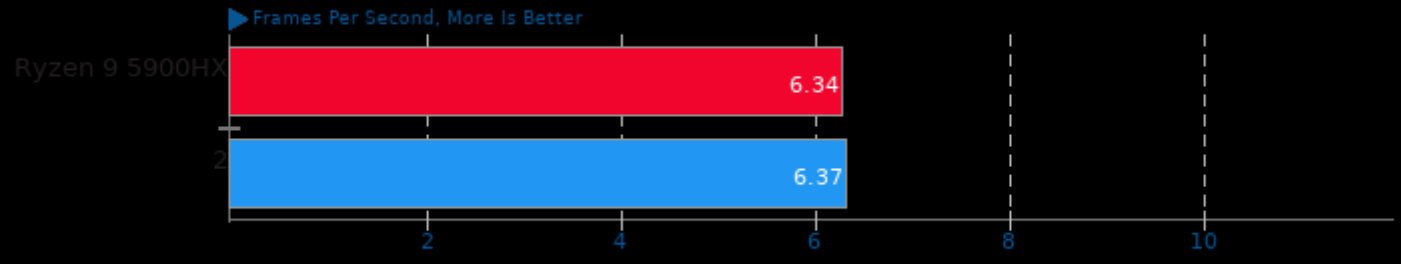
Tuning: Visual Quality Optimized - Input: Bosphorus 1080p




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

## VP9 libvpx Encoding 1.10.0

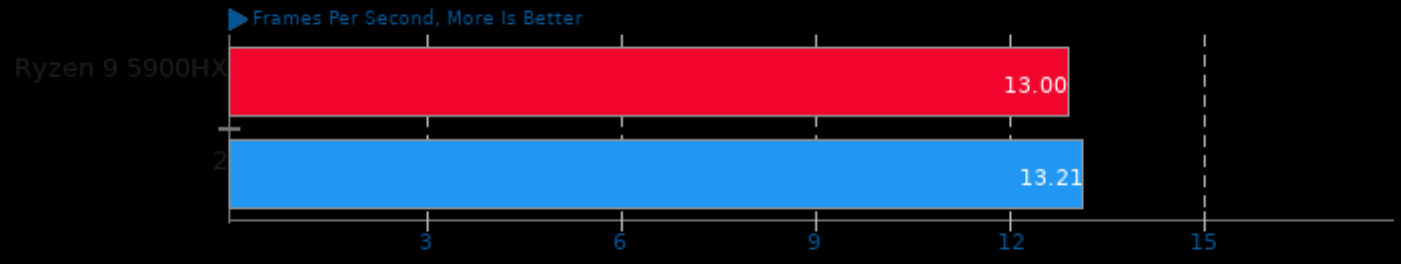
Speed: Speed 0 - Input: Bosphorus 4K




1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

## VP9 libvpx Encoding 1.10.0

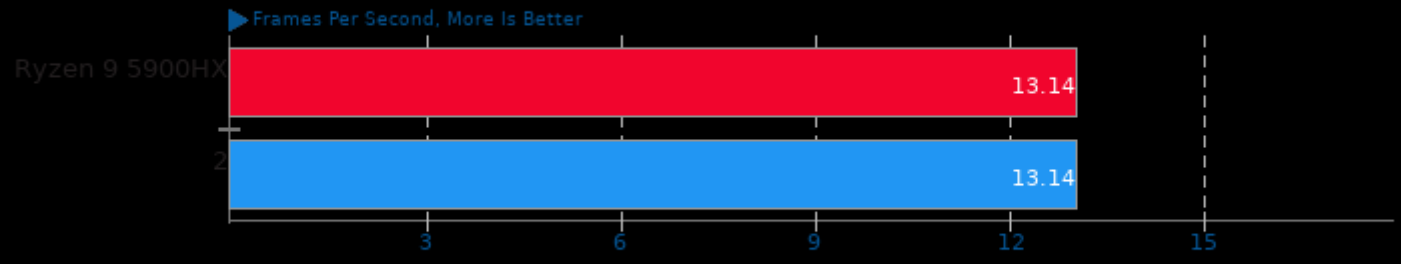
Speed: Speed 5 - Input: Bosphorus 4K




1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

## VP9 libvpx Encoding 1.10.0

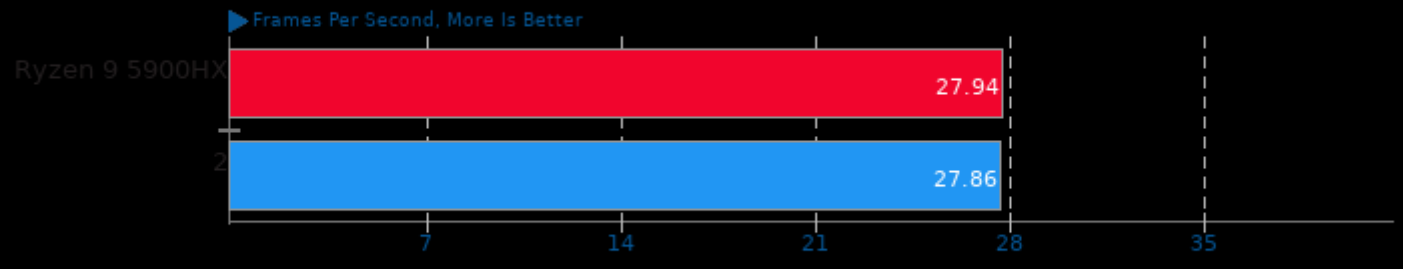
Speed: Speed 0 - Input: Bosphorus 1080p




1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

## VP9 libvpx Encoding 1.10.0

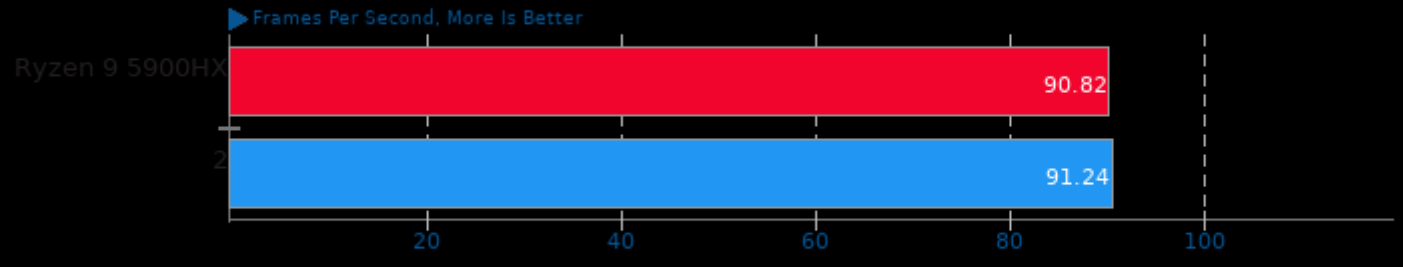
Speed: Speed 5 - Input: Bosphorus 1080p




1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

## x264 2019-12-17

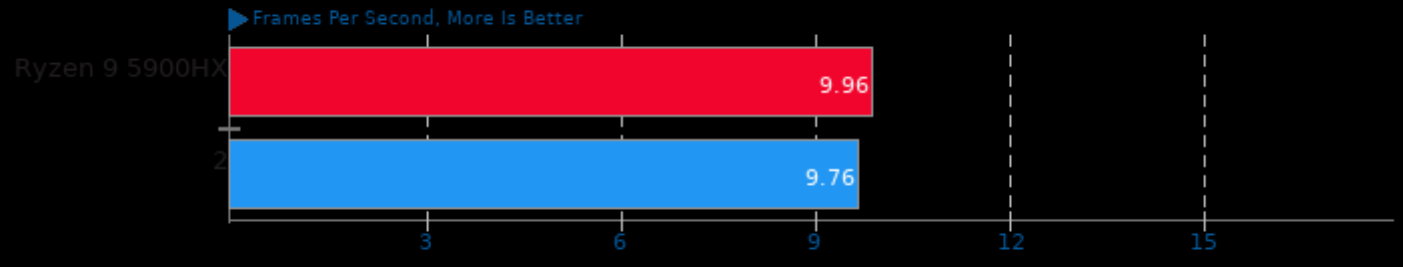
H.264 Video Encoding




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

## x265 3.4

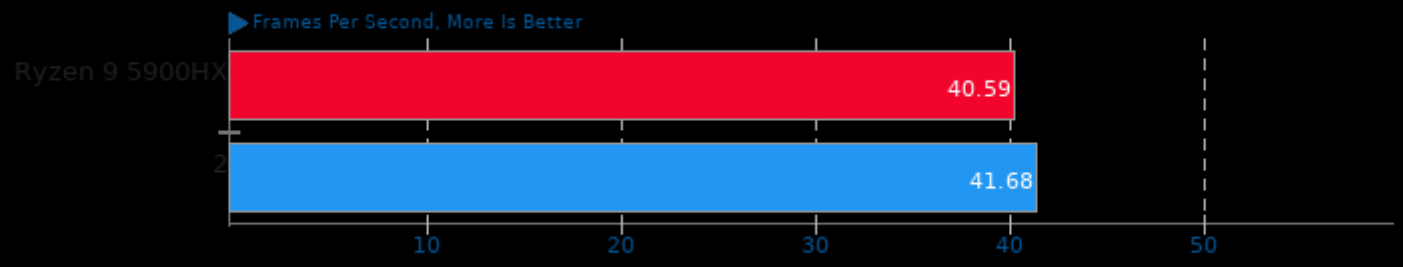
Video Input: Bosphorus 4K



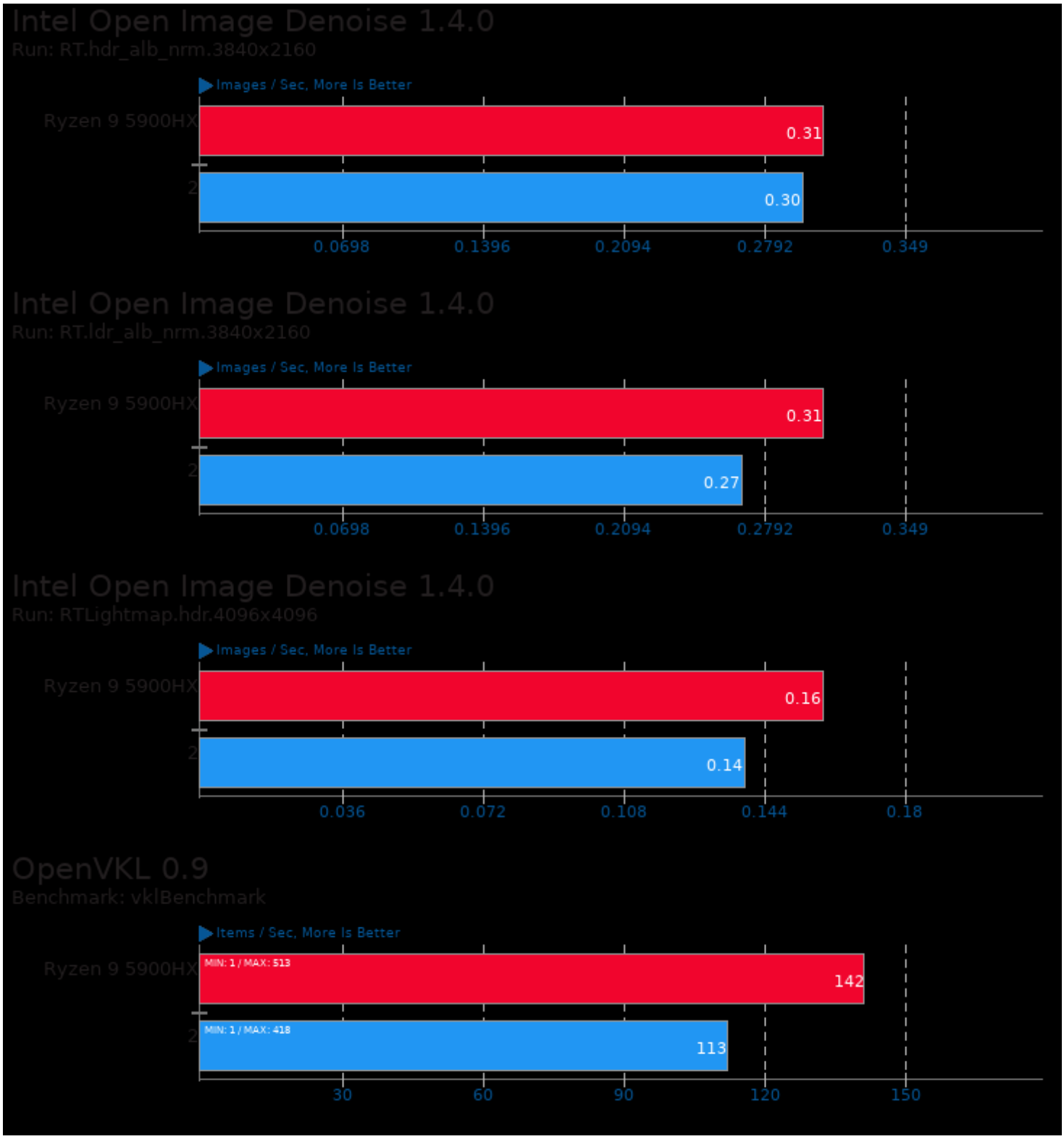

1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

## x265 3.4

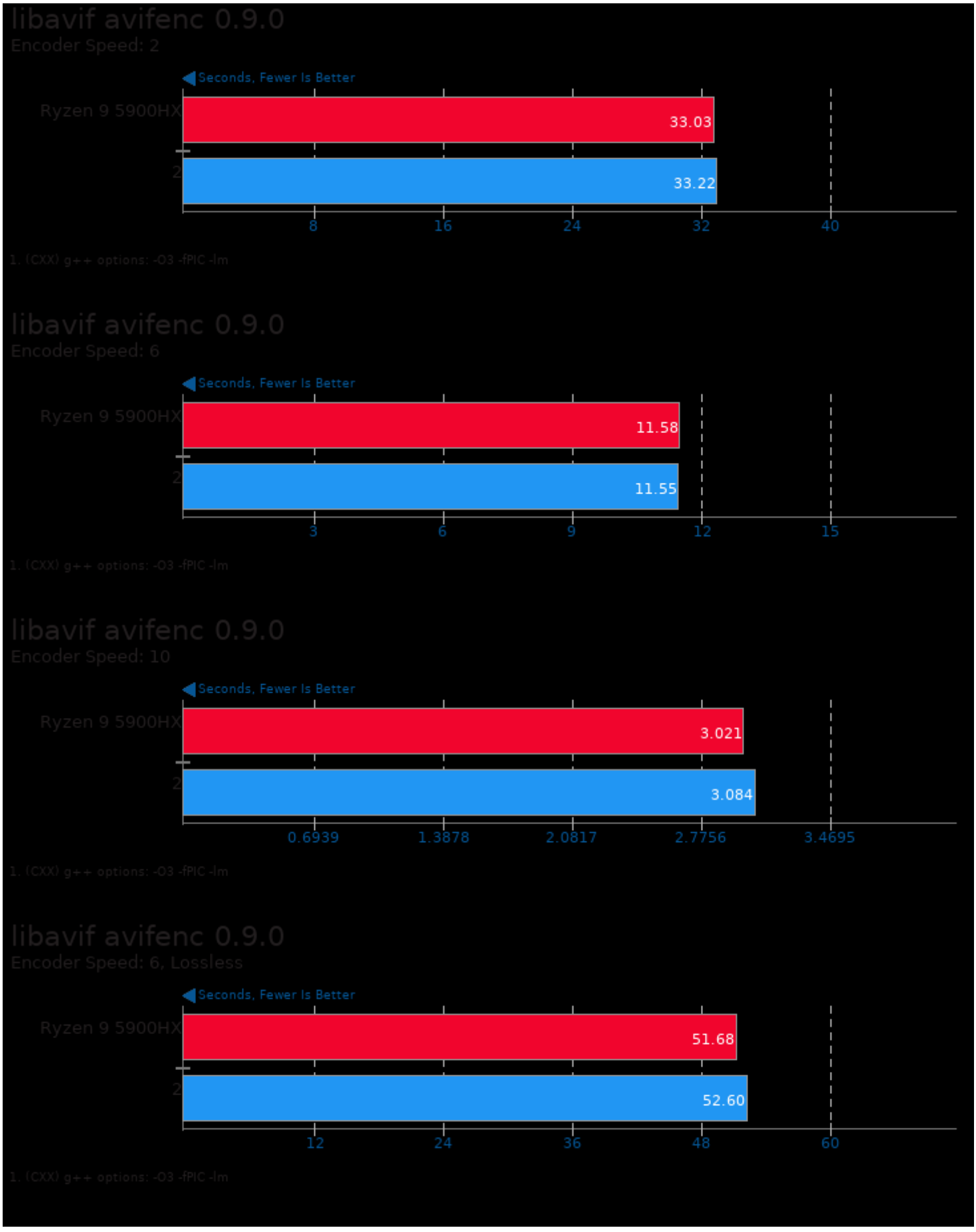
Video Input: Bosphorus 1080p




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

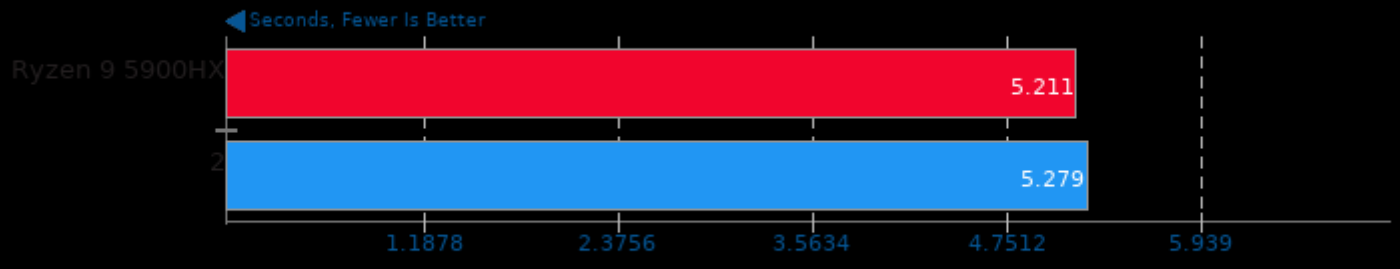

Intel Open Image Denoise 1.4.0
Run: RT.hdr_alb_nrm.3840x2160
Images / Sec, More Is Better
Ryzen 9 5900HX
0.31
0.30
0.0698
0.1396
0.2094
0.2792
0.349
Intel Open Image Denoise 1.4.0
Run: RT.ldr_alb_nrm.3840x2160
Images / Sec, More Is Better
Ryzen 9 5900HX
0.31
0.27
0.0698
0.1396
0.2094
0.2792
0.349
Intel Open Image Denoise 1.4.0
Run: RTLightmap.hdr.4096x4096
Images / Sec, More Is Better
Ryzen 9 5900HX
0.16
0.14
0.036
0.072
0.108
0.144
0.18
OpenVKL 0.9
Benchmark: vklBenchmark
Items / Sec, More Is Better
Ryzen 9 5900HX
MIN: 1 / MAX: 513
142
MIN: 1 / MAX: 418
113
30
60
90
120
150


OpenVKL 0.9
Benchmark: vklBenchmarkVdbVolume
Items / Sec, More Is Better
Ryzen 9 5900HX
MIN: 772920 / MAX: 40981032
15022122
MIN: 515449 / MAX: 44319672
14936305
3M
6M
9M
12M
15M
OpenVKL 0.9
Benchmark: vklBenchmarkStructuredVolume
Items / Sec, More Is Better
Ryzen 9 5900HX
MIN: 974788 / MAX: 398318652
62578005
MIN: 441794 / MAX: 454344336
62530787
13M
26M
39M
52M
65M
OpenVKL 0.9
Benchmark: vklBenchmarkUnstructuredVolume
Items / Sec, More Is Better
Ryzen 9 5900HX
MIN: 23998 / MAX: 8297544
2293880
MIN: 18660 / MAX: 8430851
2295929
500K
1000K
1500K
2000K
2500K
libavif avifenc 0.9.0
Encoder Speed: 0
Seconds, Fewer Is Better
Ryzen 9 5900HX
63.14
63.41
14
28
42
56
70
1. (CXX) g++ options: -O3 -fPIC -lm


libavif avifenc 0.9.0
Encoder Speed: 2
Seconds, Fewer Is Better
Ryzen 9 5900HX
33.03
33.22
8
16
24
32
40
1. (CXX) g++ options: -O3 -fPIC -lm
libavif avifenc 0.9.0
Encoder Speed: 6
Seconds, Fewer Is Better
Ryzen 9 5900HX
11.58
11.55
3
6
9
12
15
1. (CXX) g++ options: -O3 -fPIC -lm
libavif avifenc 0.9.0
Encoder Speed: 10
Seconds, Fewer Is Better
Ryzen 9 5900HX
3.021
3.084
0.6939
1.3878
2.0817
2.7756
3.4695
1. (CXX) g++ options: -O3 -fPIC -lm
libavif avifenc 0.9.0
Encoder Speed: 6, Lossless
Seconds, Fewer Is Better
Ryzen 9 5900HX
51.68
52.60
12
24
36
48
60
1. (CXX) g++ options: -O3 -fPIC -lm

## libavif avifenc 0.9.0

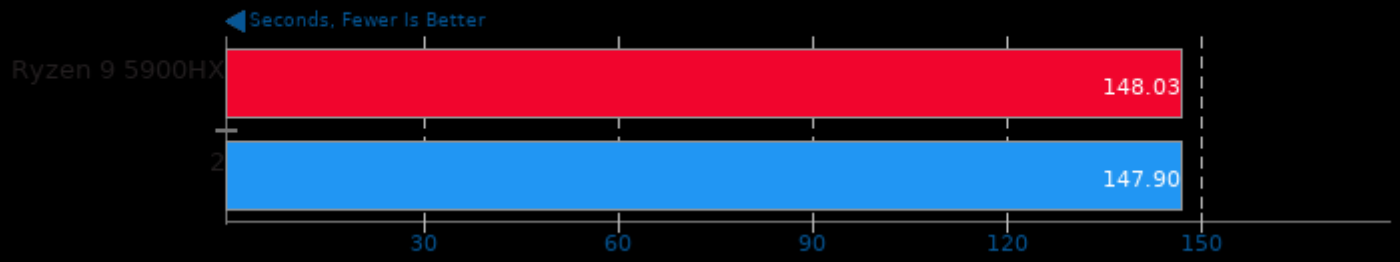
Encoder Speed: 10, Lossless




1. (CXX) g++ options: -O3 -fPIC -lm

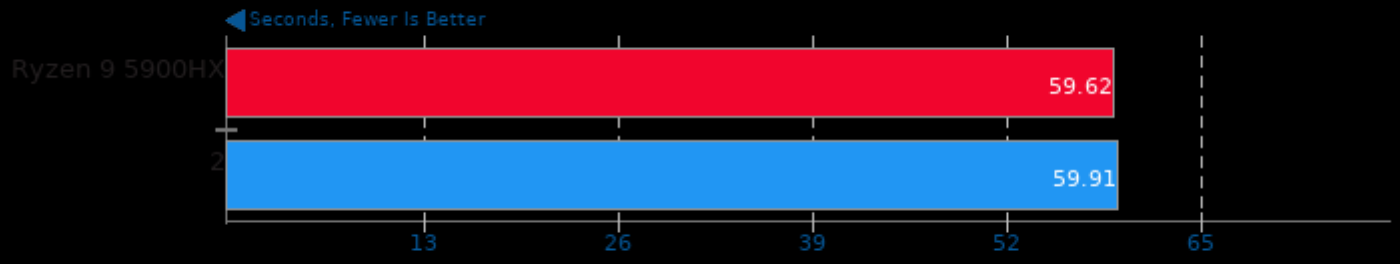
## Timed Godot Game Engine Compilation 3.2.3

Time To Compile




## C-Ray 1.1

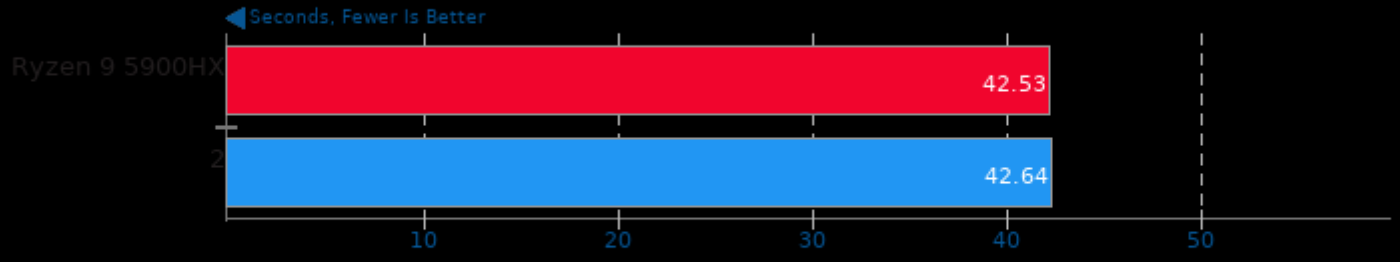
Total Time - 4K, 16 Rays Per Pixel




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

## POV-Ray 3.7.0.7

Trace Time

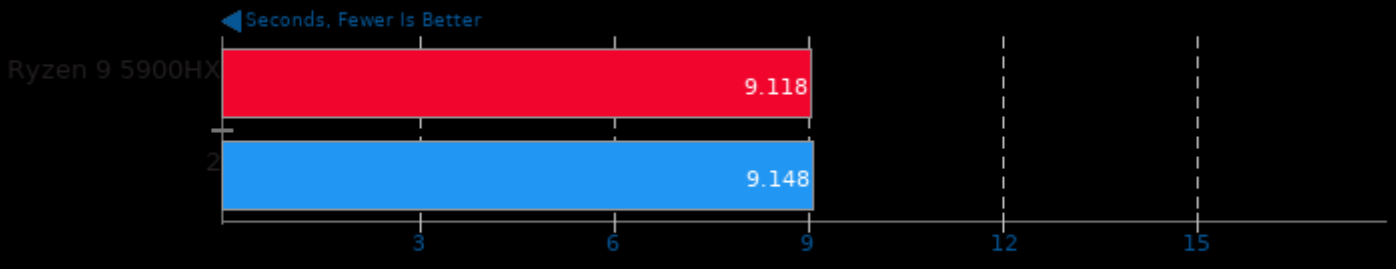



1. (CXX) g++ options: -pipe -O3 -ffast-math -march=native -pthread -lSDL -lXpm -lSM -lICE -lX11 -lIlmImf -lIlmImf-2_5 -lImath-2_5 -lHalf-2_5 -lIex-2_5 -lIex

# cc AMD Ryzen 9 5900HX

## Smallpt 1.0

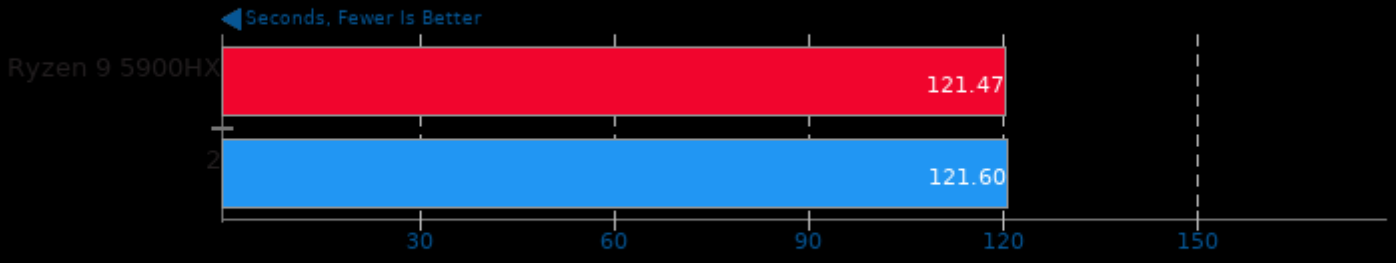
Global Illumination Renderer; 128 Samples




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

## YafaRay 3.4.1

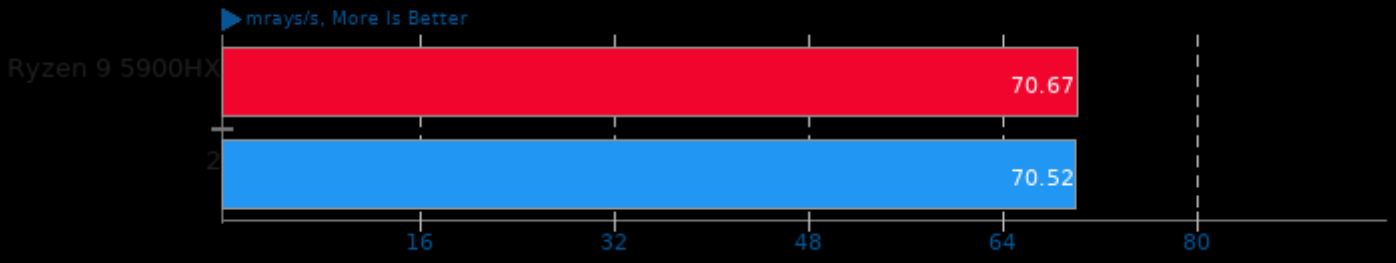
Total Time For Sample Scene




1. (CXX) g++ options: -std=c++11 -O3 -ffast-math -rdynamic -ldl -lImath -lIlmImf -lIex -lHalf -lz -lIlmThread -lxml2 -lfreetype -lpthread

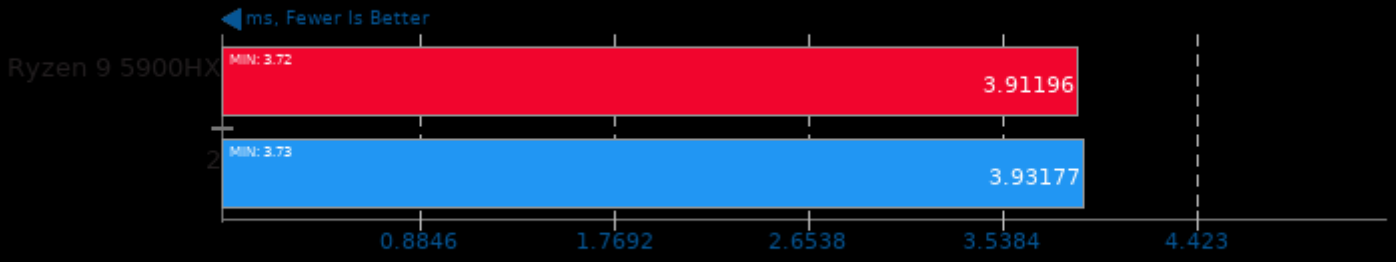
## rays1bench 2020-01-09

Large Scene

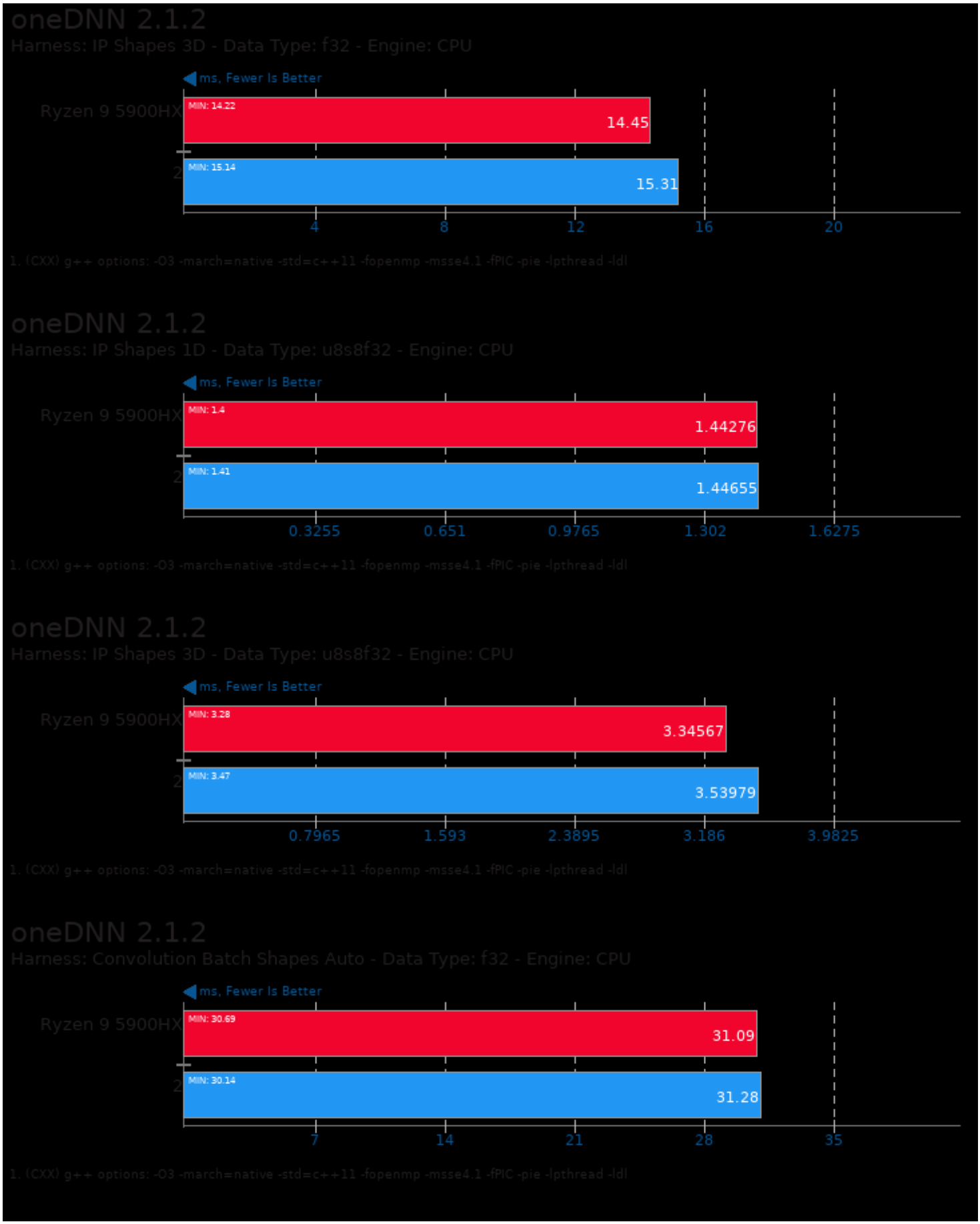


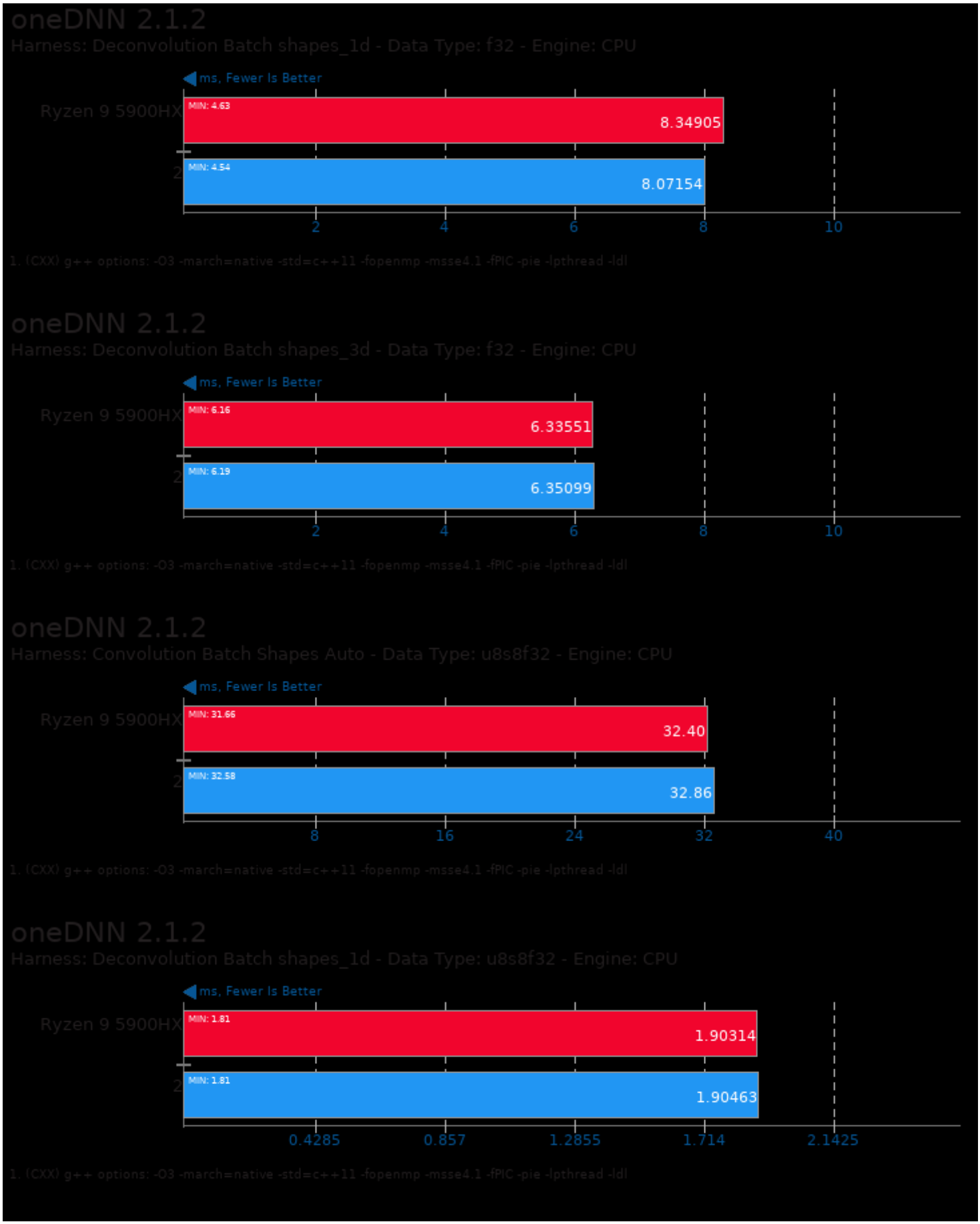

## oneDNN 2.1.2

Harness: IP Shapes 1D - Data Type: f32 - Engine: CPU




1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

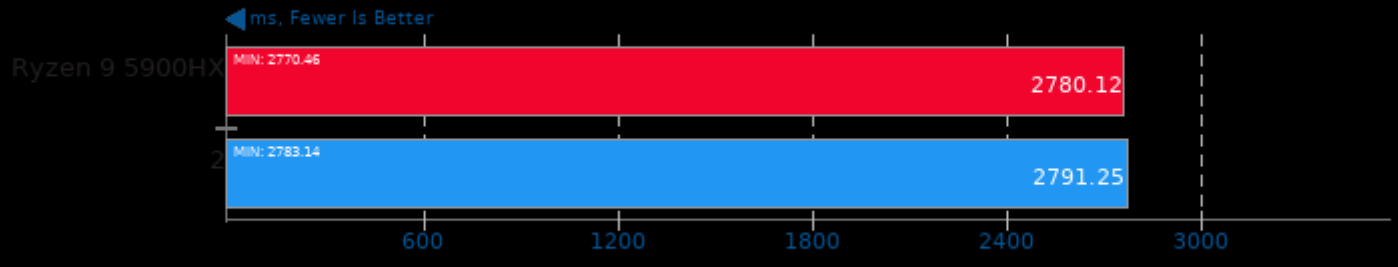

oneDNN 2.1.2
Harness: IP Shapes 3D - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 14.22
14.45
MIN: 15.14
15.31
4
8
12
16
20
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 2.1.2
Harness: IP Shapes 1D - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 1.4
1.44276
MIN: 1.41
1.44655
0.3255
0.651
0.9765
1.302
1.6275
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 2.1.2
Harness: IP Shapes 3D - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 3.28
3.34567
MIN: 3.47
3.53979
0.7965
1.593
2.3895
3.186
3.9825
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 2.1.2
Harness: Convolution Batch Shapes Auto - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 30.69
31.09
MIN: 30.14
31.28
7
14
21
28
35
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl


oneDNN 2.1.2
Harness: Deconvolution Batch shapes_1d - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 4.63
8.34905
MIN: 4.54
8.07154
2
4
6
8
10
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 2.1.2
Harness: Deconvolution Batch shapes_3d - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 6.16
6.33551
MIN: 6.19
6.35099
2
4
6
8
10
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 2.1.2
Harness: Convolution Batch Shapes Auto - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 31.66
32.40
MIN: 32.58
32.86
8
16
24
32
40
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 2.1.2
Harness: Deconvolution Batch shapes_1d - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 1.81
1.90314
MIN: 1.81
1.90463
0.4285
0.857
1.2855
1.714
2.1425
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl


oneDNN 2.1.2
Harness: Deconvolution Batch shapes_3d - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 2.51
2.71440
MIN: 2.55
2.66654
0.6107
1.2214
1.8321
2.4428
3.0535
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 2.1.2
Harness: Recurrent Neural Network Training - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 3927.37
3938.62
MIN: 3917.26
3937.66
800
1600
2400
3200
4000
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 2.1.2
Harness: Recurrent Neural Network Inference - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 2776.06
2783.16
MIN: 2802.91
2814.06
600
1200
1800
2400
3000
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl
oneDNN 2.1.2
Harness: Recurrent Neural Network Training - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
Ryzen 9 5900HX
MIN: 3895.07
3906.72
MIN: 3910.75
3930.37
800
1600
2400
3200
4000
1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 2.1.2

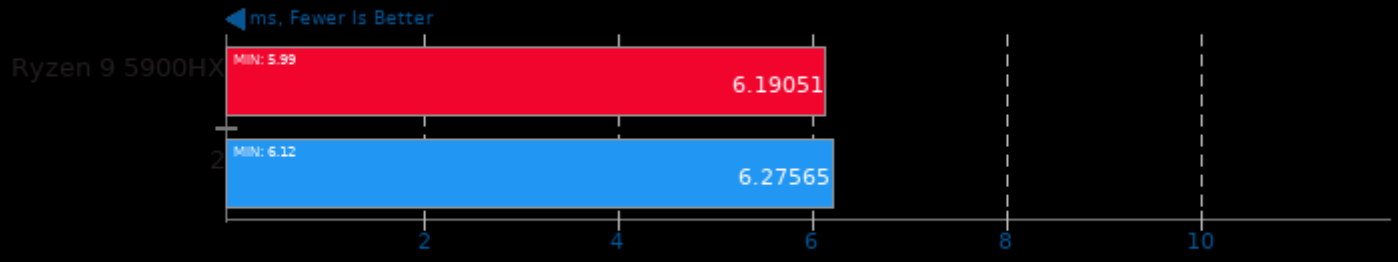
Harness: Recurrent Neural Network Inference - Data Type: u8s8f32 - Engine: CPU




1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 2.1.2

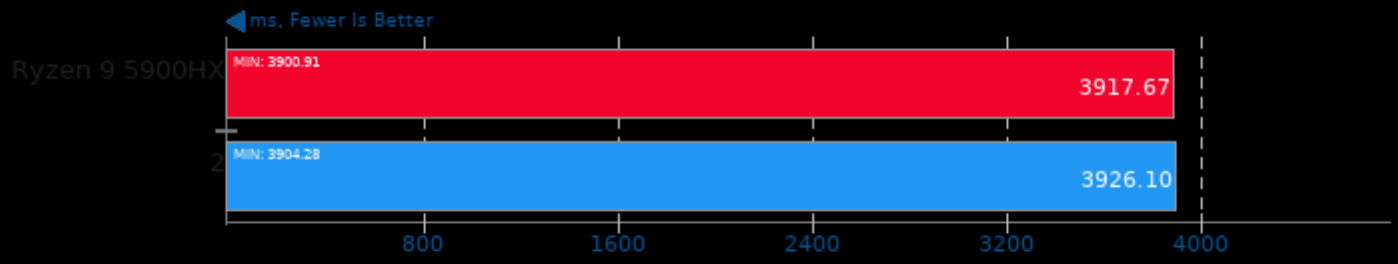
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: f32 - Engine: CPU




1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 2.1.2

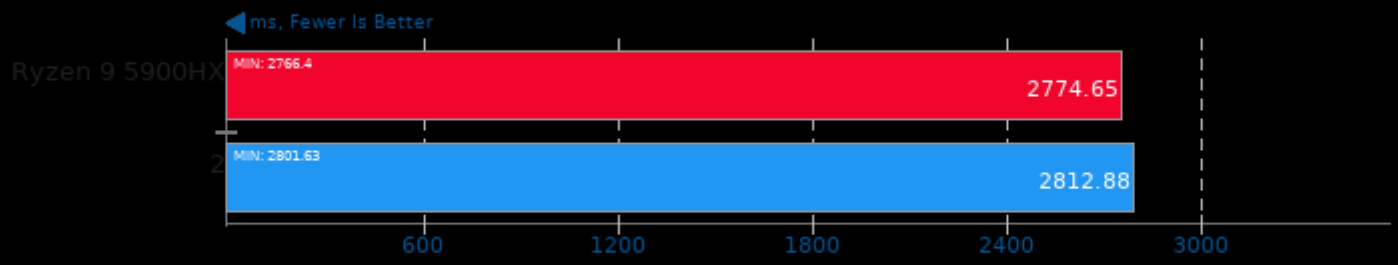
Harness: Recurrent Neural Network Training - Data Type: bf16bf16bf16 - Engine: CPU




1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

oneDNN 2.1.2

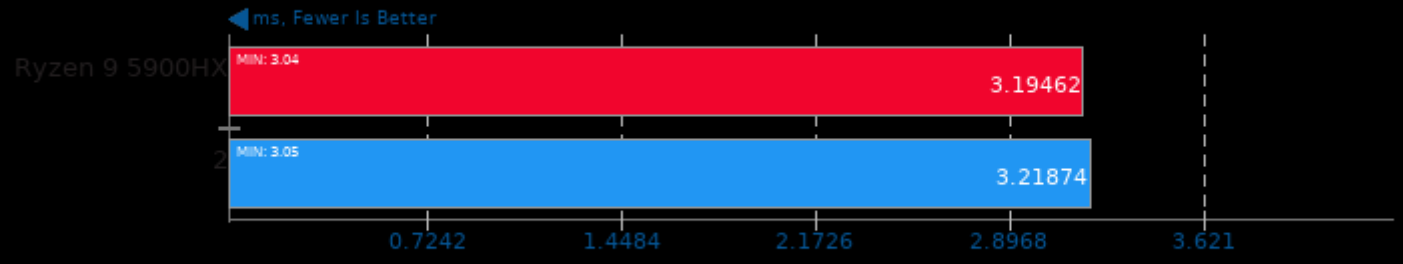
Harness: Recurrent Neural Network Inference - Data Type: bf16bf16bf16 - Engine: CPU




1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

## oneDNN 2.1.2

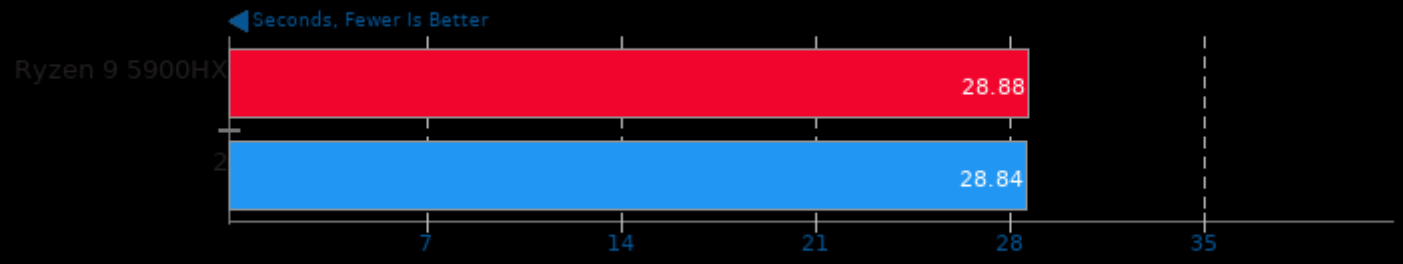
Harness: Matrix Multiply Batch Shapes Transformer - Data Type: u8s8f32 - Engine: CPU




1. (CXX) g++ options: -O3 -march=native -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread -ldl

## AOBench

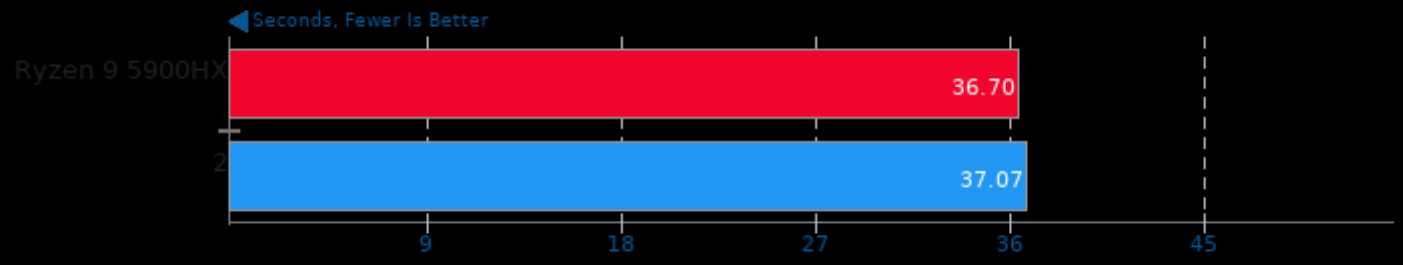
Size: 2048 x 2048 - Total Time




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

## dcraw

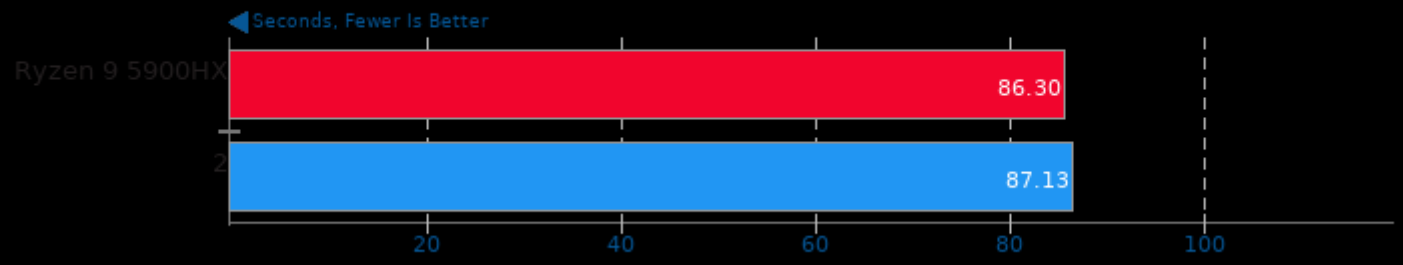
RAW To PPM Image Conversion




1. (CC) gcc options: -lm

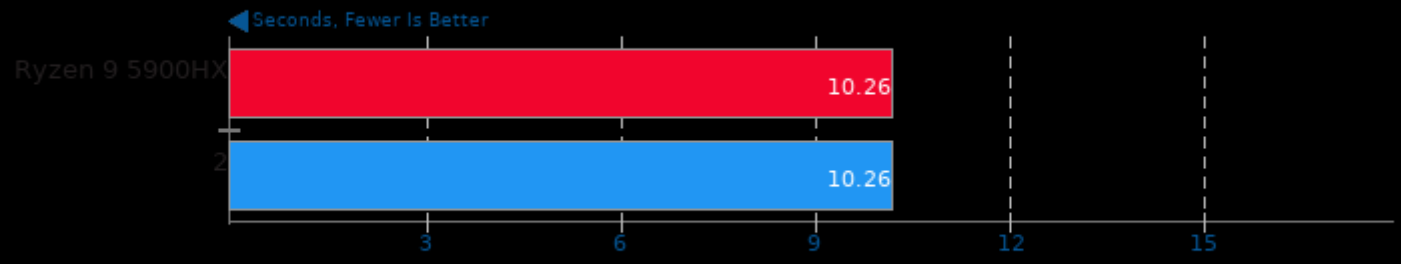
## DeepSpeech 0.6

Acceleration: CPU



## Monkey Audio Encoding 3.99.6

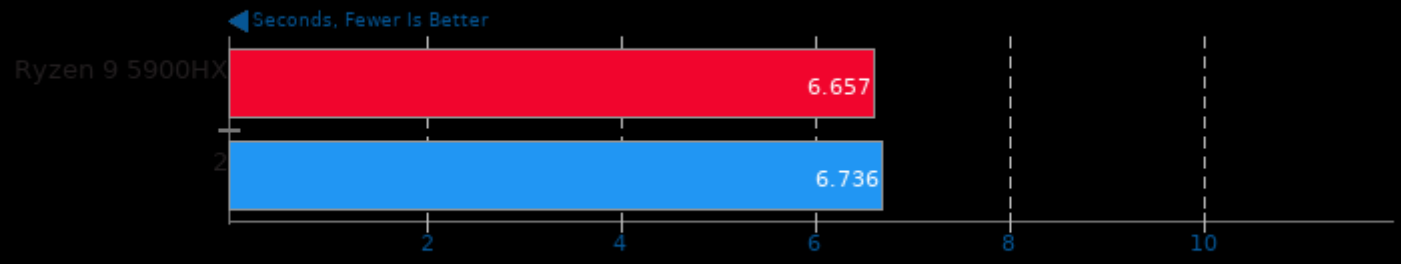
WAV To APE




1. (CXX) g++ options: -O3 -pedantic -rdynamic -lrt

## FLAC Audio Encoding 1.3.2

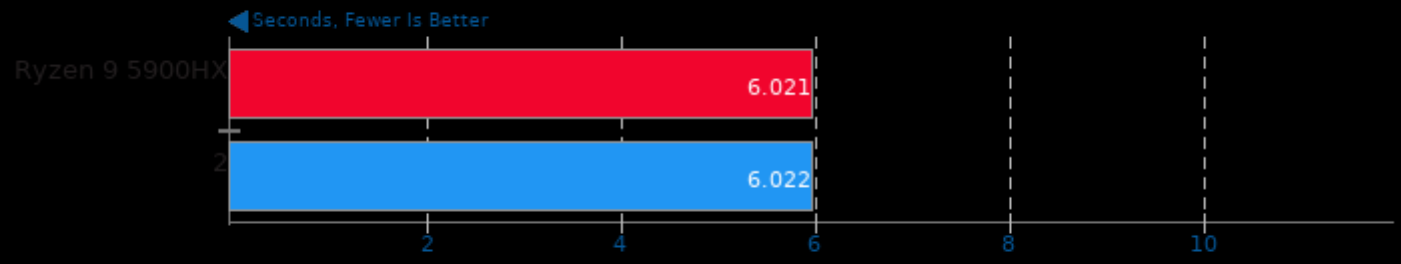
WAV To FLAC




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

## LAME MP3 Encoding 3.100

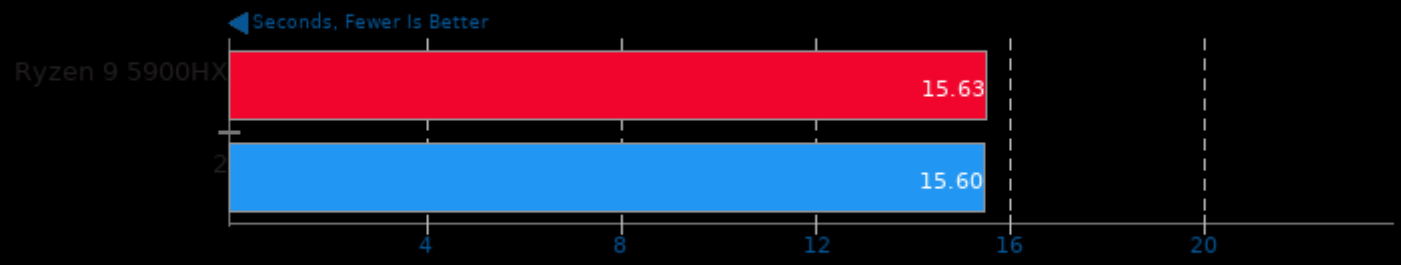
WAV To MP3



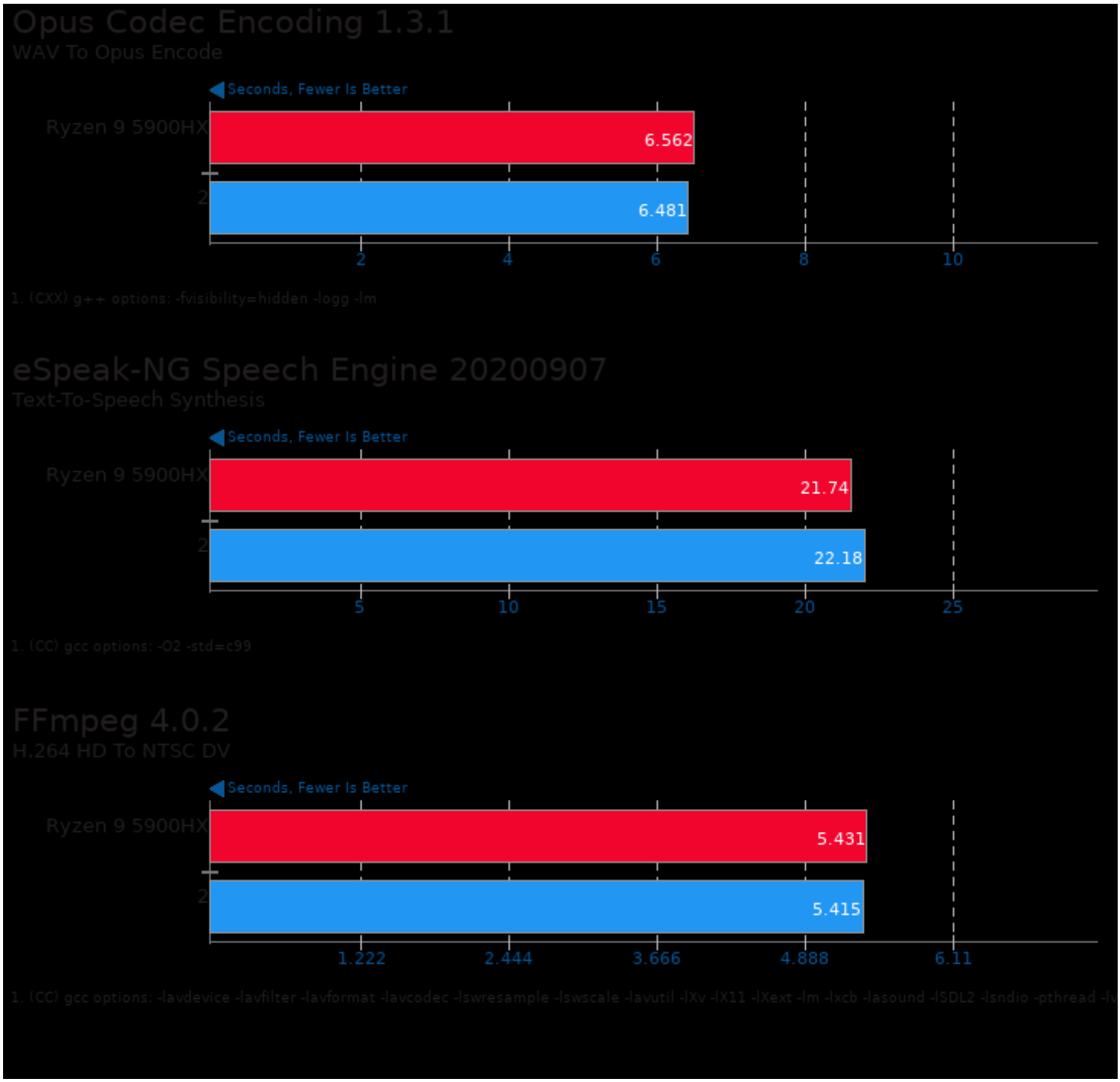

1. (CC) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -lm

## Ogg Audio Encoding 1.3.4

WAV To Ogg

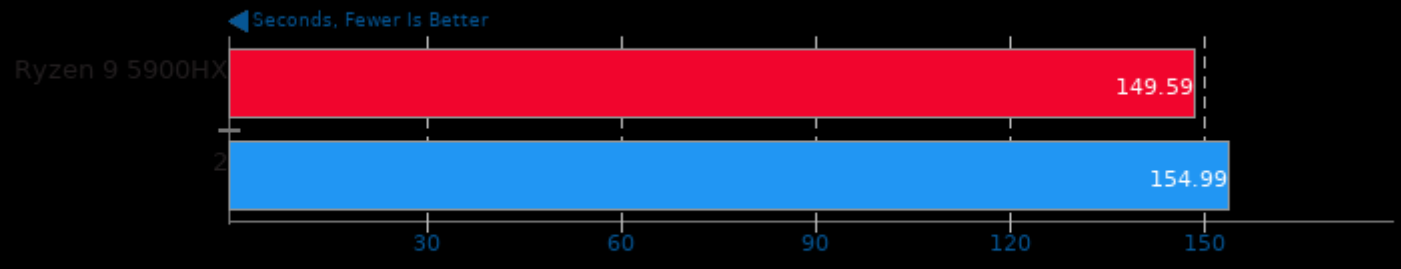



1. (CC) gcc options: -O2 -ffast-math -fsigned-char


Opus Codec Encoding 1.3.1
WAV To Opus Encode
Seconds, Fewer Is Better
Ryzen 9 5900HX
6.562
6.481
2
4
6
8
10
1. (CXX) g++ options: -fvisibility=hidden -logg -lm
eSpeak-NG Speech Engine 20200907
Text-To-Speech Synthesis
Seconds, Fewer Is Better
Ryzen 9 5900HX
21.74
22.18
5
10
15
20
25
1. (CC) gcc options: -O2 -std=c99
FFmpeg 4.0.2
H.264 HD To NTSC DV
Seconds, Fewer Is Better
Ryzen 9 5900HX
5.431
5.415
1.222
2.444
3.666
4.888
6.11
1. (CC) gcc options: -lavdevice -lavfilter -lavformat -lavcodec -lswresample -lswscale -lavutil -lXv -lX11 -lXext -lm -lxcb -lasound -lSDL2 -lsndio -pthread

## Ngspice 34

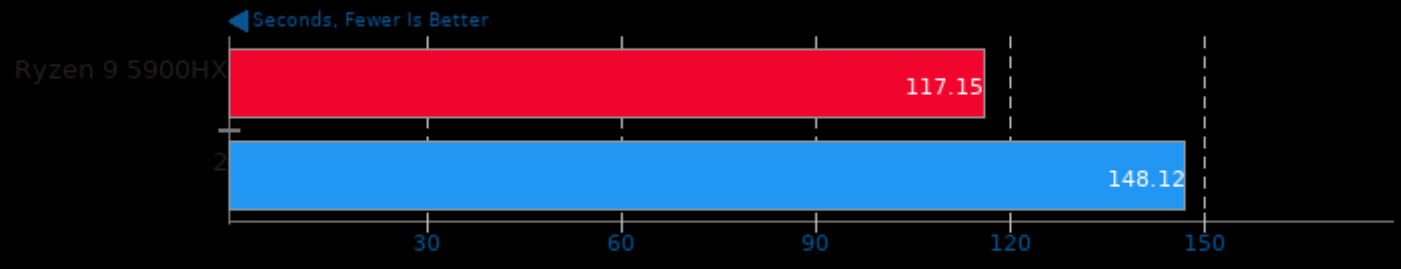
Circuit: C2670




1. (CC) gcc options: -O0 -fopenmp -lm -lstdc++ -lfftw3 -lXaw -lXmu -lXt -lXext -lX11 -lXft -lfontconfig -lXrender -lfreetype -lSM -lICE

## Ngspice 34

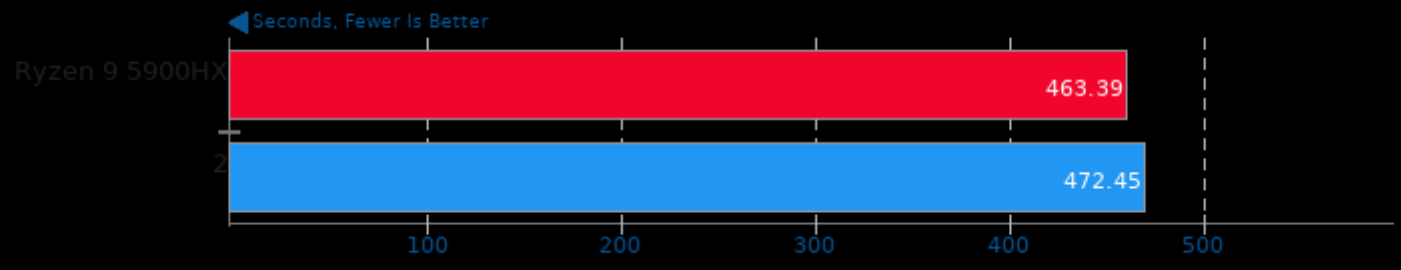
Circuit: C7552




1. (CC) gcc options: -O0 -fopenmp -lm -lstdc++ -lfftw3 -lXaw -lXmu -lXt -lXext -lX11 -lXft -lfontconfig -lXrender -lfreetype -lSM -lICE

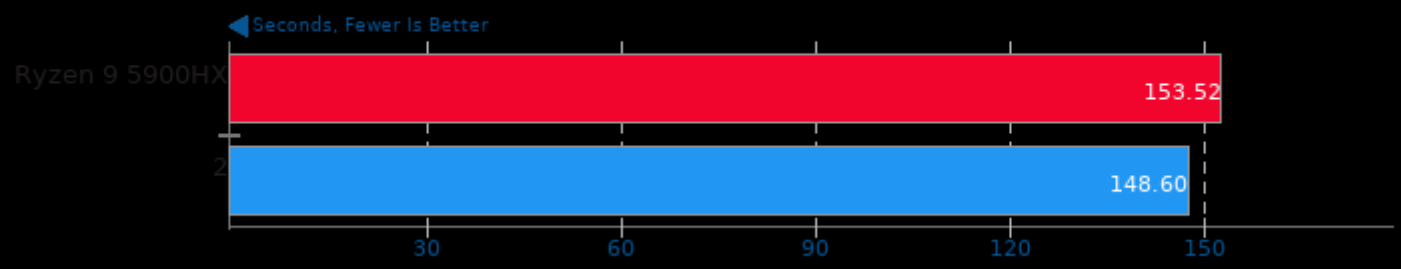
## Radiance Benchmark 5.0

Test: Serial

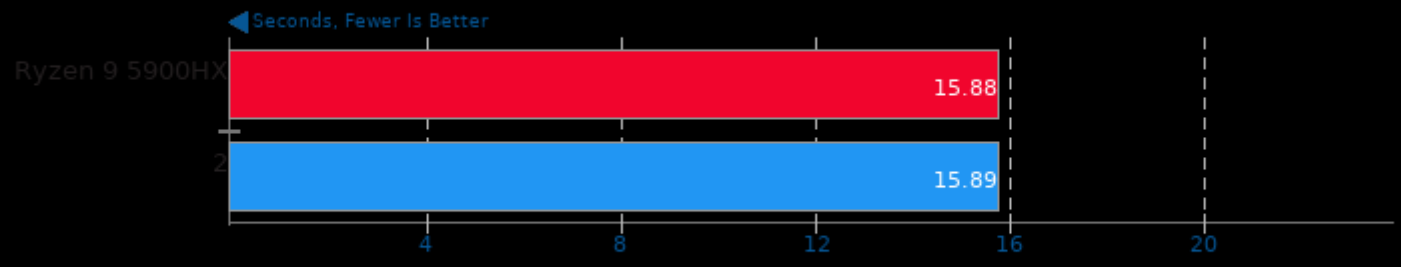



## Radiance Benchmark 5.0

Test: SMP Parallel



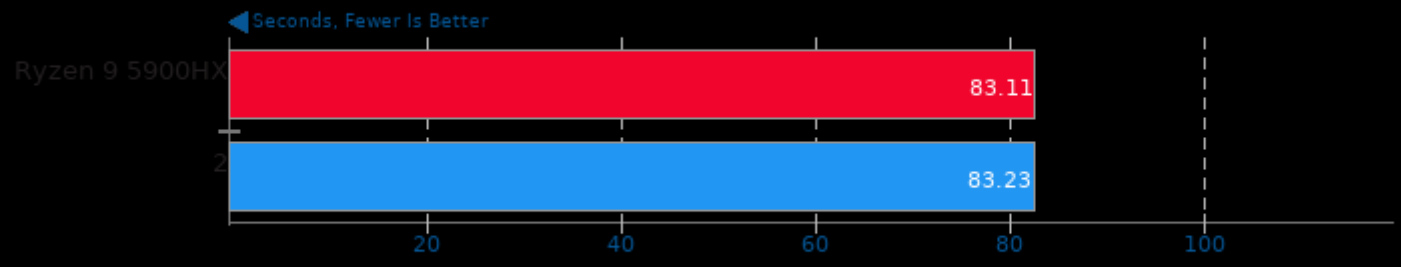
## RNNoise 2020-06-28




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

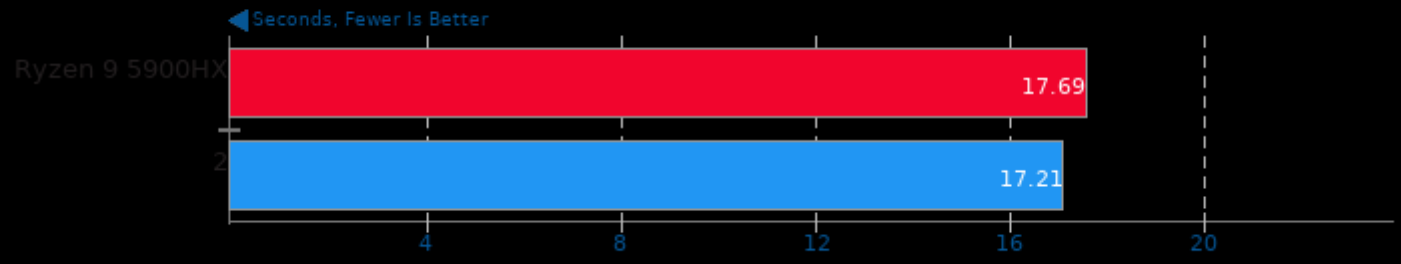
## Tachyon 0.99b6

Total Time



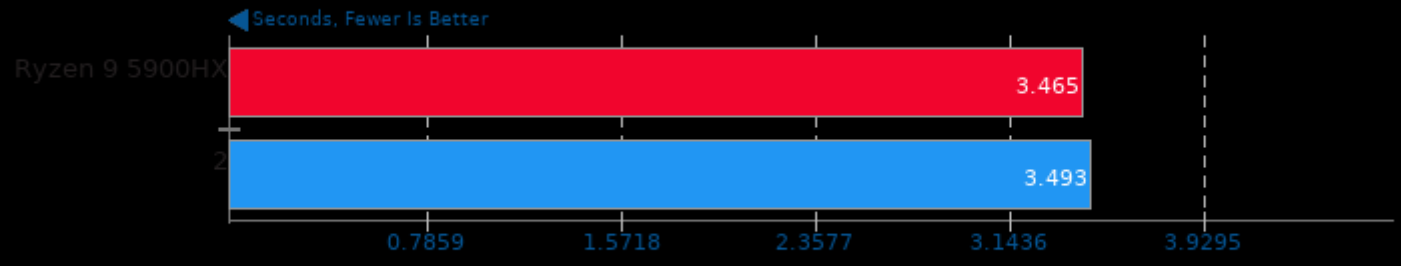

1. (CC) gcc options: -m64 -O3 -fomit-frame-pointer -ffast-math -ltachyon -lm -lpthread

## VOSK Speech Recognition Toolkit 0.3.21




## WebP2 Image Encode 20210126

Encode Settings: Default

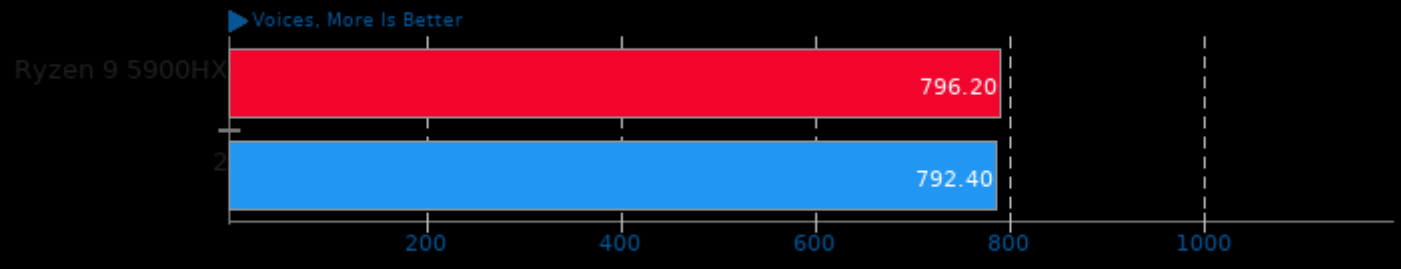



1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lOpenGL -lGLX -lGLU -lglut -lXmu -lXi -lpthread -ljpeg


WebP2 Image Encode 20210126
Encode Settings: Quality 75, Compression Effort 7
Seconds, Fewer Is Better
Ryzen 9 5900HX
208.15
208.00
50
100
150
200
250
1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lOpenGL -lGLX -lGLU -lglut -lXmu -lXi -lpthread -ljpeg
WebP2 Image Encode 20210126
Encode Settings: Quality 95, Compression Effort 7
Seconds, Fewer Is Better
Ryzen 9 5900HX
371.63
373.40
80
160
240
320
400
1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lOpenGL -lGLX -lGLU -lglut -lXmu -lXi -lpthread -ljpeg
WebP2 Image Encode 20210126
Encode Settings: Quality 100, Compression Effort 5
Seconds, Fewer Is Better
Ryzen 9 5900HX
11.83
11.78
3
6
9
12
15
1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lOpenGL -lGLX -lGLU -lglut -lXmu -lXi -lpthread -ljpeg
WebP2 Image Encode 20210126
Encode Settings: Quality 100, Lossless Compression
Seconds, Fewer Is Better
Ryzen 9 5900HX
739.22
731.99
160
320
480
640
800
1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lOpenGL -lGLX -lGLU -lglut -lXmu -lXi -lpthread -ljpeg

## Google SynthMark 20201109

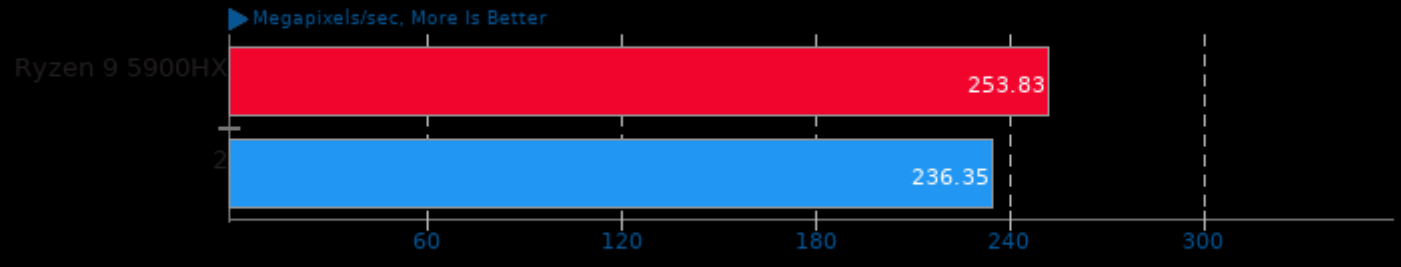
Test: VoiceMark_100




1. (CXX) g++ options: -lm -lpthread -std=c++11 -Ofast

## libjpeg-turbo tjbench 2.1.0

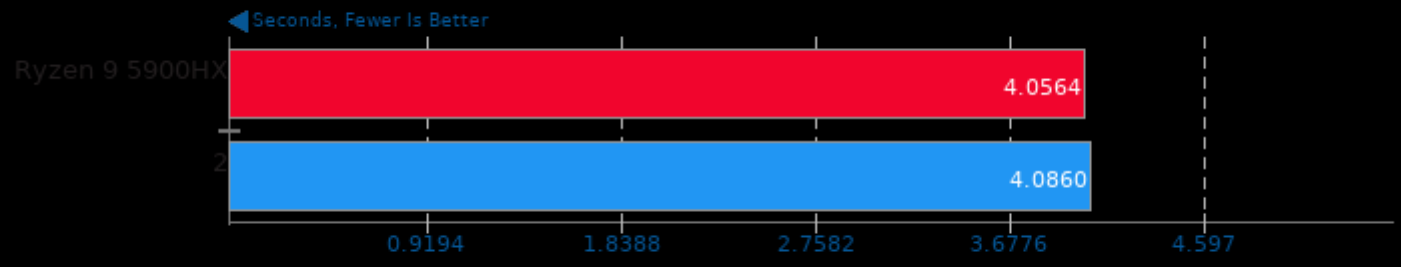
Test: Decompression Throughput




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

## ASTC Encoder 3.0

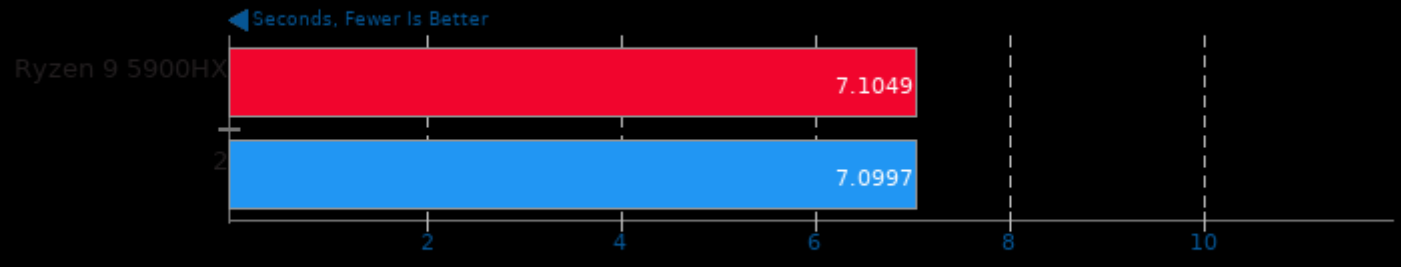
Preset: Medium




1. (CXX) g++ options: -O3 -flto -pthread

## ASTC Encoder 3.0

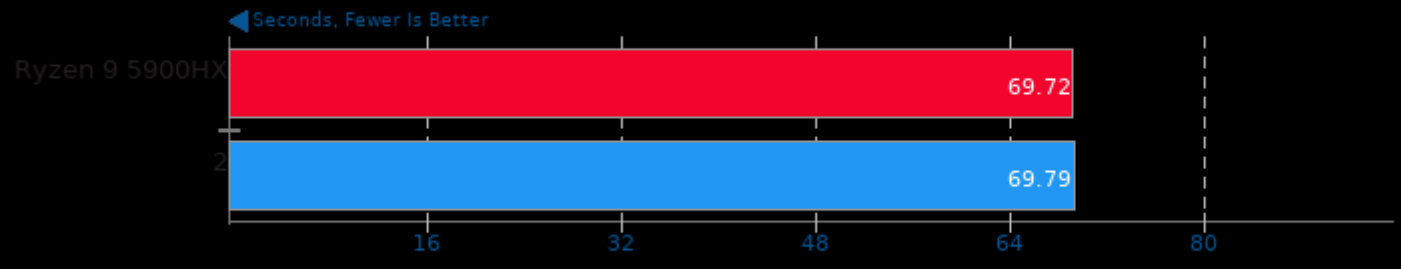
Preset: Thorough




1. (CXX) g++ options: -O3 -flto -pthread

## ASTC Encoder 3.0

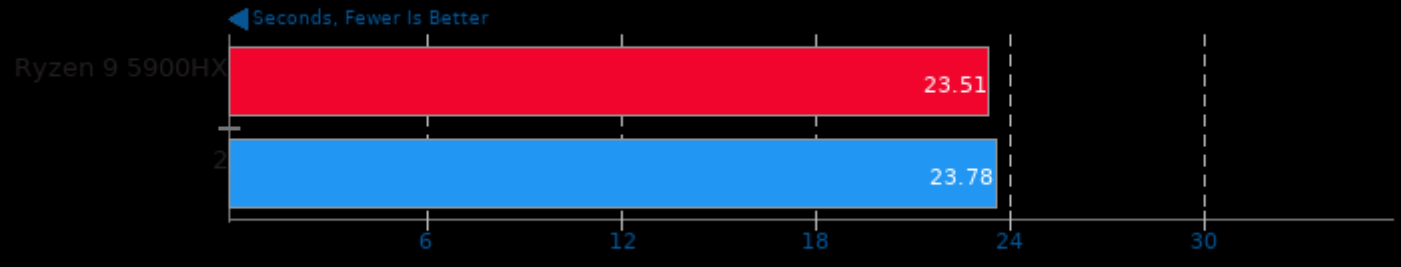
Preset: Exhaustive




1. (CXX) g++ options: -O3 -flto -pthread

## Basis Universal 1.13

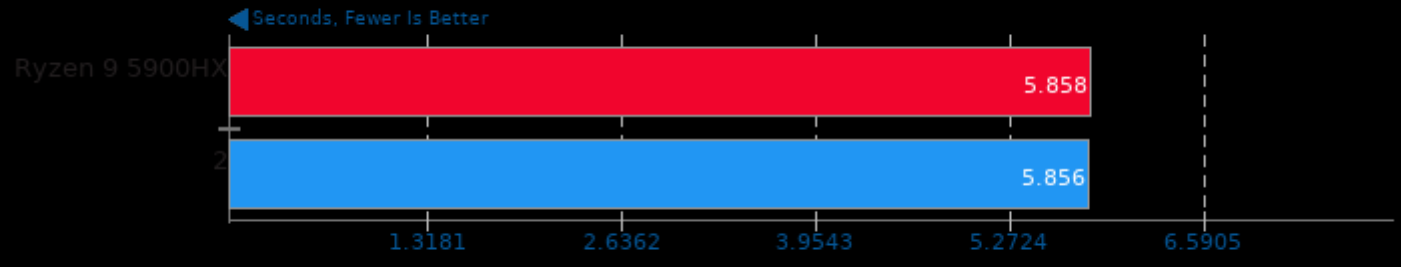
Settings: ETC1S




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

## Basis Universal 1.13

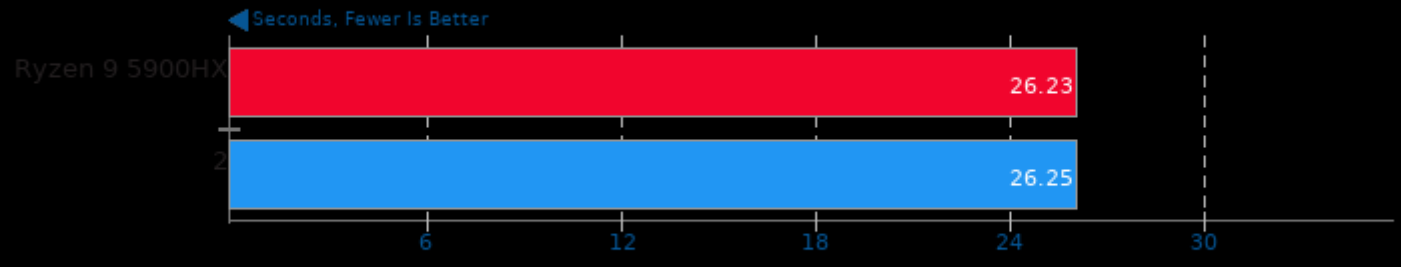
Settings: UASTC Level 0




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

## Basis Universal 1.13

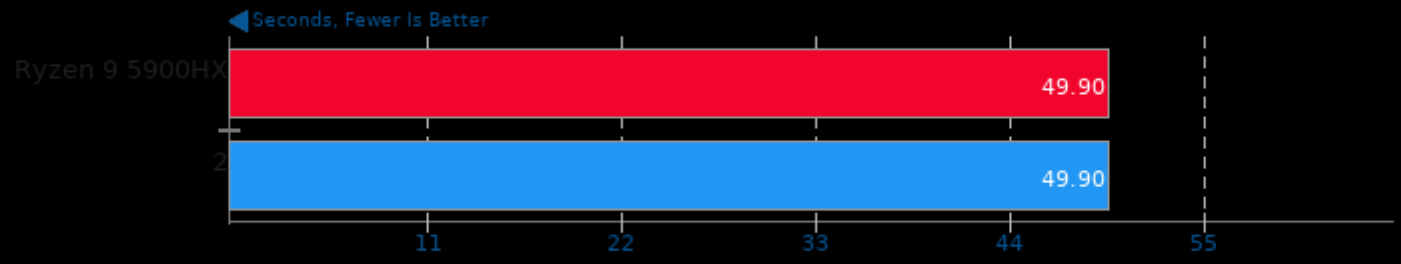
Settings: UASTC Level 2




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

## Basis Universal 1.13

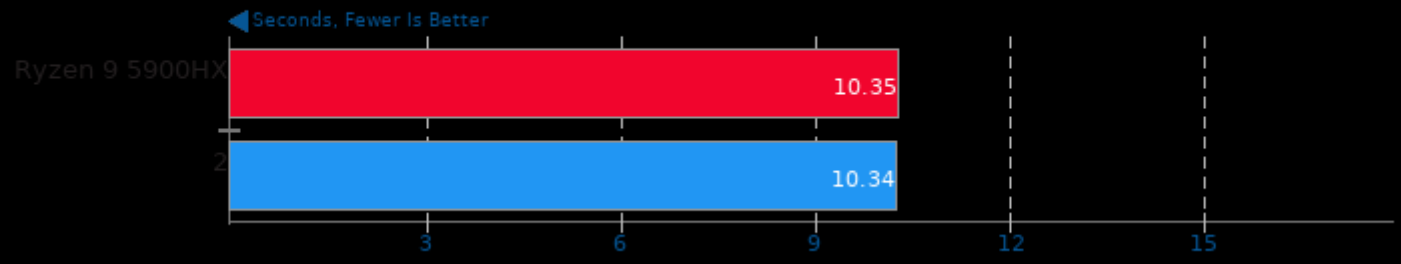
Settings: UASTC Level 3




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

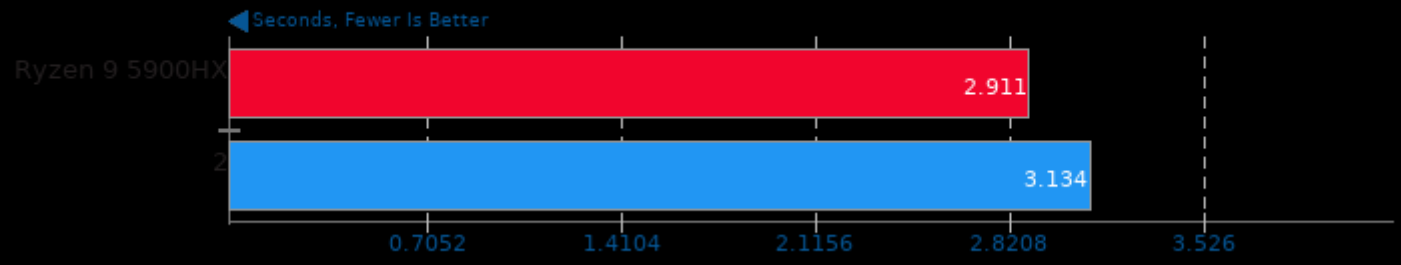
## KTX-Software toktx 4.0

Settings: UASTC 3



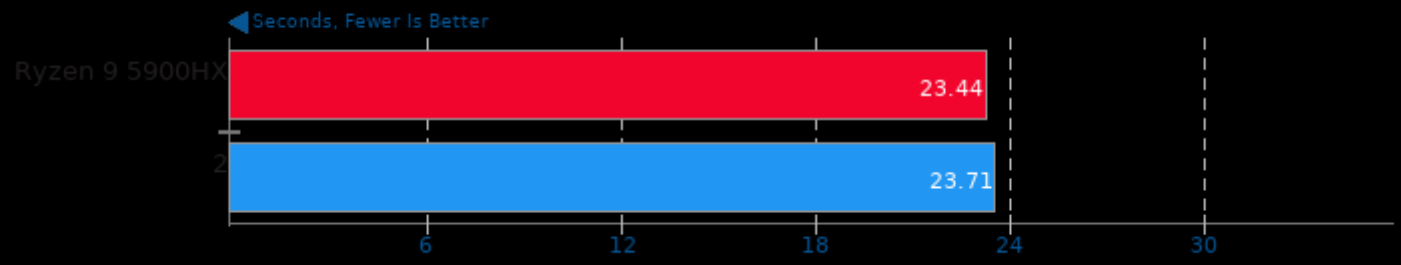

## KTX-Software toktx 4.0

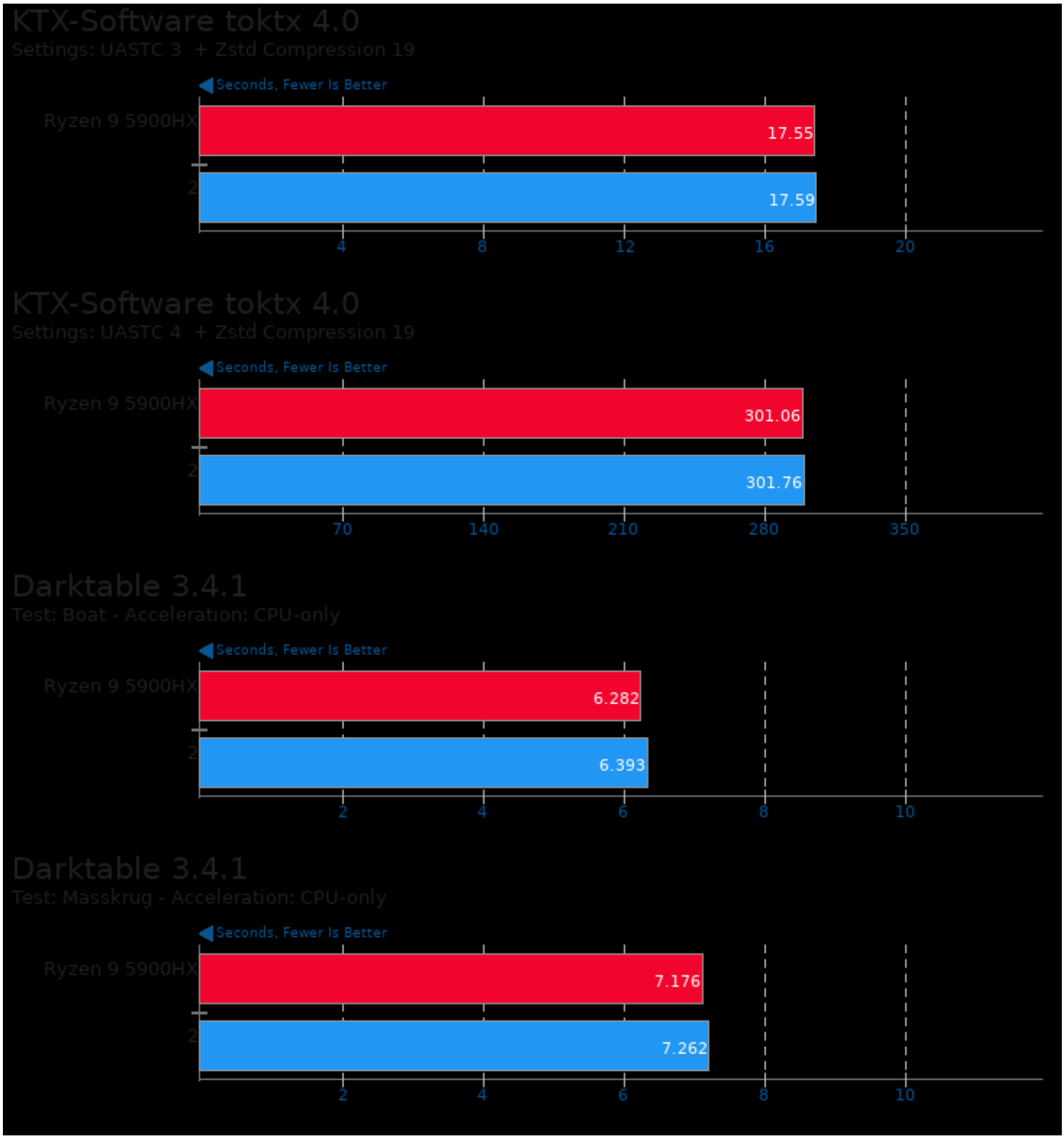
Settings: Zstd Compression 9

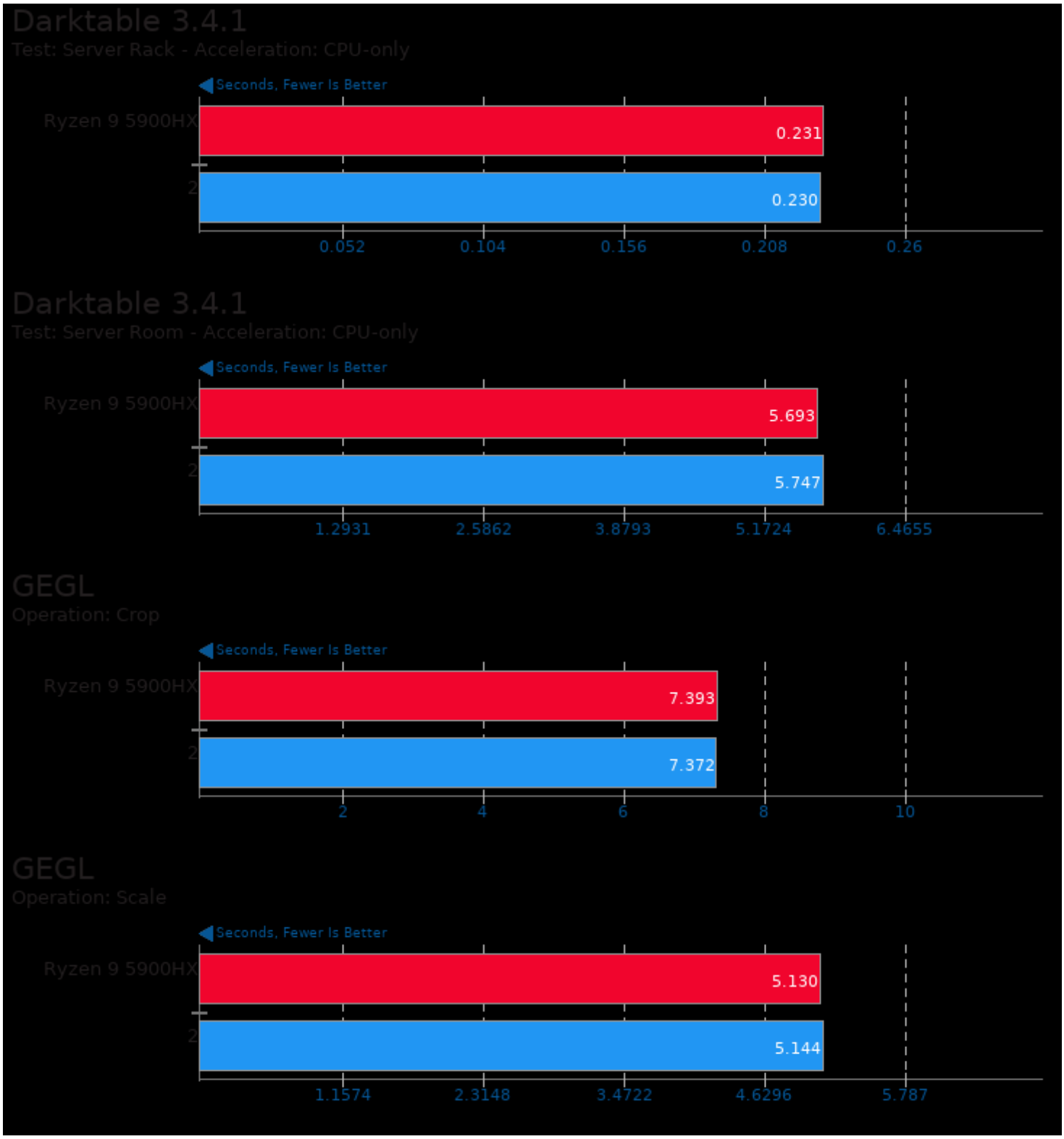



## KTX-Software toktx 4.0

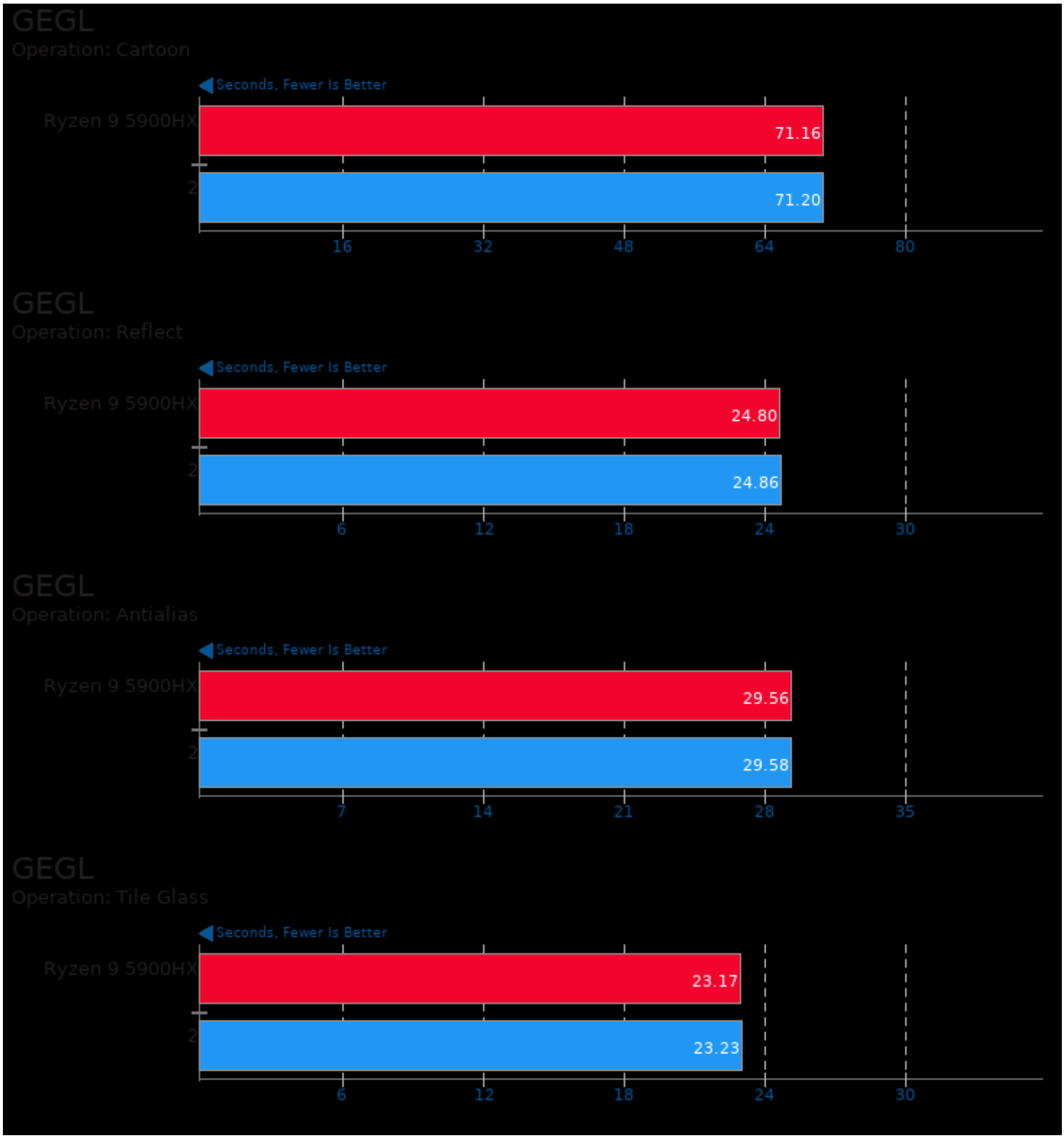
Settings: Zstd Compression 19



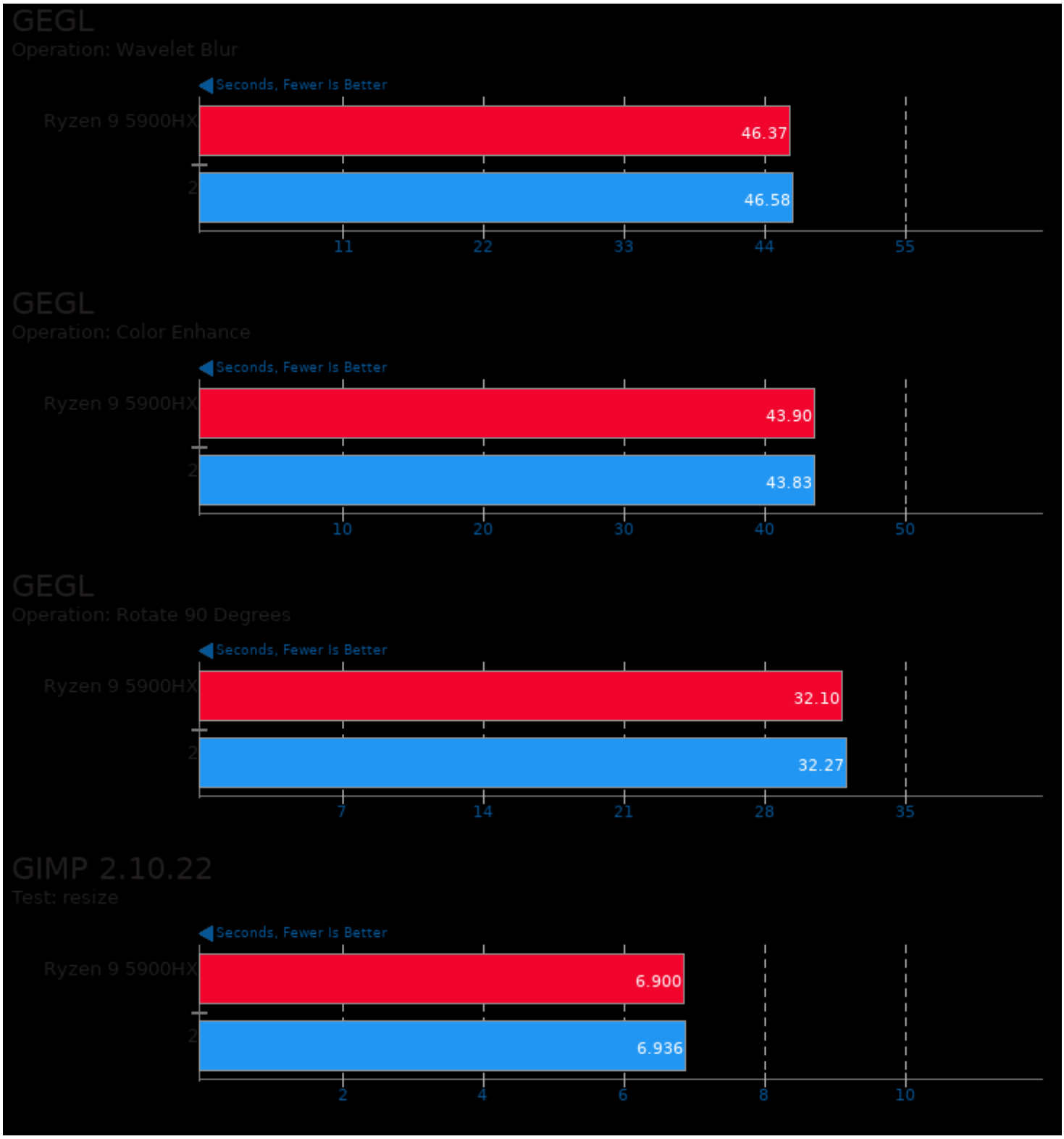

KTX-Software toktx 4.0
Settings: UASTC 3 + Zstd Compression 19
Seconds, Fewer Is Better
Ryzen 9 5900HX
17.55
17.59
4
8
12
16
20
KTX-Software toktx 4.0
Settings: UASTC 4 + Zstd Compression 19
Seconds, Fewer Is Better
Ryzen 9 5900HX
301.06
301.76
70
140
210
280
350
Darktable 3.4.1
Test: Boat - Acceleration: CPU-only
Seconds, Fewer Is Better
Ryzen 9 5900HX
6.282
6.393
2
4
6
8
10
Darktable 3.4.1
Test: Masskrug - Acceleration: CPU-only
Seconds, Fewer Is Better
Ryzen 9 5900HX
7.176
7.262
2
4
6
8
10


Darktable 3.4.1
Test: Server Rack - Acceleration: CPU-only
Seconds, Fewer Is Better
Ryzen 9 5900HX
0.231
0.230
0.052
0.104
0.156
0.208
0.26
Darktable 3.4.1
Test: Server Room - Acceleration: CPU-only
Seconds, Fewer Is Better
Ryzen 9 5900HX
5.693
5.747
1.2931
2.5862
3.8793
5.1724
6.4655
GEGL
Operation: Crop
Seconds, Fewer Is Better
Ryzen 9 5900HX
7.393
7.372
2
4
6
8
10
GEGL
Operation: Scale
Seconds, Fewer Is Better
Ryzen 9 5900HX
5.130
5.144
1.1574
2.3148
3.4722
4.6296
5.787

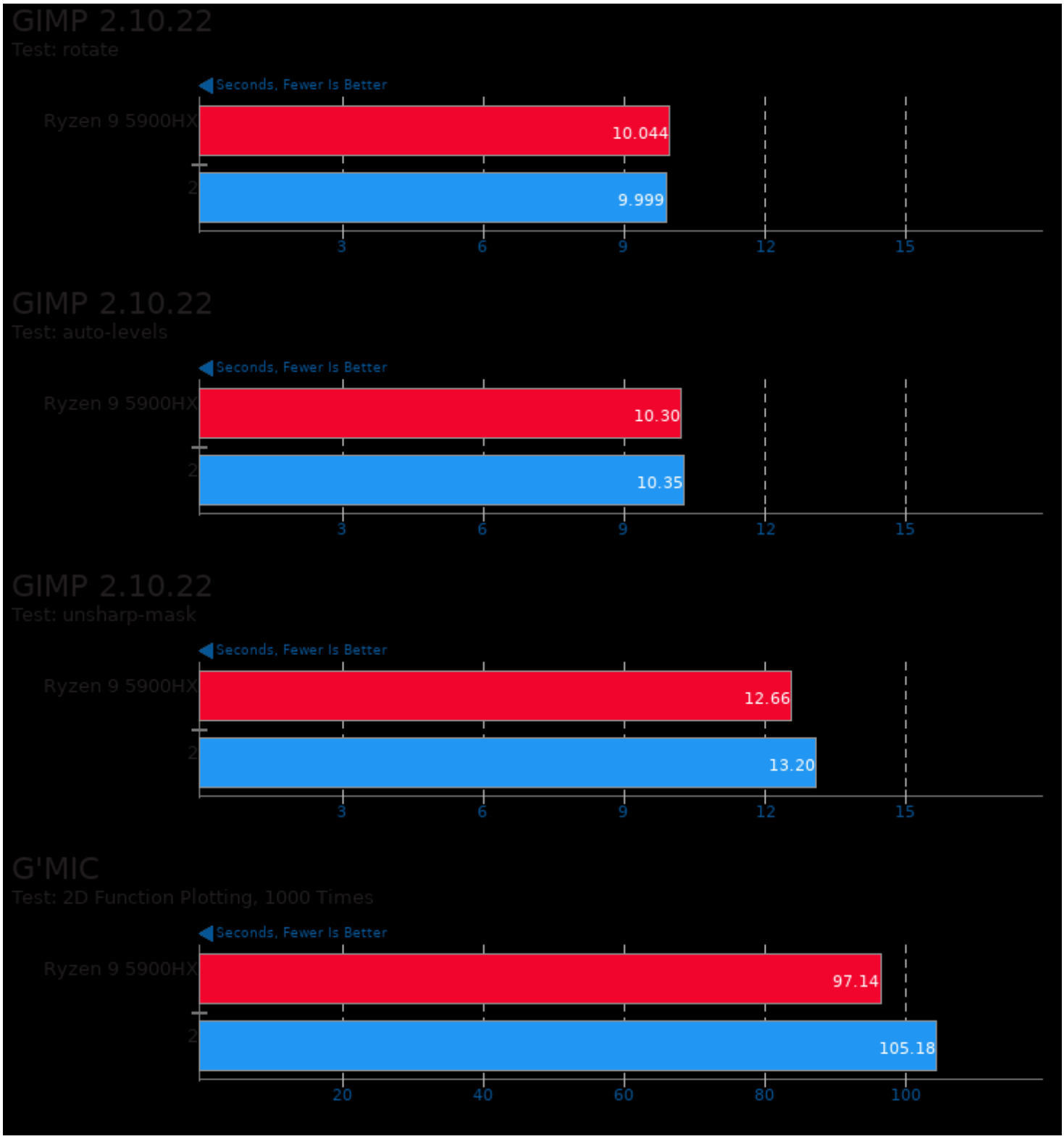
# cc AMD Ryzen 9 5900HX

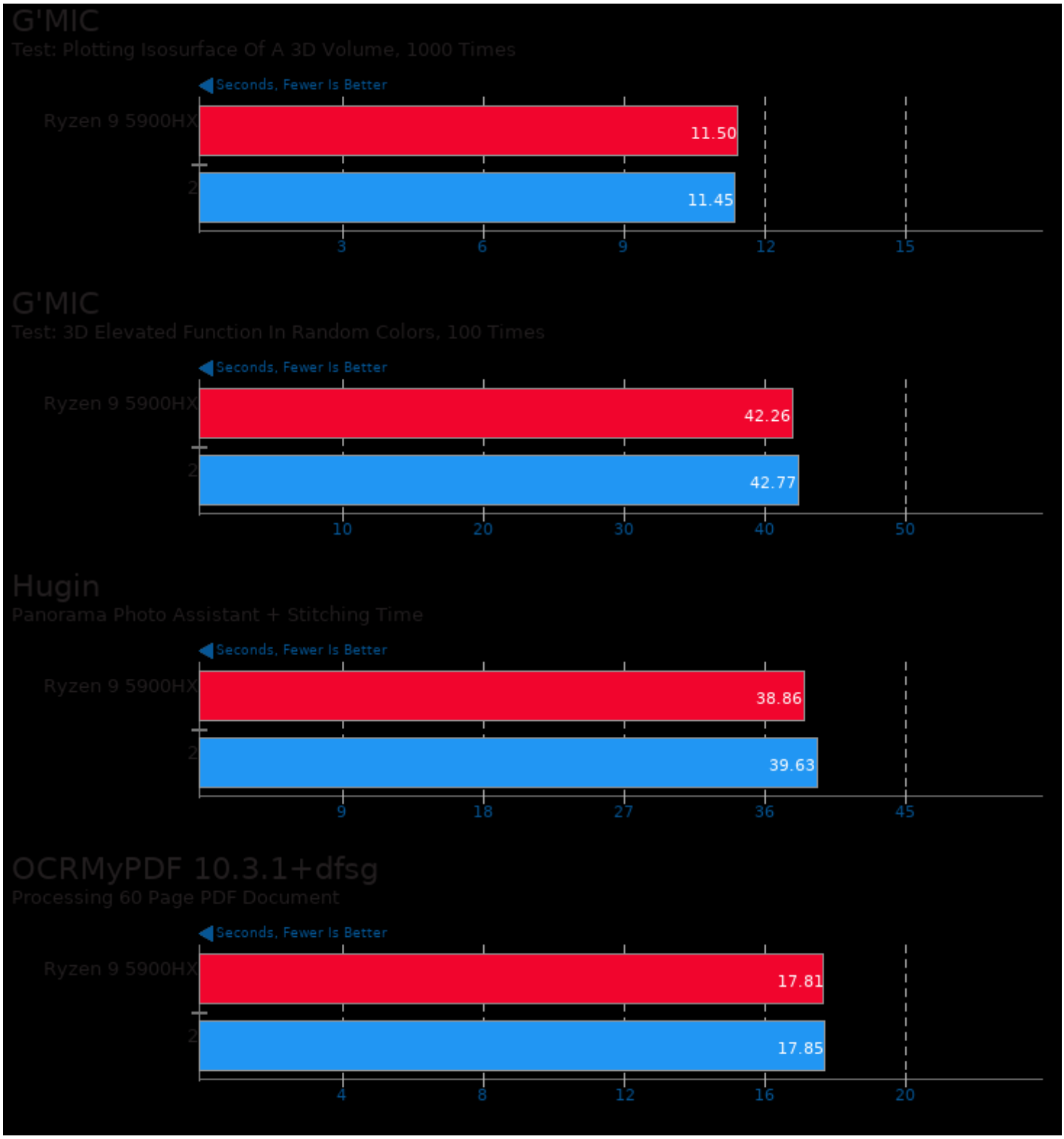


# cc AMD Ryzen 9 5900HX



# cc AMD Ryzen 9 5900HX




G'MIC
Test: Plotting Isosurface Of A 3D Volume, 1000 Times
Seconds, Fewer Is Better
Ryzen 9 5900HX
11.50
11.45
3
6
9
12
15
G'MIC
Test: 3D Elevated Function In Random Colors, 100 Times
Seconds, Fewer Is Better
Ryzen 9 5900HX
42.26
42.77
10
20
30
40
50
Hugin
Panorama Photo Assistant + Stitching Time
Seconds, Fewer Is Better
Ryzen 9 5900HX
38.86
39.63
9
18
27
36
45
OCRMyPDF 10.3.1+dfsg
Processing 60 Page PDF Document
Seconds, Fewer Is Better
Ryzen 9 5900HX
17.81
17.85
4
8
12
16
20

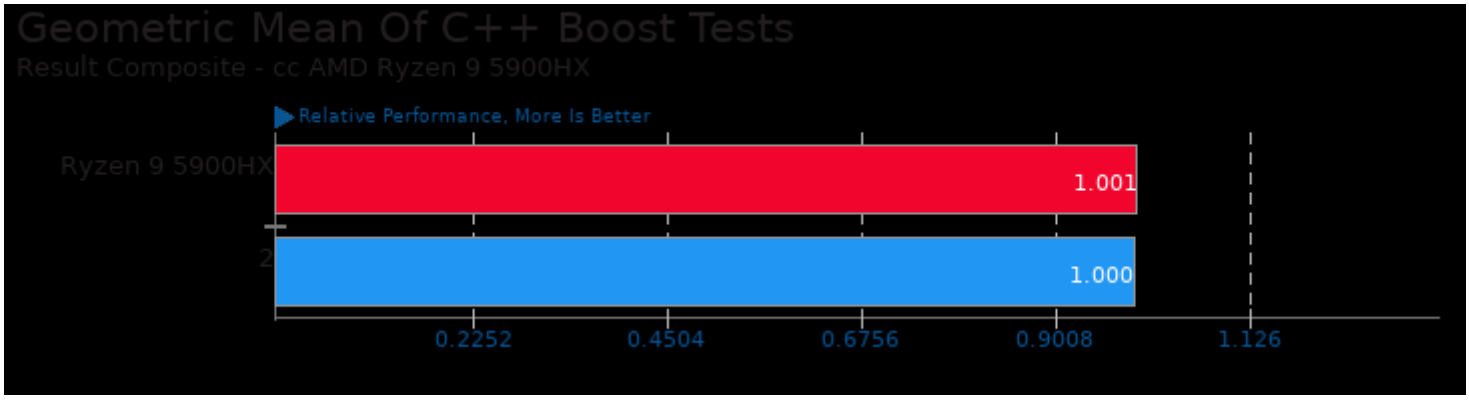
These geometric means are based upon test groupings / test suites for this result file.



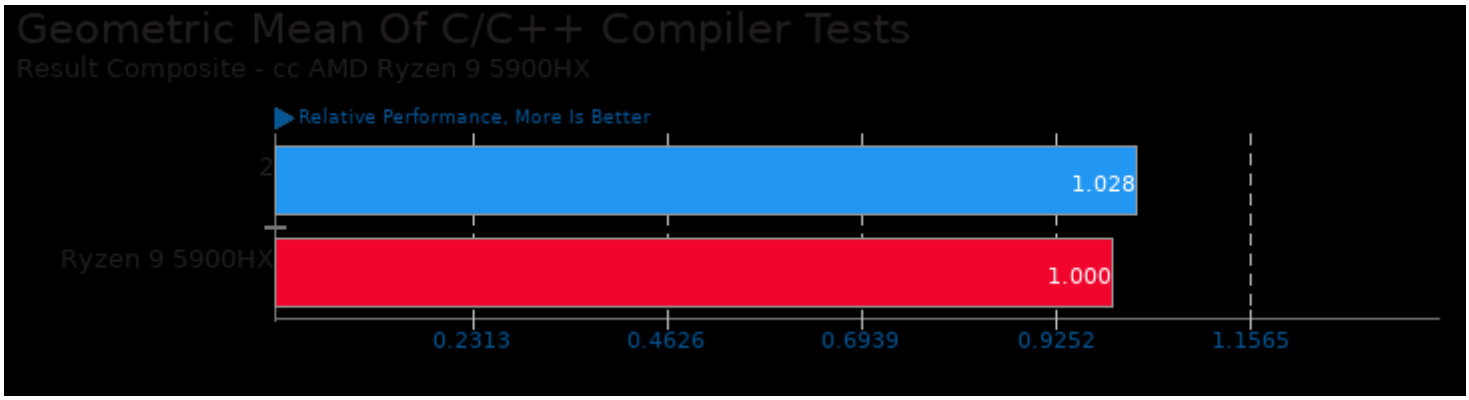

Geometric mean based upon tests: pts/encode-mp3, pts/encode-ogg, pts/encode-flac, pts/encode-ape and pts/encode-opus




Geometric mean based upon tests: pts/dav1d, pts/aom-av1, pts/svt-av1, pts/libgav1, pts/rav1e and pts/avifenc




Geometric mean based upon tests: pts/povray and pts/yafaray



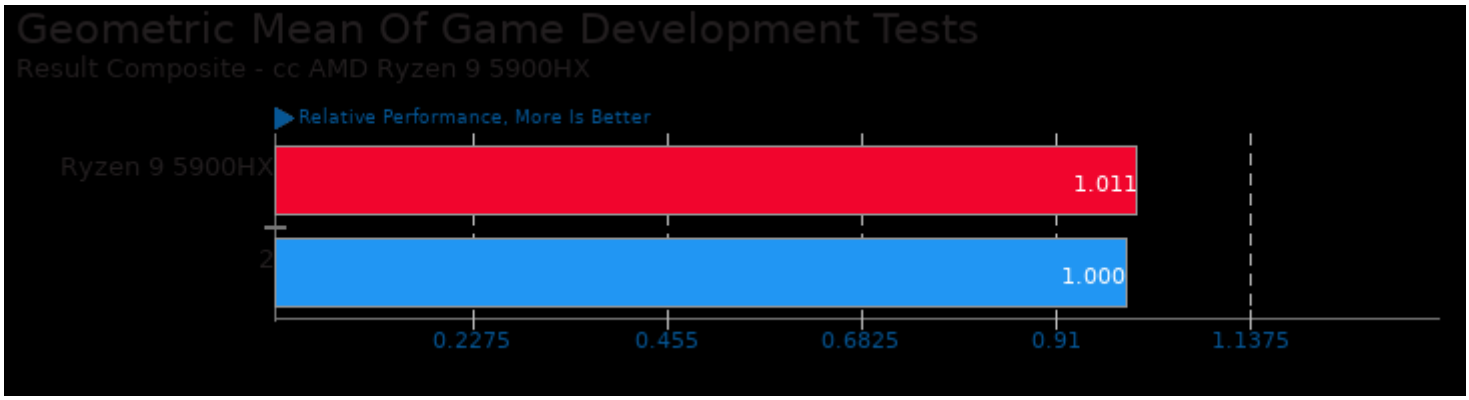

Geometric mean based upon tests: pts/aobench, pts/vpxenc, pts/graphics-magick, pts/c-ray, pts/encode-mp3, pts/encode-flac, pts/libgav1, pts/dav1d, pts/x264, pts/x265, pts/kvazaar, pts/aom-av1, pts/svt-av1, pts/svt-vp9, pts/tachyon and pts/basis



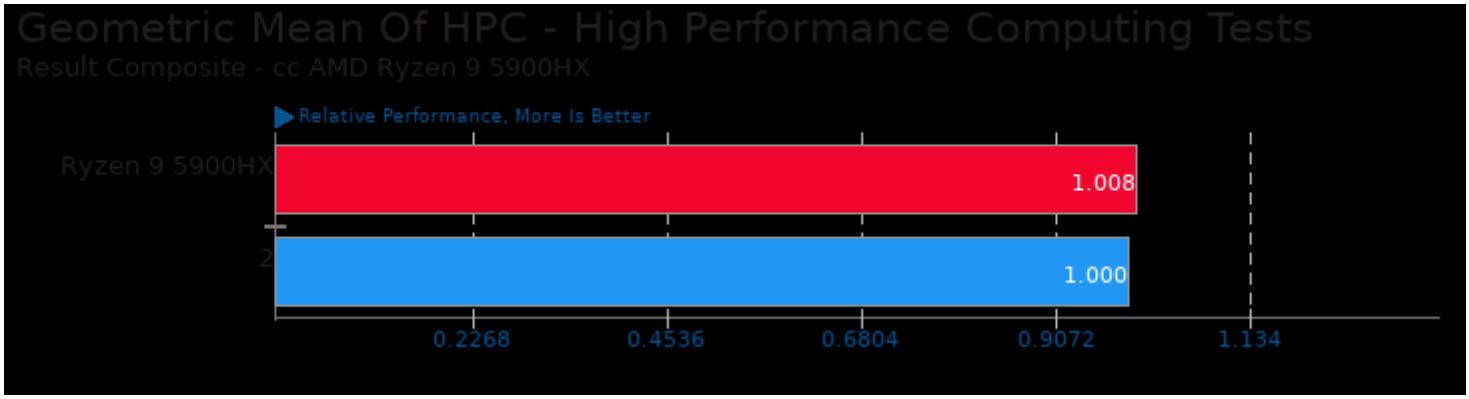

Geometric mean based upon tests: pts/c-ray, pts/dav1d, pts/svt-av1, pts/svt-hevc, pts/svt-vp9, pts/vpxenc, pts/x264, pts/x265, pts/encode-flac, pts/encode-mp3, pts/graphics-magick, pts/onednn, pts/povray, pts/radiance, pts/tachyon, pts/ttsiod-renderer, system/darktable and pts/tjbench




Geometric mean based upon tests: pts/encode-mp3, pts/encode-ogg, pts/encode-flac, pts/encode-ape, pts/encode-opus, pts/svt-vp9, pts/svt-hevc, pts/x264, pts/x265, pts/kvazaar, pts/ffmpeg, pts/vpxenc, pts/dav1d, pts/aom-av1, pts/svt-av1, pts/libgav1, pts/rav1e and pts/avifenc



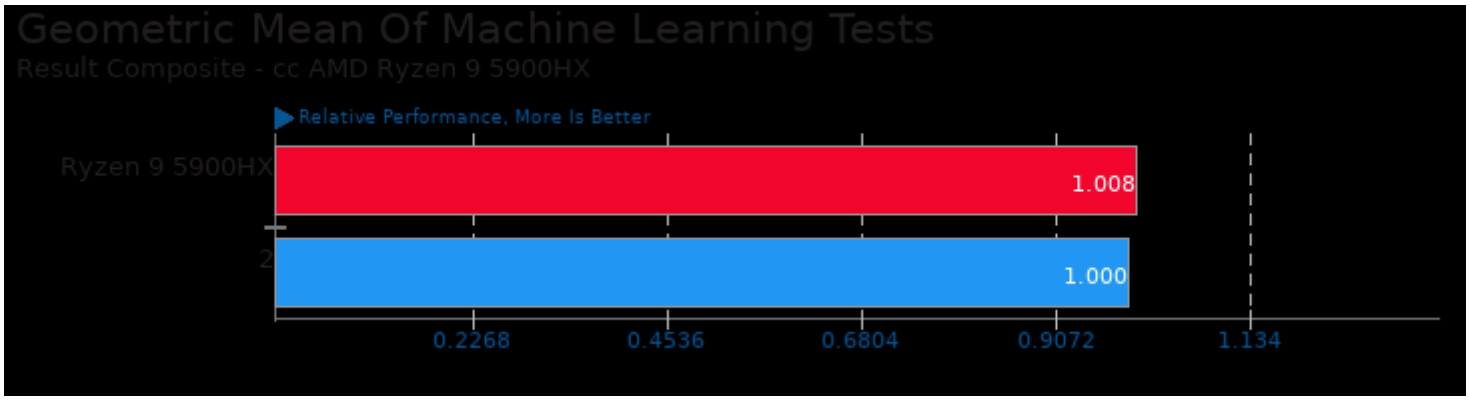

Geometric mean based upon tests: pts/basis, pts/astcenc, pts/betsy, pts/etcpak, pts/toktx, pts/build-godot, pts/luajit, pts/oidn and pts/openvkl



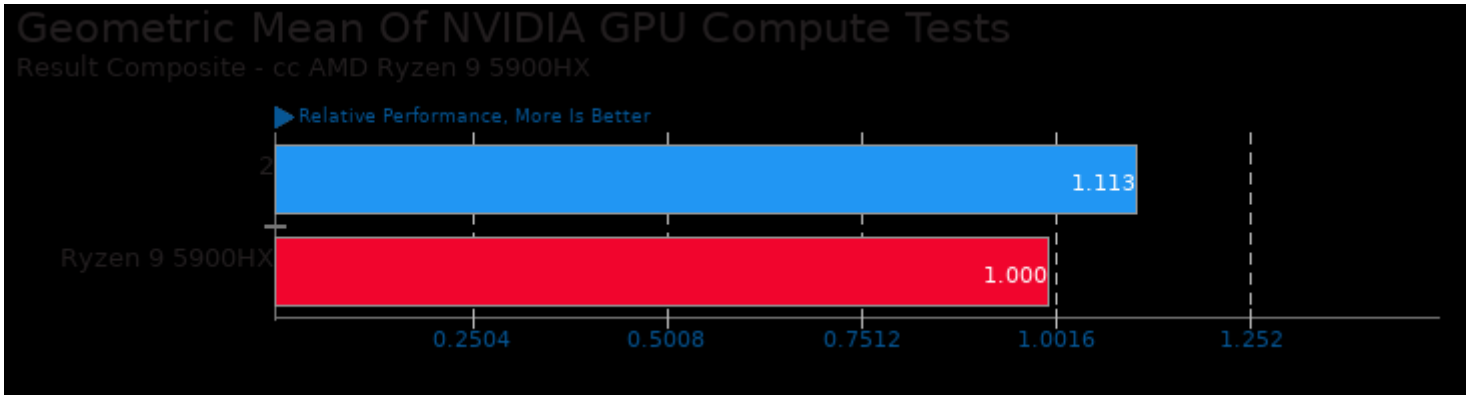

Geometric mean based upon tests: pts/deepspeech, pts/rnnoise and pts/onednn



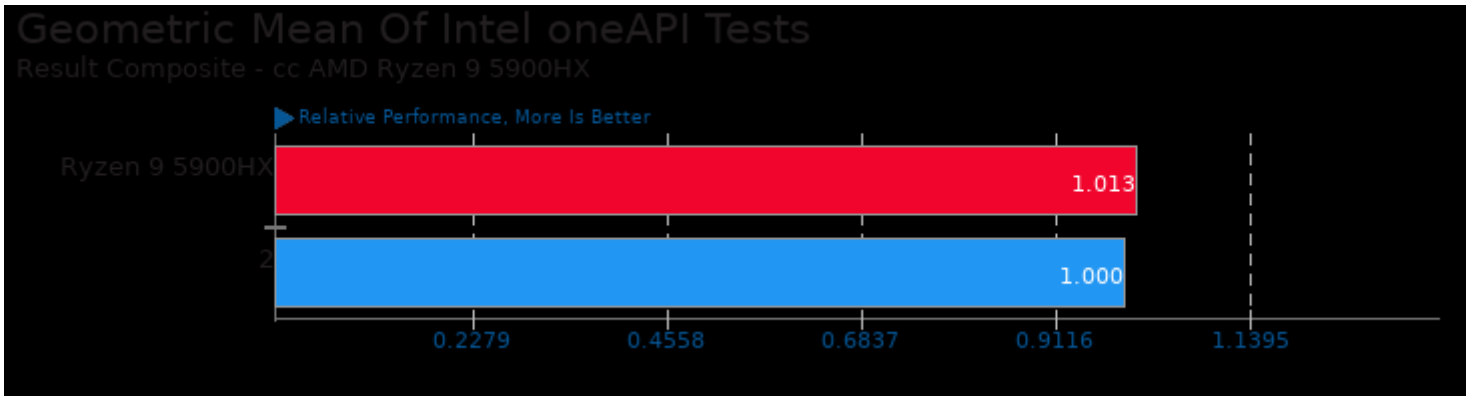

Geometric mean based upon tests: pts/graphics-magick, system/gmic, pts/libraw, pts/webp, pts/webp2, pts/tjbench, system/gimp, pts/dcraw, system/hugin, system/darktable, system/gegl and pts/avifenc



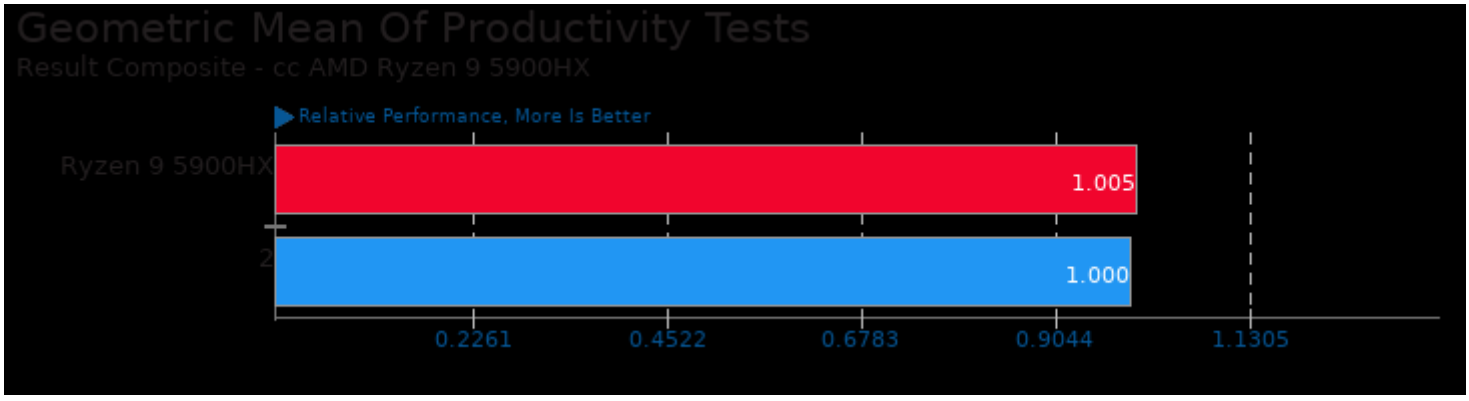

Geometric mean based upon tests: pts/deepspeech, pts/rnnoise and pts/onednn




Geometric mean based upon tests: pts/luxcorerender and pts/betsy



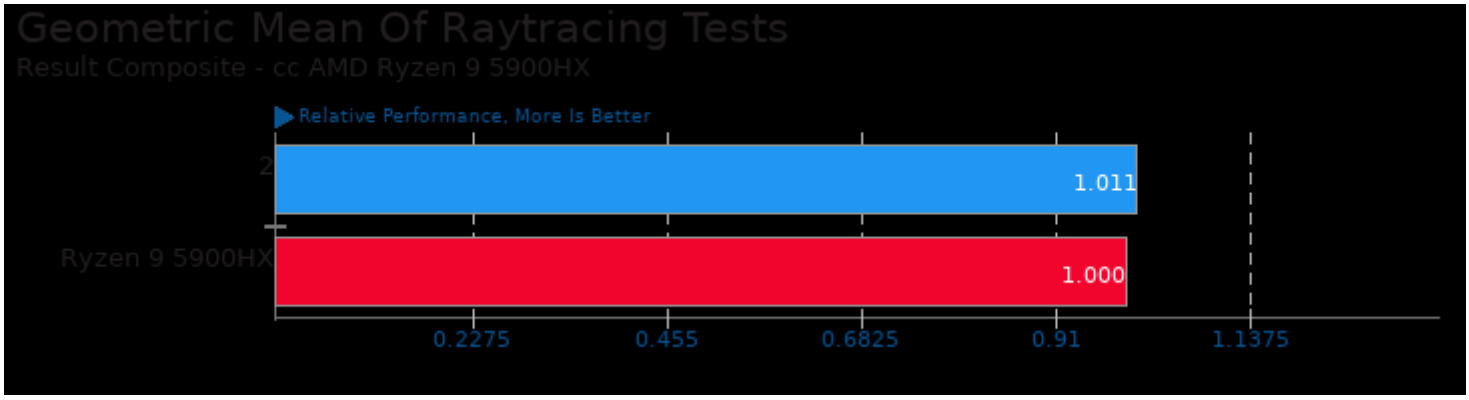

Geometric mean based upon tests: pts/embree, pts/onednn, pts/oidn, pts/ospray and pts/openvkl




Geometric mean based upon tests: system/gimp and system/gegl



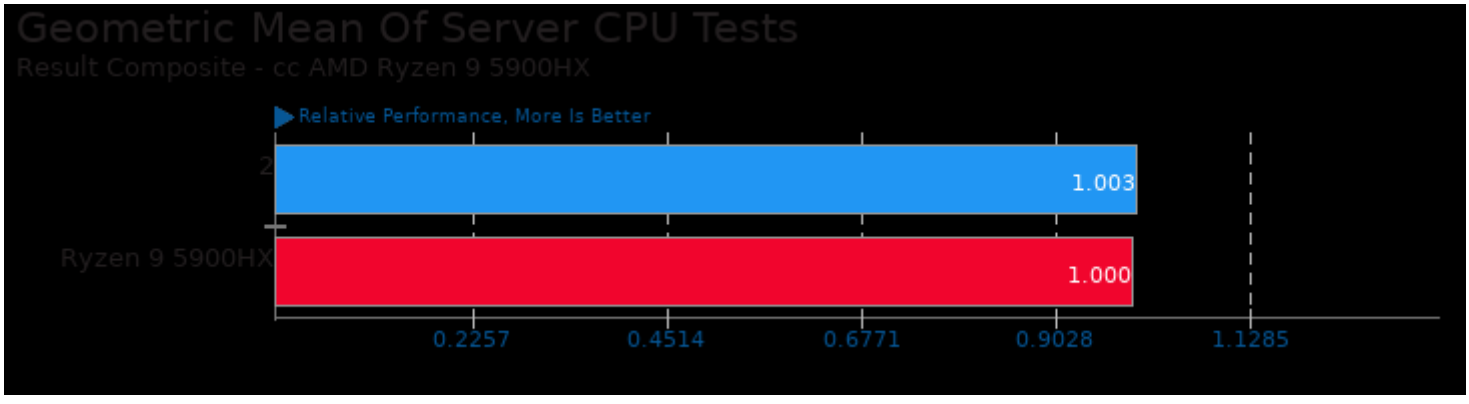

Geometric mean based upon tests: pts/build-godot, pts/yafaray, pts/rays1bench, pts/vosk and system/ocrmypdf



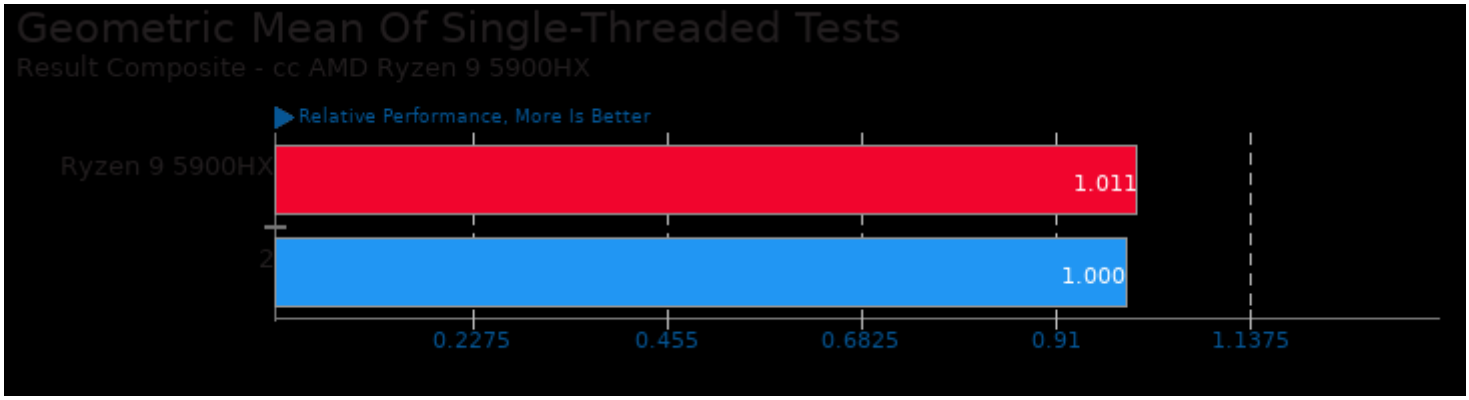

Geometric mean based upon tests: pts/ospray, pts/c-ray, pts/tachyon, pts/povray, pts/rays1bench and pts/yafaray



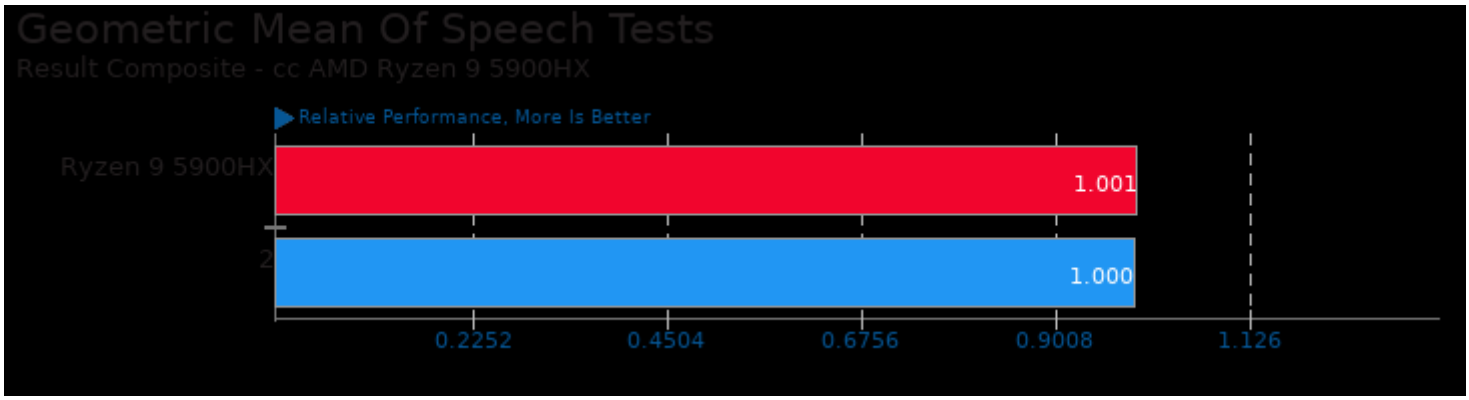

Geometric mean based upon tests: pts/ospray, pts/c-ray, pts/tachyon, pts/povray, pts/rays1bench, pts/yafaray, pts/radiance, pts/aobench, pts/luxcorerender, pts/smallpt and pts/ttsiod-renderer



Geometric mean based upon tests: pts/onednn, pts/svt-av1, pts/svt-hevc, pts/svt-vp9, pts/x264, pts/x265, pts/dav1d, pts/c-ray, pts/povray, pts/radiance, pts/tjbench and system/gimp



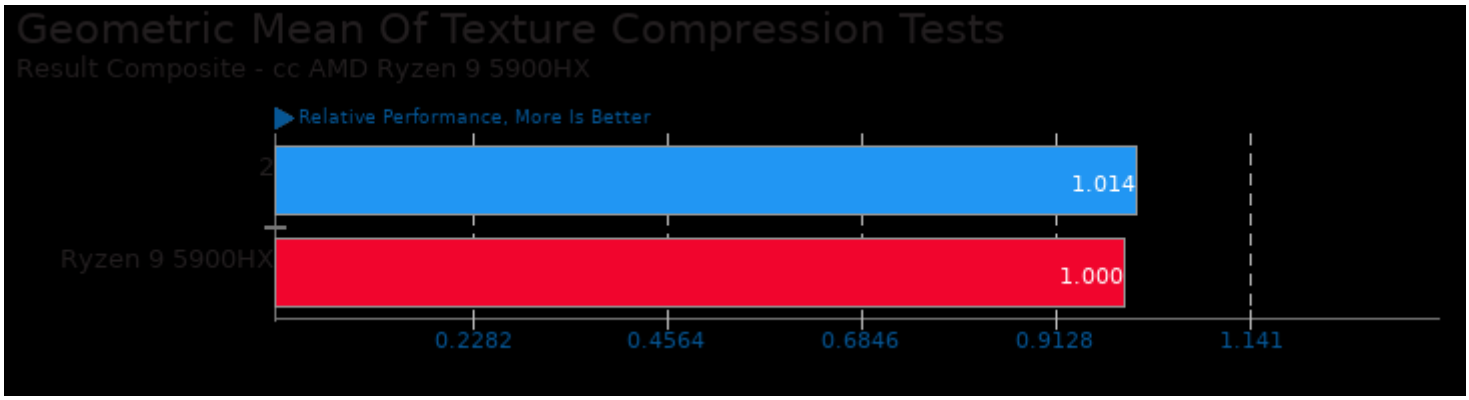

Geometric mean based upon tests: pts/luajit, pts/dcraw, pts/deepspeech, pts/encode-flac, pts/encode-mp3, pts/encode-ogg, pts/espeak, pts/radiance and pts/tjbench




Geometric mean based upon tests: pts/espeak, pts/deepspeech, pts/vosk, pts/rnnoise and pts/synthmark




Geometric mean based upon tests: pts/espeak, pts/deepspeech, pts/vosk, pts/rnnoise and pts/synthmark




Geometric mean based upon tests: pts/basis, pts/astcenc, pts/betsy, pts/etcpak and pts/toktx




Geometric mean based upon tests: pts/svt-vp9, pts/svt-hevc, pts/x264, pts/x265, pts/kvazaar, pts/ffmpeg, pts/vpxenc, pts/dav1d, pts/aom-av1, pts/svt-av1, pts/libgav1, pts/rav1e and pts/avifenc

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 05:00.*