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AMD Ryzen 9 5950X 16-Core testing with a ASUS ROG CROSSHAIR VIII HERO (WI-FI) (3801 BIOS) and AMD Radeon RX 6700/6700 XT / 6800M 12GB on Ubuntu 21.10 via the Phoronix Test Suite.

Automated Executive Summary

4 had the most wins, coming in first place for 45% of the tests.

Based on the geometric mean of all complete results, the fastest (2) was 1.003x the speed of the slowest (5). 4 was 1x the speed of 2, 3 was 1x the speed of 4, 1 was 0.998x the speed of 3, 5 was 1x the speed of 1.

Test Systems:

1

2

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3

4

5

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (3801 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Sabrent Rocket 4.0 Plus, Graphics: AMD Radeon RX 6700/6700 XT / 6800M 12GB (2855/1000MHz), Audio: AMD Device ab28, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 21.10, Kernel: 5.15.0-rc2-3reverts (x86_64) 20210922, Desktop: GNOME Shell 40.2, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.1.4 (LLVM 12.0.1), Vulkan: 1.2.168, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 3840x2160

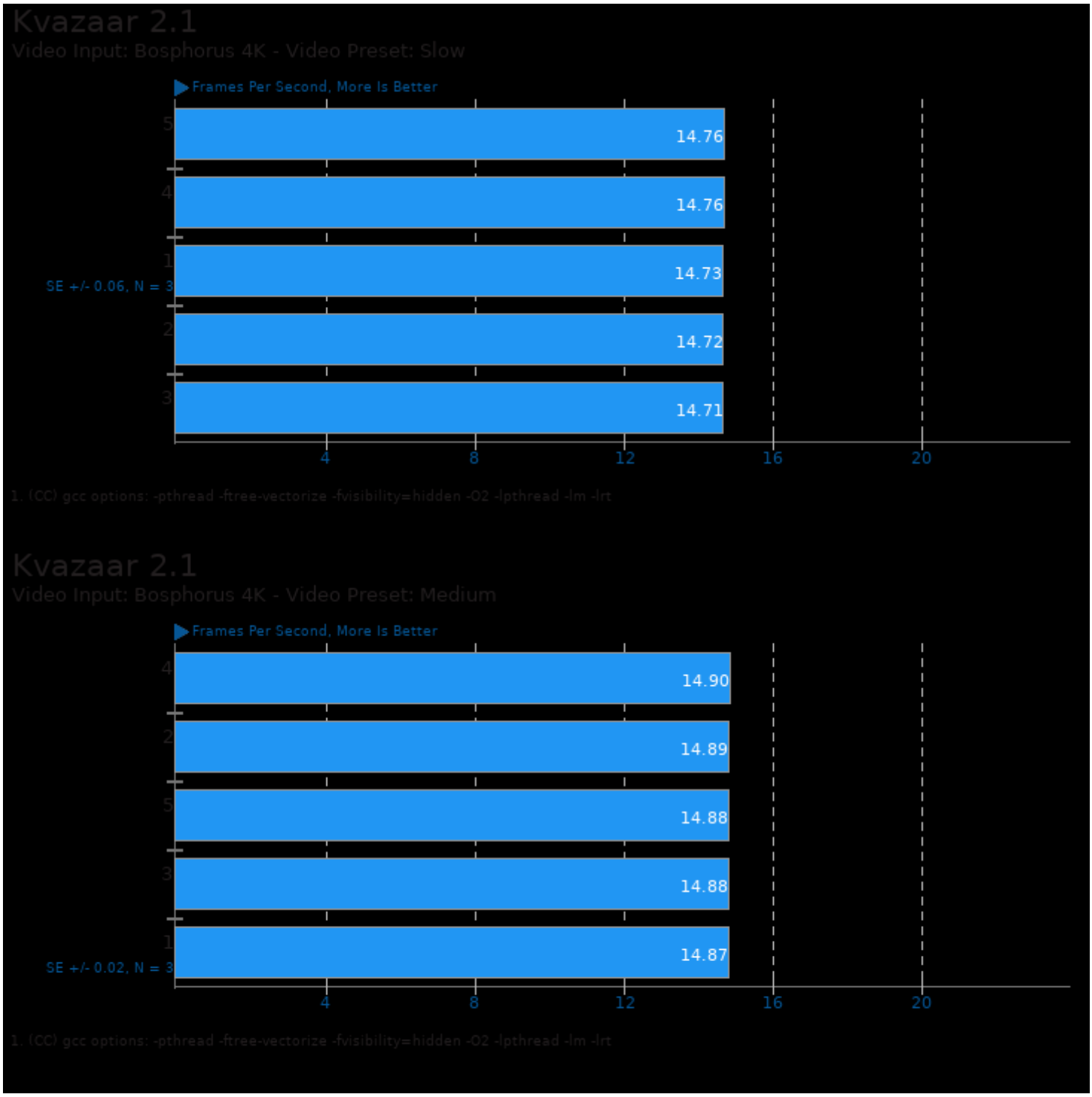
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-M6DaQn/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-M6DaQn/gcc-11-11.2.0/debian/tmp-gcn/usr --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0xa201016
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

	1	2	3	4	5
Kvazaar - Bosphorus 4K - Slow (FPS)	14.73	14.72	**14.71**	**14.76**	**14.76**
Normalized	99.8%	99.73%	99.66%	100%	100%
Standard Deviation	0.7%				
Kvazaar - Bosphorus 4K - Medium (FPS)	**14.87**	14.89	14.88	**14.9**	14.88
Normalized	99.8%	99.93%	99.87%	100%	99.87%
Standard Deviation	0.2%				
Kvazaar - Bosphorus 1080p - Slow (FPS)	60.25	60.18	59.87	**60.27**	**59.72**
Normalized	99.97%	99.85%	99.34%	100%	99.09%
Standard Deviation	0.2%				
Kvazaar - Bosphorus 1080p - Medium (FPS)	62.13	**61.95**	61.98	62.18	**62.26**
Normalized	99.79%	99.5%	99.55%	99.87%	100%
Standard Deviation	0.2%				
Kvazaar - Bosphorus 4K - Very Fast (FPS)	30.35	30.46	**30.48**	30.47	**30.29**
Normalized	99.57%	99.93%	100%	99.97%	99.38%
Standard Deviation	0.1%				
Kvazaar - Bosphorus 4K - Ultra Fast (FPS)	53.54	53.53	**53.48**	**53.58**	53.53
Normalized	99.93%	99.91%	99.81%	100%	99.91%

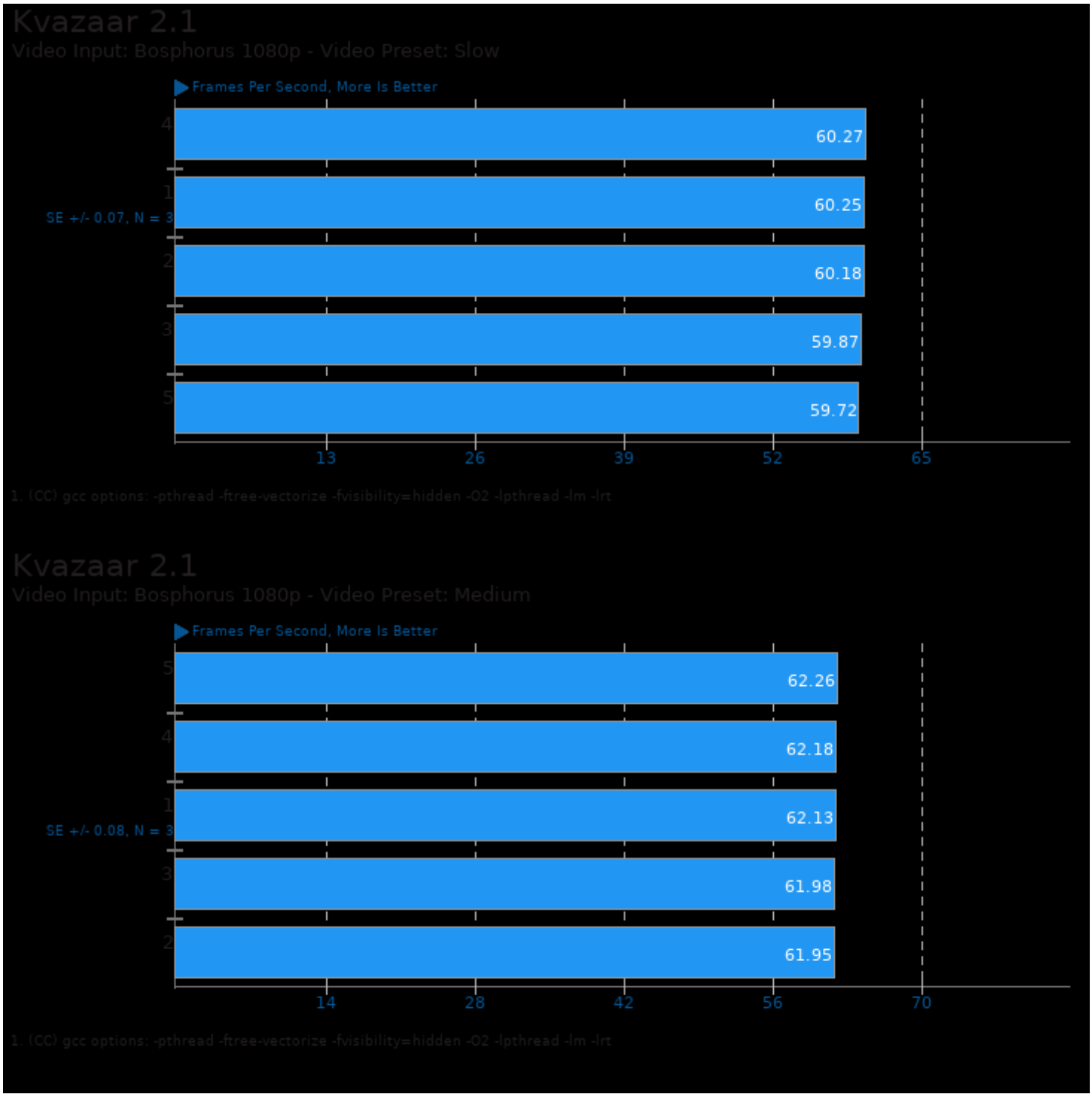
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Standard Deviation	0.5%				
Kvazaar - Bosphorus 1080p - Very Fast (FPS)	**122.56**	**123.05**	122.79	122.82	122.87
Normalized	99.6%	100%	99.79%	99.81%	99.85%
Standard Deviation	0.2%				
Kvazaar - Bosphorus 1080p - Ultra Fast (FPS)	215.38	**214.36**	**215.48**	**215.48**	215.18
Normalized	99.95%	99.48%	100%	100%	99.86%
Standard Deviation	0.4%				
ASTC Encoder - Medium (sec)	3.3655	3.335	**3.2996**	3.3584	**3.3659**
Normalized	98.04%	98.94%	100%	98.25%	98.03%
Standard Deviation	0.6%				
ASTC Encoder - Thorough (sec)	6.9761	**6.8836**	6.9707	6.9514	**6.9912**
Normalized	98.67%	100%	98.75%	99.02%	98.46%
Standard Deviation	0.2%				
ASTC Encoder - Exhaustive	**32.9674**	32.8438	32.8411	**32.8255**	32.8313
Normalized	99.57%	99.94%	99.95%	100%	99.98%
Standard Deviation	0.5%				

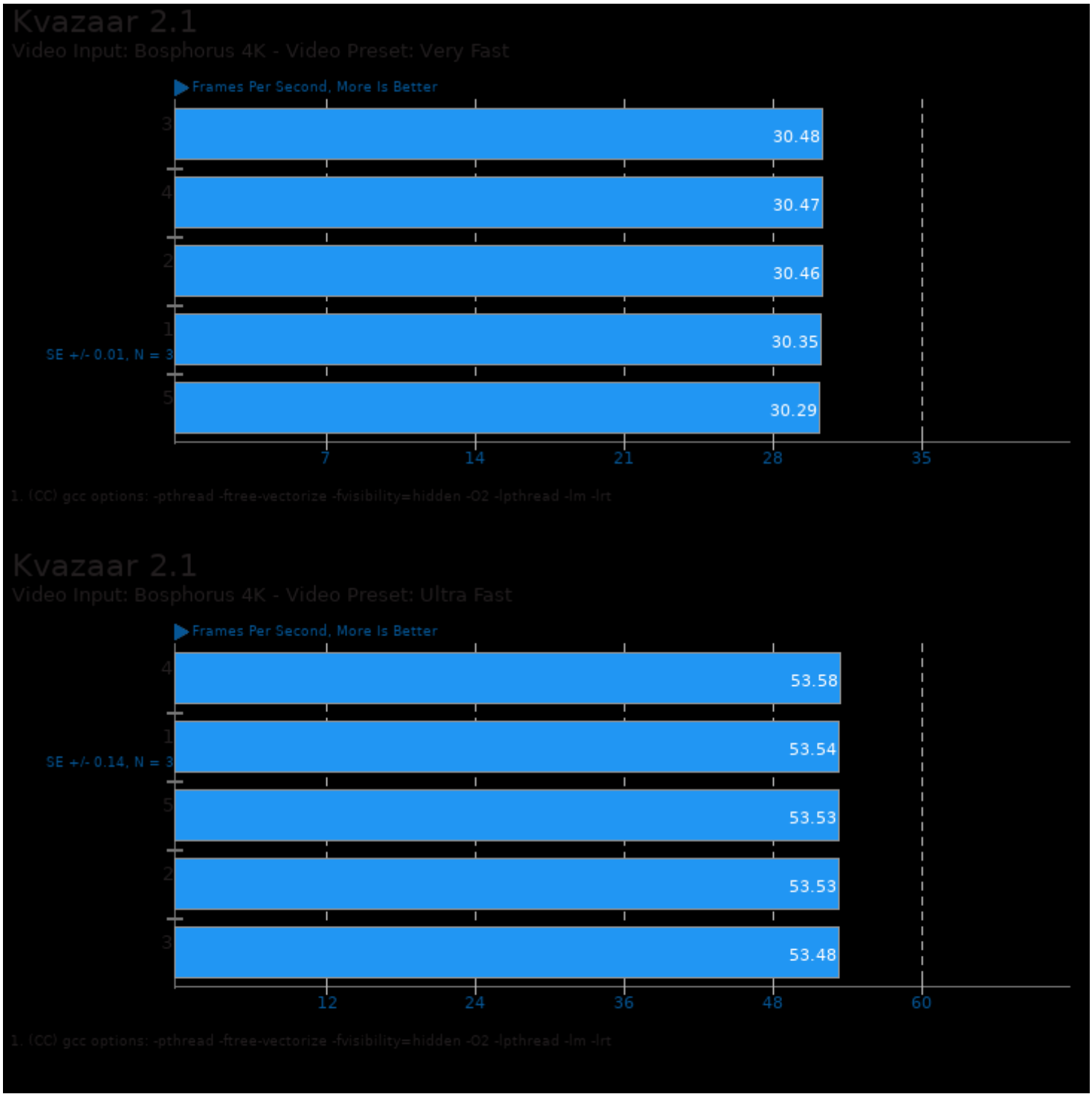
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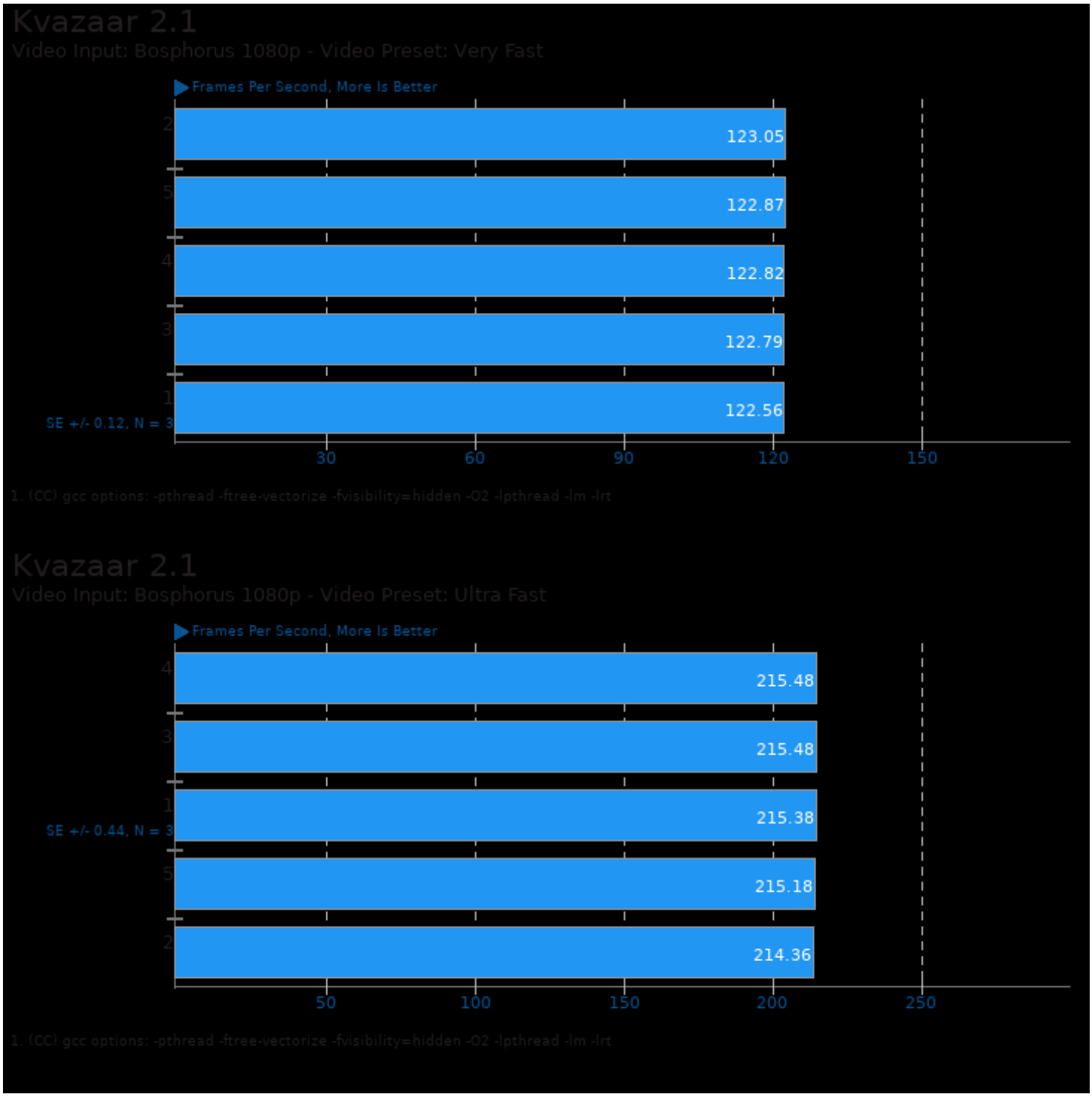
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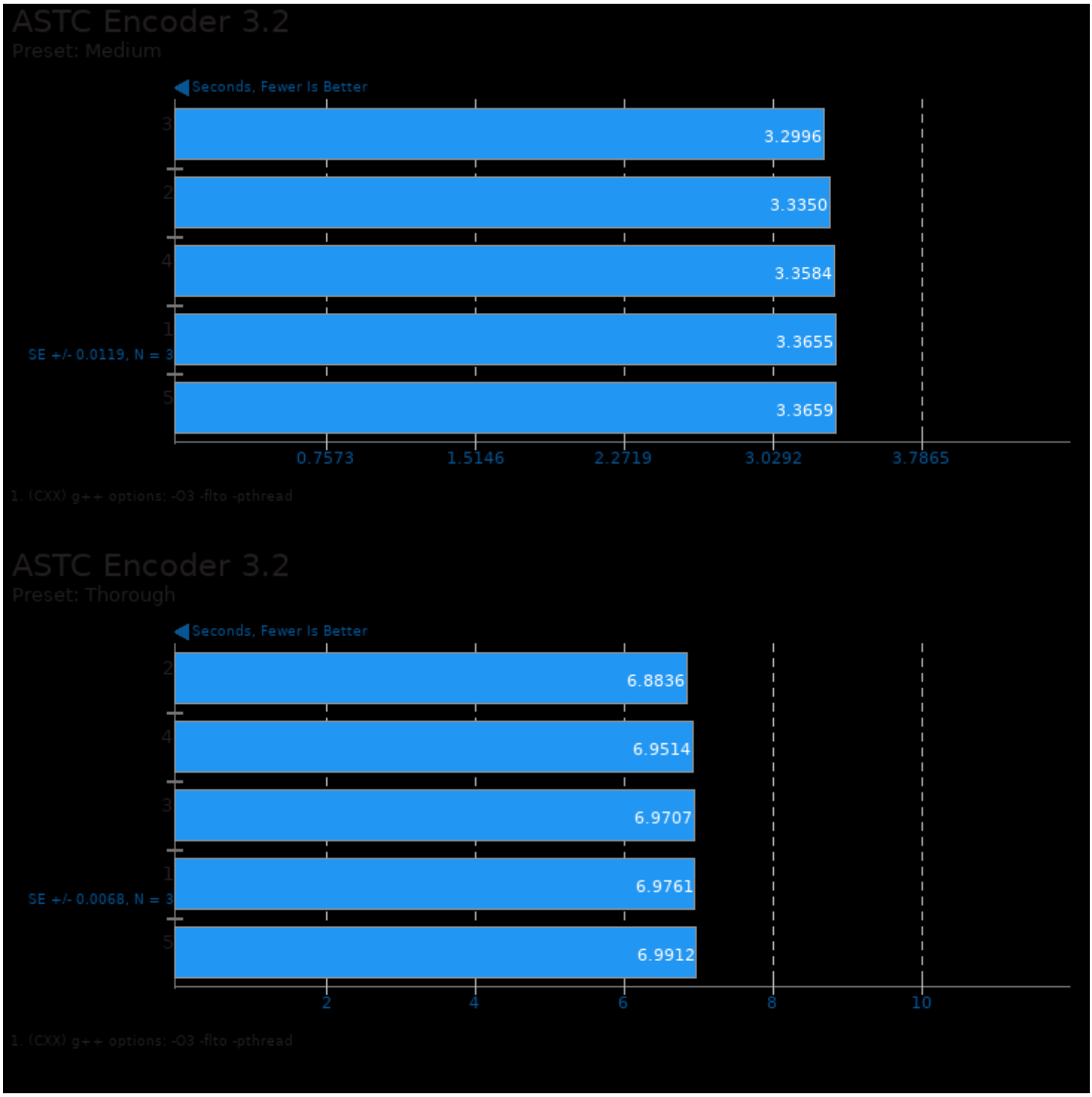
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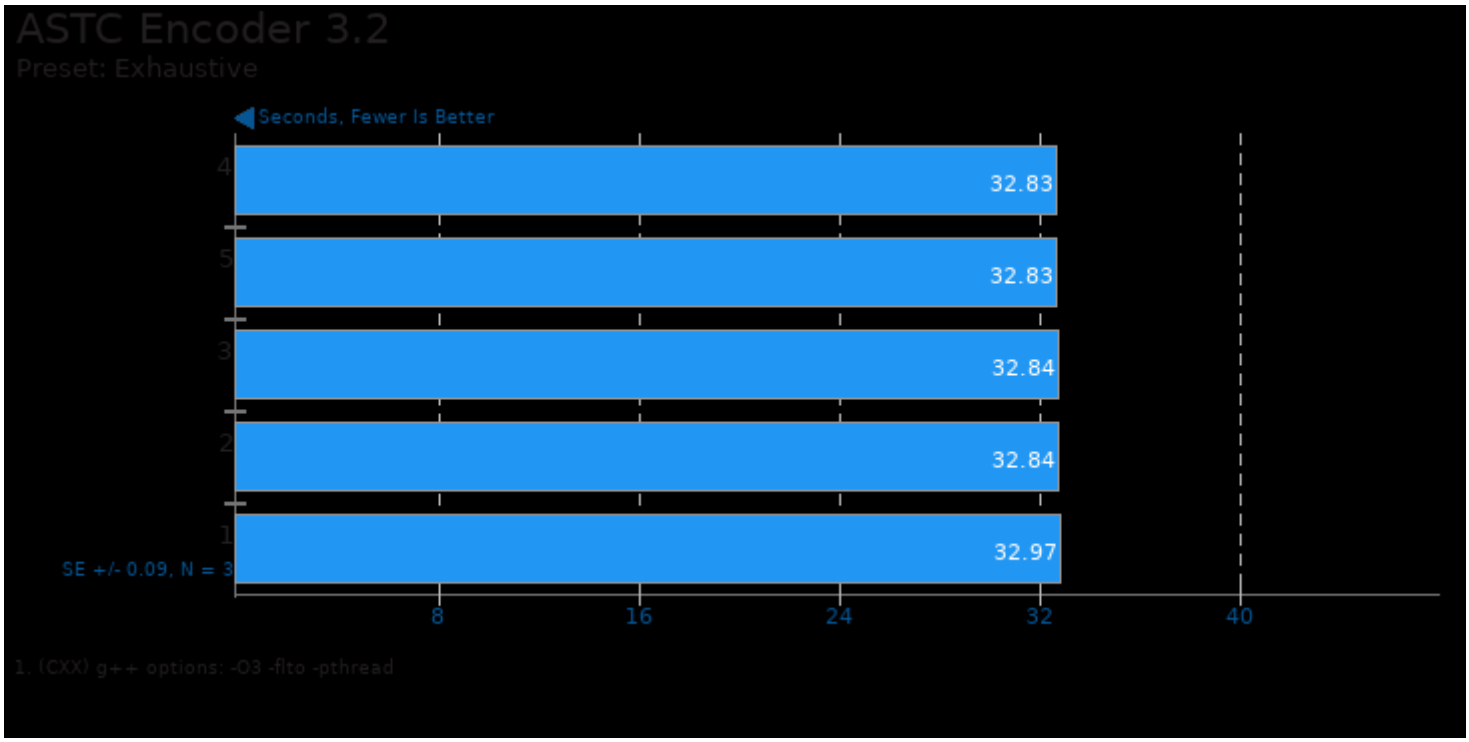
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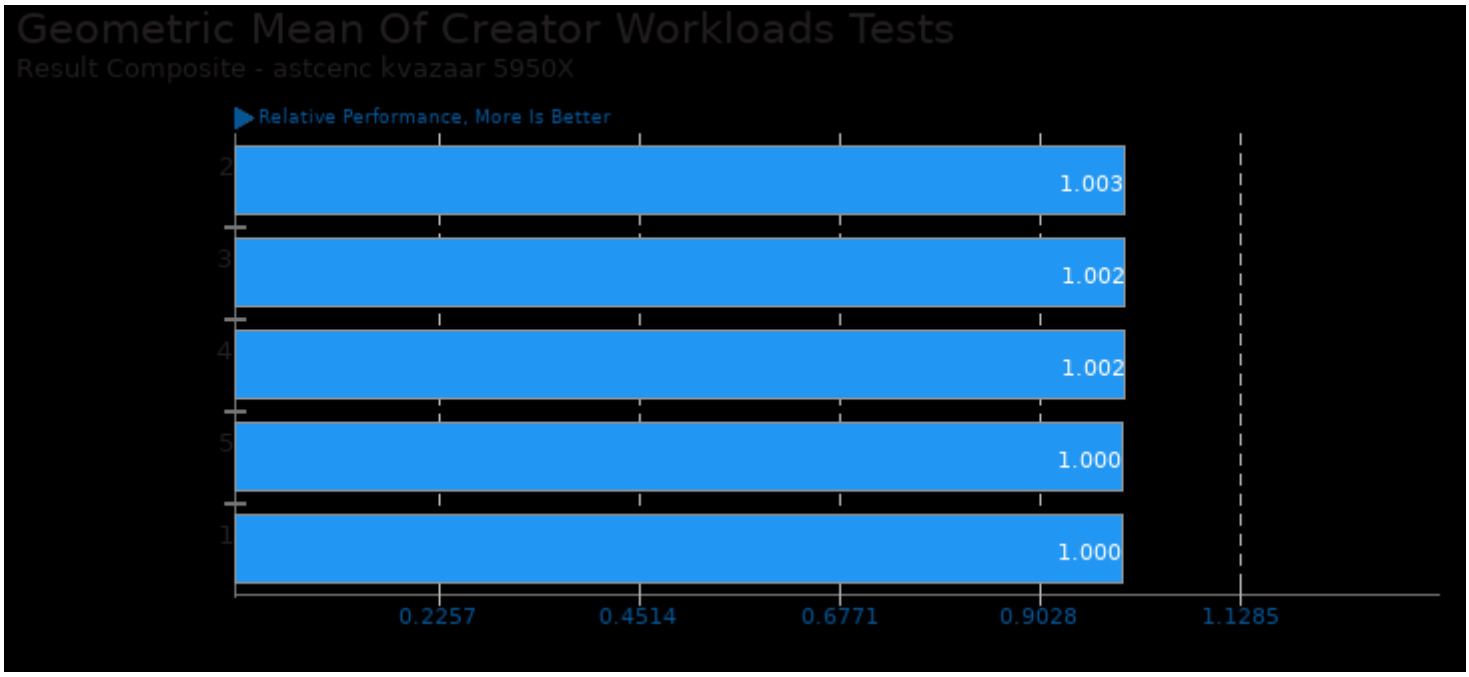


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These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/kvazaar and pts/astcenc

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 18:18.