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kvazaar uvg266 amd epyc genoa

2 x AMD EPYC 9654 96-Core testing with a AMD Titanite_4G (RTI1002E BIOS) and ASPEED on Ubuntu 23.04 via the Phoronix Test Suite.

Automated Executive Summary

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

Based on the geometric mean of all complete results, the fastest (c) was 1.021x the speed of the slowest (a). b was 0.999x the speed of c, d was 0.982x the speed of b, a was 0.998x the speed of d.

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

uvg266 (Video Input: Bosphorus 1080p - Video Preset: Ultra Fast) at 1.182x
Kvazaar (Video Input: Bosphorus 1080p - Video Preset: Very Fast) at 1.178x
Kvazaar (Video Input: Bosphorus 1080p - Video Preset: Ultra Fast) at 1.154x
uvg266 (Video Input: Bosphorus 4K - Video Preset: Ultra Fast) at 1.088x
Kvazaar (Video Input: Bosphorus 4K - Video Preset: Ultra Fast) at 1.084x
uvg266 (Video Input: Bosphorus 1080p - Video Preset: Very Fast) at 1.073x
uvg266 (Video Input: Bosphorus 1080p - Video Preset: Super Fast) at 1.065x
uvg266 (Video Input: Bosphorus 4K - Video Preset: Super Fast) at 1.061x
Kvazaar (Video Input: Bosphorus 4K - Video Preset: Super Fast) at 1.039x

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Kvazaar (Video Input: Bosphorus 4K - Video Preset: Very Fast) at 1.035x.

Test Systems:

a

b

c

d

Processor: 2 x AMD EPYC 9654 96-Core @ 3.71GHz (192 Cores / 384 Threads), Motherboard: AMD Titanite_4G (RTI1002E BIOS), Chipset: AMD Device 14a4, Memory: 1520GB, Disk: 800GB INTEL SSDPF21Q800GB, Graphics: ASPEED, Monitor: VGA HDMI, Network: Broadcom NetXtreme BCM5720 PCIe

OS: Ubuntu 23.04, Kernel: 5.19.0-21-generic (x86_64), Desktop: GNOME Shell 43.1, Display Server: X Server 1.21.1.4, Vulkan: 1.3.224, Compiler: GCC 12.2.0, File-System: ext4, Screen Resolution: 1920x1080

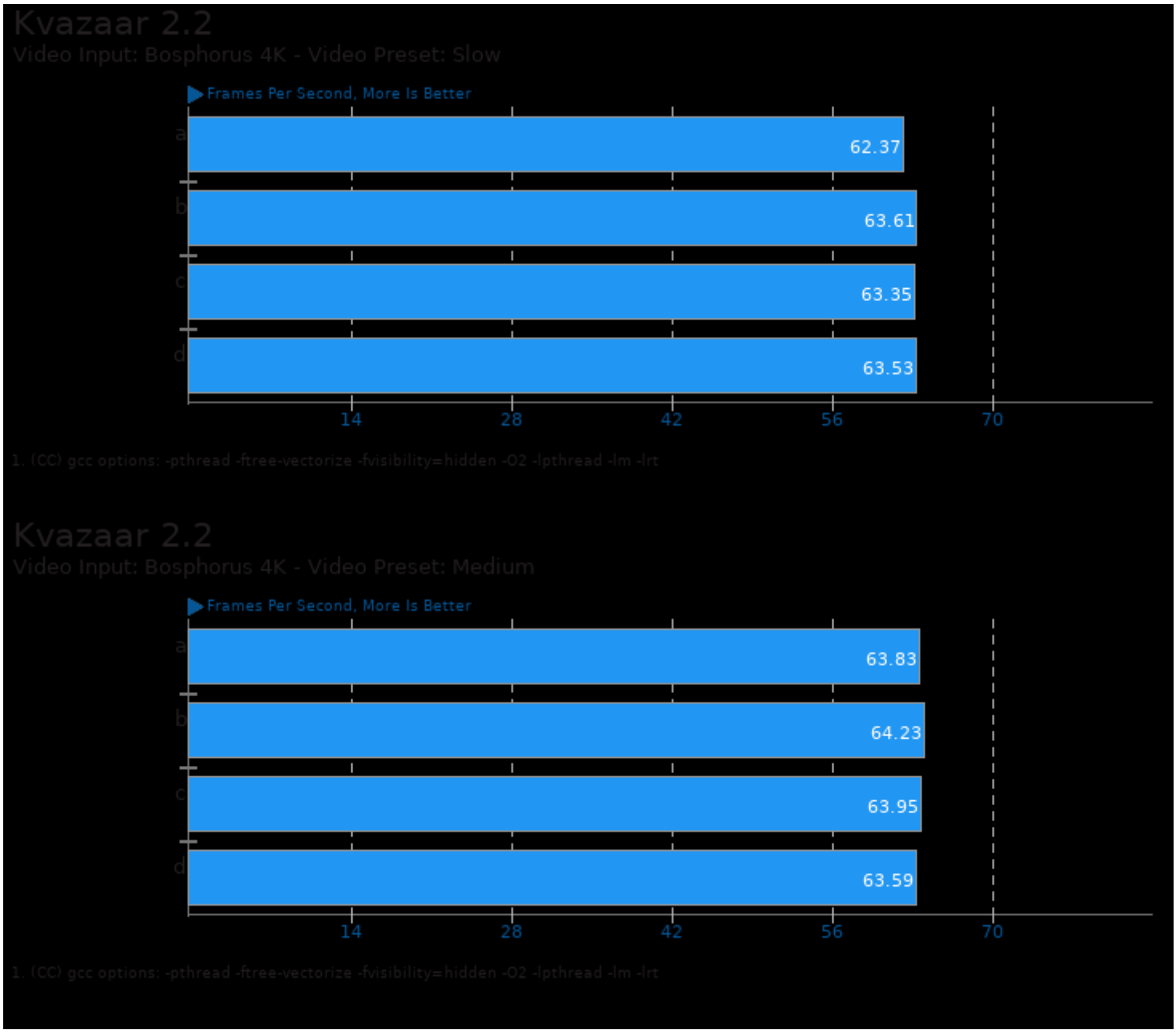
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-cet --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-defaulted --enable-offload-targets=nvptx-none=/build/gcc-12-l0Aoyl/gcc-12-12.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-12-l0Aoyl/gcc-12-12.2.0/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-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: amd-pstate performance (Boost: Enabled) - CPU Microcode: 0xa10110d
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

	a	b	c	d
Kvazaar - Bosphorus 4K - Slow (FPS)	**62.37**	**63.61**	63.35	63.53
Normalized	98.05%	100%	99.59%	99.87%
Kvazaar - Bosphorus 4K - Medium	63.83	**64.23**	63.95	**63.59**
Normalized	99.38%	100%	99.56%	99%
Kvazaar - Bosphorus 1080p - Slow (FPS)	133.45	**133.56**	**132.81**	133.32
Normalized	99.92%	100%	99.44%	99.82%
Kvazaar - Bosphorus 1080p - Medium (FPS)	**136.13**	**138.49**	138.37	137.36
Normalized	98.3%	100%	99.91%	99.18%
Kvazaar - Bosphorus 4K - Very Fast (FPS)	**73.33**	71.78	71.94	**70.88**
Normalized	100%	97.89%	98.1%	96.66%

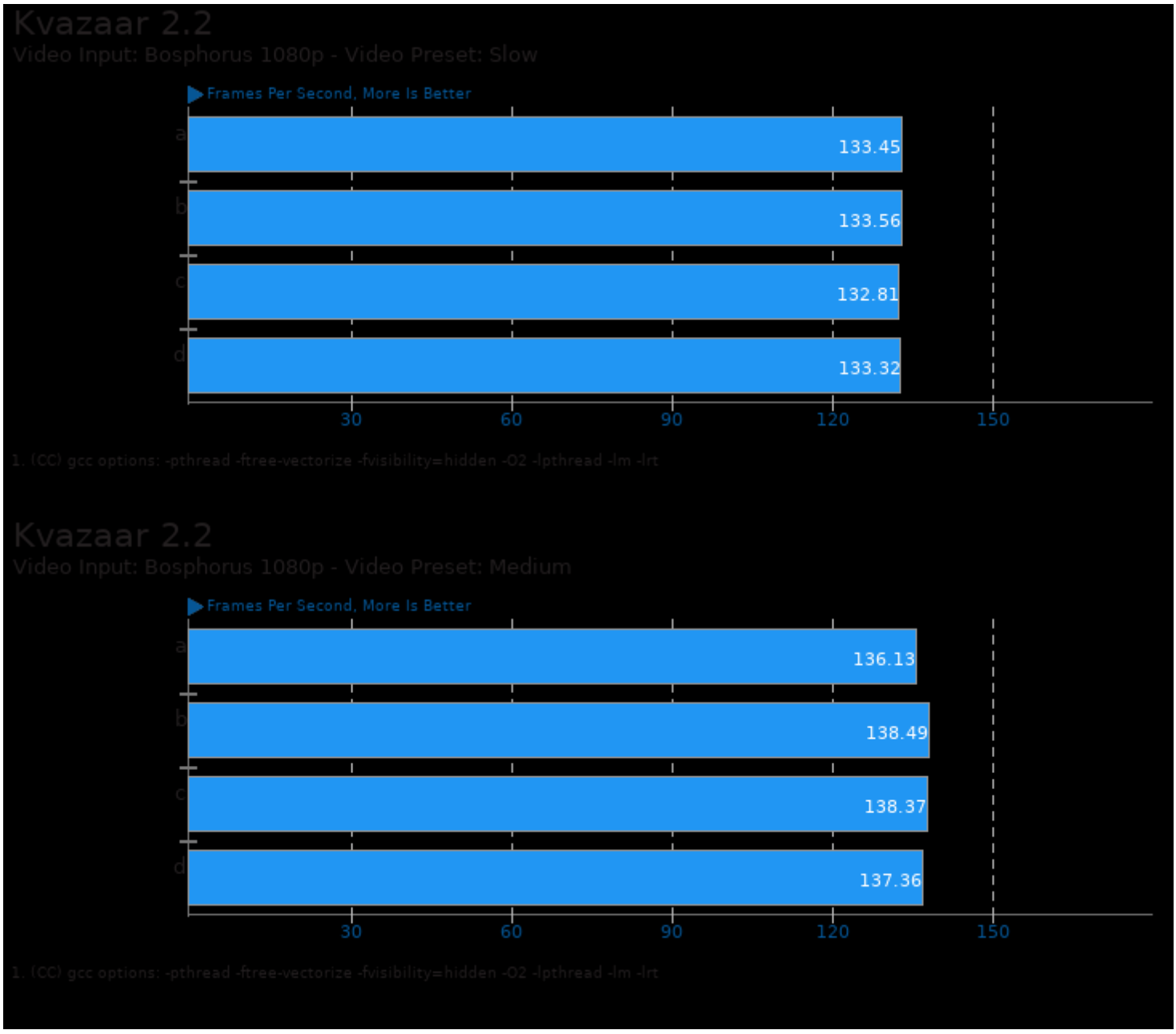
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Kvazaar - Bosphorus 4K - Super Fast (FPS)	**77.12**	75.97	74.93	**74.25**
Normalized	100%	98.51%	97.16%	96.28%
Kvazaar - Bosphorus 4K - Ultra Fast (FPS)	76.93	**77.72**	**71.69**	72.45
Normalized	98.98%	100%	92.24%	93.22%
Kvazaar - Bosphorus 1080p - Very Fast (FPS)	**243.59**	**287.06**	283.13	262.79
Normalized	84.86%	100%	98.63%	91.55%
Kvazaar - Bosphorus 1080p - Super Fast (FPS)	**280.56**	**289.11**	288.46	284.89
Normalized	97.04%	100%	99.78%	98.54%
Kvazaar - Bosphorus 1080p - Ultra Fast (FPS)	291.47	**298.7**	296.9	**258.85**
Normalized	97.58%	100%	99.4%	86.66%
uvg266 - Bosphorus 4K - Slow (FPS)	43.6	**43.93**	**43.58**	43.83
Normalized	99.25%	100%	99.2%	99.77%
uvg266 - Bosphorus 4K - Medium	**45.35**	44.29	44.34	**44.26**
Normalized	100%	97.66%	97.77%	97.6%
uvg266 - Bosphorus 1080p - Slow	78.59	78.53	**78.34**	**78.91**
Normalized	99.59%	99.52%	99.28%	100%
uvg266 - Bosphorus 1080p - Medium (FPS)	87.33	87.39	**87.15**	**87.49**
Normalized	99.82%	99.89%	99.61%	100%
uvg266 - Bosphorus 4K - Very Fast (FPS)	54.26	**54.18**	**54.71**	54.69
Normalized	99.18%	99.03%	100%	99.96%
uvg266 - Bosphorus 4K - Super Fast (FPS)	**54.68**	57.8	**58.04**	56.32
Normalized	94.21%	99.59%	100%	97.04%
uvg266 - Bosphorus 4K - Ultra Fast (FPS)	**54.54**	55.56	**59.35**	56.86
Normalized	91.9%	93.61%	100%	95.8%
uvg266 - Bosphorus 1080p - Very Fast (FPS)	204.32	211.68	**217.54**	**202.74**
Normalized	93.92%	97.31%	100%	93.2%
uvg266 - Bosphorus 1080p - Super Fast (FPS)	**221.79**	**208.18**	215.73	211.11
Normalized	100%	93.86%	97.27%	95.18%
uvg266 - Bosphorus 1080p - Ultra Fast (FPS)	**183.6**	209.89	211.91	**217.02**
Normalized	84.6%	96.71%	97.65%	100%

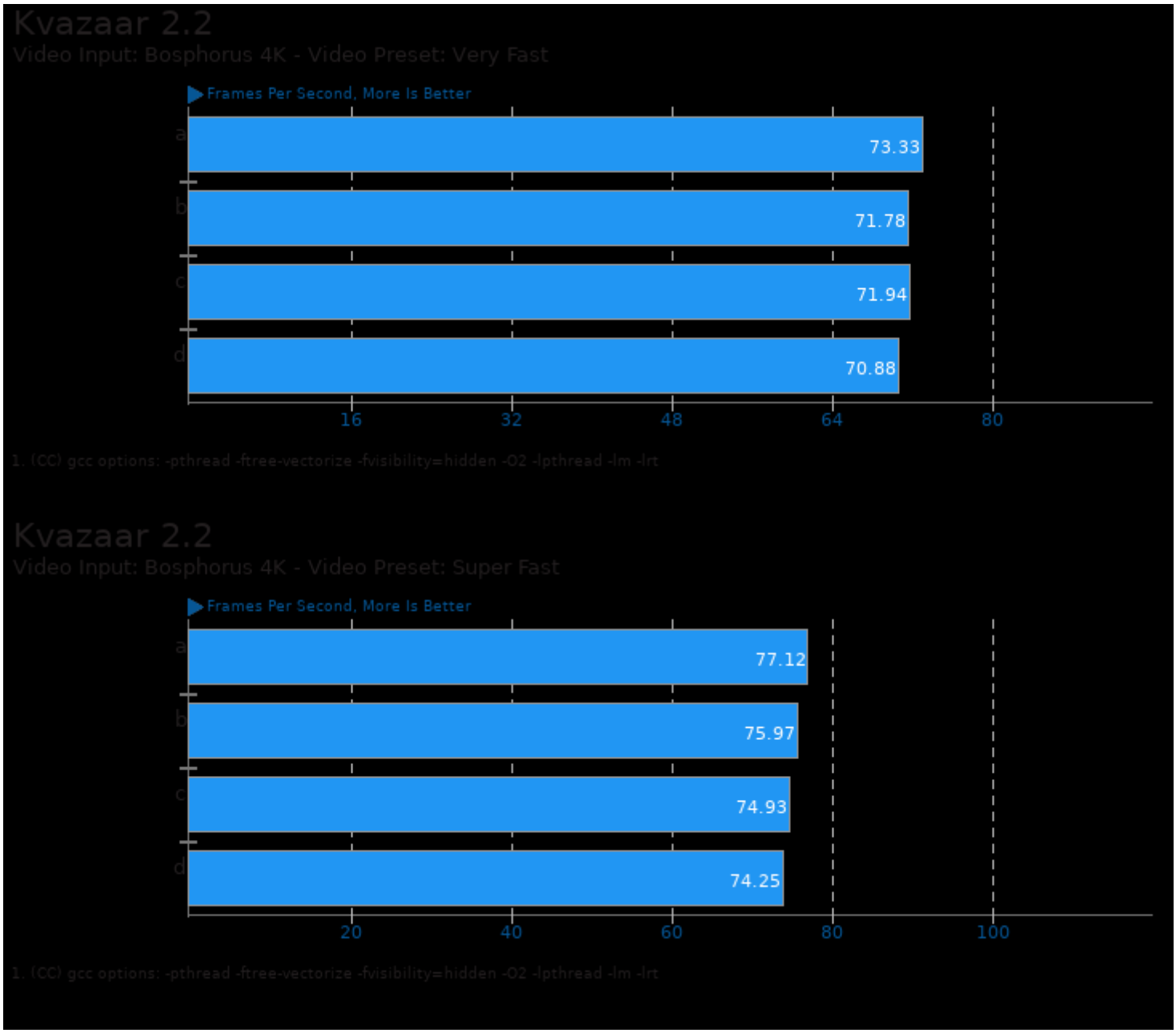
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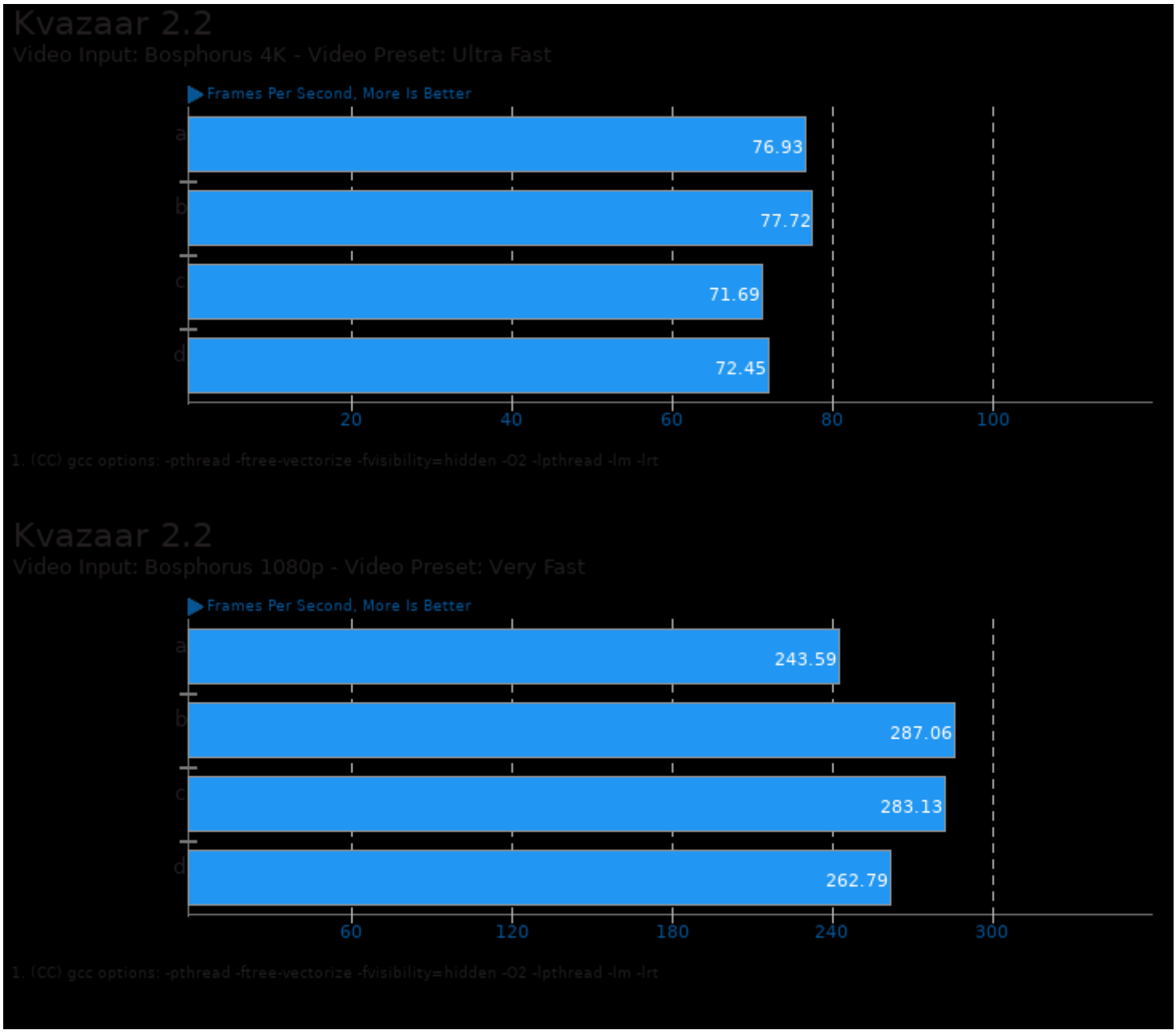
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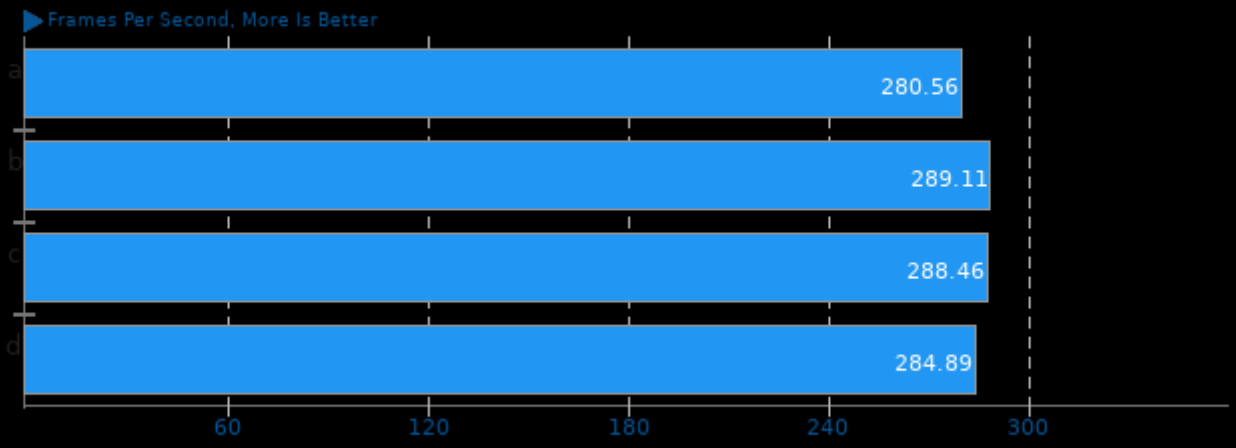
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Kvazaar 2.2

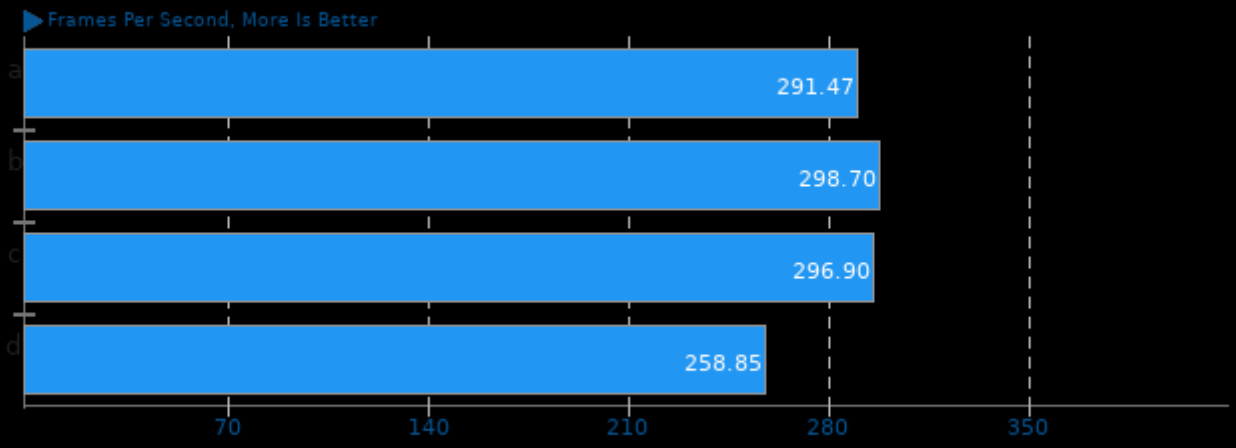
Video Input: Bosphorus 1080p - Video Preset: Super Fast



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

Kvazaar 2.2

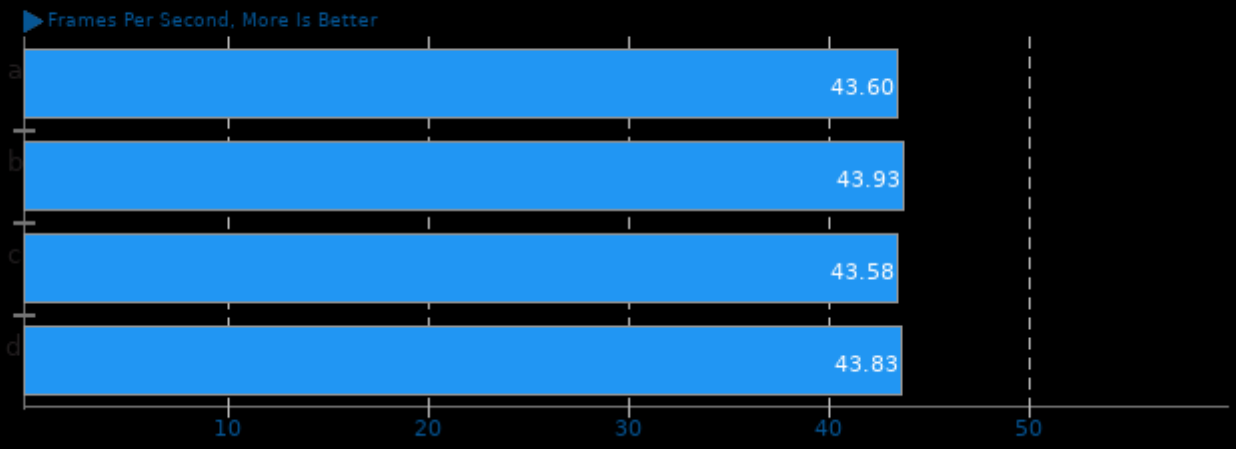
Video Input: Bosphorus 1080p - Video Preset: Ultra Fast



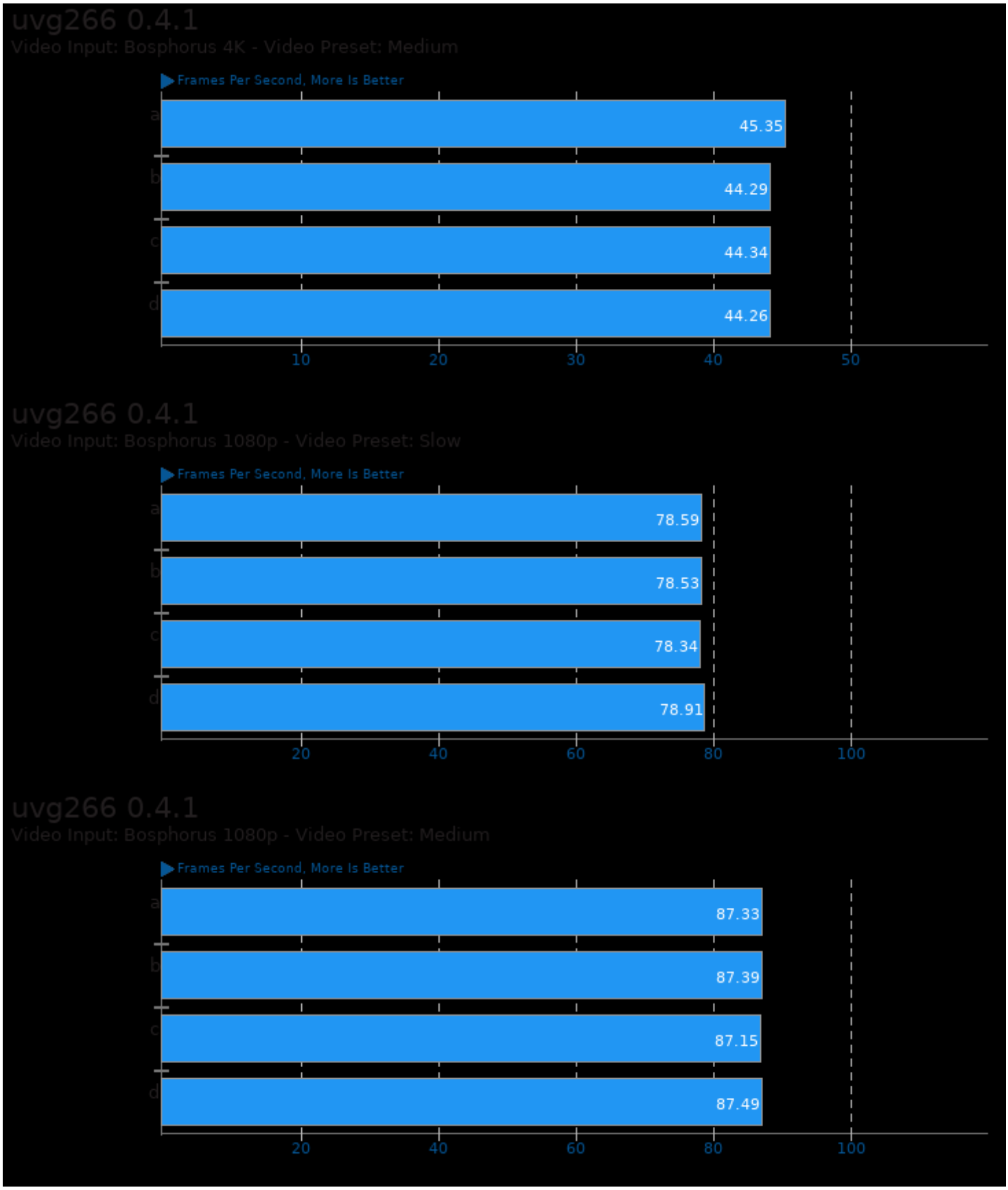
1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

uvg266 0.4.1

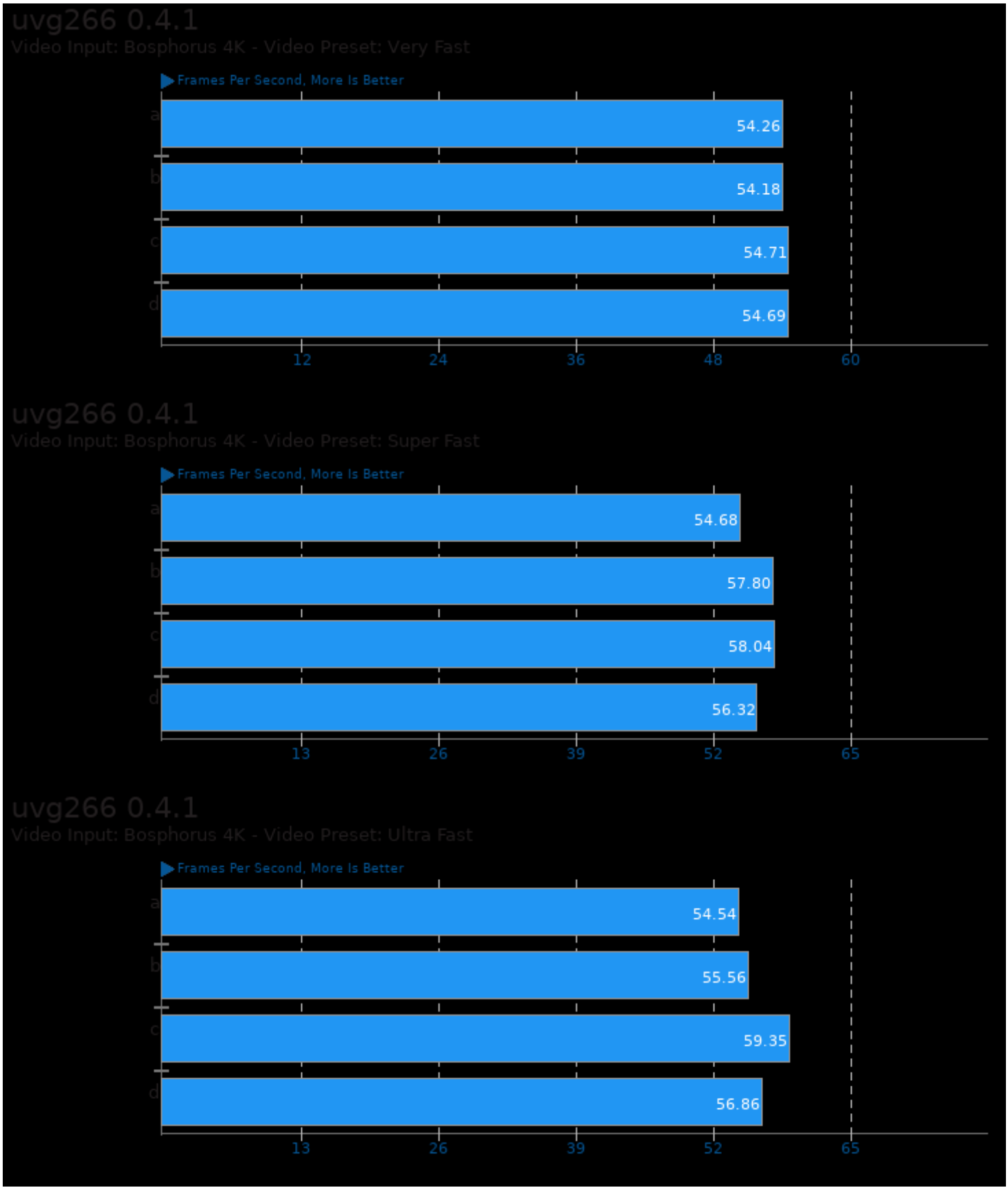
Video Input: Bosphorus 4K - Video Preset: Slow



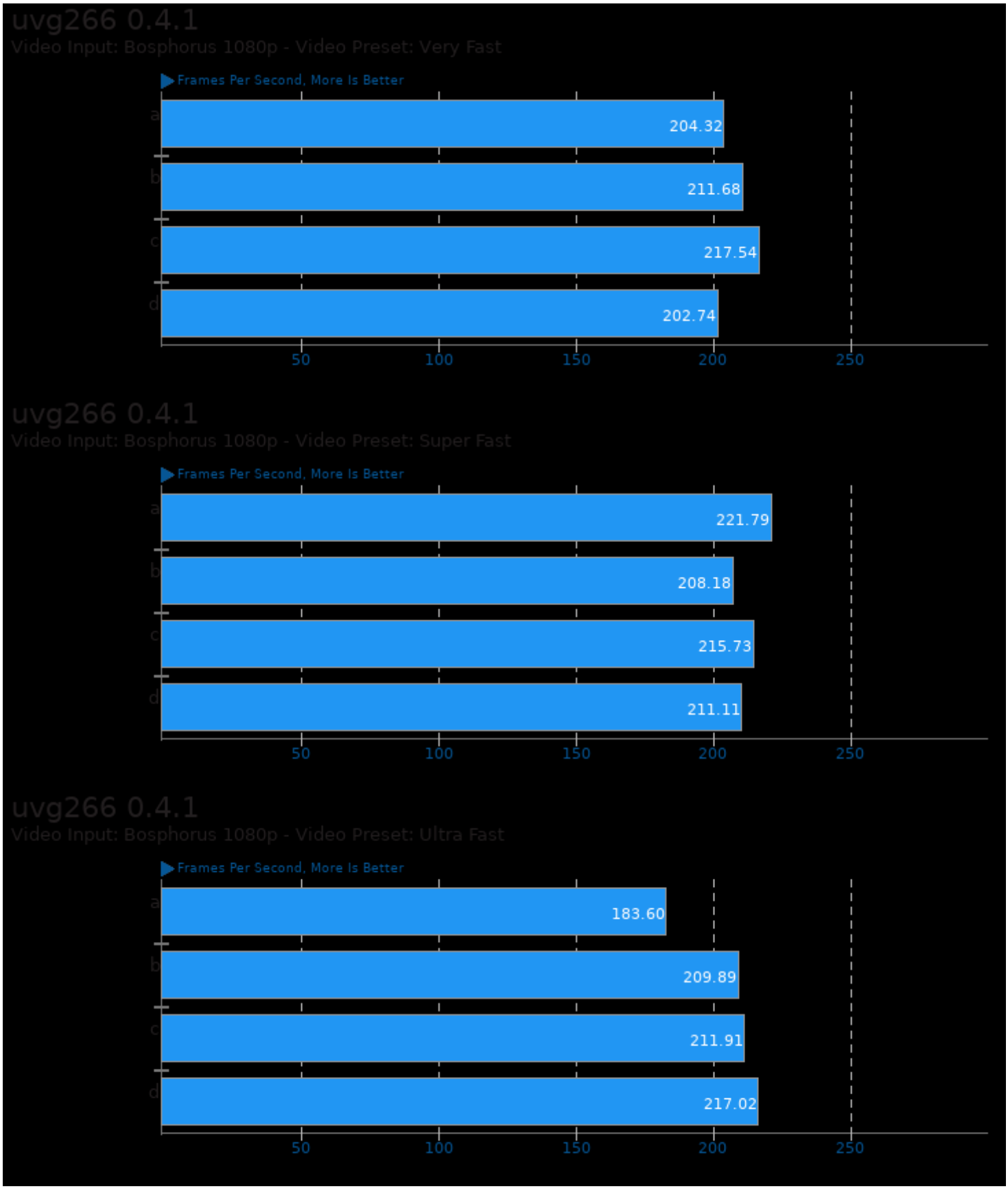
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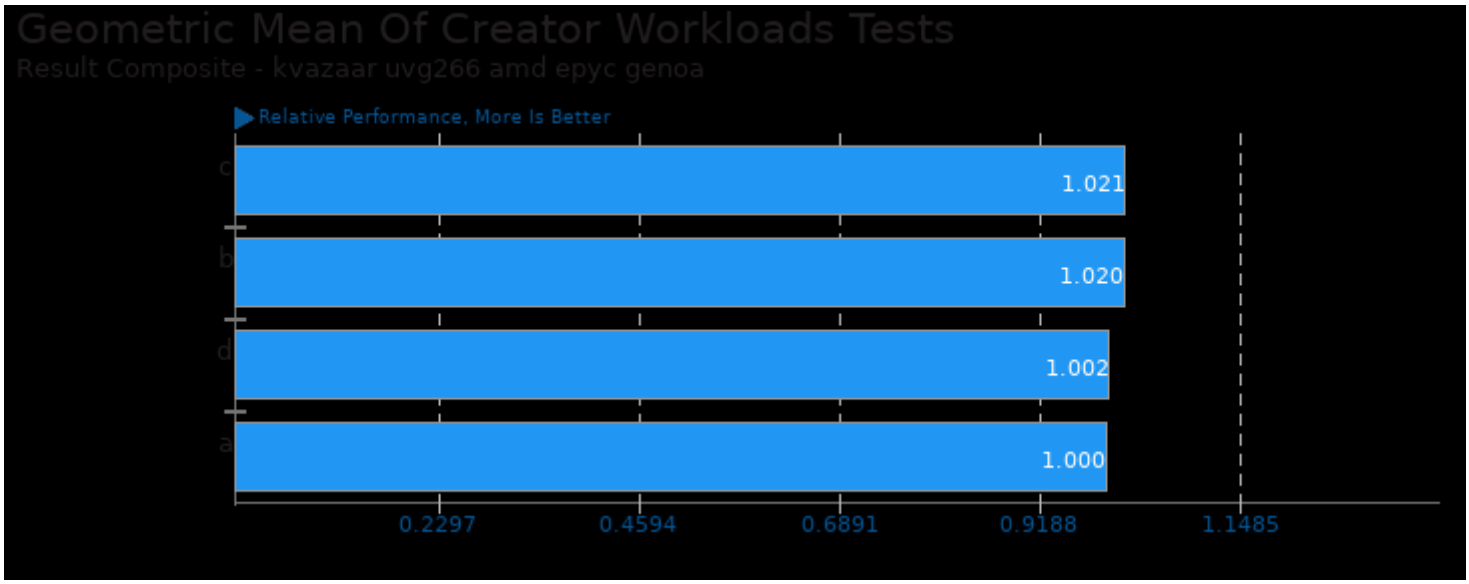


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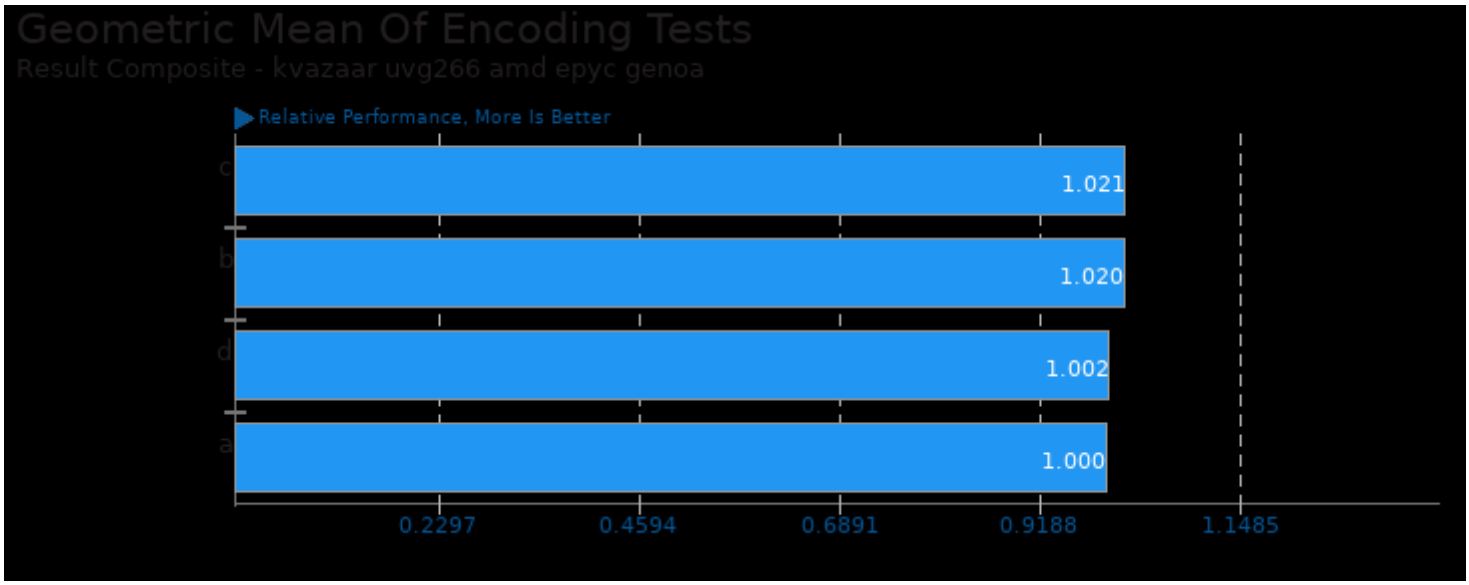


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These geometric means are based upon test groupings / test suites for this result file.

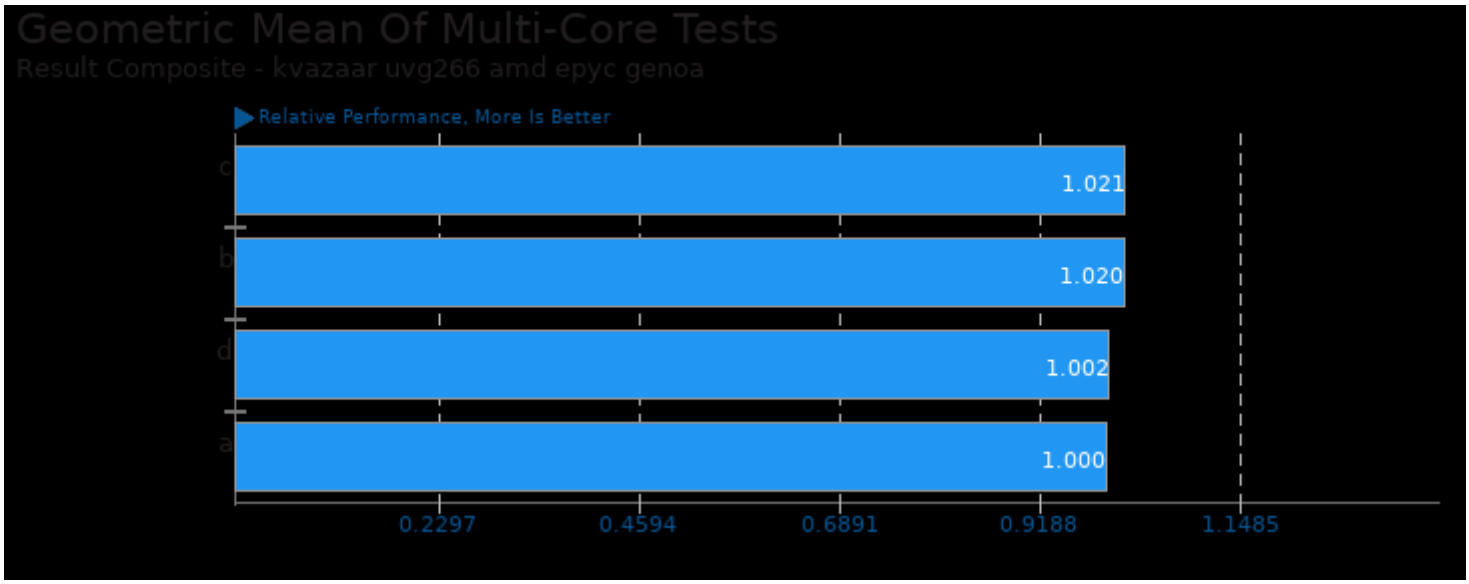


Geometric mean based upon tests: pts/kvazaar and pts/uvg266

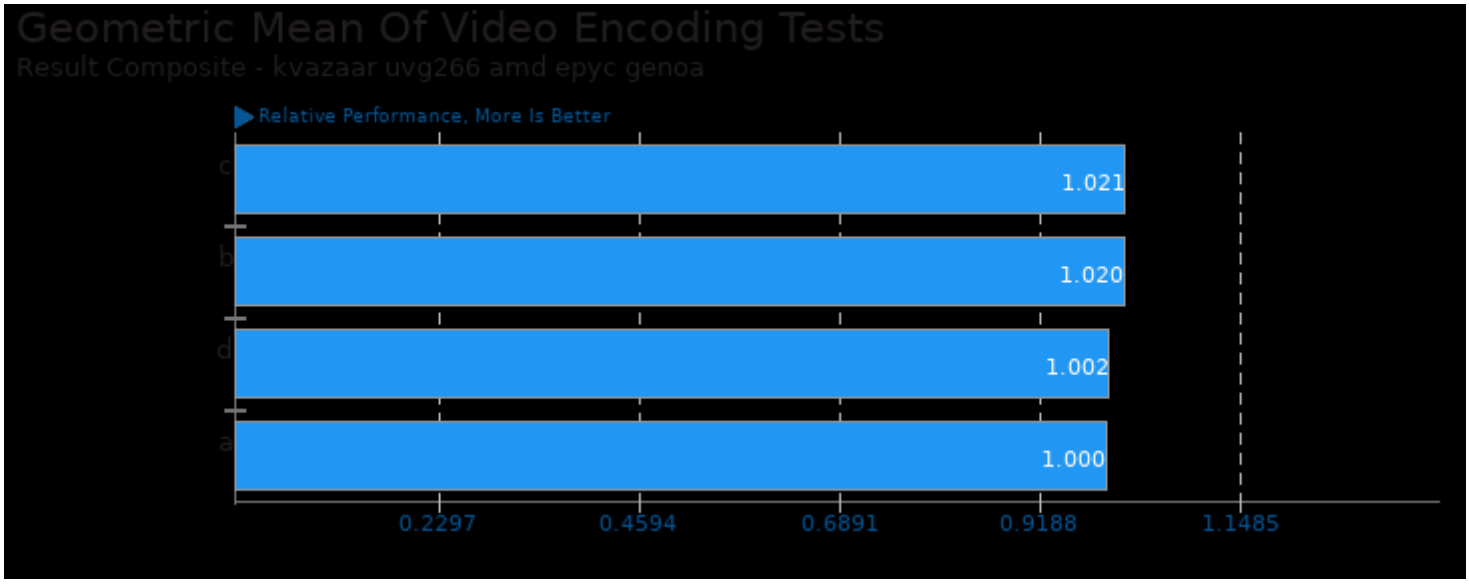


Geometric mean based upon tests: pts/kvazaar and pts/uvg266

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Geometric mean based upon tests: pts/kvazaar and pts/uvg266



Geometric mean based upon tests: pts/kvazaar and pts/uvg266

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