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DesktopGraphics2022

AMD Ryzen 5 2600 Six-Core testing with a ASRock B450 Gaming-ITX/ac (P3.20 BIOS) and Gigabyte AMD Radeon RX 6800 XT 16GB on ManjaroLinux 21.2.6 via the Phoronix Test Suite.

Automated Executive Summary

Mini 6800xt had the most wins, coming in first place for 55% of the tests.

Based on the geometric mean of all complete results, the fastest (Mini 6800xt) was 12.525x the speed of the slowest (v8 710). Mini 590 was 0.886x the speed of Mini 6800xt and v8 710 was 0.09x the speed of Mini 590.

Test Systems:

Mini 590

Processor: AMD Ryzen 5 2600 Six-Core @ 3.40GHz (6 Cores / 12 Threads), Motherboard: ASRock B450 Gaming-ITX/ac (P3.20 BIOS), Chipset: AMD 17h, Memory: 16GB, Disk: Samsung SSD 980 500GB + 2000GB TOSHIBA HDWL120, Graphics: Sapphire AMD Radeon RX 590 8GB (1560/2100MHz), Audio: AMD Ellesmere HDMI

Audio, Monitor: LG TV, Network: Intel I211 + Intel Dual Band-AC 3168NGW

OS: ManjaroLinux 21.2.6, Kernel: 5.13.19-2-MANJARO (x86_64), Desktop: GNOME Shell 42.1, Display Server: X Server 1.21.1.2 + Wayland, OpenGL: 4.6 Mesa 22.0.3 (LLVM 13.0.1 DRM 3.41), Vulkan: 1.3.204, Compiler: GCC 11.2.0 + Clang 13.0.1 + LLVM 13.0.1, File-System: btrfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x800820d
Graphics Notes: GLAMOR - BAR1 / Visible vRAM Size: 256 MB
Python Notes: Python 3.10.4
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 STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

v8 710

Processor: AMD Ryzen 9 5900X 12-Core @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (3401 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: Sabrent Rocket 4.0 500GB + 128GB TS128GMTE110S, Graphics: ASUS NVIDIA GeForce GT 710 2GB, Audio: NVIDIA GK208 HDMI/DP, Monitor: DELL U2413, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Arch Linux, Kernel: 5.17.6-arch1-1 (x86_64), Display Server: X Server 1.21.1.3, Display Driver: NVIDIA 470.103.01, OpenGL: 4.6.0, Compiler: GCC 12.1.0, File-System: btrfs, Screen Resolution: 3840x1200

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0xa201009
Graphics Notes: BAR1 / Visible vRAM Size: N/A
Python Notes: Python 3.10.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Mini 6800xt

Processor: AMD Ryzen 5 2600 Six-Core @ 3.40GHz (6 Cores / 12 Threads), Motherboard: ASRock B450 Gaming-ITX/ac (P3.20 BIOS), Chipset: AMD 17h, Memory: 16GB, Disk: Samsung SSD 980 500GB + 2000GB TOSHIBA HDWL120, Graphics: Gigabyte AMD Radeon RX 6800 XT 16GB (2575/1000MHz), Audio: AMD Navi 21/23, Monitor: LG TV, Network: Intel I211 + Intel Dual Band-AC 3168NGW

OS: ManjaroLinux 21.2.6, Kernel: 5.13.19-2-MANJARO (x86_64), Desktop: GNOME Shell 42.1, Display Server: X Server 1.21.1.2 + Wayland, OpenGL: 4.6 Mesa 22.0.3 (LLVM 13.0.1 DRM 3.41), Vulkan: 1.3.204, Compiler: GCC 11.2.0 + Clang 13.0.1 + LLVM 13.0.1, File-System: btrfs, Screen Resolution: 1920x1080

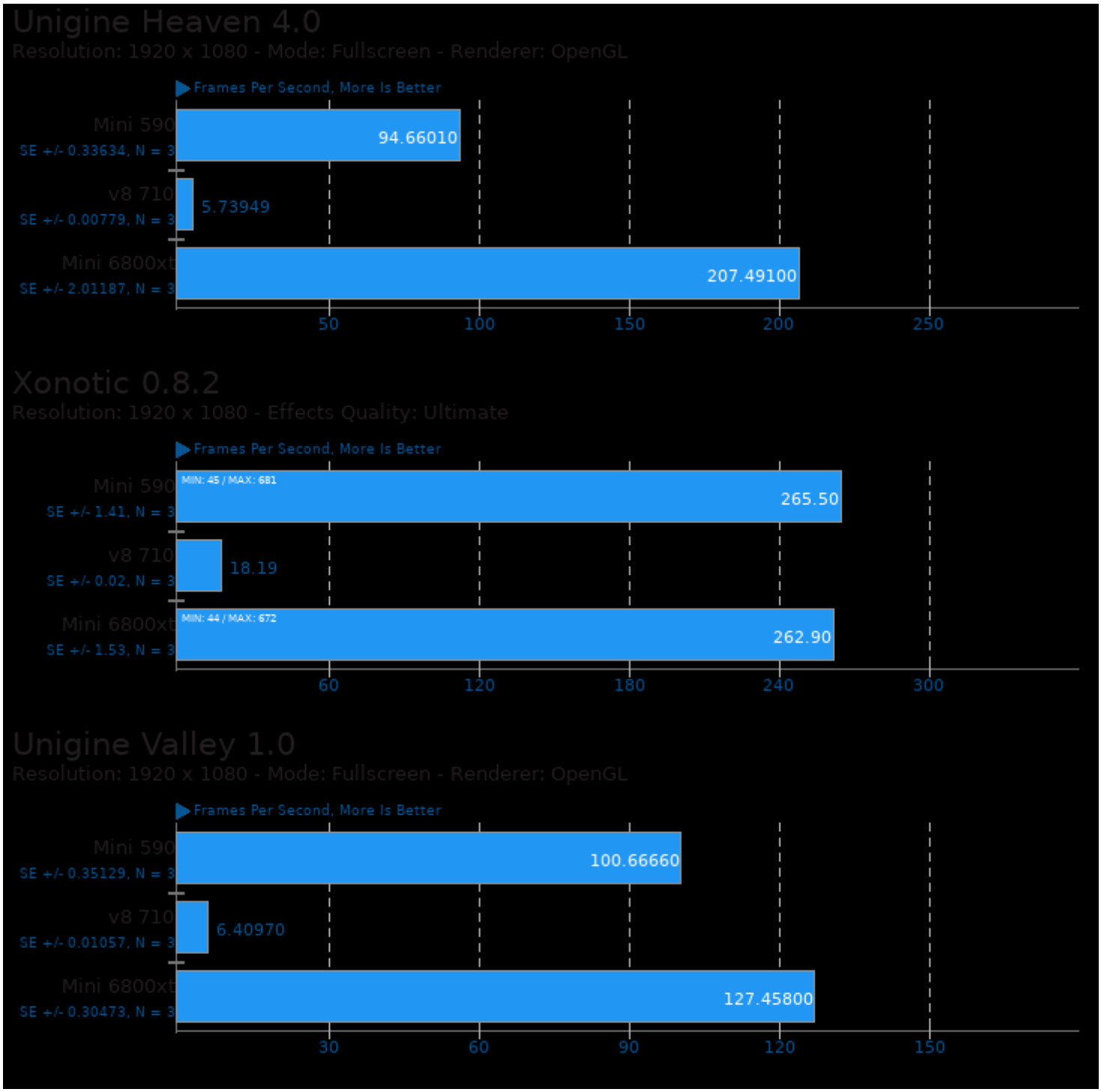
Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x800820d
Graphics Notes: GLAMOR - BAR1 / Visible vRAM Size: 256 MB
Python Notes: Python 3.10.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + 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 STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

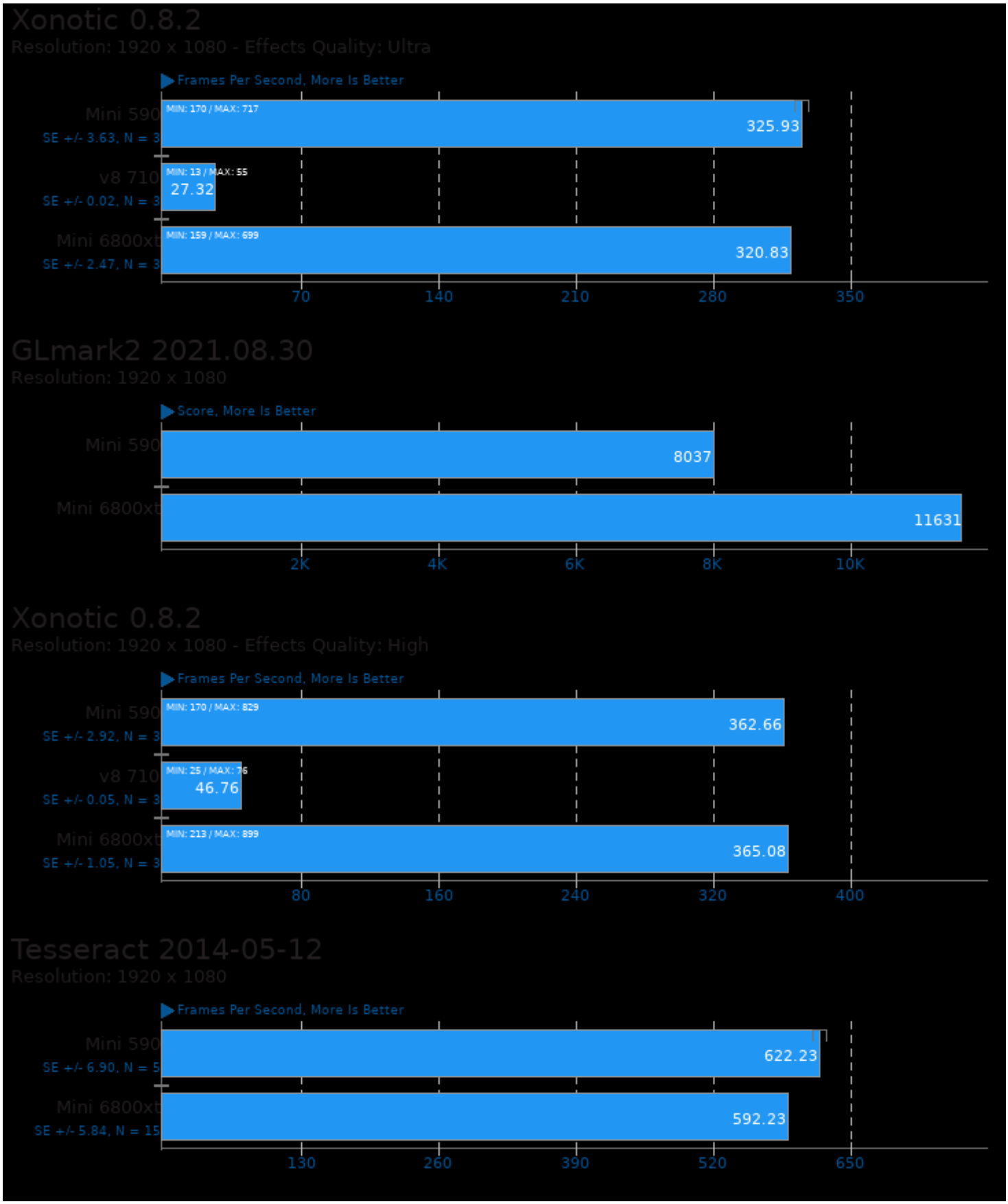
	Mini 590	v8 710	Mini 6800xt

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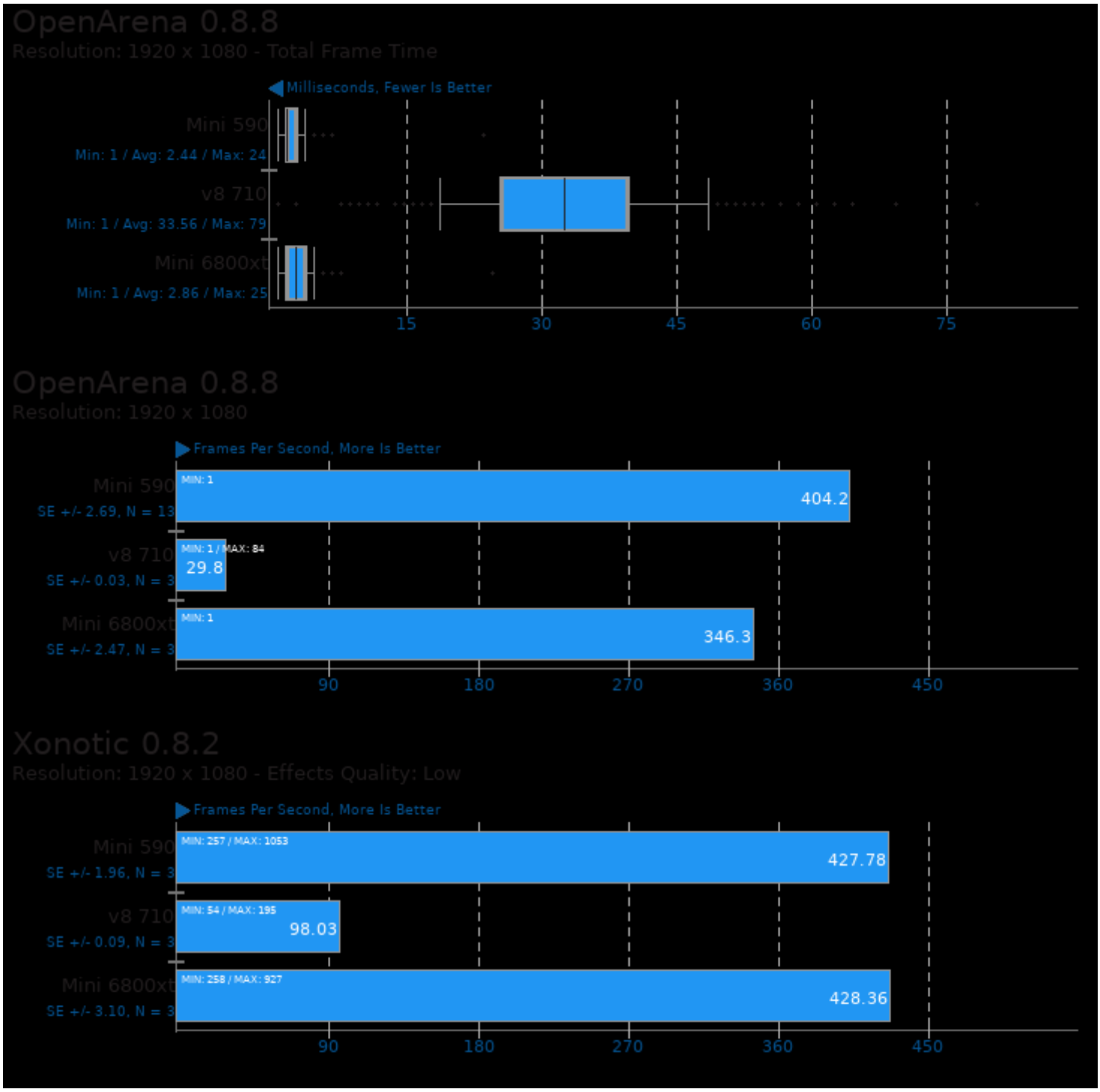
Unigine Heaven - 1920 x 1080 - Fullscreen - OpenGL (FPS)	94.6601	**5.73949**	**207.491**
Normalized	45.62%	2.77%	100%
Standard Deviation	0.6%	0.2%	1.7%
Xonotic - 1920 x 1080 - Ultimate (FPS)	**265.5030510**	**18.1948426**	262.9006917
Normalized	100%	6.85%	99.02%
Standard Deviation	0.9%	0.2%	1%
Unigine Valley - 1920 x 1080 - Fullscreen - OpenGL (FPS)	100.6666	**6.40970**	**127.458**
Normalized	78.98%	5.03%	100%
Standard Deviation	0.6%	0.3%	0.4%
Xonotic - 1920 x 1080 - Ultra (FPS)	**325.9325481**	**27.3159091**	320.8272754
Normalized	100%	8.38%	98.43%
Standard Deviation	1.9%	0.1%	1.3%
GLmark2 - 1920 x 1080 (Score)	**8037**		**11631**
Normalized	69.1%		100%
Xonotic - 1920 x 1080 - High (FPS)	362.6555018	**46.7566832**	**365.0815156**
Normalized	99.34%	12.81%	100%
Standard Deviation	1.4%	0.2%	0.5%
Tesseract - 1920 x 1080 (FPS)	**622.2273**		**592.2281**
Normalized	100%		95.18%
Standard Deviation	2.5%		3.8%
OpenArena - 1920 x 1080 (FPS)	**404.2**	**29.8**	346.3
Normalized	100%	7.37%	85.68%
Standard Deviation	2.4%	0.2%	1.2%
Xonotic - 1920 x 1080 - Low (FPS)	427.7841580	**98.0282588**	**428.3580028**
Normalized	99.87%	22.88%	100%
Standard Deviation	0.8%	0.2%	1.3%

DesktopGraphics2022

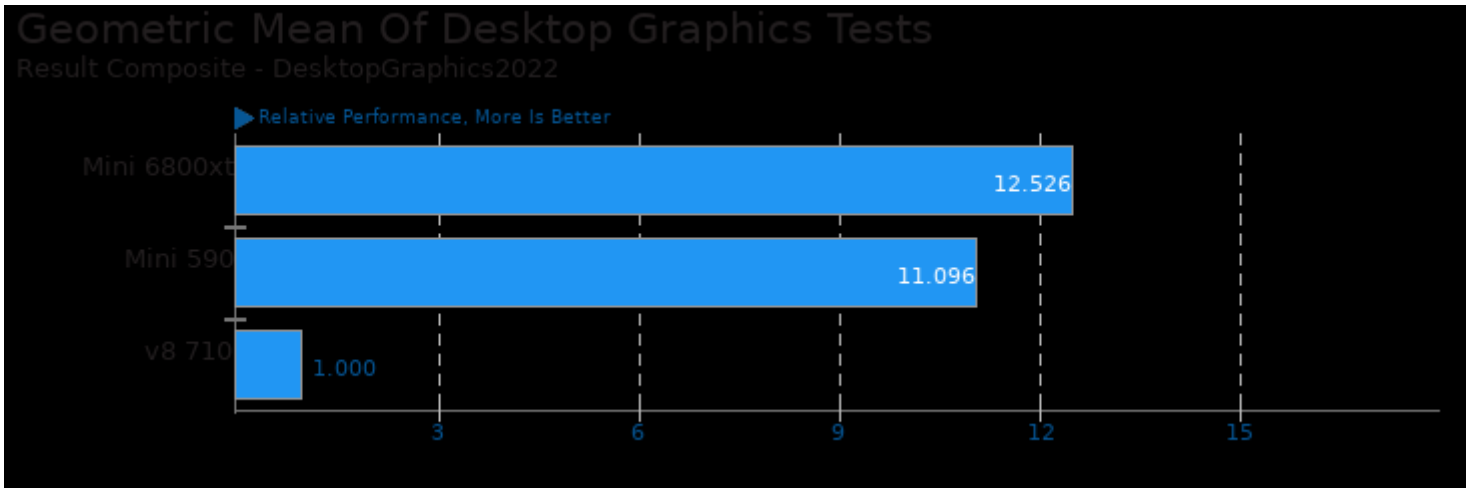



Xonotic 0.8.2
Resolution: 1920 x 1080 - Effects Quality: Ultra
Frames Per Second, More Is Better
Mini 590
SE +/- 3.63, N = 3
MIN: 170 / MAX: 717
325.93
v8 710
SE +/- 0.02, N = 3
MIN: 13 / MAX: 55
27.32
Mini 6800xt
SE +/- 2.47, N = 3
MIN: 159 / MAX: 699
320.83
70
140
210
280
350
GLmark2 2021.08.30
Resolution: 1920 x 1080
Score, More Is Better
Mini 590
8037
Mini 6800xt
11631
2K
4K
6K
8K
10K
Xonotic 0.8.2
Resolution: 1920 x 1080 - Effects Quality: High
Frames Per Second, More Is Better
Mini 590
SE +/- 2.92, N = 3
MIN: 170 / MAX: 829
362.66
v8 710
SE +/- 0.05, N = 3
MIN: 25 / MAX: 76
46.76
Mini 6800xt
SE +/- 1.05, N = 3
MIN: 213 / MAX: 899
365.08
80
160
240
320
400
Tesseract 2014-05-12
Resolution: 1920 x 1080
Frames Per Second, More Is Better
Mini 590
SE +/- 6.90, N = 5
622.23
Mini 6800xt
SE +/- 5.84, N = 15
592.23
130
260
390
520
650

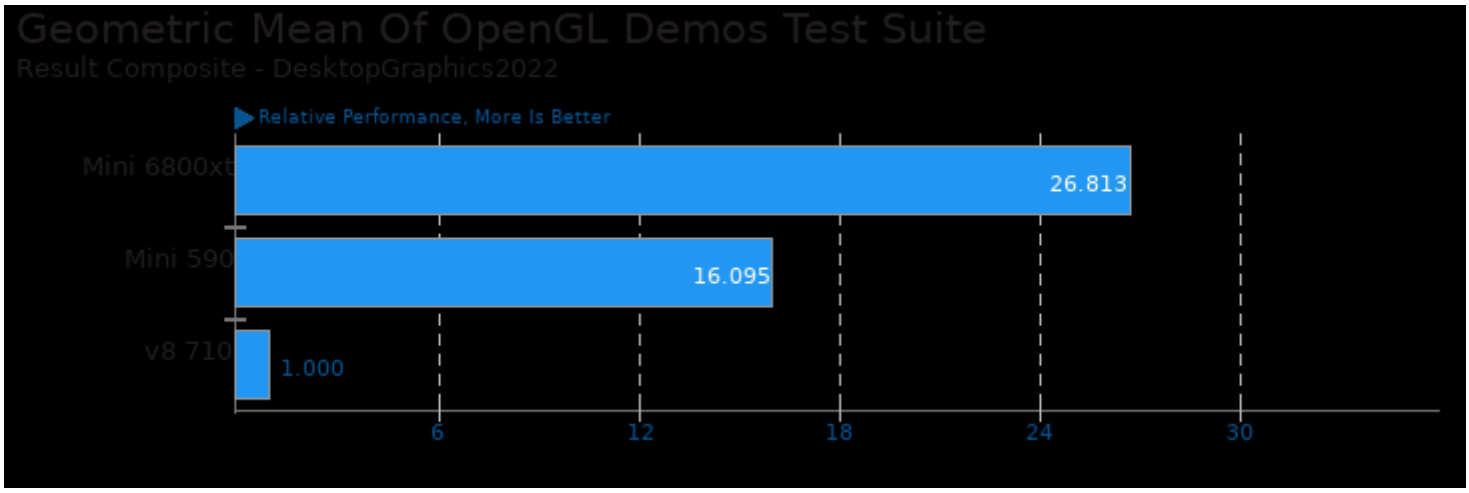
DesktopGraphics2022



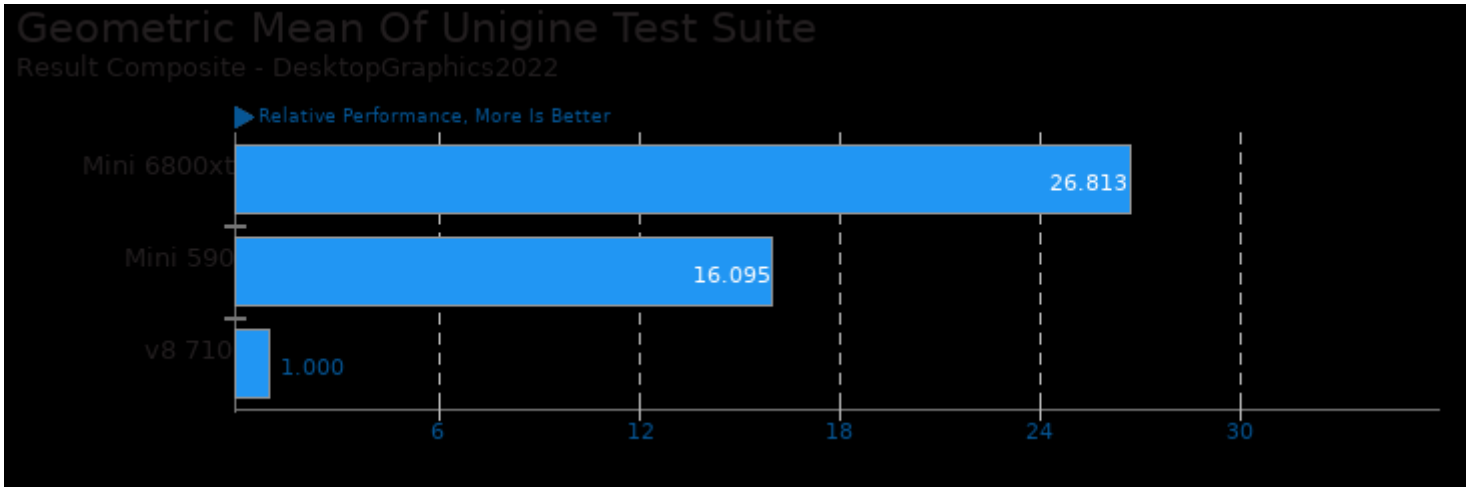
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/xonotic, pts/openarena, pts/tesseract, pts/paraview, pts/unigine-valley, pts/unigine-heaven and pts/glmark2



Geometric mean based upon tests: pts/unigine-valley and pts/unigine-heaven



Geometric mean based upon tests: pts/unigine-valley and pts/unigine-heaven

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

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