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Unigine Tests

AMD Ryzen 5 1600 Six-Core testing with a Gigabyte AB350M-Gaming 3-CF (F50d BIOS) and AMD Radeon RX 56/64 8GB on EndeavourOS rolling via the Phoronix Test Suite.

Automated Executive Summary

R5 1600 RX V56 had the most wins, coming in first place for 50% of the tests.

Based on the geometric mean of all complete results, the fastest (R5 1600 RX V56) was 1.073x the speed of the slowest (MSI Stealth). Ryzen 5 1600 RX Vega 56 was 0.935x the speed of R5 1600 RX V56 and MSI Stealth was 0.997x the speed of Ryzen 5 1600 RX Vega 56.

Test Systems:

MSI Stealth

Processor: Intel Core i7-9750H @ 4.50GHz (6 Cores / 12 Threads), Motherboard: MSI MS-17G1 (E17G1IMS.10F BIOS), Chipset: Intel Cannon Lake PCH, Memory: 16GB, Disk: 1000GB CT1000P2SSD8 + 1024GB SAMSUNG

MZVLB1T0HALR-00000, Graphics: MSI NVIDIA GeForce RTX 2070 with Max-Q Design 8GB, Audio: Realtek ALC1220, Network: Qualcomm Atheros Killer E2500 + Intel Cannon Lake PCH CNVi WiFi

OS: Arch rolling, Kernel: 5.15.12-zen1-1-zen (x86_64), Desktop: Cinnamon 5.0.7, Display Server: X Server 1.21.1.3, Display Driver: NVIDIA 495.46, OpenGL: 4.6.0, Vulkan: 1.2.186, Compiler: GCC 11.1.0 + Clang 13.0.0 + LLVM 13.0.0 + CUDA 11.5, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Processor Notes: Scaling Governor: intel_pstate powersave (EPP: balance_performance) - CPU Microcode: 0xea
Graphics Notes: BAR1 / Visible vRAM Size: 256 MiB
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Ryzen 5 1600 RX Vega 56

Processor: AMD Ryzen 5 1600 Six-Core @ 3.20GHz (6 Cores / 12 Threads), Motherboard: Gigabyte AB350M-Gaming 3-CF (F50d BIOS), Chipset: AMD 17h, Memory: 32GB, Disk: 256GB SPCC Solid State + 2000GB Seagate ST2000DM008-2FR1 + 1024GB MTFDDAK1T0TBN-1A + 250GB Crucial CT250MX2 + 1000GB Seagate ST1000LM014-1EJ1 + 640GB TOSHIBA MK6475GS, Graphics: AMD Radeon RX 56/64 8GB (1650/945MHz), Audio: AMD Vega 10 HDMI Audio, Network: Realtek RTL8111/8168/8411 + Intel-AC 9260

OS: EndeavourOS rolling, Kernel: 5.15.13-zen1-1-zen (x86_64), Desktop: Cinnamon 5.0.7, Display Server: X Server 1.21.1.3, OpenGL: 4.6 Mesa 21.3.3 (LLVM 13.0.0), Vulkan: 1.2.201, Compiler: GCC 11.1.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: amdgpu.ppfeaturemask=0xffffffff - Transparent Huge Pages: always
Environment Notes: RADV_PERFTEST=aco
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0x8001138
Graphics Notes: GLAMOR - BAR1 / Visible vRAM Size: 256 MB
Graphics Oc Notes: AMD OverDrive GPU Overclock: 2%
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 Full AMD retpoline IBPB: conditional STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

R5 1600 RX V56

Processor: AMD Ryzen 5 1600 Six-Core @ 3.20GHz (6 Cores / 12 Threads), Motherboard: Gigabyte AB350M-Gaming 3-CF (F50d BIOS), Chipset: AMD 17h, Memory: 32GB, Disk: 256GB SPCC Solid State + 2000GB Seagate ST2000DM008-2FR1 + 1024GB MTFDDAK1T0TBN-1A + 250GB Crucial CT250MX2 + 1000GB Seagate ST1000LM014-1EJ1 + 640GB TOSHIBA MK6475GS, Graphics: AMD Radeon RX 56/64 8GB (1650/945MHz), Audio: AMD Vega 10 HDMI Audio, Monitor: ED273UR, Network: Realtek RTL8111/8168/8411 + Intel-AC 9260

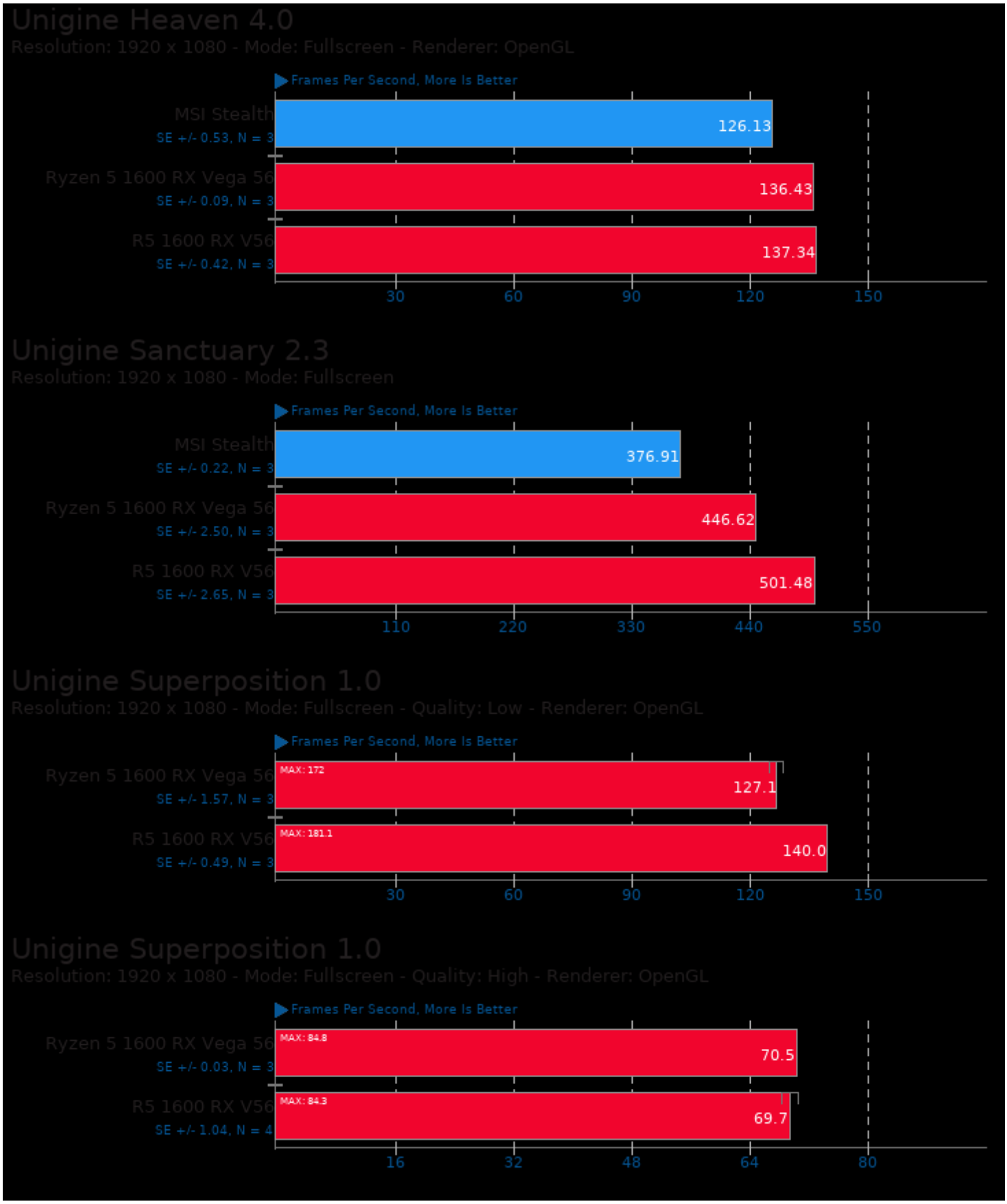
OS: EndeavourOS rolling, Kernel: 5.19.1-zen1-1-zen (x86_64), Desktop: Cinnamon 5.4.9, Display Server: X Server 1.21.1.4, OpenGL: 4.6 Mesa 22.1.6 (LLVM 14.0.6 DRM 3.47), OpenCL: OpenCL 2.1 AMD-APP (3452.0), Vulkan: 1.3.211, Compiler: GCC 12.1.1 20220730 + Clang 14.0.6 + LLVM 14.0.6, File-System: ext4, Screen Resolution: 4480x1440

Kernel Notes: amdgpu.ppfeaturemask=0xffffffff - Transparent Huge Pages: always
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0x8001138
Graphics Notes: GLAMOR - BAR1 / Visible vRAM Size: 256 MB - vBIOS Version: 113-D0500100-102
Graphics Oc Notes: AMD OverDrive GPU Overclock: 2%
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Vulnerable + spec_store_bypass: Vulnerable + spectre_v1: Vulnerable: __user pointer sanitization and usercopy barriers only; no swapgs barriers + spectre_v2: Vulnerable IBPB: disabled STIBP: disabled PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

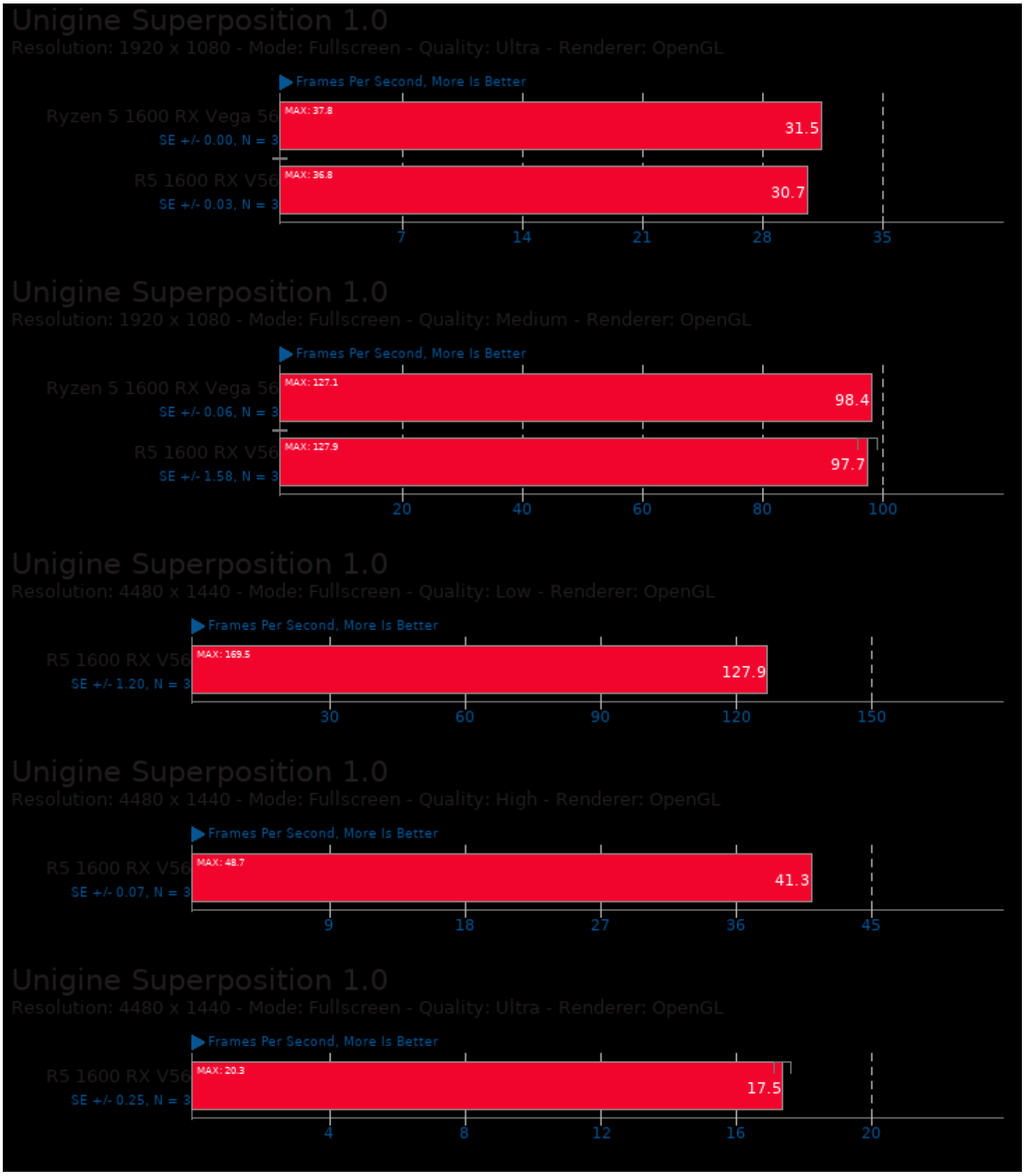
Unigine Tests

	MSI Stealth	Ryzen 5 1600 RX Vega 56	R5 1600 RX V56
Unigine Heaven - 1920 x 1080 - Fullscreen - OpenGL (FPS)	**126.128**	136.433	**137.342**
Normalized	91.83%	99.34%	100%
Standard Deviation	0.7%	0.1%	0.5%
Unigine Sanctuary - 1920 x 1080 - Fullscreen (FPS)	**376.908**	446.623	**501.476**
Normalized	75.16%	89.06%	100%
Standard Deviation	0.1%	1%	0.9%
Unigine Superposition - 1920 x 1080 - Fullscreen - Low - OpenGL (FPS)		**127.1**	**140.0**
Normalized		90.79%	100%
Standard Deviation		2.1%	0.6%
Unigine Superposition - 1920 x 1080 - Fullscreen - High - OpenGL (FPS)		**70.5**	**69.7**
Normalized		100%	98.87%
Standard Deviation		0.1%	3%
Unigine Superposition - 1920 x 1080 - Fullscreen - Ultra - OpenGL (FPS)		**31.5**	**30.7**
Normalized		100%	97.46%
Standard Deviation		0%	0.2%
Unigine Superposition - 1920 x 1080 - Fullscreen - Medium - OpenGL (FPS)		**98.4**	**97.7**
Normalized		100%	99.29%
Standard Deviation		0.1%	2.8%
Unigine Superposition - 4480 x 1440 - Fullscreen - Low - OpenGL (FPS)			127.9
Standard Deviation			1.6%
Unigine Superposition - 4480 x 1440 - Fullscreen - High - OpenGL (FPS)			41.3
Standard Deviation			0.3%
Unigine Superposition - 4480 x 1440 - Fullscreen - Ultra - OpenGL (FPS)			17.5
Standard Deviation			2.5%
Unigine Superposition - 4480 x 1440 - Fullscreen - Medium - OpenGL (FPS)			59.6
Standard Deviation			0.2%
Unigine Tropics - 1920 x 1080 - Fullscreen (FPS)	**294.027**	**234.550**	245.084
Normalized	100%	79.77%	83.35%
Standard Deviation	0.5%	1%	1.2%
Unigine Valley - 1920 x 1080 - Fullscreen - OpenGL (FPS)	113.775	**112.566**	**124.799**
Normalized	91.17%	90.2%	100%
Standard Deviation	0.1%	1.5%	0.6%

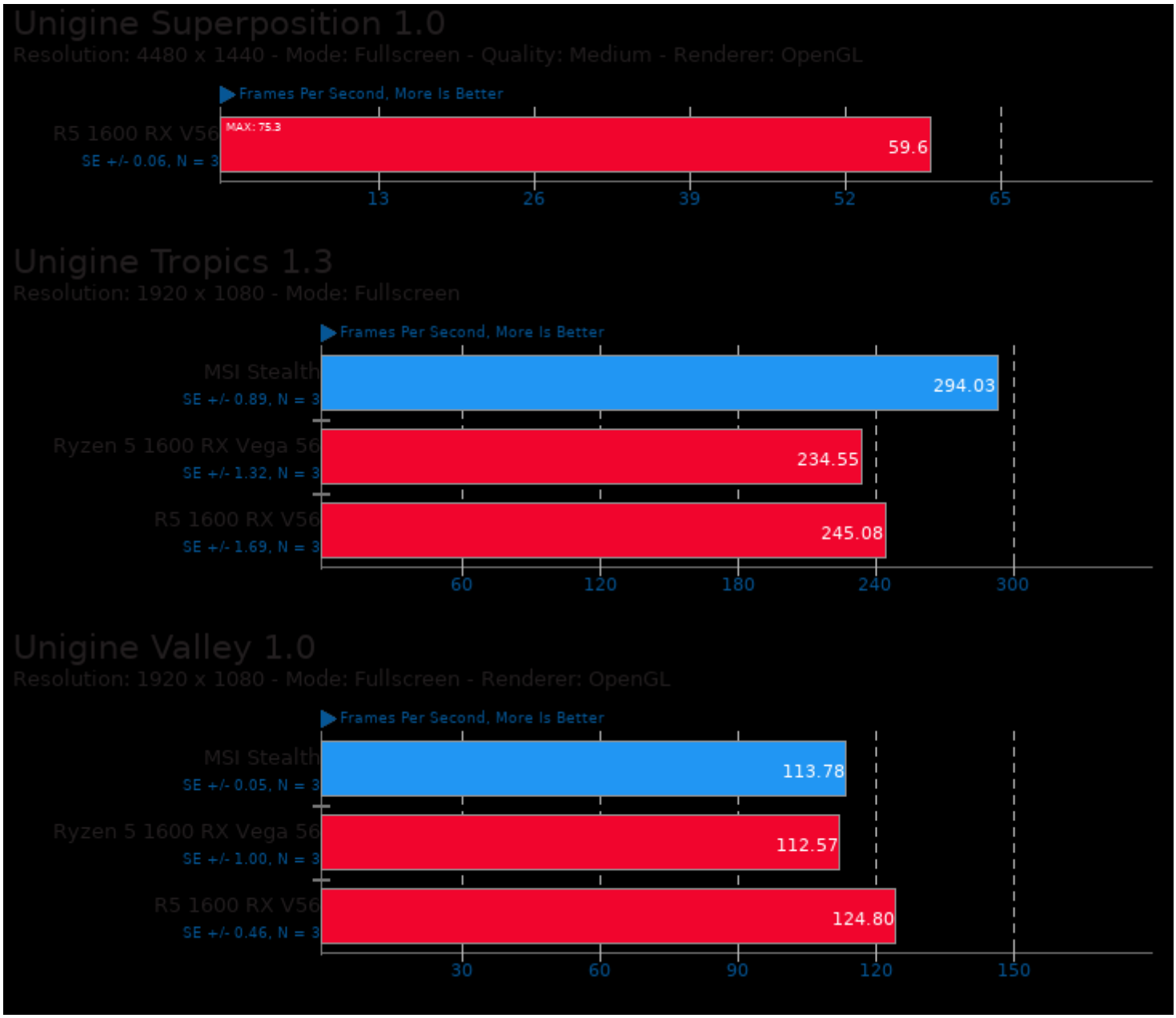
Unigine Tests



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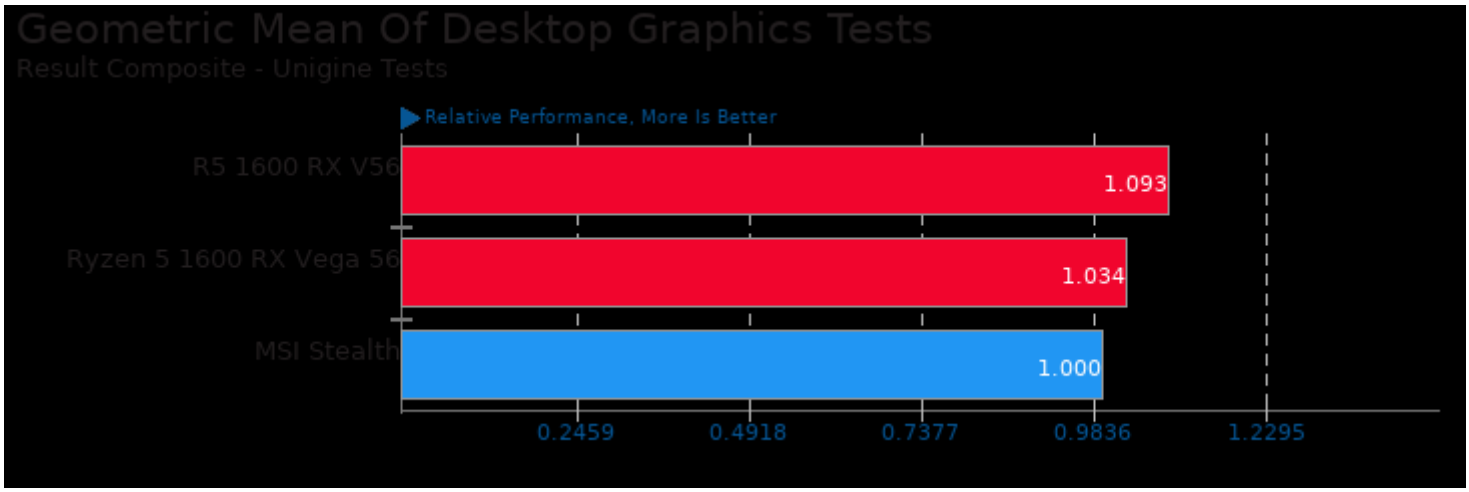


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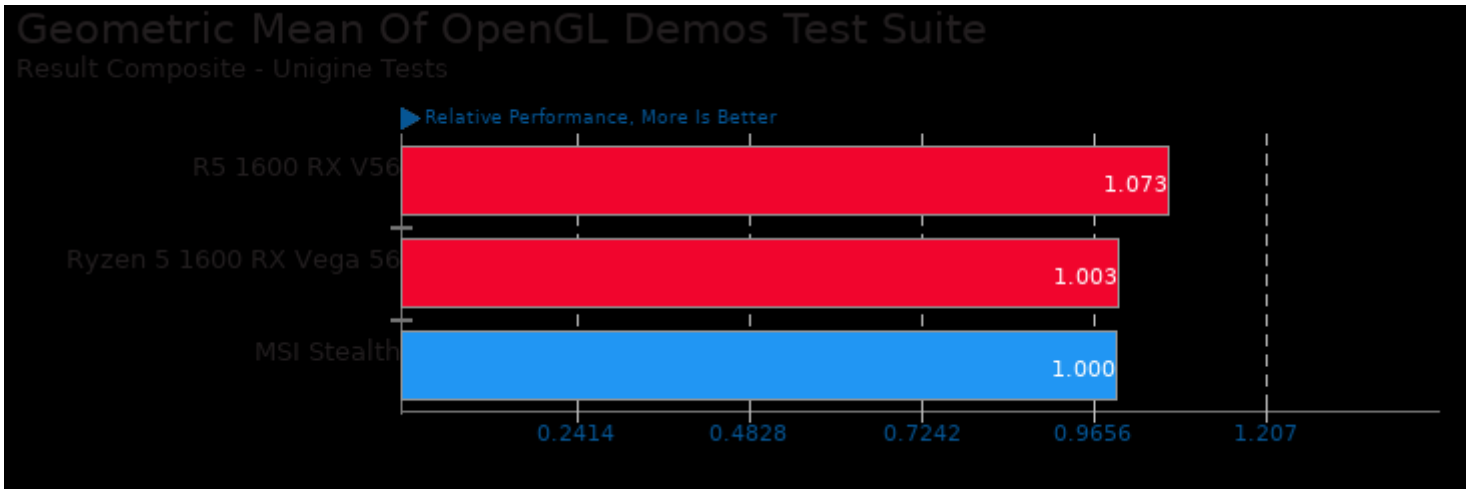


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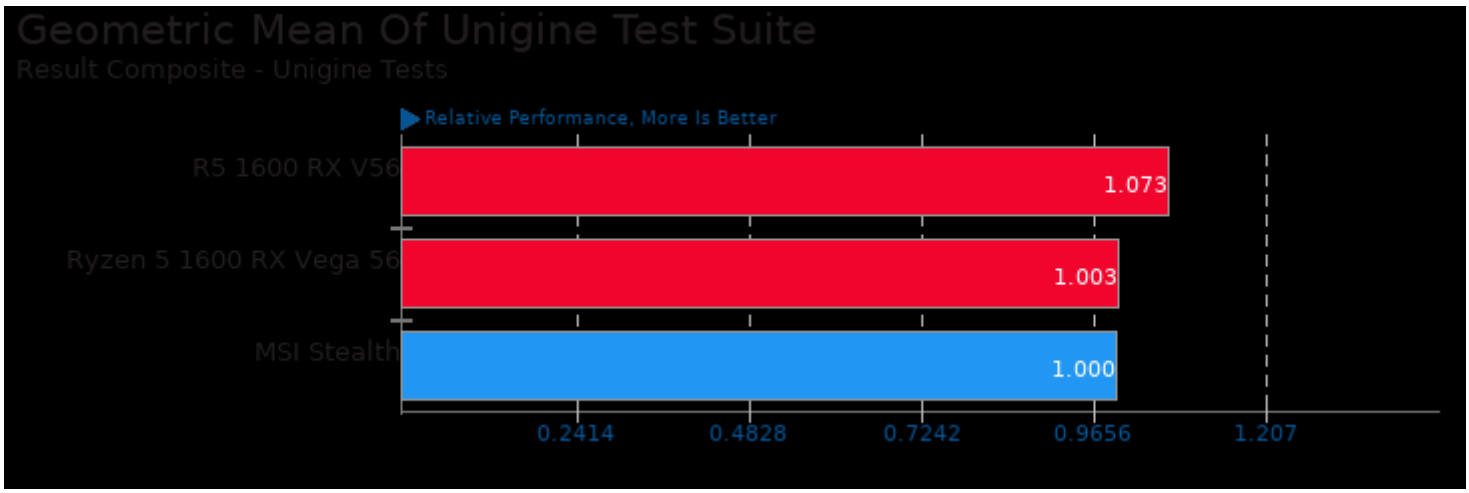
These geometric means are based upon test groupings / test suites for this result file.



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



Geometric mean based upon tests: pts/unigine-valley, pts/unigine-heaven, pts/unigine-sanctuary, pts/unigine-tropics and pts/unigine-super



Geometric mean based upon tests: pts/unigine-valley, pts/unigine-heaven, pts/unigine-sanctuary, pts/unigine-tropics and pts/unigine-super

Unigine Tests

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 03:09.