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Laptop Graphics

AMD Ryzen 5 4500U testing with a LENOVO LNVNB161216 (EECN20WW BIOS) and AMD Renoir 512MB on Ubuntu 21.04 via the Phoronix Test Suite.

Automated Executive Summary

Core i7 1165G7 had the most wins, coming in first place for 66% of the tests.

Based on the geometric mean of all complete results, the fastest (Core i7 1165G7) was 1.477x the speed of the slowest (Core i7 1065G7). Ryzen 5 5500U was 0.977x the speed of Core i7 1165G7, Ryzen 5 4500U was 0.76x the speed of Ryzen 5 5500U, Core i7 1065G7 was 0.911x the speed of Ryzen 5 4500U.

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

DDraceNetwork (Resolution: 1920 x 1200 - Mode: Fullscreen - Renderer: OpenGL 3.3 - Zoom: Default - Demo: Multeasymap - Total Frame Time) at 8.134x
DDraceNetwork (Resolution: 1920 x 1200 - Mode: Fullscreen - Renderer: OpenGL 3.3 - Zoom: Default - Demo: RaiNyMore2 - Total Frame Time) at 7.42x
GLmark2 (Resolution: 1920 x 1200) at 3.11x
Warsow (Resolution: 1920 x 1200) at 2.611x
VkResample (Upscale: 2x - Precision: Single) at 2.289x
Unvanquished (Resolution: 1920 x 1200 - Effects Quality: Ultra) at 2.23x

RealSR-NCNN (Scale: 4x - TAA: Yes) at 2.211x
Unvanquished (Resolution: 1920 x 1200 - Effects Quality: Medium) at 2.199x
GpuTest (Test: Pixmark Volplosion - Resolution: 1920 x 1200 - Mode: Fullscreen) at 2.199x
RealSR-NCNN (Scale: 4x - TAA: No) at 2.112x.

Test Systems:

Core i7 1165G7

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0GG9PT (1.2.5 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 16GB, Disk: Kioxia KBG40ZNS256G NVMe 256GB, Graphics: Intel Xe TGL GT2 3GB (1300MHz), Audio: Realtek ALC289, Network: Intel Wi-Fi 6 AX201

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 21.2.0-devel (git-25ad699 2021-07-02 hirsute-oibaf-ppa), Vulkan: 1.2.182, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 1920x1200

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: intel_pstate powersave - CPU Microcode: 0x88 - Thermald 2.4.3
Java Notes: OpenJDK Runtime Environment (build 11.0.11+9-Ubuntu-0ubuntu2)
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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Ryzen 5 5500U

Processor: AMD Ryzen 5 5500U @ 2.10GHz (6 Cores / 12 Threads), Motherboard: LENOVO LNVNB161216 (GLCN22WW BIOS), Chipset: AMD Renoir Root Complex, Memory: 6GB, Disk: 256GB SAMSUNG MZALQ256HBJD-00BL2, Graphics: AMD Lucienne 2GB (1800/400MHz), Audio: AMD Device 1637, Network: Qualcomm Atheros QCA6174 802.11ac

OS: Ubuntu 21.04, Kernel: 5.13.0-051300-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server 1.20.11 + Wayland, OpenGL: 4.6 Mesa 21.2.0-devel (git-4698755 2021-07-03 hirsute-oibaf-ppa) (LLVM 12.0.0), 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: 0x8608102
Graphics Notes: GLAMOR
Java Notes: OpenJDK Runtime Environment (build 11.0.11+9-Ubuntu-0ubuntu2)
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: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Core i7 1065G7

Processor: Intel Core i7-1065G7 @ 3.90GHz (4 Cores / 8 Threads), Motherboard: Dell 06CDVY (1.0.9 BIOS), Chipset: Intel Ice Lake-LP DRAM, Memory: 16GB, Disk: Toshiba KBG40ZPZ512G NVMe 512GB, Graphics: Intel Iris Plus ICL GT2 3GB (1100MHz), Audio: Realtek ALC289, Network: Intel Killer Wi-Fi 6 AX1650i 160MHz

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 21.2.0-devel (git-4698755 2021-07-03 hirsute-oibaf-ppa), Vulkan: 1.2.182, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 1920x1200

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: intel_pstate powersave - CPU Microcode: 0xa6 - Thermald 2.4.3
Java Notes: OpenJDK Runtime Environment (build 11.0.11+9-Ubuntu-0ubuntu2)
Python Notes: Python 3.9.5
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Ryzen 5 4500U

Processor: AMD Ryzen 5 4500U @ 2.38GHz (6 Cores), Motherboard: LENOVO LNVNB161216 (EECN20WW BIOS), Chipset: AMD Renoir Root Complex, Memory: 16GB, Disk: 256GB SK hynix HFM256GDHTNI-87A0B, Graphics: AMD Renoir 512MB (1500/400MHz), Audio: AMD Device 1637, Network: Realtek RTL8822CE 802.11ac PCIe

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 21.2.0-devel (git-c246af0 2021-07-04 hirsute-oibaf-ppa) (LLVM 12.0.0), 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: 0x8600102 - ACPI Profile: balanced
Java Notes: OpenJDK Runtime Environment (build 11.0.11+9-Ubuntu-0ubuntu2)
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: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	Core i7 1165G7	Ryzen 5 5500U	Core i7 1065G7	Ryzen 5 4500U
RealSR-NCNN - 4x - No (sec)	**65.195**	66.975	**137.691**	66.183
Normalized	100%	97.34%	47.35%	98.51%
Standard Deviation	0.2%	0.2%	2.6%	0.7%

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RealSR-NCNN - 4x - Yes (sec)	507.349	515.134	**1103**	**498.838**
Normalized	98.32%	96.84%	45.24%	100%
Standard Deviation	0.1%	0%	0.3%	0.1%
Waifu2x-NCNN Vulkan - 2x - 3 - No	4.204	**3.910**	**7.018**	4.472
Normalized	93.01%	100%	55.71%	87.43%
Standard Deviation	1.4%	0.2%	1.1%	1.5%
Waifu2x-NCNN Vulkan - 2x - 3 - Yes (sec)	27.363	**25.725**	**52.450**	29.500
Normalized	94.01%	100%	49.05%	87.2%
Standard Deviation	0.2%	1.2%	1.1%	1.1%
VkResample - 2x - Single (ms)	117.058	**76.924**	**176.060**	109.582
Normalized	65.71%	100%	43.69%	70.2%
Standard Deviation	0%	0.7%	1.3%	0.7%
DDraceNetwork - 1920 x 1200 - Fullscreen - OpenGL 3.3 - Default - RaiNyMore2 (FPS)	274.62	**369.98**	**166.82**	351.56
Normalized	74.23%	100%	45.09%	95.02%
Standard Deviation	0.8%	1.4%	1.1%	7.3%
DDraceNetwork - 1920 x 1200 - Fullscreen - OpenGL 3.3 - Default - Multeasymap (FPS)	**341.05**	288.76	**237.51**	243.42
Normalized	100%	84.67%	69.64%	71.37%
Standard Deviation	1.2%	0.7%	0.9%	1.4%
ET: Legacy - 1920 x 1200 (FPS)	**245.1**	200.9	198.8	**154.8**
Normalized	100%	81.97%	81.11%	63.16%
Standard Deviation	0.6%	1.7%	1.4%	1.2%
Tesseract - 1920 x 1200 (FPS)	**161.3847**	138.9918	98.41122	**93.20415**
Normalized	100%	86.12%	60.98%	57.75%
Standard Deviation	0.8%	2%	1.3%	2.3%
Unvanquished - 1920 x 1200 - High (FPS)	**188.6**	174.2	153.2	**95.8**
Normalized	100%	92.36%	81.23%	50.8%
Standard Deviation	0.6%	1%	0.7%	1%
Unvanquished - 1920 x 1200 - Ultra (FPS)	**164.1**	136.5	103.9	**73.6**
Normalized	100%	83.18%	63.32%	44.85%
Standard Deviation	1%	0.5%	1.5%	0.8%
Unvanquished - 1920 x 1200 - Medium (FPS)	**201.2**	184.5	176.6	**91.5**
Normalized	100%	91.7%	87.77%	45.48%
Standard Deviation	1.1%	1.7%	2.4%	1%
Warsow - 1920 x 1200 (FPS)	**246.7**	146.9	115.0	**94.5**
Normalized	100%	59.55%	46.62%	38.31%
Standard Deviation	0.5%	0.1%	0.7%	1.5%
Xonotic - 1920 x 1200 - Low (FPS)	**364.8214525**	266.4636475	272.2002241	**222.5562873**
Normalized	100%	73.04%	74.61%	61%
Standard Deviation	1.5%	0.5%	0.2%	0.5%
Xonotic - 1920 x 1200 - High (FPS)	**227.6012483**	197.7152237	165.1061648	**153.7846650**
Normalized	100%	86.87%	72.54%	67.57%
Standard Deviation	0.8%	0.2%	0.6%	1.5%
Xonotic - 1920 x 1200 - Ultra (FPS)	**187.7293240**	173.6124413	136.0621513	**134.3301522**
Normalized	100%	92.48%	72.48%	71.56%
Standard Deviation	0.6%	0.6%	0.4%	2.3%
Xonotic - 1920 x 1200 - Ultimate (FPS)	**142.9296857**	139.5757591	104.9392687	**100.9345575**

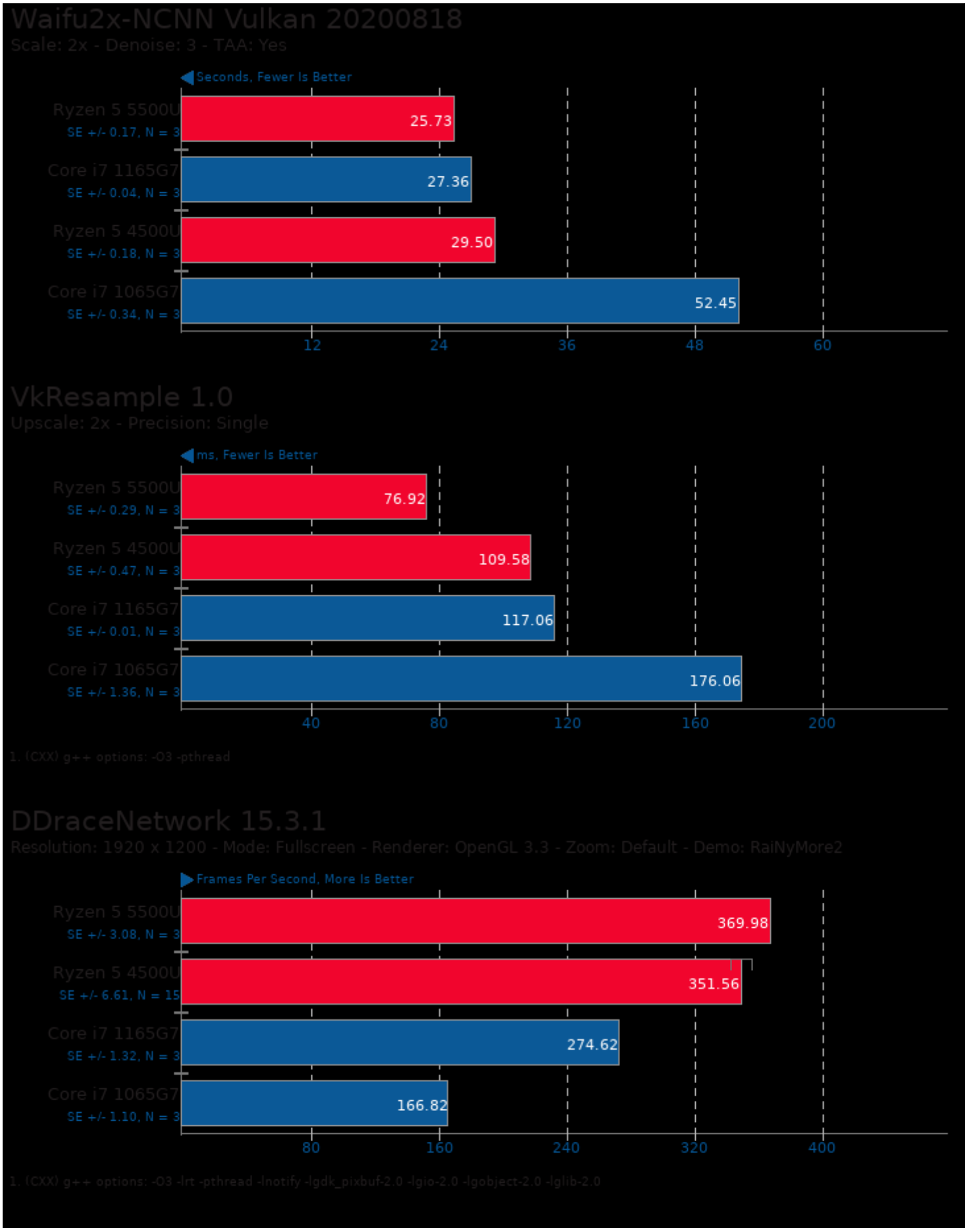
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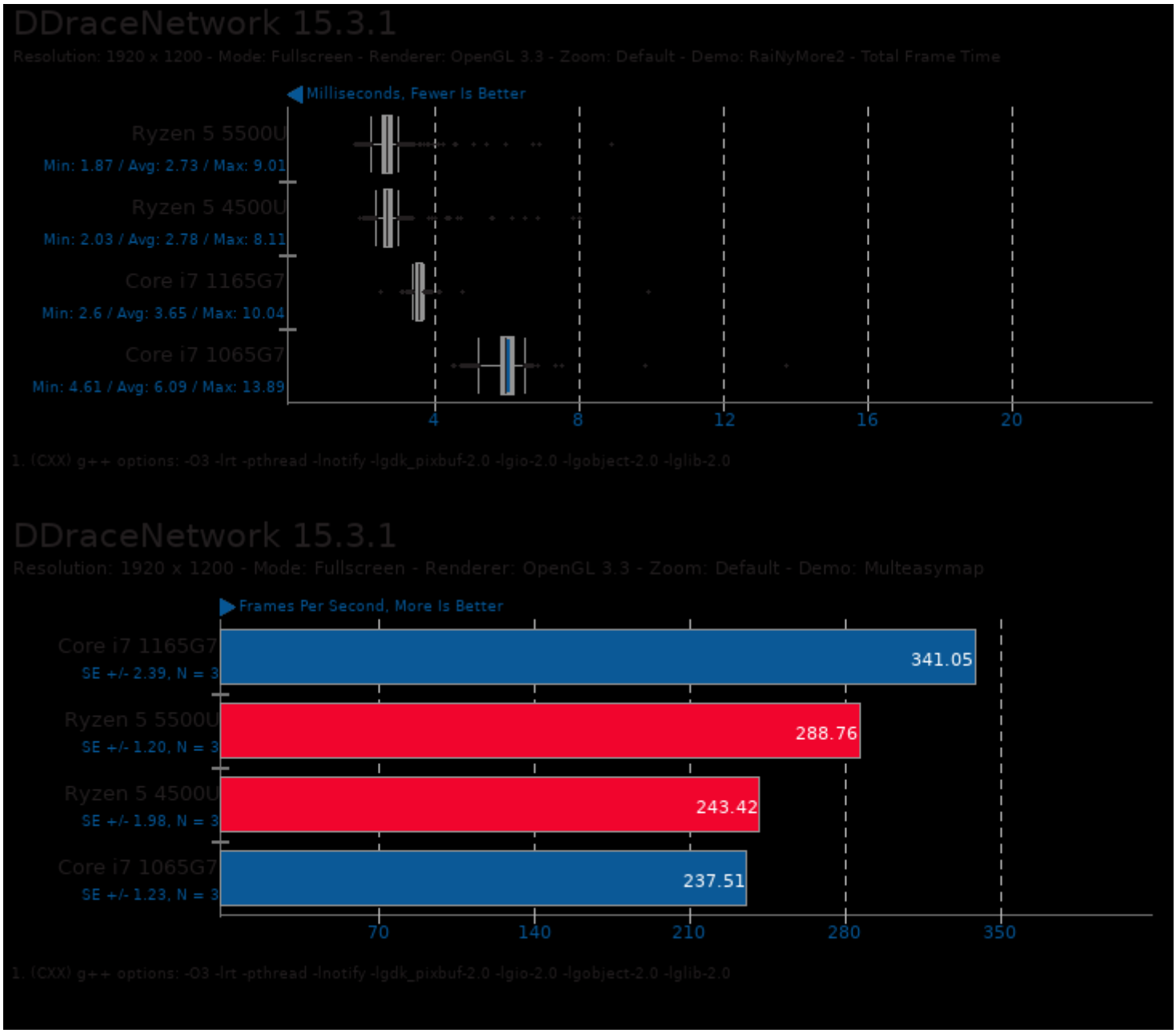
Normalized	100%	97.65%	73.42%	70.62%
Standard Deviation	0.7%	0.6%	0.4%	0.9%
yquake2 - OpenGL 3.x - 1920 x 1080 (FPS)	**728.1**	679.8	**534.4**	567.3
Normalized	100%	93.37%	73.4%	77.92%
Standard Deviation	0.1%	2.1%	0.7%	8.5%
GLmark2 - 1920 x 1200 (Score)	**821**	**2553**	901	1960
Normalized	32.16%	100%	35.29%	76.77%
ParaView - Many Spheres - 1920 x 1200 (Frames / Sec)	**8.18**		**5.44**	8.01
Normalized	100%		66.5%	97.92%
Standard Deviation	0.8%		0.7%	1%
ParaView - Many Spheres - 1920 x 1200 (MiPolys / Sec)	**820.452**		**545.371**	803.323
Normalized	100%		66.47%	97.91%
Standard Deviation	0.8%		0.7%	1.1%
ParaView - Wavelet Volume - 1920 x 1200 (Frames / Sec)	**70.66**	69.72	**48.13**	48.72
Normalized	100%	98.67%	68.11%	68.95%
Standard Deviation	1.3%	3%	0.4%	2%
ParaView - Wavelet Volume - 1920 x 1200 (MiVoxels / Sec)	**1131**	1115	**770.105**	779.515
Normalized	100%	98.66%	68.12%	68.95%
Standard Deviation	1.3%	3%	0.4%	2%
ParaView - Wavelet Contour - 1920 x 1200 (Frames / Sec)	60.02	**63.60**	**43.39**	45.55
Normalized	94.37%	100%	68.22%	71.62%
Standard Deviation	0.1%	0.5%	0.3%	4.1%
ParaView - Wavelet Contour - 1920 x 1200 (MiPolys / Sec)	625.519	**662.814**	**452.154**	474.662
Normalized	94.37%	100%	68.22%	71.61%
Standard Deviation	0.1%	0.5%	0.3%	4.1%
Java 2D Microbenchmark - Text Rendering (Units/sec)	26593			
Standard Deviation	4.3%			
Java 2D Microbenchmark - Image Rendering (Units/sec)	7149364			
Standard Deviation	0.2%			
Java 2D Microbenchmark - V.G.R (Units/sec)	3096130			
Standard Deviation	0.4%			
GpuTest - GiMark - 1920 x 1200 - Fullscreen (Points)	2082	**3098**	**2003**	2237
Normalized	67.2%	100%	64.65%	72.21%
Standard Deviation		0.3%	0%	2.4%
GpuTest - Plot3D - 1920 x 1200 - Fullscreen (Points)	**12453**	**24556**	12969	21511
Normalized	50.71%	100%	52.81%	87.6%
Standard Deviation	0.1%	0.3%	0.1%	1%
GpuTest - Furmark - 1920 x 1200 - Fullscreen (Points)	**2008**	1183	1275	**1013**
Normalized	100%	58.91%	63.5%	50.45%
Standard Deviation	9.6%	0.1%	13.1%	2.3%

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GpuTest - TessMark - 1920 x 1200 - Fullscreen (Points)	5606	**6920**	**3857**	4815
Normalized	81.01%	100%	55.74%	69.58%
Standard Deviation	0%	0.5%	0.9%	0.7%
GpuTest - Triangle - 1920 x 1200 - Fullscreen (Points)	**221442**	195091	**168679**	188402
Normalized	100%	88.1%	76.17%	85.08%
Standard Deviation	0.3%	12.7%	1.7%	5.8%
GpuTest - Pixmark Piano - 1920 x 1200 - Fullscreen (Points)	**620**	483	**295**	330
Normalized	100%	77.9%	47.58%	53.23%
Standard Deviation	0.8%		0.4%	0.6%
GpuTest - Pixmark Volplosion - 1920 x 1200 - Fullscreen (Points)	**1726**	1251	**785**	838
Normalized	100%	72.48%	45.48%	48.55%
Standard Deviation	0.8%	0.2%	2.6%	1.1%
Basemark GPU - OpenGL - 1920 x 1200 - High (FPS)	**33.52**	23.22	19.44	**18.80**
Normalized	100%	69.27%	58%	56.09%
Standard Deviation	0.5%	0.6%	0.2%	0.4%
Basemark GPU - Vulkan - 1920 x 1200 - High (FPS)	**32.78**	26.40	**19.61**	20.96
Normalized	100%	80.54%	59.82%	63.94%
Standard Deviation	0.2%	0.3%	0.1%	0.3%
Basemark GPU - OpenGL - 1920 x 1200 - Medium (FPS)	75.90	**90.83**	89.77	**72.72**
Normalized	83.56%	100%	98.83%	80.06%
Standard Deviation	1.4%	1.5%	1%	0.6%
Basemark GPU - Vulkan - 1920 x 1200 - Medium (FPS)	**194.11**	122.71	100.85	**98.76**
Normalized	100%	63.22%	51.96%	50.88%
Standard Deviation	0.9%	0.6%	2%	1.3%

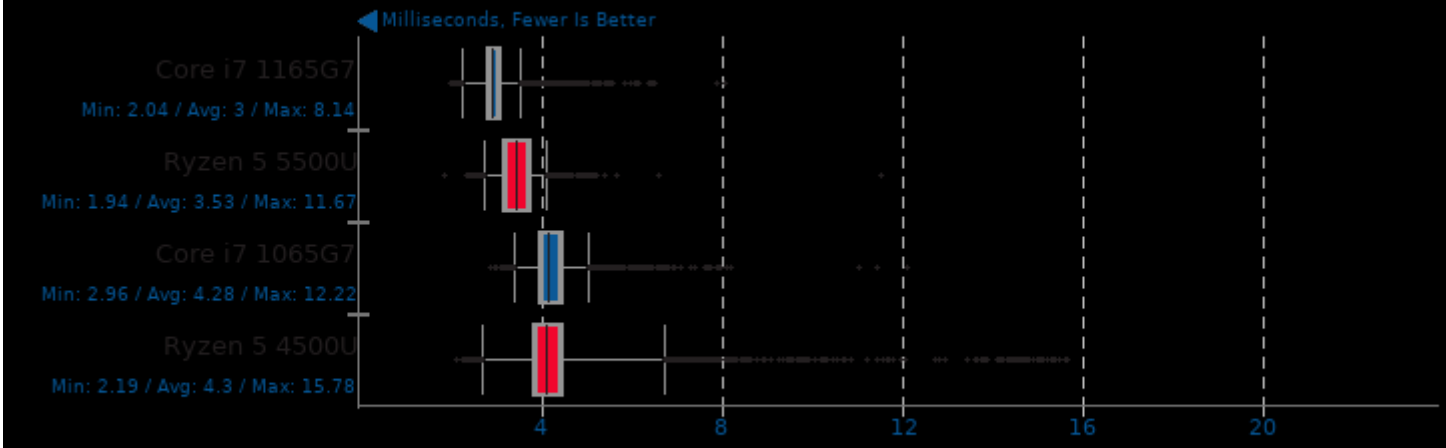

RealSR-NCNN 20200818
Scale: 4x - TAA: No
Seconds, Fewer Is Better
Core i7 1165G7
SE +/- 0.06, N = 3
65.20
Ryzen 5 4500U
SE +/- 0.25, N = 3
66.18
Ryzen 5 5500U
SE +/- 0.08, N = 3
66.98
Core i7 1065G7
SE +/- 1.02, N = 12
137.69
30
60
90
120
150
RealSR-NCNN 20200818
Scale: 4x - TAA: Yes
Seconds, Fewer Is Better
Ryzen 5 4500U
SE +/- 0.25, N = 3
498.84
Core i7 1165G7
SE +/- 0.41, N = 3
507.35
Ryzen 5 5500U
SE +/- 0.07, N = 3
515.13
Core i7 1065G7
SE +/- 1.63, N = 3
1102.74
200
400
600
800
1000
Waifu2x-NCNN Vulkan 20200818
Scale: 2x - Denoise: 3 - TAA: No
Seconds, Fewer Is Better
Ryzen 5 5500U
SE +/- 0.005, N = 3
3.910
Core i7 1165G7
SE +/- 0.034, N = 3
4.204
Ryzen 5 4500U
SE +/- 0.038, N = 3
4.472
Core i7 1065G7
SE +/- 0.044, N = 3
7.018
2
4
6
8
10


Waifu2x-NCNN Vulkan 20200818
Scale: 2x - Denoise: 3 - TAA: Yes
Seconds, Fewer Is Better
Ryzen 5 5500U
SE +/- 0.17, N = 3
25.73
Core i7 1165G7
SE +/- 0.04, N = 3
27.36
Ryzen 5 4500U
SE +/- 0.18, N = 3
29.50
Core i7 1065G7
SE +/- 0.34, N = 3
52.45
12
24
36
48
60
VkResample 1.0
Upscale: 2x - Precision: Single
ms, Fewer Is Better
Ryzen 5 5500U
SE +/- 0.29, N = 3
76.92
Ryzen 5 4500U
SE +/- 0.47, N = 3
109.58
Core i7 1165G7
SE +/- 0.01, N = 3
117.06
Core i7 1065G7
SE +/- 1.36, N = 3
176.06
40
80
120
160
200
1. (CXX) g++ options: -O3 -pthread
DDraceNetwork 15.3.1
Resolution: 1920 x 1200 - Mode: Fullscreen - Renderer: OpenGL 3.3 - Zoom: Default - Demo: RaiNyMore2
Frames Per Second, More Is Better
Ryzen 5 5500U
SE +/- 3.08, N = 3
369.98
Ryzen 5 4500U
SE +/- 6.61, N = 15
351.56
Core i7 1165G7
SE +/- 1.32, N = 3
274.62
Core i7 1065G7
SE +/- 1.10, N = 3
166.82
80
160
240
320
400
1. (CXX) g++ options: -O3 -lrt -pthread -lnotify -lgdk_pixbuf-2.0 -lgio-2.0 -lgobject-2.0 -lglib-2.0


DDraceNetwork 15.3.1
Resolution: 1920 x 1200 - Mode: Fullscreen - Renderer: OpenGL 3.3 - Zoom: Default - Demo: RaiNyMore2 - Total Frame Time
Milliseconds, Fewer Is Better
Ryzen 5 5500U
Min: 1.87 / Avg: 2.73 / Max: 9.01
Ryzen 5 4500U
Min: 2.03 / Avg: 2.78 / Max: 8.11
Core i7 1165G7
Min: 2.6 / Avg: 3.65 / Max: 10.04
Core i7 1065G7
Min: 4.61 / Avg: 6.09 / Max: 13.89
4
8
12
16
20
1. (CXX) g++ options: -O3 -lrt -pthread -lnotify -lgdk_pixbuf-2.0 -lgio-2.0 -lgobject-2.0 -lglib-2.0
DDraceNetwork 15.3.1
Resolution: 1920 x 1200 - Mode: Fullscreen - Renderer: OpenGL 3.3 - Zoom: Default - Demo: Multeasymap
Frames Per Second, More Is Better
Core i7 1165G7
SE +/- 2.39, N = 3
341.05
Ryzen 5 5500U
SE +/- 1.20, N = 3
288.76
Ryzen 5 4500U
SE +/- 1.98, N = 3
243.42
Core i7 1065G7
SE +/- 1.23, N = 3
237.51
70
140
210
280
350
1. (CXX) g++ options: -O3 -lrt -pthread -lnotify -lgdk_pixbuf-2.0 -lgio-2.0 -lgobject-2.0 -lglib-2.0

DDraceNetwork 15.3.1

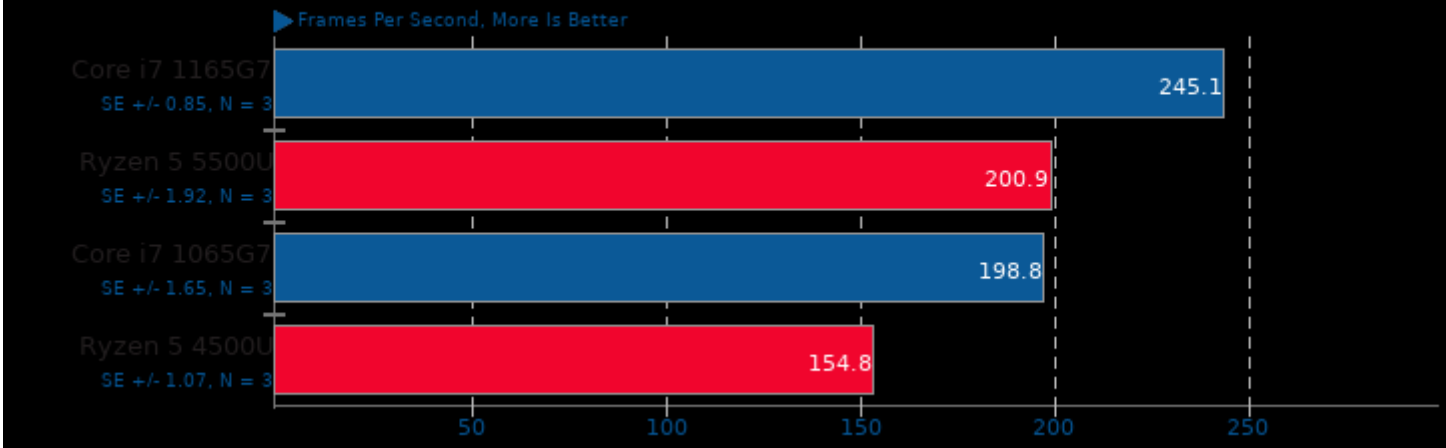
Resolution: 1920 x 1200 - Mode: Fullscreen - Renderer: OpenGL 3.3 - Zoom: Default - Demo: Multeasymap - Total Frame Time



1. (CXX) g++ options: -O3 -lrt -pthread -lnotify -lgdk_pixbuf-2.0 -lgio-2.0 -lgobject-2.0 -lglib-2.0

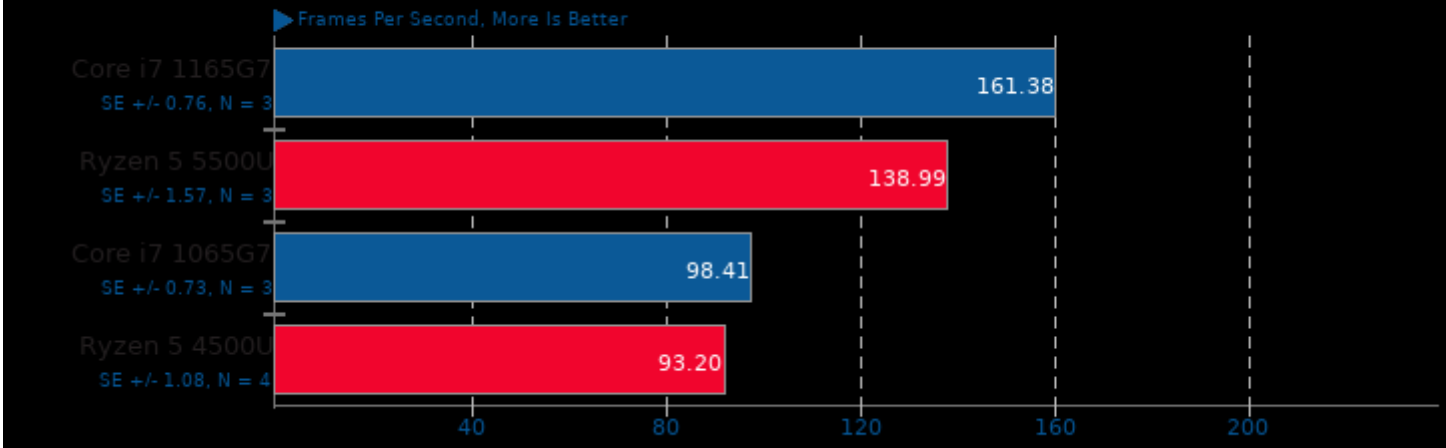
ET: Legacy 2.77

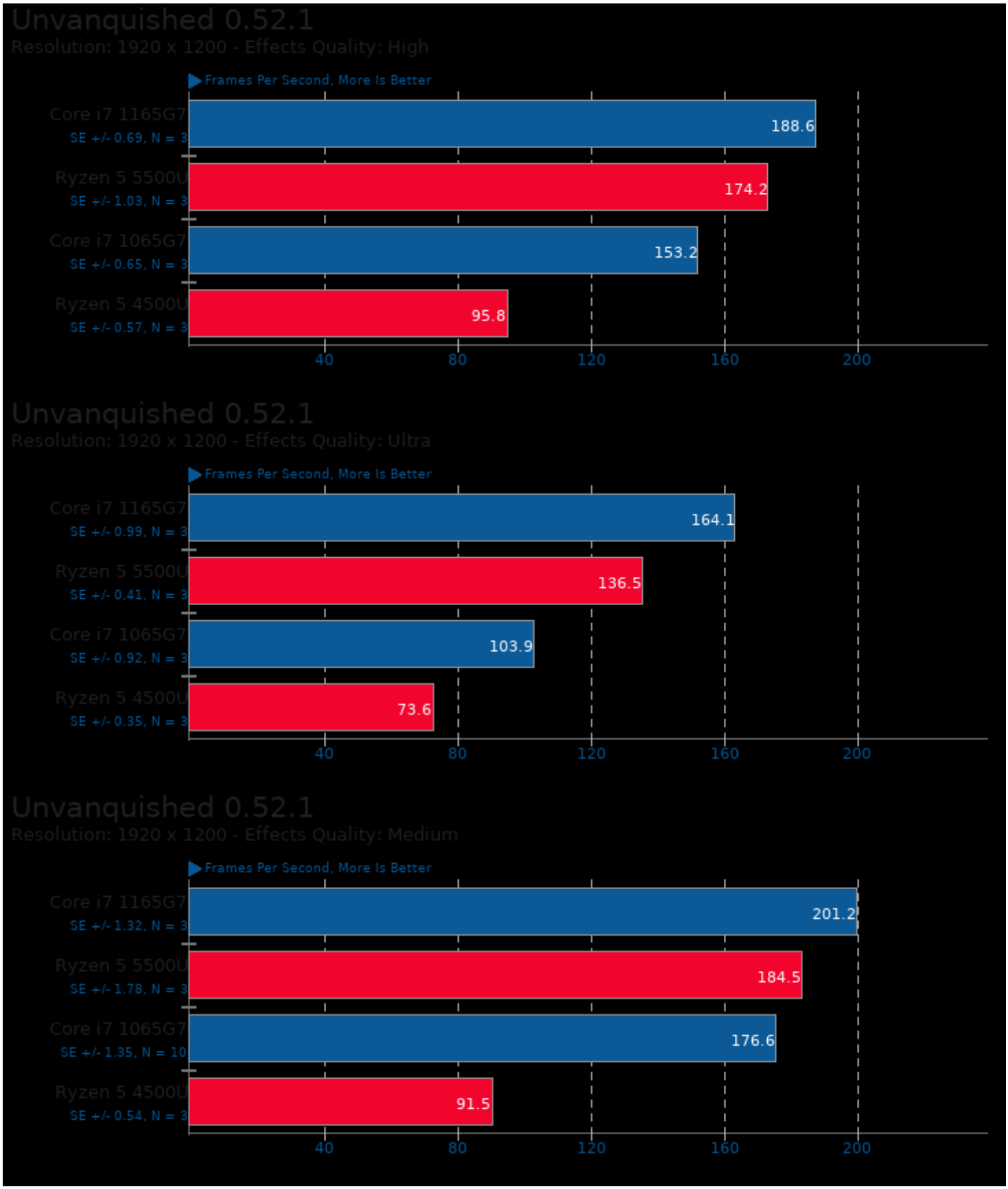
Resolution: 1920 x 1200



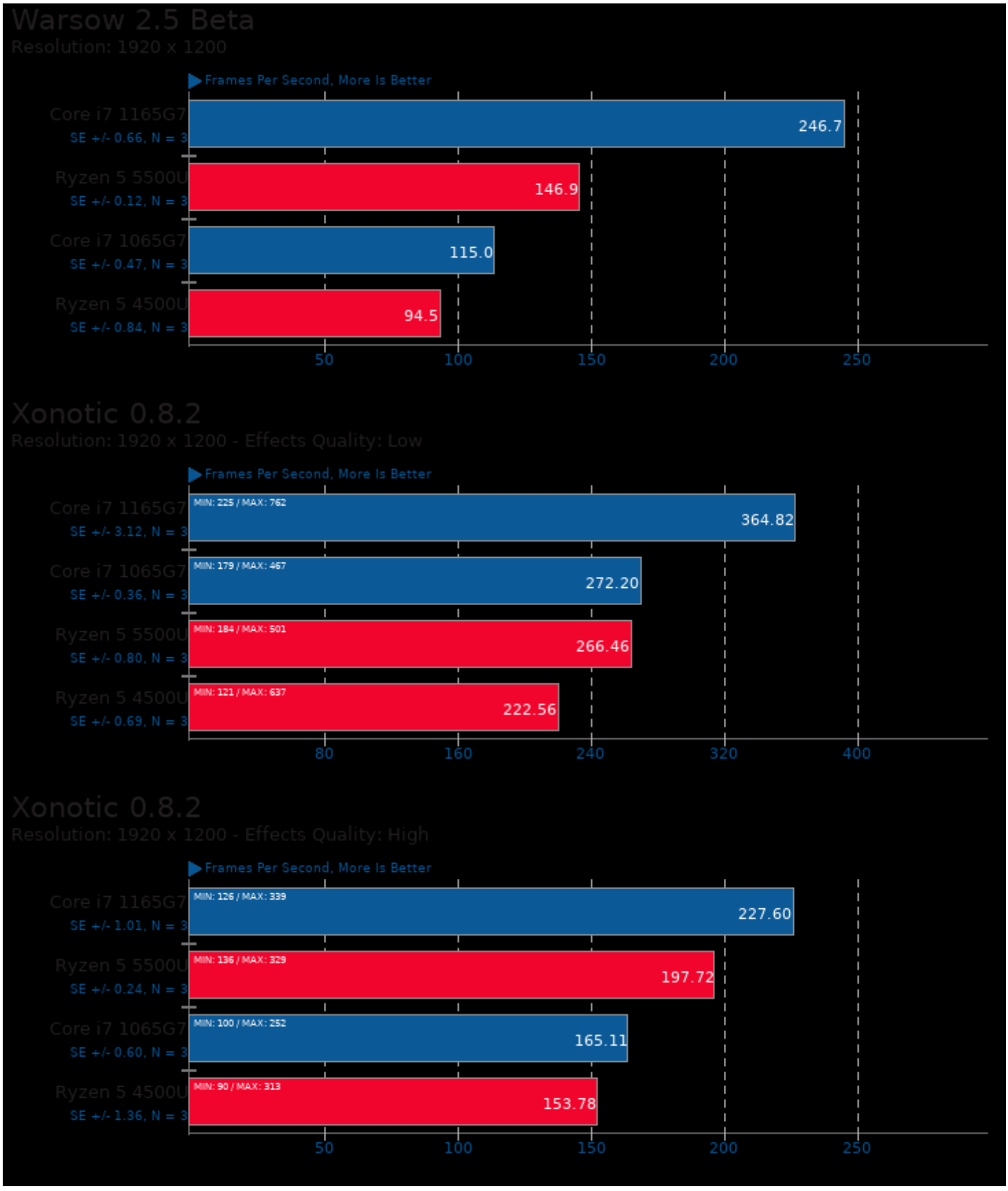
Tesseract 2014-05-12

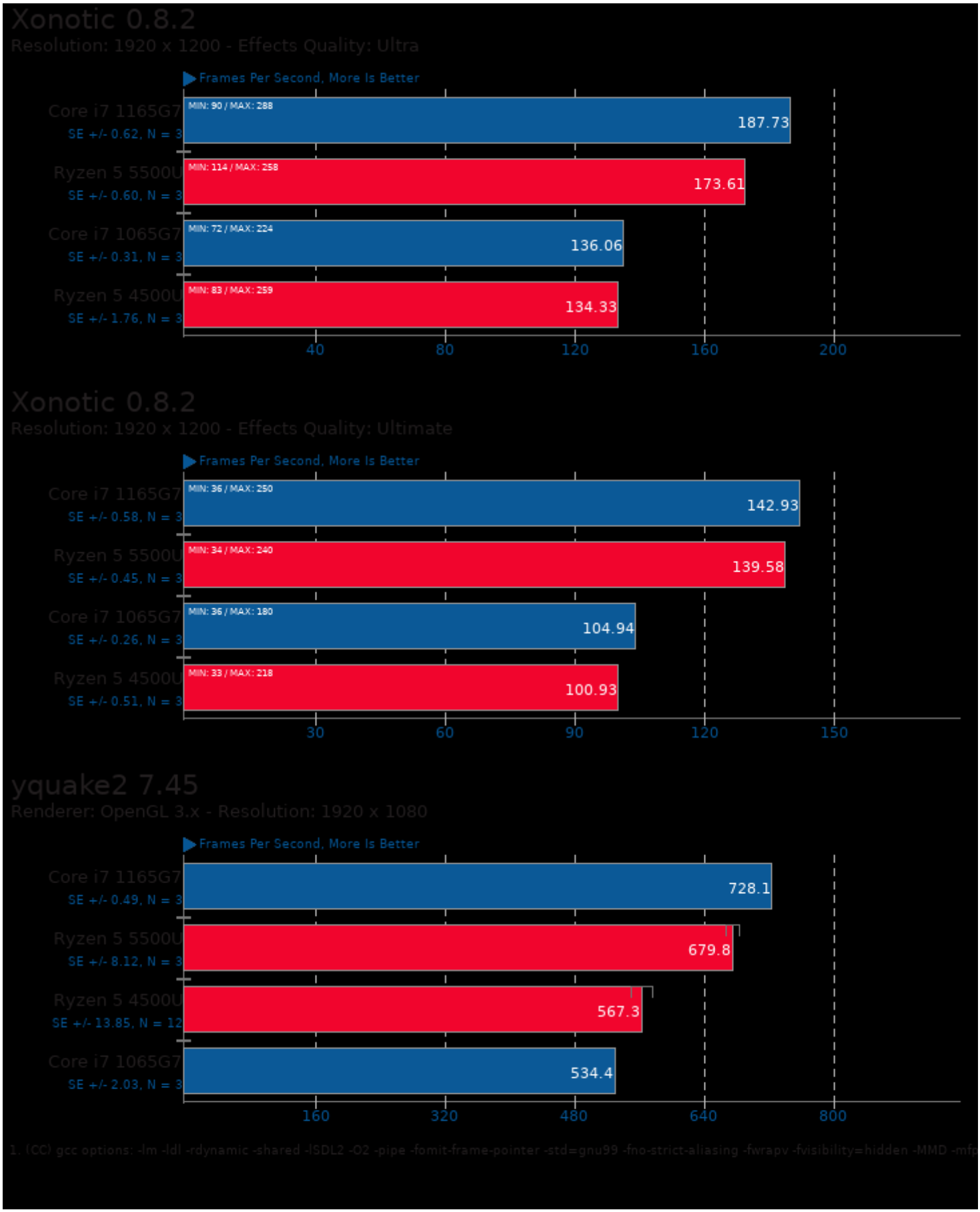
Resolution: 1920 x 1200

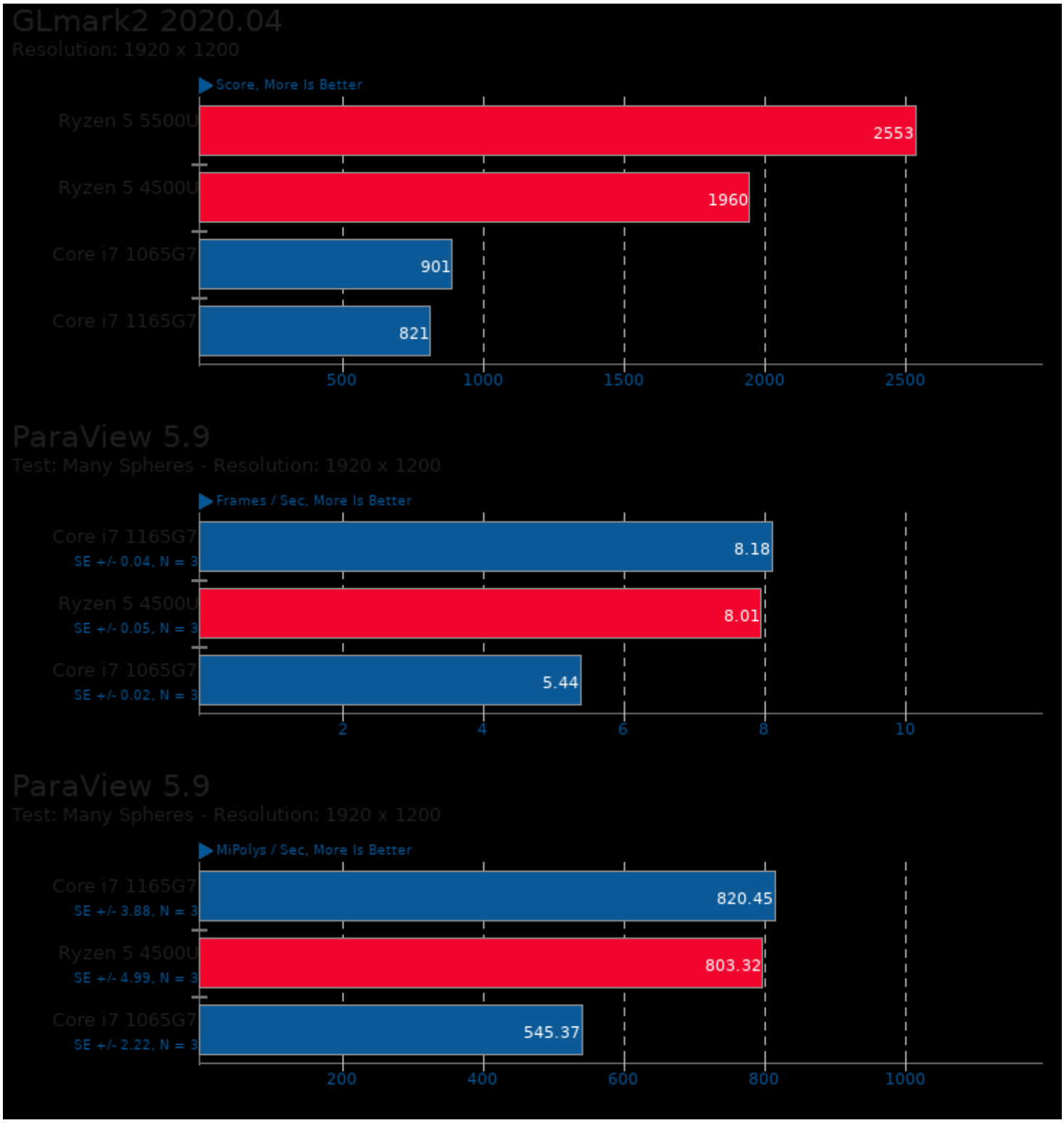


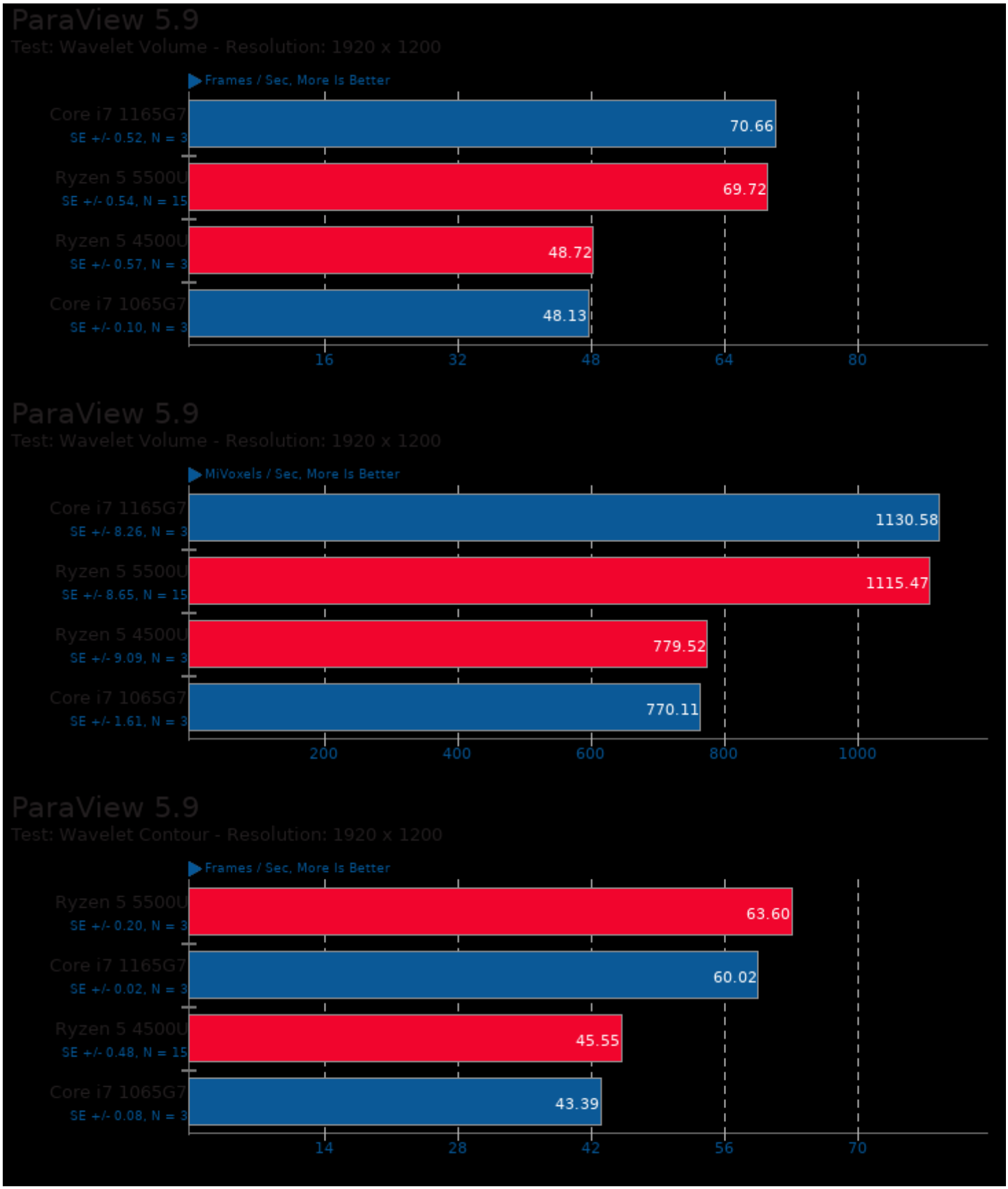

Unvanquished 0.52.1
Resolution: 1920 x 1200 - Effects Quality: High
Frames Per Second, More Is Better
Core i7 1165G7
SE +/- 0.69, N = 3
188.6
Ryzen 5 5500U
SE +/- 1.03, N = 3
174.2
Core i7 1065G7
SE +/- 0.65, N = 3
153.2
Ryzen 5 4500U
SE +/- 0.57, N = 3
95.8
40
80
120
160
200
Unvanquished 0.52.1
Resolution: 1920 x 1200 - Effects Quality: Ultra
Frames Per Second, More Is Better
Core i7 1165G7
SE +/- 0.99, N = 3
164.1
Ryzen 5 5500U
SE +/- 0.41, N = 3
136.5
Core i7 1065G7
SE +/- 0.92, N = 3
103.9
Ryzen 5 4500U
SE +/- 0.35, N = 3
73.6
40
80
120
160
200
Unvanquished 0.52.1
Resolution: 1920 x 1200 - Effects Quality: Medium
Frames Per Second, More Is Better
Core i7 1165G7
SE +/- 1.32, N = 3
201.2
Ryzen 5 5500U
SE +/- 1.78, N = 3
184.5
Core i7 1065G7
SE +/- 1.35, N = 10
176.6
Ryzen 5 4500U
SE +/- 0.54, N = 3
91.5
40
80
120
160
200

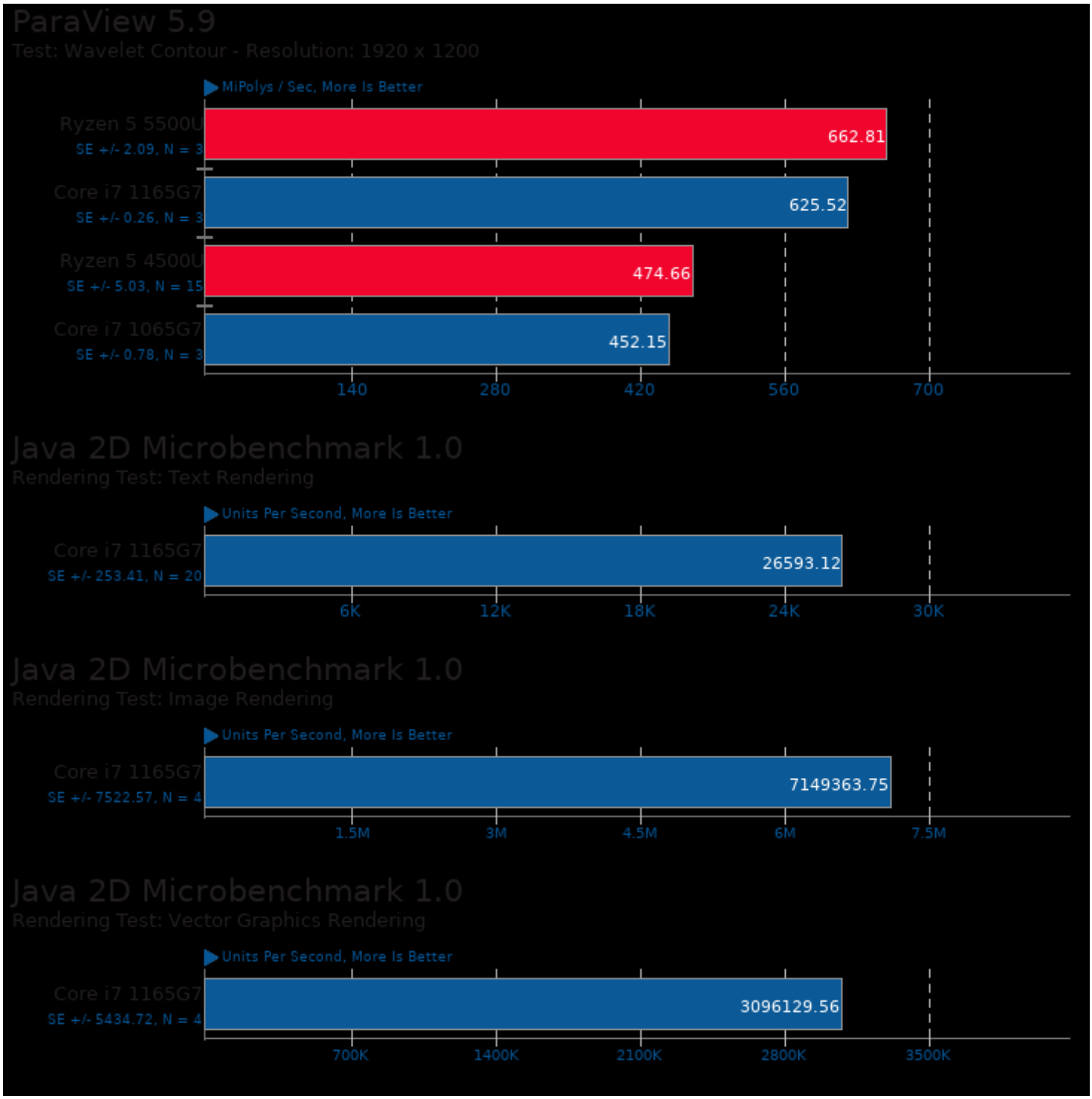
Laptop Graphics



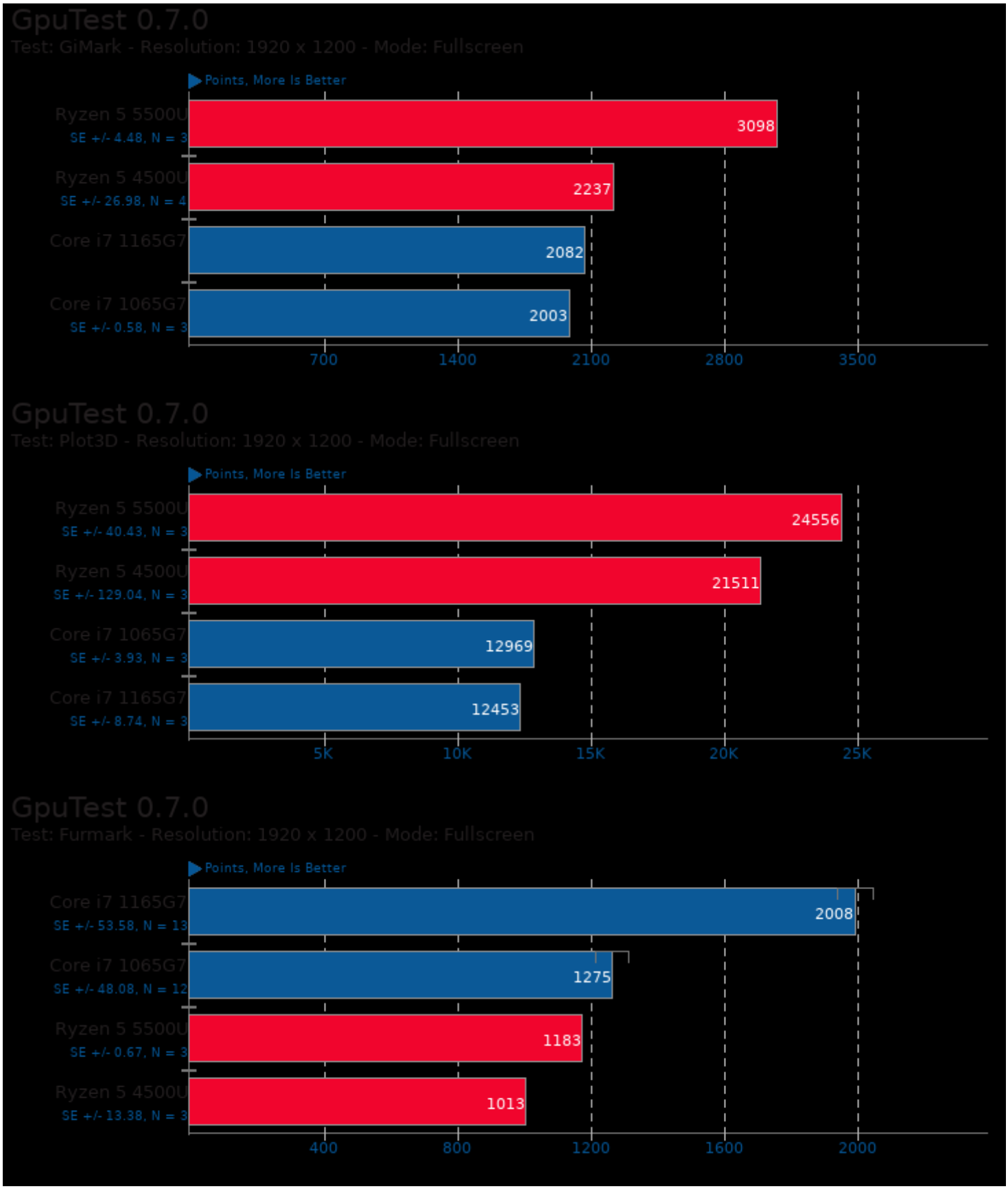

Xonotic 0.8.2
Resolution: 1920 x 1200 - Effects Quality: Ultra
Frames Per Second, More Is Better
Core i7 1165G7
SE +/- 0.62, N = 3
MIN: 90 / MAX: 288
187.73
Ryzen 5 5500U
SE +/- 0.60, N = 3
MIN: 114 / MAX: 258
173.61
Core i7 1065G7
SE +/- 0.31, N = 3
MIN: 72 / MAX: 224
136.06
Ryzen 5 4500U
SE +/- 1.76, N = 3
MIN: 83 / MAX: 259
134.33
40
80
120
160
200
Xonotic 0.8.2
Resolution: 1920 x 1200 - Effects Quality: Ultimate
Frames Per Second, More Is Better
Core i7 1165G7
SE +/- 0.58, N = 3
MIN: 36 / MAX: 250
142.93
Ryzen 5 5500U
SE +/- 0.45, N = 3
MIN: 34 / MAX: 240
139.58
Core i7 1065G7
SE +/- 0.26, N = 3
MIN: 36 / MAX: 180
104.94
Ryzen 5 4500U
SE +/- 0.51, N = 3
MIN: 33 / MAX: 218
100.93
30
60
90
120
150
yquake2 7.45
Renderer: OpenGL 3.x - Resolution: 1920 x 1080
Frames Per Second, More Is Better
Core i7 1165G7
SE +/- 0.49, N = 3
728.1
Ryzen 5 5500U
SE +/- 8.12, N = 3
679.8
Ryzen 5 4500U
SE +/- 13.85, N = 12
567.3
Core i7 1065G7
SE +/- 2.03, N = 3
534.4
160
320
480
640
800
1. (CC) gcc options: -lm -ldl -rdynamic -shared -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mfp

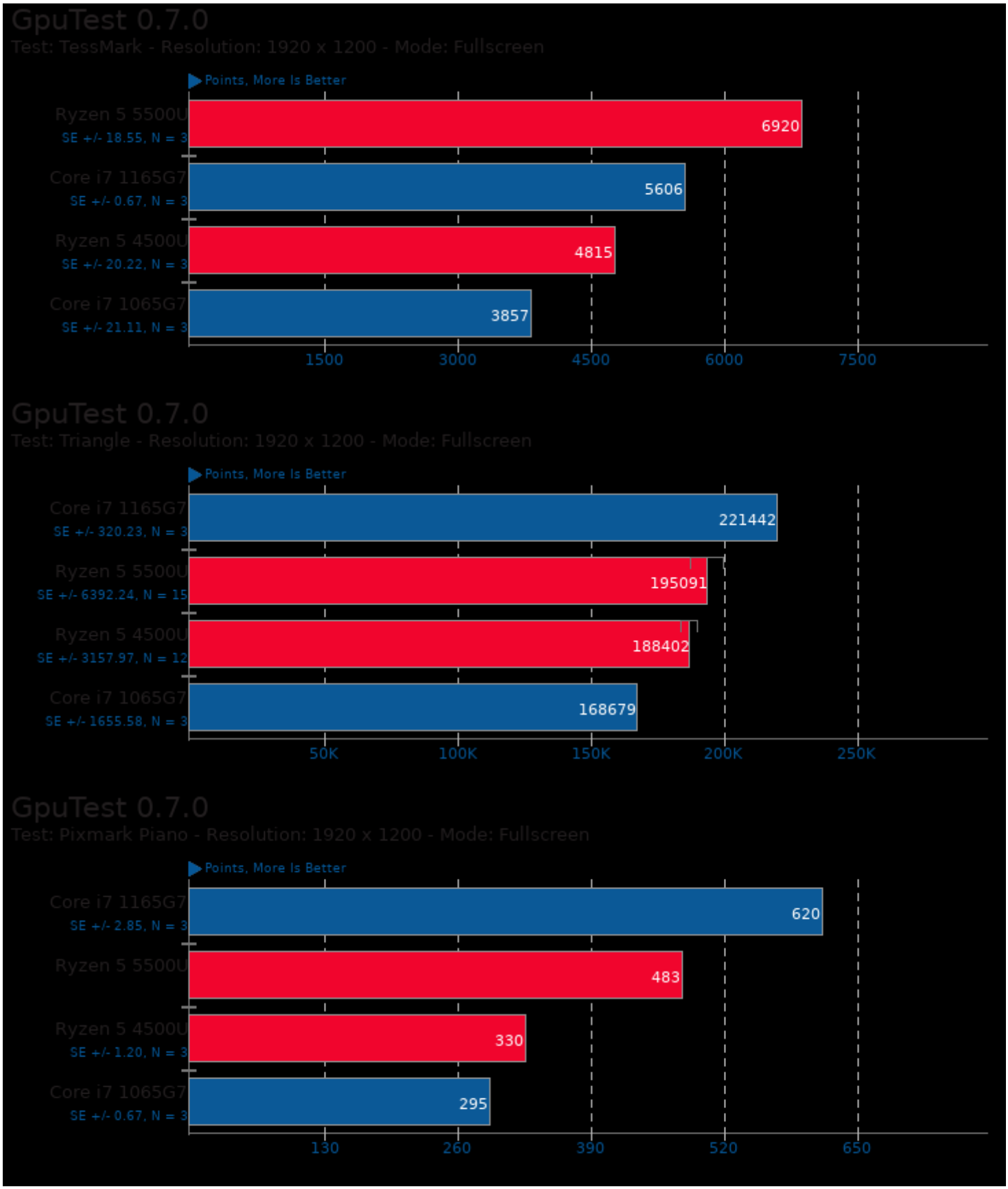

GLmark2 2020.04
Resolution: 1920 x 1200
Score, More Is Better
Ryzen 5 5500U
2553
Ryzen 5 4500U
1960
Core i7 1065G7
901
Core i7 1165G7
821
500
1000
1500
2000
2500
ParaView 5.9
Test: Many Spheres - Resolution: 1920 x 1200
Frames / Sec, More Is Better
Core i7 1165G7
SE +/- 0.04, N = 3
8.18
Ryzen 5 4500U
SE +/- 0.05, N = 3
8.01
Core i7 1065G7
SE +/- 0.02, N = 3
5.44
2
4
6
8
10
ParaView 5.9
Test: Many Spheres - Resolution: 1920 x 1200
MiPolys / Sec, More Is Better
Core i7 1165G7
SE +/- 3.88, N = 3
820.45
Ryzen 5 4500U
SE +/- 4.99, N = 3
803.32
Core i7 1065G7
SE +/- 2.22, N = 3
545.37
200
400
600
800
1000

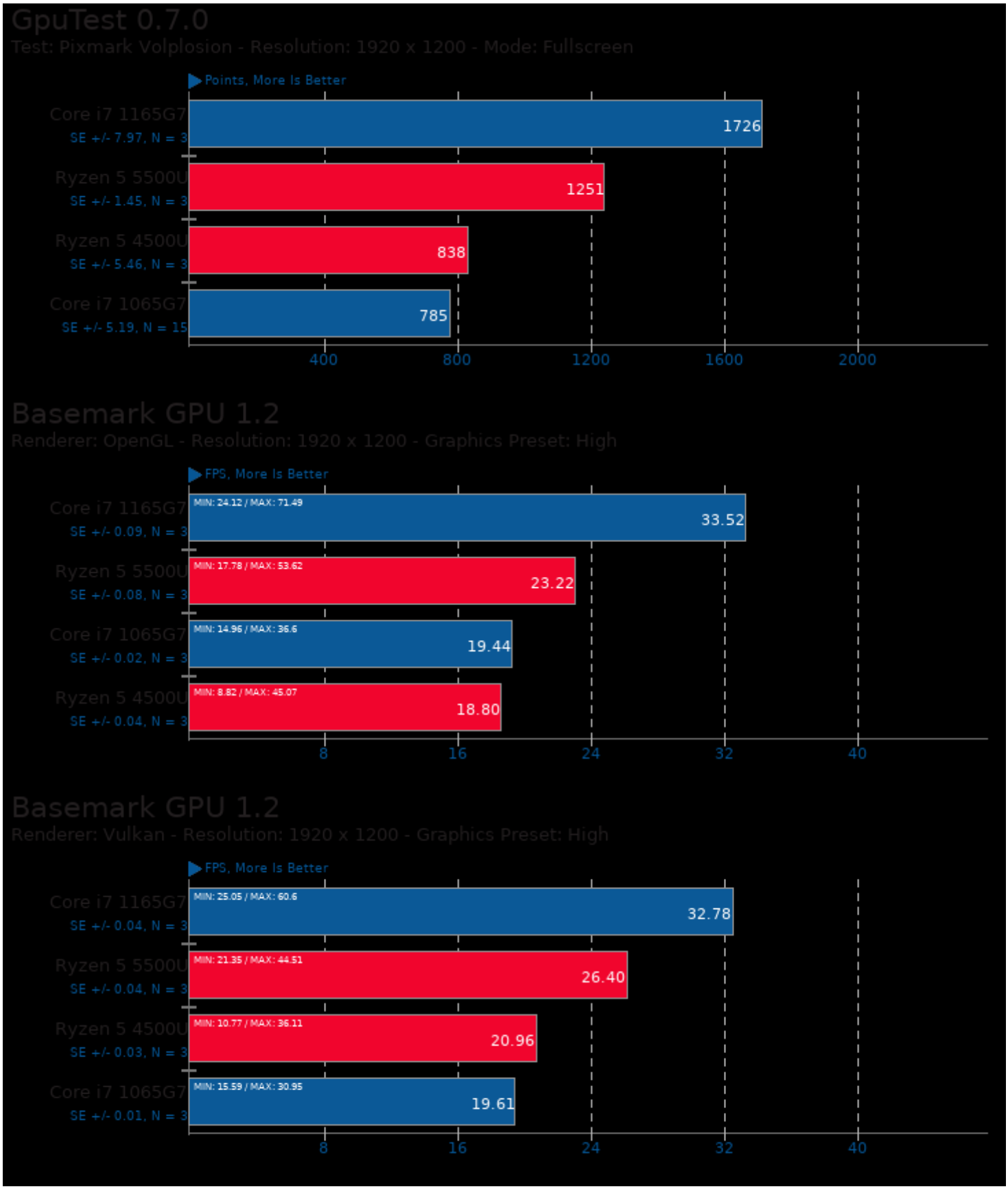

ParaView 5.9
Test: Wavelet Volume - Resolution: 1920 x 1200
Frames / Sec, More Is Better
Core i7 1165G7
SE +/- 0.52, N = 3
70.66
Ryzen 5 5500U
SE +/- 0.54, N = 15
69.72
Ryzen 5 4500U
SE +/- 0.57, N = 3
48.72
Core i7 1065G7
SE +/- 0.10, N = 3
48.13
16
32
48
64
80
ParaView 5.9
Test: Wavelet Volume - Resolution: 1920 x 1200
MiVoxels / Sec, More Is Better
Core i7 1165G7
SE +/- 8.26, N = 3
1130.58
Ryzen 5 5500U
SE +/- 8.65, N = 15
1115.47
Ryzen 5 4500U
SE +/- 9.09, N = 3
779.52
Core i7 1065G7
SE +/- 1.61, N = 3
770.11
200
400
600
800
1000
ParaView 5.9
Test: Wavelet Contour - Resolution: 1920 x 1200
Frames / Sec, More Is Better
Ryzen 5 5500U
SE +/- 0.20, N = 3
63.60
Core i7 1165G7
SE +/- 0.02, N = 3
60.02
Ryzen 5 4500U
SE +/- 0.48, N = 15
45.55
Core i7 1065G7
SE +/- 0.08, N = 3
43.39
14
28
42
56
70

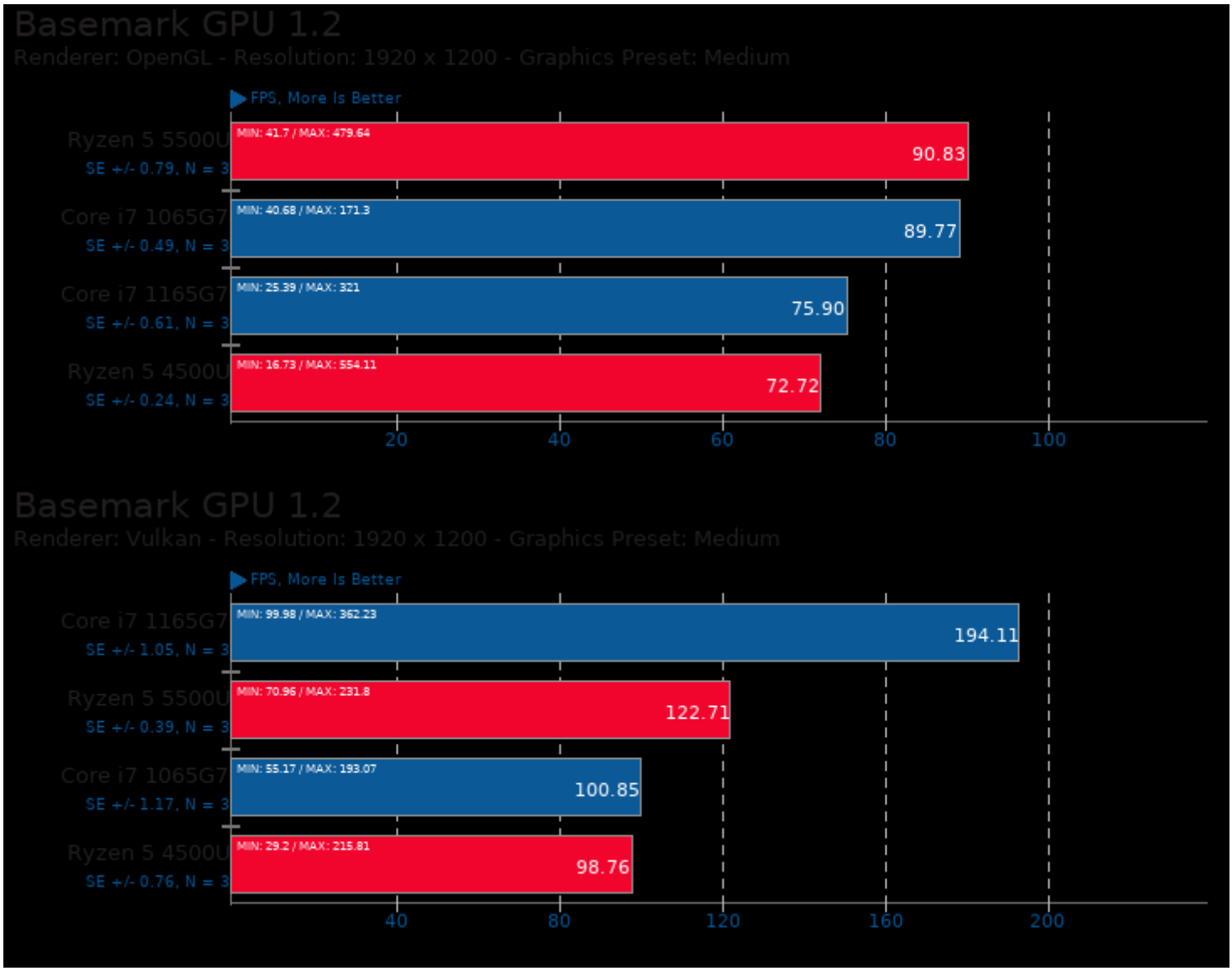

ParaView 5.9
Test: Wavelet Contour - Resolution: 1920 x 1200
MiPolys / Sec, More Is Better
Ryzen 5 5500U
SE +/- 2.09, N = 3
662.81
Core i7 1165G7
SE +/- 0.26, N = 3
625.52
Ryzen 5 4500U
SE +/- 5.03, N = 15
474.66
Core i7 1065G7
SE +/- 0.78, N = 3
452.15
140
280
420
560
700
Java 2D Microbenchmark 1.0
Rendering Test: Text Rendering
Units Per Second, More Is Better
Core i7 1165G7
SE +/- 253.41, N = 20
26593.12
6K
12K
18K
24K
30K
Java 2D Microbenchmark 1.0
Rendering Test: Image Rendering
Units Per Second, More Is Better
Core i7 1165G7
SE +/- 7522.57, N = 4
7149363.75
1.5M
3M
4.5M
6M
7.5M
Java 2D Microbenchmark 1.0
Rendering Test: Vector Graphics Rendering
Units Per Second, More Is Better
Core i7 1165G7
SE +/- 5434.72, N = 4
3096129.56
700K
1400K
2100K
2800K
3500K

Laptop Graphics

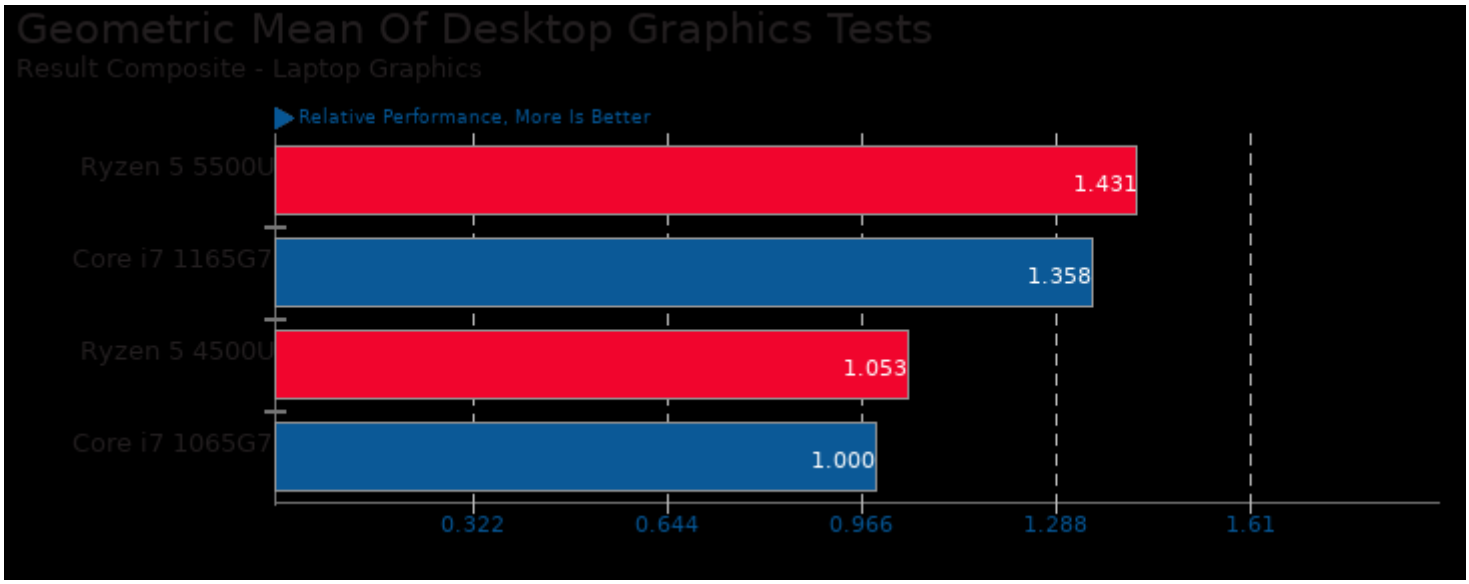



GpuTest 0.7.0
Test: TessMark - Resolution: 1920 x 1200 - Mode: Fullscreen
Points, More Is Better
Ryzen 5 5500U
SE +/- 18.55, N = 3
6920
Core i7 1165G7
SE +/- 0.67, N = 3
5606
Ryzen 5 4500U
SE +/- 20.22, N = 3
4815
Core i7 1065G7
SE +/- 21.11, N = 3
3857
1500
3000
4500
6000
7500
GpuTest 0.7.0
Test: Triangle - Resolution: 1920 x 1200 - Mode: Fullscreen
Points, More Is Better
Core i7 1165G7
SE +/- 320.23, N = 3
221442
Ryzen 5 5500U
SE +/- 6392.24, N = 15
195091
Ryzen 5 4500U
SE +/- 3157.97, N = 12
188402
Core i7 1065G7
SE +/- 1655.58, N = 3
168679
50K
100K
150K
200K
250K
GpuTest 0.7.0
Test: Pixmark Piano - Resolution: 1920 x 1200 - Mode: Fullscreen
Points, More Is Better
Core i7 1165G7
SE +/- 2.85, N = 3
620
Ryzen 5 5500U
483
Ryzen 5 4500U
SE +/- 1.20, N = 3
330
Core i7 1065G7
SE +/- 0.67, N = 3
295
130
260
390
520
650

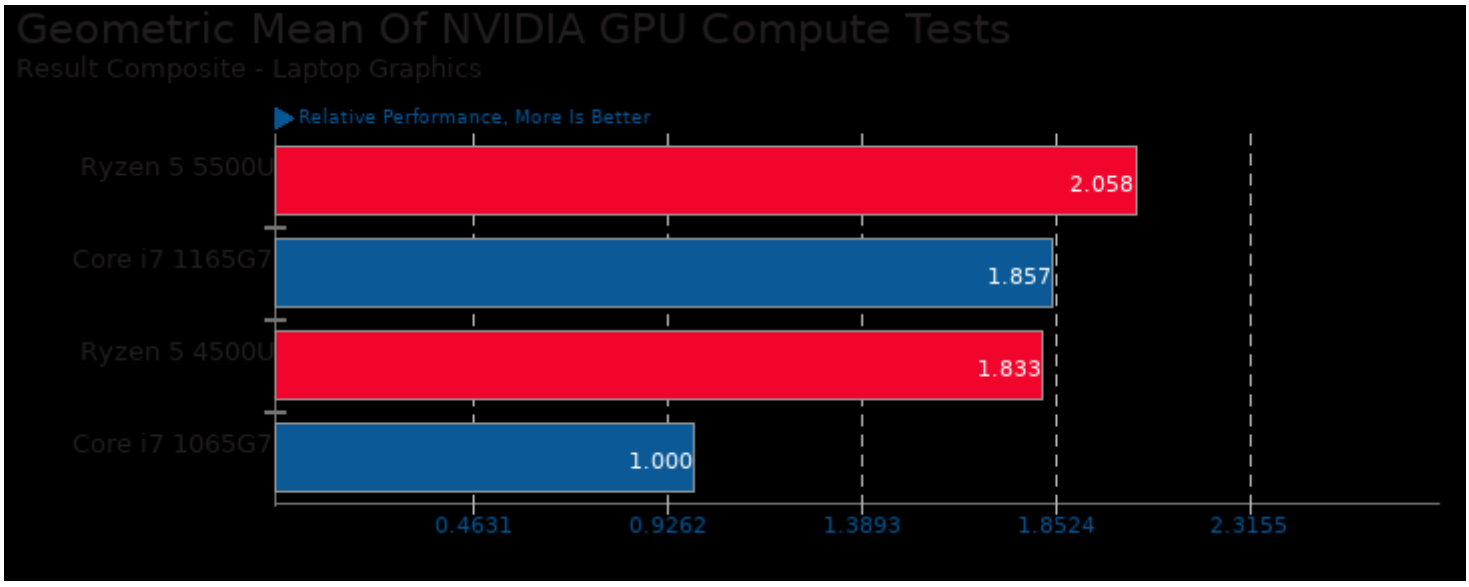

GpuTest 0.7.0
Test: Pixmark Volplosion - Resolution: 1920 x 1200 - Mode: Fullscreen
Points, More Is Better
Core i7 1165G7
SE +/- 7.97, N = 3
1726
Ryzen 5 5500U
SE +/- 1.45, N = 3
1251
Ryzen 5 4500U
SE +/- 5.46, N = 3
838
Core i7 1065G7
SE +/- 5.19, N = 15
785
400
800
1200
1600
2000
Basemark GPU 1.2
Renderer: OpenGL - Resolution: 1920 x 1200 - Graphics Preset: High
FPS, More Is Better
Core i7 1165G7
SE +/- 0.09, N = 3
MIN: 24.12 / MAX: 71.49
33.52
Ryzen 5 5500U
SE +/- 0.08, N = 3
MIN: 17.78 / MAX: 53.62
23.22
Core i7 1065G7
SE +/- 0.02, N = 3
MIN: 14.96 / MAX: 36.6
19.44
Ryzen 5 4500U
SE +/- 0.04, N = 3
MIN: 8.82 / MAX: 45.07
18.80
8
16
24
32
40
Basemark GPU 1.2
Renderer: Vulkan - Resolution: 1920 x 1200 - Graphics Preset: High
FPS, More Is Better
Core i7 1165G7
SE +/- 0.04, N = 3
MIN: 25.05 / MAX: 60.6
32.78
Ryzen 5 5500U
SE +/- 0.04, N = 3
MIN: 21.35 / MAX: 44.51
26.40
Ryzen 5 4500U
SE +/- 0.03, N = 3
MIN: 10.77 / MAX: 36.11
20.96
Core i7 1065G7
SE +/- 0.01, N = 3
MIN: 15.59 / MAX: 30.95
19.61
8
16
24
32
40


Basemark GPU 1.2
Renderer: OpenGL - Resolution: 1920 x 1200 - Graphics Preset: Medium
FPS, More Is Better
Ryzen 5 5500U
SE +/- 0.79, N = 3
MIN: 41.7 / MAX: 479.64
90.83
Core i7 1065G7
SE +/- 0.49, N = 3
MIN: 40.68 / MAX: 171.3
89.77
Core i7 1165G7
SE +/- 0.61, N = 3
MIN: 25.39 / MAX: 321
75.90
Ryzen 5 4500U
SE +/- 0.24, N = 3
MIN: 16.73 / MAX: 554.11
72.72
20
40
60
80
100
Basemark GPU 1.2
Renderer: Vulkan - Resolution: 1920 x 1200 - Graphics Preset: Medium
FPS, More Is Better
Core i7 1165G7
SE +/- 1.05, N = 3
MIN: 99.98 / MAX: 362.23
194.11
Ryzen 5 5500U
SE +/- 0.39, N = 3
MIN: 70.96 / MAX: 231.8
122.71
Core i7 1065G7
SE +/- 1.17, N = 3
MIN: 55.17 / MAX: 193.07
100.85
Ryzen 5 4500U
SE +/- 0.76, N = 3
MIN: 29.2 / MAX: 215.81
98.76
40
80
120
160
200

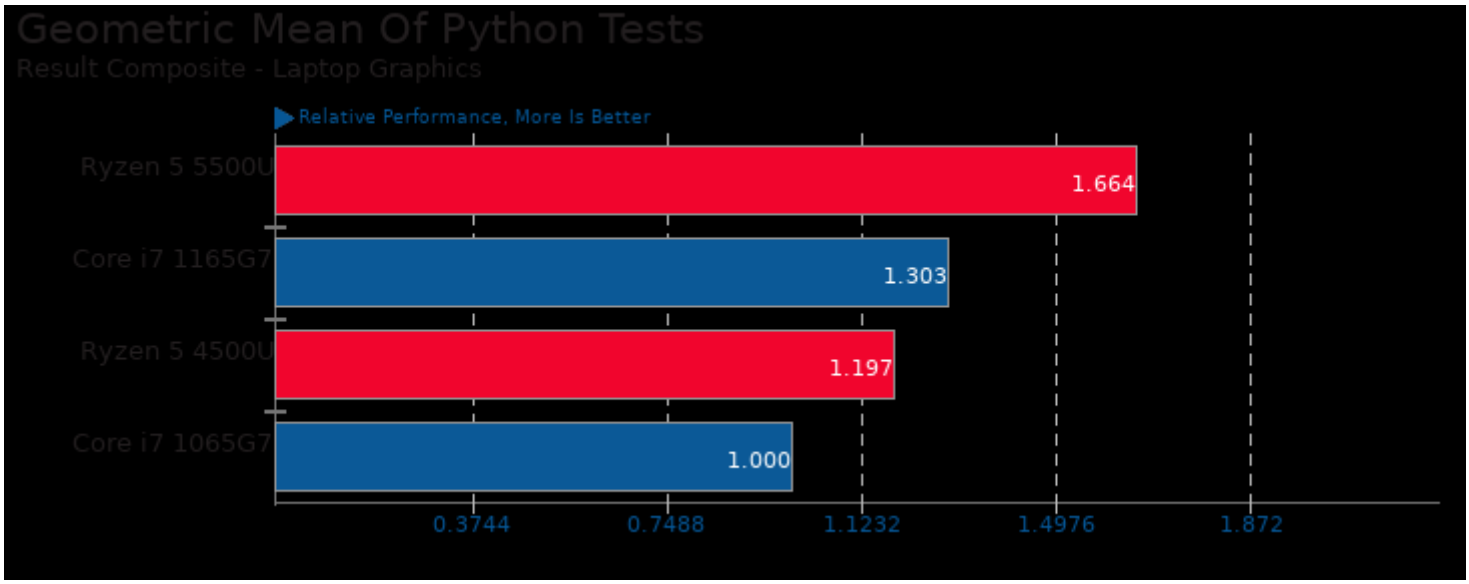
These geometric means are based upon test groupings / test suites for this result file.



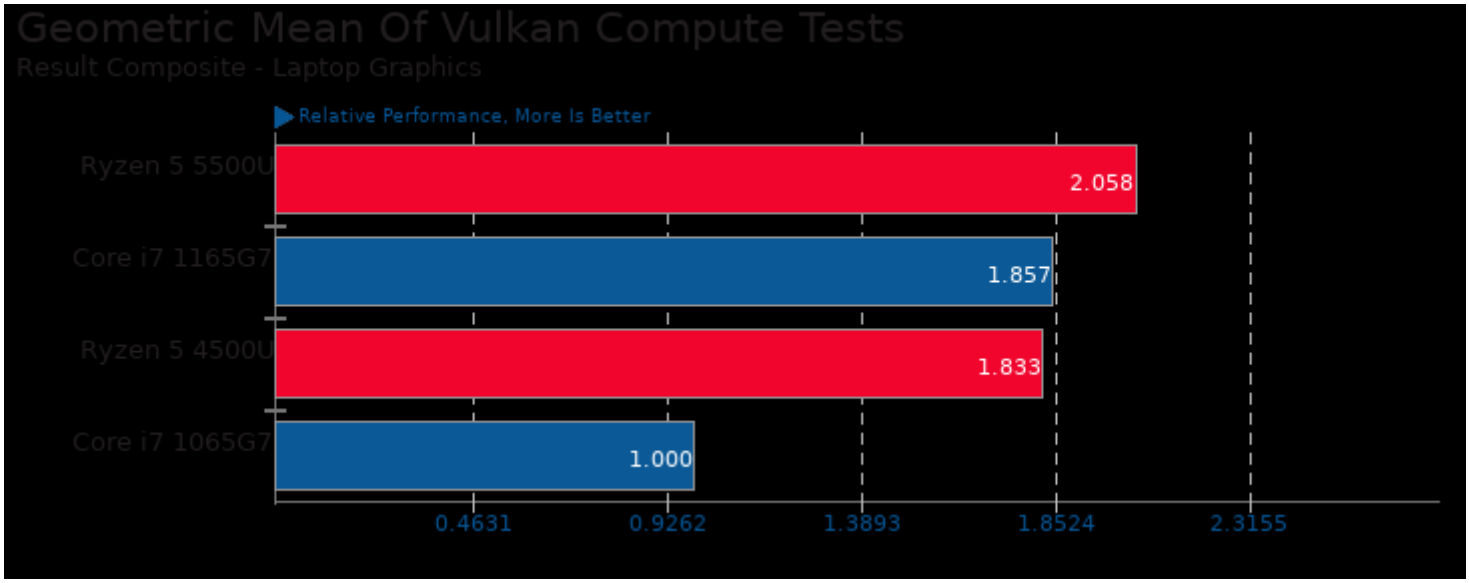
Geometric mean based upon tests: pts/xonotic, pts/tesseract, pts/paraview and pts/glmark2



Geometric mean based upon tests: pts/vkresample, pts/realsr-ncnn and pts/waifu2x-ncnn



Geometric mean based upon tests: pts/glmark2 and pts/paraview



Geometric mean based upon tests: pts/vkresample, pts/realsr-ncnn and pts/waifu2x-ncnn

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 04:44.