



## 2021 Laptops

AMD Ryzen 5 4500U testing with a LENOVO LNVNB161216 (EECN20WW BIOS) and AMD Renoir 512MB on Ubuntu 20.10 via the Phoronix Test Suite.

### Automated Executive Summary

*Dell XPS i7-1165G7 had the most wins, coming in first place for 51% of the tests.*

*Based on the geometric mean of all complete results, the fastest (Dell XPS i7-1165G7) was 1.207x the speed of the slowest (Dell XPS i7-1065G7). Lenovo IdeaPad Ryzen 5 4500U was 0.966x the speed of Dell XPS i7-1165G7 and Dell XPS i7-1065G7 was 0.858x the speed of Lenovo IdeaPad Ryzen 5 4500U.*

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

*LeelaChessZero (Backend: BLAS) at 3.023x*

*CLOMP (Static OMP Speedup) at 3x*

*TensorFlow Lite (Model: SqueezeNet) at 2.146x*

*TensorFlow Lite (Model: Inception V4) at 2.134x*

*TensorFlow Lite (Model: Inception ResNet V2) at 2.109x*

*TensorFlow Lite (Model: Mobilenet Float) at 2.091x*

*TensorFlow Lite (Model: Mobilenet Quant) at 2.019x*

*ONNX Runtime (Model: super-resolution-10 - Device: OpenMP CPU) at 1.99x*

ASKAP (Test: tConvolve OpenMP - Gridding) at 1.942x  
GLmark2 (Resolution: 1920 x 1080) at 1.926x.

## Test Systems:

### Dell XPS 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 UHD 3GB (1300MHz), Audio: Realtek ALC289, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.8.0-41-generic (x86\_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9, Display Driver: intel, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 10.2.0, 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-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-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgc-n-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/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-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: 0x6e - Thermald 2.3  
Python Notes: Python 3.8.6  
Security Notes: itlb\_multihit: Not affected + I1tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre\_v1: Mitigation of usercopy/swaps barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx\_async\_abort: Not affected

### Dell XPS i7-1065G7

Processor: Intel Core i7-1065G7 @ 3.90GHz (4 Cores / 8 Threads), Motherboard: Dell 06CDVY (1.0.9 BIOS), Chipset: Intel Device 34ef, Memory: 16GB, Disk: Toshiba KBG40ZPZ512G NVMe 512GB, Graphics: Intel Iris Plus G7 3GB (1100MHz), Audio: Realtek ALC289, Network: Intel Killer Wi-Fi 6 AX1650i 160MHz

OS: Ubuntu 20.10, Kernel: 5.8.0-41-generic (x86\_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9, Display Driver: modesetting 1.20.9, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 10.2.0, 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-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-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgc-n-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/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-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: 0xa0 - Thermald 2.3  
Python Notes: Python 3.8.6  
Security Notes: itlb\_multihit: KVM: Mitigation of VMX disabled + I1tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre\_v1: Mitigation of usercopy/swaps barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx\_async\_abort: Not affected

### Lenovo IdeaPad 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 20.10, Kernel: 5.8.0-41-generic (x86\_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9, Display Driver: amd, OpenGL: 4.6 Mesa 21.1.0-devel (git-e014e3b 2021-01-31 groovy-oibaf-ppa) (LLVM 11.0.1), Vulkan: 1.2.145, Compiler: GCC 10.2.0, 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-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-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgc-n-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/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-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 ondemand (Boost: Enabled) - CPU Microcode: 0x8600102  
 Graphics Notes: GLAMOR  
 Python Notes: Python 3.8.6  
 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/swaps 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

	Dell XPS i7-1165G7	Dell XPS i7-1065G7	Lenovo IdeaPad Ryzen 5 4500U
<b>AI Benchmark Alpha - D.I.S (Score)</b>	570	<b>446</b>	<b>656</b>
Normalized	86.89%	67.99%	100%
<b>AI Benchmark Alpha - D.T.S (Score)</b>	<b>664</b>	<b>555</b>	600
Normalized	100%	83.58%	90.36%
<b>AI Benchmark Alpha - Device AI Score</b>	1234	<b>1001</b>	<b>1256</b>
Normalized	98.25%	79.7%	100%
<b>Appleseed - Disney Material (sec)</b>	719.883126	<b>895.914748</b>	<b>505.834716</b>
Normalized	70.27%	56.46%	100%
<b>Appleseed - Material Tester (sec)</b>	669.565215	<b>815.364357</b>	<b>518.750614</b>
Normalized	77.48%	63.62%	100%
<b>ASKAP - tConvolve MPI - Degriding</b>	<b>1469</b>	<b>950.742</b>	1357
Normalized	100%	64.73%	92.41%
Standard Deviation	0.6%	0.7%	0.7%
<b>ASKAP - tConvolve MPI - Gridding</b>	<b>1831</b>	1118	<b>1075</b>
Normalized	100%	61.08%	58.74%
Standard Deviation	0.8%	1.3%	0%
<b>ASKAP - tConvolve OpenMP - Gridding (Million Grid Points/sec)</b>	<b>1473</b>	1105	<b>758.564</b>
Normalized	100%	74.98%	51.48%
Standard Deviation	2.4%	0.4%	0%
<b>ASKAP - tConvolve OpenMP - Degriding (Million Grid Points/sec)</b>	<b>2218</b>	1733	<b>1485</b>
Normalized	100%	78.15%	66.95%
Standard Deviation	0.2%	8.5%	0.3%
<b>ASKAP - H.C.O (Iterations/sec)</b>	<b>190.746</b>	155.414	<b>130.322</b>
Normalized	100%	81.48%	68.32%
Standard Deviation	5.4%	8.2%	0.3%
<b>ASTC Encoder - Medium (sec)</b>	11.44	<b>14.20</b>	<b>8.77</b>
Normalized	76.66%	61.76%	100%

	Standard Deviation	3.5%	3.1%	0.4%
<b>ASTC Encoder - Thorough (sec)</b>		85.58	<b>105.94</b>	<b>58.83</b>
	Normalized	68.74%	55.53%	100%
	Standard Deviation	0.8%	1.7%	1.1%
<b>Basemark GPU - OpenGL - 1920 x 1080 - High (FPS)</b>		<b>33.51</b>	<b>19.78</b>	19.86
	Normalized	100%	59.03%	59.27%
	Standard Deviation	0.5%	3.1%	1.6%
<b>Basemark GPU - Vulkan - 1920 x 1080 - High (FPS)</b>		<b>30.71</b>	<b>19.31</b>	23.02
	Normalized	100%	62.88%	74.96%
	Standard Deviation	0.5%	0%	0.5%
<b>Basemark GPU - OpenGL - 1920 x 1080 - Medium (FPS)</b>		<b>74.93</b>	<b>93.46</b>	80.82
	Normalized	80.17%	100%	86.48%
	Standard Deviation	0.2%	1.2%	1.6%
<b>Basemark GPU - Vulkan - 1920 x 1080 - Medium (FPS)</b>		<b>167.80</b>	<b>96.30</b>	110.07
	Normalized	100%	57.39%	65.6%
	Standard Deviation	2.1%	2.5%	0.1%
<b>Blender - BMW27 - CPU-Only (sec)</b>		514.42	<b>630.73</b>	<b>394.65</b>
	Normalized	76.72%	62.57%	100%
	Standard Deviation	0.1%	0.2%	0.7%
<b>Build2 - Time To Compile (sec)</b>		397.680	<b>526.245</b>	<b>337.675</b>
	Normalized	84.91%	64.17%	100%
	Standard Deviation	0.4%	0.2%	1.6%
<b>CLOMP - Static OMP Speedup (Speedup)</b>		<b>5.1</b>	2.5	<b>1.7</b>
	Normalized	100%	49.02%	33.33%
	Standard Deviation	2%	0%	0%
<b>Coremark - CoreMark Size 666 - I.P.S (Iterations/Sec)</b>		123093	<b>96719</b>	<b>170880</b>
	Normalized	72.03%	56.6%	100%
	Standard Deviation	2.3%	1.6%	0.2%
<b>Darktable - Boat - CPU-only (sec)</b>		<b>15.308</b>	<b>19.136</b>	15.737
	Normalized	100%	80%	97.27%
	Standard Deviation	2.5%	2.2%	0.3%
<b>Darktable - Masskrug - CPU-only (sec)</b>		<b>8.786</b>	<b>11.372</b>	8.998
	Normalized	100%	77.26%	97.64%
	Standard Deviation	5.5%	3.3%	0.1%
<b>Darktable - Server Rack - CPU-only (sec)</b>		<b>0.197</b>	0.228	<b>0.271</b>
	Normalized	100%	86.4%	72.69%
	Standard Deviation	0.6%	1.9%	3.2%
<b>Darktable - Server Room - CPU-only (sec)</b>		6.715	<b>8.324</b>	<b>6.309</b>
	Normalized	93.95%	75.79%	100%
	Standard Deviation	8.3%	7.6%	0.4%
<b>dav1d - Chimera 1080p (FPS)</b>		<b>319.30</b>	258.91	<b>249.72</b>
	Normalized	100%	81.09%	78.21%
	Standard Deviation	2.3%	2.5%	0.7%
<b>dav1d - Summer Nature 4K (FPS)</b>		75.34	<b>62.26</b>	<b>77.87</b>
	Normalized	96.75%	79.95%	100%
	Standard Deviation	2.4%	3.1%	0.4%
<b>dav1d - S.N.1 (FPS)</b>		<b>311.23</b>	248.14	<b>240.08</b>
	Normalized	100%	79.73%	77.14%
	Standard Deviation	6.1%	4%	0%

dav1d - C.1.1.b (FPS)	65.89	<b>53.47</b>	<b>79.42</b>
Normalized	82.96%	67.33%	100%
Standard Deviation	2.9%	0.9%	0.2%
DeepSpeech - CPU (sec)	<b>61.41240</b>	68.45577	<b>74.35980</b>
Normalized	100%	89.71%	82.59%
Standard Deviation	1%	0.1%	0.4%
Dolfyn - C.F.D (sec)	<b>16.057</b>	18.735	<b>18.760</b>
Normalized	100%	85.71%	85.59%
Standard Deviation	1%	1.4%	0.3%
ET: Legacy - Renderer2 - 1920 x 1080 (FPS)	<b>137.1</b>	120.1	<b>114.7</b>
Normalized	100%	87.6%	83.66%
Standard Deviation	0.7%	0.9%	2%
Etcpak - ETC2 (Mpx/s)	<b>206.959</b>	171.480	<b>167.493</b>
Normalized	100%	82.86%	80.93%
Standard Deviation	0.6%	0.1%	0%
Etcpak - ETC1 + Dithering (Mpx/s)	<b>339.046</b>	283.210	<b>263.644</b>
Normalized	100%	83.53%	77.76%
Standard Deviation	0.2%	0%	0.1%
FinanceBench - Repo OpenMP (ms)	77497	<b>99330</b>	<b>57117</b>
Normalized	73.7%	57.5%	100%
Standard Deviation	0.5%	1.5%	0.5%
FinanceBench - Bonds OpenMP (ms)	108402	<b>137184</b>	<b>82756</b>
Normalized	76.34%	60.32%	100%
Standard Deviation	0.4%	0.6%	0.5%
Gcrypt Library (sec)	<b>194.734</b>	<b>235.228</b>	217.982
Normalized	100%	82.79%	89.33%
Standard Deviation	0.5%	0.6%	0.1%
Git - T.T.C.C.G.C (sec)	<b>46.681</b>	55.278	<b>55.364</b>
Normalized	100%	84.45%	84.32%
Standard Deviation	1.7%	0.1%	0.1%
GLmark2 - 1920 x 1080 (Score)	<b>886</b>	960	<b>1706</b>
Normalized	51.93%	56.27%	100%
GnuPG - 2.7.S.F.E (sec)	<b>58.531</b>	68.918	<b>71.862</b>
Normalized	100%	84.93%	81.45%
Standard Deviation	1.8%	2.5%	1.6%
Google SynthMark - VoiceMark_100 (Voices)	<b>932.070</b>	747.124	<b>655.630</b>
Normalized	100%	80.16%	70.34%
Standard Deviation	0.6%	0.5%	0.1%
Hugin - P.P.A.S.T (sec)	69.530	<b>83.985</b>	<b>64.830</b>
Normalized	93.24%	77.19%	100%
Standard Deviation	1.2%	1.4%	0.3%
IndigoBench - CPU - Bedroom (M samples/s)	0.528	<b>0.457</b>	<b>0.726</b>
Normalized	72.73%	62.95%	100%
Standard Deviation	0.1%	0.6%	1.3%
IndigoBench - CPU - Supercar (M samples/s)	1.215	<b>1.033</b>	<b>1.558</b>
Normalized	77.98%	66.3%	100%
Standard Deviation	0.3%	1.4%	1.1%
Intel Open Image Denoise - Memorial (Images / Sec)	<b>6.09</b>	4.67	<b>4.38</b>
Normalized	100%	76.68%	71.92%
Standard Deviation	3%	2.4%	0.9%
LAMMPS Molecular Dynamics Simulator - Rhodopsin Protein (ns/day)	2.823	<b>2.121</b>	<b>3.965</b>
Normalized	71.2%	53.49%	100%
Standard Deviation	9%	5.8%	0.3%

<b>LeelaChessZero - BLAS (Nodes/s)</b>	<b>130</b>	<b>393</b>	317
Normalized	33.08%	100%	80.66%
Standard Deviation	0.9%	3.3%	3.1%
<b>LeelaChessZero - Eigen (Nodes/s)</b>	<b>531</b>	<b>362</b>	517
Normalized	100%	68.17%	97.36%
Standard Deviation		1.1%	2.4%
<b>libavif avifenc - 2 (sec)</b>	130.317	<b>164.139</b>	<b>94.542</b>
Normalized	72.55%	57.6%	100%
Standard Deviation	0.6%	0.2%	0.4%
<b>libavif avifenc - 8 (sec)</b>	7.164	<b>9.036</b>	<b>6.811</b>
Normalized	95.07%	75.38%	100%
Standard Deviation	5%	4.3%	0.2%
<b>libavif avifenc - 10 (sec)</b>	6.293	<b>7.684</b>	<b>6.243</b>
Normalized	99.21%	81.25%	100%
Standard Deviation	3.9%	4.7%	0.2%
<b>libjpeg-turbo tjbenc - D.T (Megapixels/sec)</b>	<b>216.764316</b>	<b>178.795300</b>	201.655602
Normalized	100%	82.48%	93.03%
Standard Deviation	0.1%	0.4%	0.1%
<b>LibRaw - P.P.B (Mpix/sec)</b>	26.47	<b>22.51</b>	<b>27.12</b>
Normalized	97.6%	83%	100%
Standard Deviation	6.6%	1.5%	0.3%
<b>LibreOffice - 2.D.T.P (sec)</b>	<b>5.450</b>	6.715	<b>7.882</b>
Normalized	100%	81.16%	69.14%
Standard Deviation	2.5%	4.2%	3.8%
<b>librsvg - SVG Files To PNG (sec)</b>	<b>17.108</b>	21.205	<b>29.131</b>
Normalized	100%	80.68%	58.73%
Standard Deviation	0.4%	0.6%	0.4%
<b>LuxCoreRender - DLSC (M samples/sec)</b>	0.56	<b>0.44</b>	<b>0.72</b>
Normalized	77.78%	61.11%	100%
Standard Deviation	2.3%	2.5%	2.1%
<b>LuxCoreRender - R.C.a.P (M samples/sec)</b>	0.60	<b>0.48</b>	<b>0.82</b>
Normalized	73.17%	58.54%	100%
Standard Deviation	2.2%	2.5%	0.7%
<b>Mobile Neural Network - SqueezeNetV1.0</b>	8.296	<b>9.829</b>	<b>7.540</b>
Normalized	90.89%	76.71%	100%
Standard Deviation	0.7%	2.3%	2.5%
<b>Mobile Neural Network - resnet-v2-50 (ms)</b>	44.502	<b>52.552</b>	<b>37.584</b>
Normalized	84.45%	71.52%	100%
Standard Deviation	0.8%	3.3%	1.1%
<b>Mobile Neural Network - MobileNetV2_224</b>	4.689	<b>5.481</b>	<b>4.454</b>
Normalized	94.99%	81.26%	100%
Standard Deviation	0.2%	5.6%	3.3%
<b>Mobile Neural Network - mobilenet-v1-1.0</b>	5.799	<b>6.978</b>	<b>4.577</b>
Normalized	78.93%	65.59%	100%
Standard Deviation	0.2%	4.9%	1.6%
<b>Mobile Neural Network - inception-v3 (ms)</b>	60.633	<b>71.769</b>	<b>38.519</b>
Normalized	63.53%	53.67%	100%
Standard Deviation	1.7%	3.5%	1.3%
<b>NCNN - CPU - mobilenet (ms)</b>	30.36	<b>34.20</b>	<b>28.24</b>
Normalized	93.02%	82.57%	100%
Standard Deviation	0.4%	0.8%	0.2%
<b>NCNN - CPU-v2-v2 - mobilenet-v2 (ms)</b>	<b>7.25</b>	7.99	<b>8.03</b>
Normalized	100%	90.74%	90.29%
Standard Deviation	18.8%	24.2%	2.4%
<b>NCNN - CPU-v3-v3 - mobilenet-v3 (ms)</b>	<b>6.45</b>	<b>7.00</b>	6.89

	Normalized	100%	92.14%	93.61%
	Standard Deviation	22.7%	23.7%	2.2%
<b>NCNN - CPU - shufflenet-v2 (ms)</b>		9.95	<b>10.31</b>	<b>8.45</b>
	Normalized	84.92%	81.96%	100%
	Standard Deviation	0.9%	25.1%	5.4%
<b>NCNN - CPU - mnasnet (ms)</b>		<b>7.86</b>	7.53	<b>6.20</b>
	Normalized	78.88%	82.34%	100%
	Standard Deviation	1.3%	23.2%	3.8%
<b>NCNN - CPU - efficientnet-b0 (ms)</b>		11.42	<b>12.72</b>	<b>11.41</b>
	Normalized	99.91%	89.7%	100%
	Standard Deviation	0.6%	0.7%	3.5%
<b>NCNN - CPU - blazeface (ms)</b>		2.61	<b>3.12</b>	<b>2.44</b>
	Normalized	93.49%	78.21%	100%
	Standard Deviation	0.6%	3.4%	11.4%
<b>NCNN - CPU - googlenet (ms)</b>		<b>23.10</b>	<b>26.33</b>	26.10
	Normalized	100%	87.73%	88.51%
	Standard Deviation	0.2%	3.7%	1.3%
<b>NCNN - CPU - vgg16 (ms)</b>		<b>67.03</b>	73.80	<b>108.89</b>
	Normalized	100%	90.83%	61.56%
	Standard Deviation	0.3%	4.1%	0.3%
<b>NCNN - CPU - resnet18 (ms)</b>		<b>20.45</b>	23.38	<b>24.75</b>
	Normalized	100%	87.47%	82.63%
	Standard Deviation	0%	5.1%	0.9%
<b>NCNN - CPU - alexnet (ms)</b>		<b>17.34</b>	<b>20.25</b>	17.78
	Normalized	100%	85.63%	97.53%
	Standard Deviation	0.2%	4.2%	1.5%
<b>NCNN - CPU - resnet50 (ms)</b>		<b>48.48</b>	<b>54.44</b>	50.06
	Normalized	100%	89.05%	96.84%
	Standard Deviation	0.1%	3.6%	1.3%
<b>NCNN - CPU - yolov4-tiny (ms)</b>		<b>39.32</b>	<b>45.00</b>	43.69
	Normalized	100%	87.38%	90%
	Standard Deviation	0.4%	0.7%	1.2%
<b>NCNN - CPU - squeezenet_ssd (ms)</b>		<b>32.63</b>	37.76	<b>38.74</b>
	Normalized	100%	86.41%	84.23%
	Standard Deviation	0.2%	2%	2.6%
<b>NCNN - CPU - regnety_400m (ms)</b>		17.72	<b>19.18</b>	<b>14.86</b>
	Normalized	83.86%	77.48%	100%
	Standard Deviation	0%	3%	5.3%
<b>NCNN - Vulkan GPU - mobilenet (ms)</b>		30.37	<b>33.46</b>	<b>28.24</b>
	Normalized	92.99%	84.4%	100%
	Standard Deviation	0%	0.1%	1.2%
<b>NCNN - Vulkan GPU-v2-v2 - mobilenet-v2</b>		<b>7.08</b>	7.74	<b>8.61</b>
	Normalized	100%	91.47%	82.23%
	Standard Deviation	17.1%	21.9%	17.3%
<b>NCNN - Vulkan GPU-v3-v3 - mobilenet-v3</b>		<b>6.45</b>	6.82	<b>8.85</b>
	Normalized	100%	94.57%	72.88%
	Standard Deviation	22.8%	21.5%	31.5%
<b>NCNN - Vulkan GPU - shufflenet-v2 (ms)</b>		<b>9.99</b>	10.26	<b>11.51</b>
	Normalized	100%	97.37%	86.79%
	Standard Deviation	1.2%	24.3%	43%
<b>NCNN - Vulkan GPU - mnasnet (ms)</b>		<b>7.86</b>	7.46	<b>6.94</b>
	Normalized	88.3%	93.03%	100%
	Standard Deviation	0.8%	22.8%	13.2%
<b>NCNN - Vulkan GPU - efficientnet-b0 (ms)</b>		11.42	<b>11.39</b>	<b>12.64</b>
	Normalized	99.74%	100%	90.11%

	Standard Deviation	1.1%	19.5%	20.7%
<b>NCNN - Vulkan GPU - blazeface (ms)</b>		<b>2.61</b>	2.76	<b>3.47</b>
	Normalized	100%	94.57%	75.22%
	Standard Deviation	0.4%	22%	56.4%
<b>NCNN - Vulkan GPU - googlenet (ms)</b>		<b>23.12</b>	23.23	<b>30.80</b>
	Normalized	100%	99.53%	75.06%
	Standard Deviation	0.2%	24%	23.5%
<b>NCNN - Vulkan GPU - vgg16 (ms)</b>		67.23	<b>66.71</b>	<b>108.33</b>
	Normalized	99.23%	100%	61.58%
	Standard Deviation	0.2%	13.7%	0.5%
<b>NCNN - Vulkan GPU - resnet18 (ms)</b>		20.51	<b>20.49</b>	<b>24.17</b>
	Normalized	99.9%	100%	84.77%
	Standard Deviation	0.3%	19.9%	1.1%
<b>NCNN - Vulkan GPU - alexnet (ms)</b>		<b>17.35</b>	<b>18.16</b>	17.73
	Normalized	100%	95.54%	97.86%
	Standard Deviation	0.2%	14.9%	1.2%
<b>NCNN - Vulkan GPU - resnet50 (ms)</b>		<b>48.59</b>	50.59	<b>50.92</b>
	Normalized	100%	96.05%	95.42%
	Standard Deviation	0.2%	11.7%	1.1%
<b>NCNN - Vulkan GPU - yolov4-tiny (ms)</b>		<b>39.28</b>	<b>44.14</b>	44.02
	Normalized	100%	88.99%	89.23%
	Standard Deviation	0.1%	1.1%	1.1%
<b>NCNN - Vulkan GPU - squeezenet_ssd (ms)</b>		<b>32.65</b>	37.22	<b>37.84</b>
	Normalized	100%	87.72%	86.28%
	Standard Deviation	0.1%	5.8%	2.5%
<b>NCNN - Vulkan GPU - regnety_400m (ms)</b>		17.79	<b>16.98</b>	<b>21.18</b>
	Normalized	95.45%	100%	80.17%
	Standard Deviation	0.2%	17.9%	49.5%
<b>Node.js V8 Web Tooling Benchmark (runs/s)</b>		<b>12.48</b>	10.32	<b>9.25</b>
	Normalized	100%	82.69%	74.12%
	Standard Deviation	1%	2.4%	0.6%
<b>OCRMyPDF - P.6.P.P.D (sec)</b>		42.501	<b>49.483</b>	<b>34.065</b>
	Normalized	80.15%	68.84%	100%
	Standard Deviation	2.4%	7.6%	0.5%
<b>ONNX Runtime - yolov4 - OpenMP CPU</b>		182	<b>156</b>	<b>203</b>
	(Inferences/min)			
	Normalized	89.66%	76.85%	100%
	Standard Deviation	0.6%	0.3%	0.4%
<b>ONNX Runtime - bert squad-10 - OpenMP</b>		283	<b>221</b>	<b>350</b>
	CPU (Inferences/min)			
	Normalized	80.86%	63.14%	100%
	Standard Deviation	0.6%	0.6%	0.1%
<b>ONNX Runtime - fcn-resnet101-11 - OpenMP</b>		30	<b>24</b>	<b>38</b>
	CPU (Inferences/min)			
	Normalized	78.95%	63.16%	100%
	Standard Deviation	0%	1.2%	2%
<b>ONNX Runtime - shufflenet-v2-10 - OpenMP</b>		10813	<b>8028</b>	<b>14025</b>
	CPU (Inferences/min)			
	Normalized	77.1%	57.24%	100%
	Standard Deviation	0.3%	2.4%	0.4%
<b>ONNX Runtime - super-resolution-10 -</b>		2121	<b>1472</b>	<b>2930</b>
	OpenMP CPU (Inferences/min)			
	Normalized	72.39%	50.24%	100%
	Standard Deviation	1%	1%	0.4%

<b>OpenVKL - vkIBenchmark (Items / Sec)</b>	<b>99</b>	70	<b>58</b>
Normalized	100%	70.71%	58.59%
Standard Deviation	0.6%		2%
<b>PyBench - T.F.A.T.T (Milliseconds)</b>	<b>744</b>	895	<b>1003</b>
Normalized	100%	83.13%	74.18%
Standard Deviation	0.5%	0.3%	0.2%
<b>QuantLib (MFLOPS)</b>	<b>3041</b>	2595	<b>2288</b>
Normalized	100%	85.34%	75.25%
Standard Deviation	1.4%	2.1%	2%
<b>RawTherapee - T.B.T (sec)</b>	96.511	<b>119.320</b>	<b>87.635</b>
Normalized	90.8%	73.45%	100%
Standard Deviation	0.8%	2.3%	0.7%
<b>RNNoise (sec)</b>	21.126	<b>25.998</b>	<b>19.685</b>
Normalized	93.18%	75.72%	100%
Standard Deviation	0.9%	2.3%	0.2%
<b>Selenium - Kraken - Firefox (ms)</b>	<b>1010</b>	<b>1257</b>	1255
Normalized	100%	80.37%	80.53%
Standard Deviation	0.3%	0.1%	1.7%
<b>Selenium - StyleBench - Firefox (Runs /</b>	<b>106</b>	90.9	<b>61.2</b>
Normalized	100%	85.75%	57.74%
Standard Deviation	1.9%	2.2%	0.8%
<b>Selenium - Jetstream 2 - Firefox (Score)</b>	<b>85.889</b>	72.712	<b>69.526</b>
Normalized	100%	84.66%	80.95%
Standard Deviation	1.9%	0.3%	0.4%
<b>Selenium - Speedometer - Firefox (Runs/min)</b>	<b>123</b>	98.3	<b>68.2</b>
Normalized	100%	79.92%	55.45%
Standard Deviation		1.2%	1.6%
<b>Selenium - Kraken - Google Chrome (ms)</b>	<b>662.3</b>	813.8	<b>859.6</b>
Normalized	100%	81.38%	77.05%
Standard Deviation	0.3%	0.6%	0.1%
<b>Selenium - PSPDFKit WASM - Firefox (Score)</b>	<b>2990</b>	<b>3383</b>	
Normalized	100%	88.38%	
Standard Deviation	0.5%	0.3%	
<b>Selenium - StyleBench - Google Chrome</b>	<b>43.3</b>	36.29	<b>32.11</b>
(Runs / Minute)			
Normalized	100%	83.81%	74.16%
Standard Deviation	0.7%	0.6%	0.6%
<b>Selenium - Jetstream 2 - Google Chrome</b>	<b>160.814</b>	136.951	<b>128.049</b>
(Score)			
Normalized	100%	85.16%	79.63%
Standard Deviation	1.5%	0.2%	0.3%
<b>Selenium - Speedometer - Google Chrome</b>	<b>159</b>	132.0	<b>108</b>
(Runs/min)			
Normalized	100%	83.02%	67.92%
Standard Deviation	0.4%	0.4%	0.5%
<b>Selenium - PSPDFKit WASM - Google</b>	<b>2965</b>	3366	<b>3822</b>
Chrome (Score)			
Normalized	100%	88.09%	77.58%
Standard Deviation	0.4%	0.4%	
<b>Selenium - W.i - Firefox (ms)</b>	<b>27.3</b>	<b>34.0</b>	29.3
Normalized	100%	80.29%	93.17%
Standard Deviation	1.3%	2.1%	0.3%
<b>Selenium - W.c - Firefox (ms)</b>	<b>335.5</b>	<b>434.4</b>	403.3
Normalized	100%	77.23%	83.19%
Standard Deviation	0.2%	0.3%	0.9%

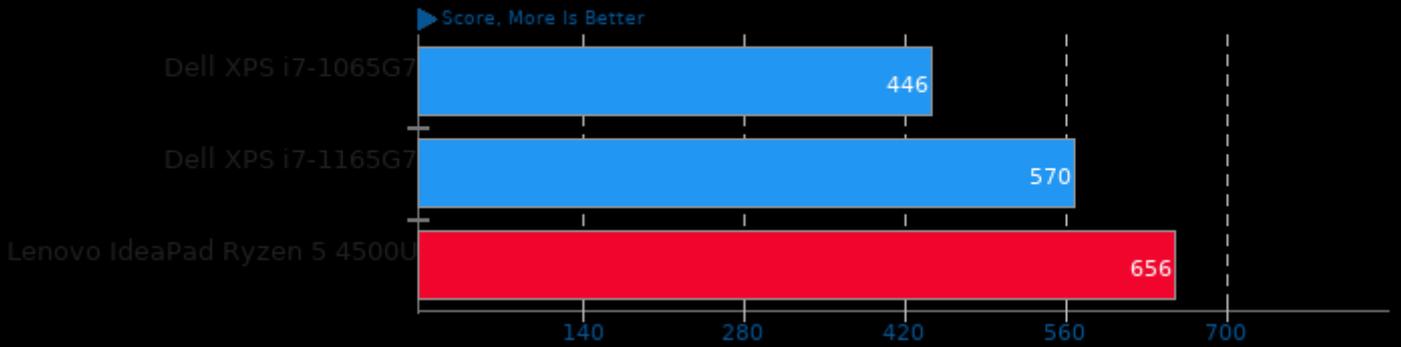
Selenium - W.i - Google Chrome (ms)	<b>28.2785</b>	<b>34.9953</b>	31.0163
Normalized	100%	80.81%	91.17%
Standard Deviation	0.7%	0.4%	0.4%
Selenium - W.c - Google Chrome (ms)	<b>280.9520</b>	<b>343.1483</b>	307.9107
Normalized	100%	81.87%	91.24%
Standard Deviation	0.1%	0.4%	0.1%
simdjson - Kostya (GB/s)	<b>0.80</b>	0.65	<b>0.61</b>
Normalized	100%	81.25%	76.25%
Standard Deviation	2.5%	2.3%	0%
simdjson - LargeRand (GB/s)	<b>0.56</b>	0.46	<b>0.39</b>
Normalized	100%	82.14%	69.64%
Standard Deviation	0%	1.2%	1.5%
simdjson - PartialTweets (GB/s)	<b>0.90</b>	0.72	<b>0.67</b>
Normalized	100%	80%	74.44%
Standard Deviation	1.1%	0.8%	0.9%
simdjson - DistinctUserID (GB/s)	<b>0.93</b>	0.74	<b>0.69</b>
Normalized	100%	79.57%	74.19%
Standard Deviation	0.6%	0.8%	0.8%
SQLite Speedtest - Timed Time - Size 1,000 (sec)	<b>50.791</b>	59.596	<b>69.831</b>
Normalized	100%	85.23%	72.73%
Standard Deviation	0.9%	0.8%	0.2%
Stockfish - Total Time (Nodes/s)	5850726	<b>4662448</b>	<b>8471187</b>
Normalized	69.07%	55.04%	100%
Standard Deviation	2.3%	1.5%	2.3%
SVT-AV1 - Enc Mode 4 - 1080p (FPS)	1.251	<b>0.963</b>	<b>1.365</b>
Normalized	91.65%	70.55%	100%
Standard Deviation	0.9%	2.4%	1.7%
SVT-AV1 - Enc Mode 8 - 1080p (FPS)	<b>11.098</b>	<b>8.325</b>	10.741
Normalized	100%	75.01%	96.78%
Standard Deviation	2.1%	2.3%	0.5%
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS)	81.43	<b>62.92</b>	<b>83.82</b>
Normalized	97.15%	75.07%	100%
Standard Deviation	5.5%	4.5%	2.5%
SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS)	59.79	<b>47.28</b>	<b>70.54</b>
Normalized	84.76%	67.03%	100%
Standard Deviation	4%	4.1%	0.9%
TensorFlow Lite - SqueezeNet (us)	548983	<b>687482</b>	<b>320290</b>
Normalized	58.34%	46.59%	100%
Standard Deviation	2.1%	2.4%	1.5%
TensorFlow Lite - Inception V4 (us)	7993567	<b>9967710</b>	<b>4670233</b>
Normalized	58.42%	46.85%	100%
Standard Deviation	0.1%	0.4%	0.9%
TensorFlow Lite - NASNet Mobile (us)	399519	<b>495267</b>	<b>258311</b>
Normalized	64.66%	52.16%	100%
Standard Deviation	1.1%	2%	0.7%
TensorFlow Lite - Mobilenet Float (us)	371353	<b>460115</b>	<b>220077</b>
Normalized	59.26%	47.83%	100%
Standard Deviation	1.3%	2%	0.7%
TensorFlow Lite - Mobilenet Quant (us)	366318	<b>454640</b>	<b>225202</b>
Normalized	61.48%	49.53%	100%
Standard Deviation	1.1%	1.9%	0.8%
TensorFlow Lite - I.R.V (us)	7254870	<b>9023843</b>	<b>4278000</b>
Normalized	58.97%	47.41%	100%
Standard Deviation	0.1%	0.2%	0.5%

<b>Tesseract - 1920 x 1080 (FPS)</b>	<b>143.7510</b>	<b>96.41743</b>	99.24678
Normalized	100%	67.07%	69.04%
Standard Deviation	0.7%	1.4%	0.6%
<b>Timed Godot Game Engine Compilation - Time To Compile (sec)</b>	404.050	<b>512.105</b>	<b>330.417</b>
Normalized	81.78%	64.52%	100%
Standard Deviation	0.2%	0.5%	0.8%
<b>Timed Linux Kernel Compilation - Time To Compile (sec)</b>	244.588	<b>314.308</b>	<b>198.303</b>
Normalized	81.08%	63.09%	100%
Standard Deviation	0.3%	0.4%	0.1%
<b>TNN - CPU - MobileNet v2 (ms)</b>	285.448	<b>338.630</b>	<b>251.302</b>
Normalized	88.04%	74.21%	100%
Standard Deviation	0.4%	0%	0.5%
<b>TNN - CPU - SqueezeNet v1.1 (ms)</b>	266.712	<b>324.289</b>	<b>255.022</b>
Normalized	95.62%	78.64%	100%
Standard Deviation	0.1%	0.1%	0%
<b>VKMark - 1920 x 1080 (VKMark Score)</b>	<b>971</b>	<b>1137</b>	1087
Normalized	85.4%	100%	95.6%
Standard Deviation	0.2%	0.2%	0.5%
<b>Warsow - 1920 x 1080 (FPS)</b>	<b>224.7</b>	<b>118.2</b>	134.2
Normalized	100%	52.6%	59.72%
Standard Deviation	2.4%	1.9%	2.1%
<b>WebP Image Encode - Quality 100 (Encode Time - sec)</b>	<b>2.057</b>	<b>2.488</b>	2.391
Normalized	100%	82.68%	86.03%
Standard Deviation	0.1%	0.1%	0.3%
<b>WebP Image Encode - Q.1.L (Encode Time - sec)</b>	<b>15.306</b>	18.804	<b>21.862</b>
Normalized	100%	81.4%	70.01%
Standard Deviation	0.1%	0.4%	0%
<b>WebP Image Encode - Q.1.H.C (Encode Time - sec)</b>	<b>6.298</b>	7.744	<b>7.937</b>
Normalized	100%	81.33%	79.35%
Standard Deviation	0.1%	0.8%	0.2%
<b>WebP Image Encode - Q.1.L.H.C (Encode Time - sec)</b>	<b>38.454</b>	<b>51.840</b>	47.263
Normalized	100%	74.18%	81.36%
Standard Deviation	2.1%	2.7%	0.7%
<b>WebP2 Image Encode - Default (sec)</b>	10.795	<b>13.642</b>	<b>7.476</b>
Normalized	69.25%	54.8%	100%
Standard Deviation	3.5%	6.1%	0.1%
<b>WebP2 Image Encode - Q.7.C.E.7 (sec)</b>	733.036	<b>921.072</b>	<b>487.506</b>
Normalized	66.51%	52.93%	100%
Standard Deviation	0.2%	0.2%	1.8%
<b>WebP2 Image Encode - Q.9.C.E.7 (sec)</b>	1310	<b>1627</b>	<b>901.018</b>
Normalized	68.78%	55.37%	100%
Standard Deviation	0.1%	2.4%	0.2%
<b>WebP2 Image Encode - Q.1.C.E.5 (sec)</b>	35.697	<b>43.977</b>	<b>27.543</b>
Normalized	77.16%	62.63%	100%
Standard Deviation	2.2%	2.5%	1.2%
<b>x265 - Bosphorus 4K (FPS)</b>	5.61	<b>4.37</b>	<b>6.97</b>
Normalized	80.49%	62.7%	100%
Standard Deviation	2%	0.8%	1%

<b>x265 - Bosphorus 1080p (FPS)</b>	25.89	<b>20.52</b>	<b>29.45</b>
Normalized	87.91%	69.68%	100%
Standard Deviation	4.3%	2.3%	0.1%
<b>Xonotic - 1920 x 1080 - Low (FPS)</b>	<b>332.2565398</b>	255.8864635	<b>243.4529298</b>
Normalized	100%	77.01%	73.27%
Standard Deviation	2.4%	0.4%	2.2%
<b>Xonotic - 1920 x 1080 - High (FPS)</b>	<b>201.3487595</b>	<b>148.7509506</b>	195.8782360
Normalized	100%	73.88%	97.28%
Standard Deviation	0.5%	2.4%	0.9%
<b>Xonotic - 1920 x 1080 - Ultra (FPS)</b>	166.1917034	<b>122.1499594</b>	<b>169.5670973</b>
Normalized	98.01%	72.04%	100%
Standard Deviation	0.3%	2%	1.6%
<b>Xonotic - 1920 x 1080 - Ultimate (FPS)</b>	127.6282332	<b>96.0822745</b>	<b>129.7981825</b>
Normalized	98.33%	74.02%	100%
Standard Deviation	0.6%	1.2%	0.6%
<b>XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)</b>	<b>59.289</b>	<b>70.340</b>	70.319
Normalized	100%	84.29%	84.31%
Standard Deviation	0.9%	2.1%	0.5%
<b>YafaRay - T.T.F.S.S (sec)</b>	465.515	<b>559.91</b>	<b>335.869</b>
Normalized	72.15%	59.99%	100%
Standard Deviation	0.3%	0.6%	0.2%
<b>Zstd Compression - 3 (MB/s)</b>	<b>4134</b>	3078	<b>2363</b>
Normalized	100%	74.47%	57.16%
Standard Deviation	0.4%	0.3%	0.8%
<b>Zstd Compression - 19 (MB/s)</b>	<b>22.7</b>	20.1	<b>16.1</b>
Normalized	100%	88.55%	70.93%
Standard Deviation	1%	0.3%	0%

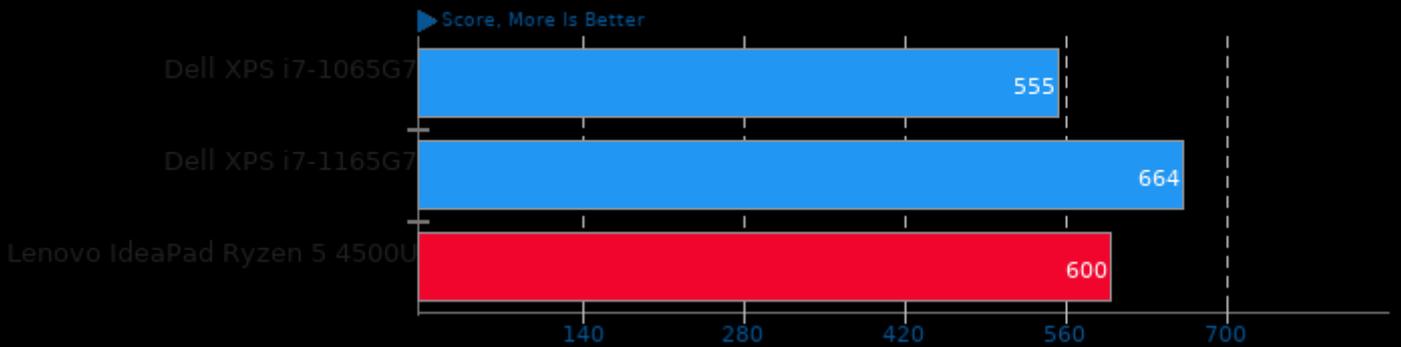
### AI Benchmark Alpha 0.1.2

Device Inference Score



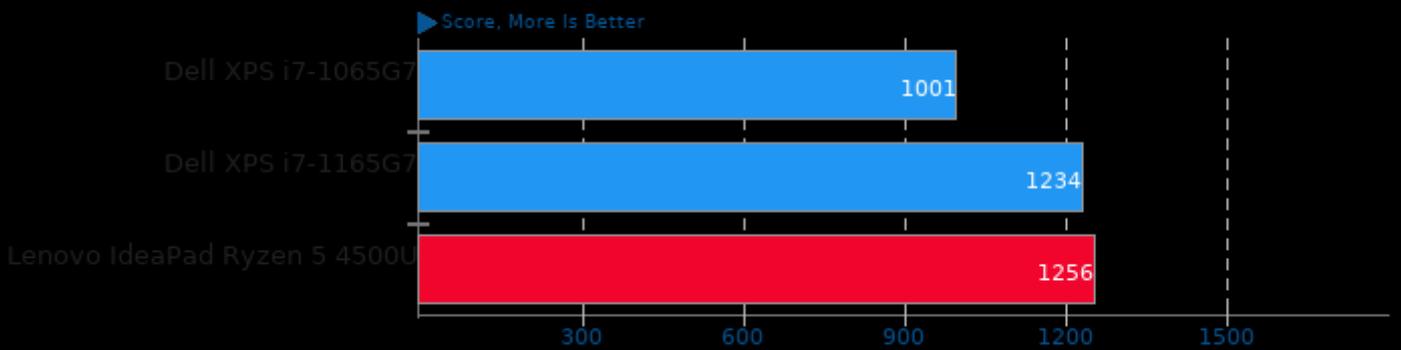
### AI Benchmark Alpha 0.1.2

Device Training Score



### AI Benchmark Alpha 0.1.2

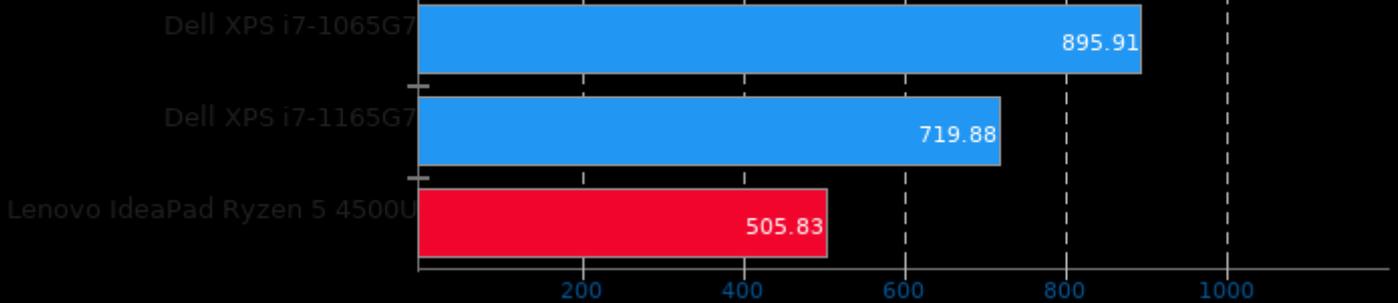
Device AI Score



### Appleseed 2.0 Beta

Scene: Disney Material

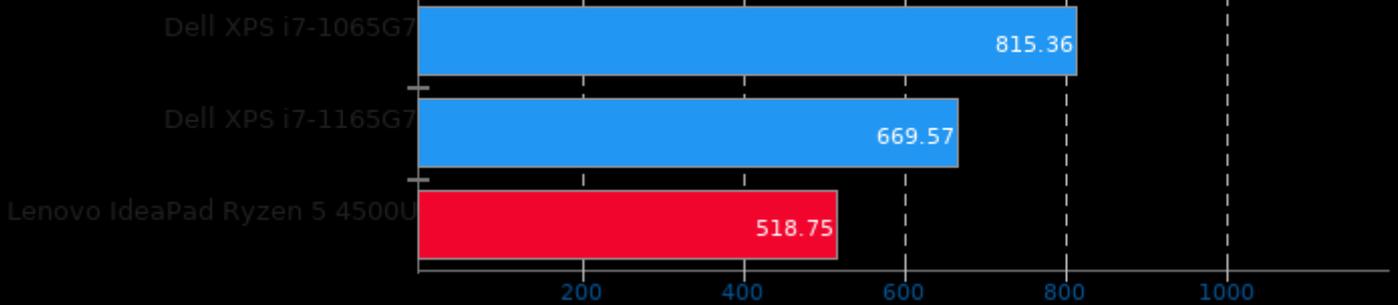
← Seconds, Fewer Is Better



### Appleseed 2.0 Beta

Scene: Material Tester

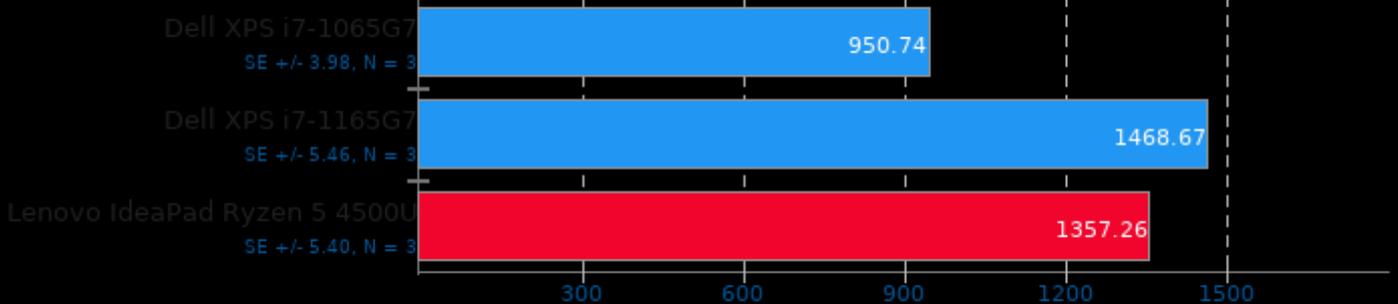
← Seconds, Fewer Is Better



### ASKAP 1.0

Test: tConvolve MPI - Degriding

► Mpix/sec, More Is Better



1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp

## ASKAP 1.0

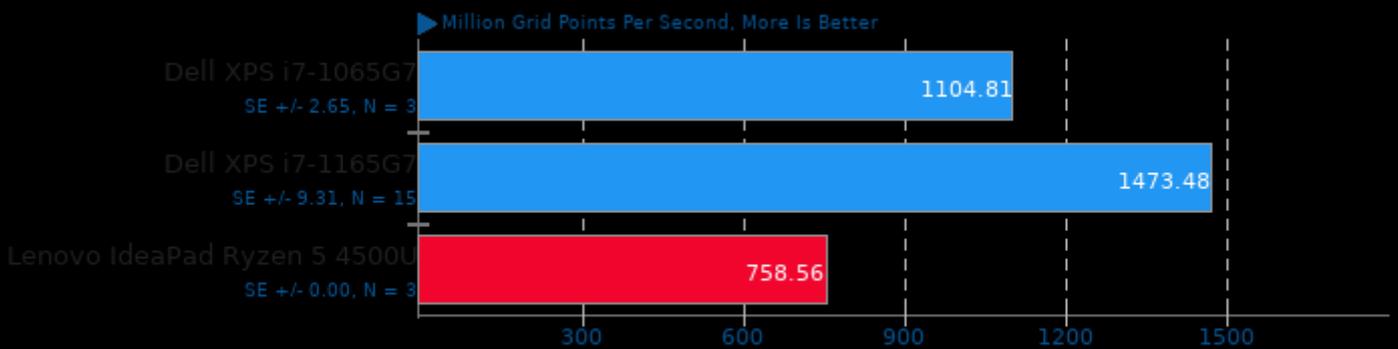
Test: tConvolve MPI - Gridding



1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp

## ASKAP 1.0

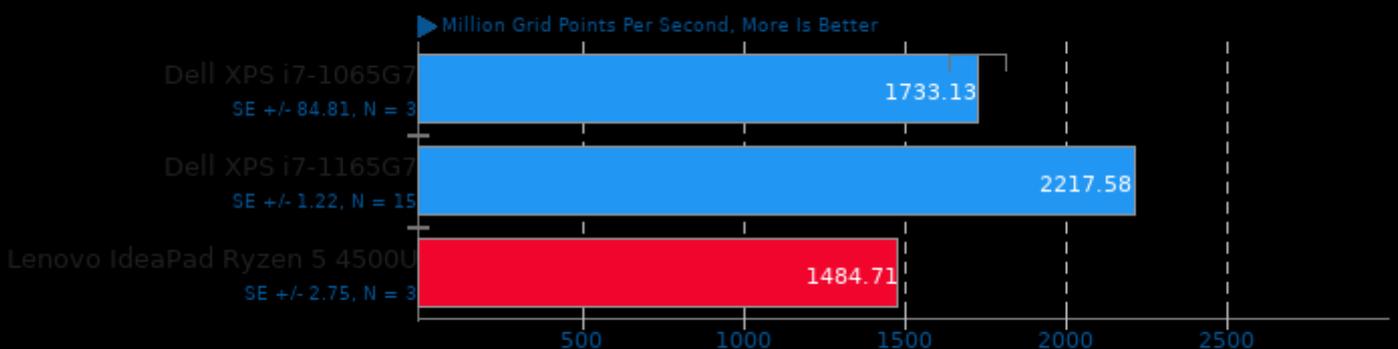
Test: tConvolve OpenMP - Gridding



1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp

## ASKAP 1.0

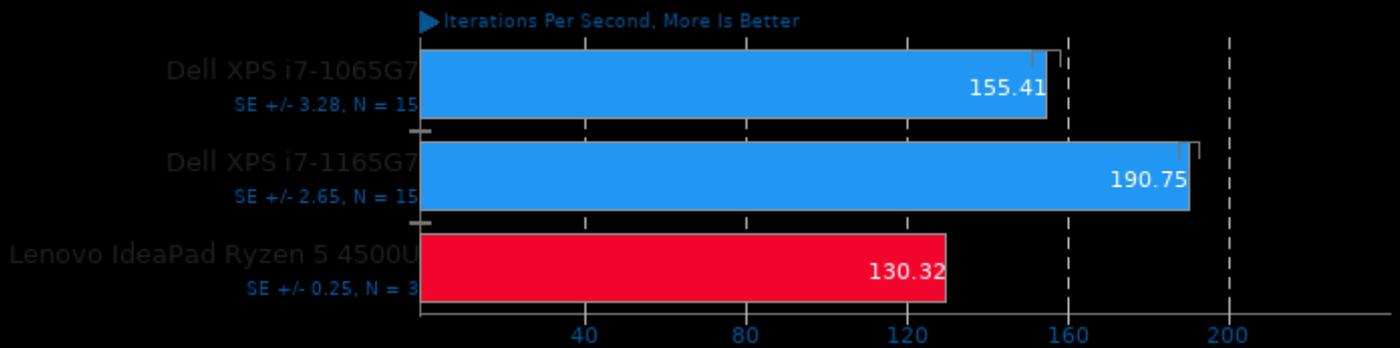
Test: tConvolve OpenMP - Degridding



1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp

### ASKAP 1.0

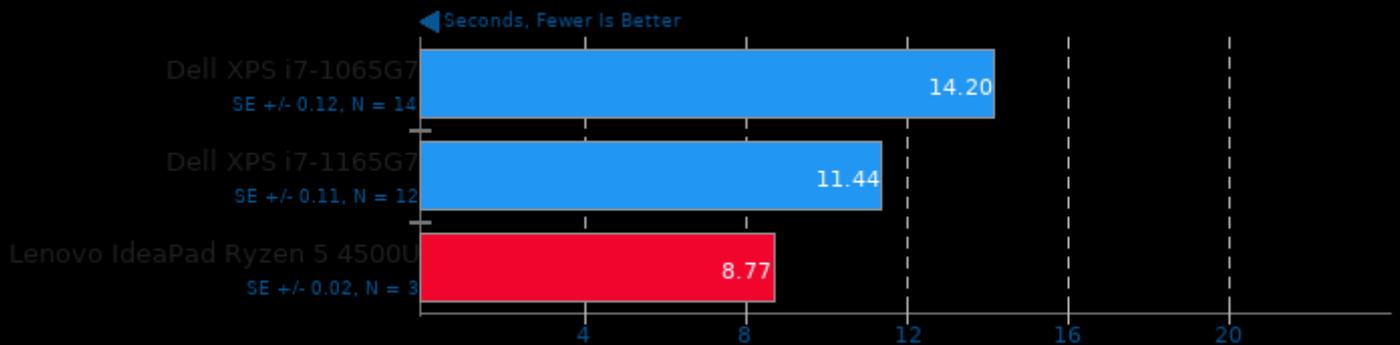
Test: Hogbom Clean OpenMP



1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp

### ASTC Encoder 2.0

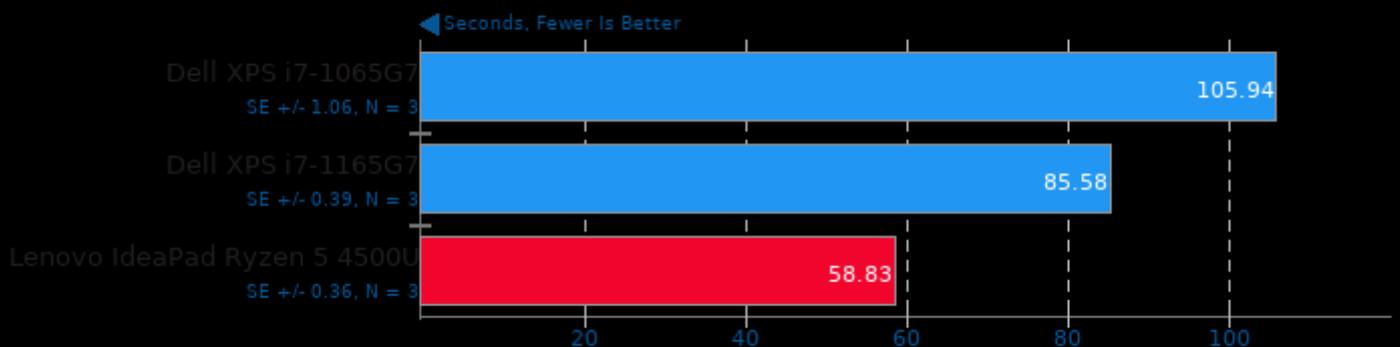
Preset: Medium



1. (CXX) g++ options: -std=c++14 -fvisibility=hidden -O3 -fno-mfpmath=sse -mavx2 -mpopcnt -lpthread

### ASTC Encoder 2.0

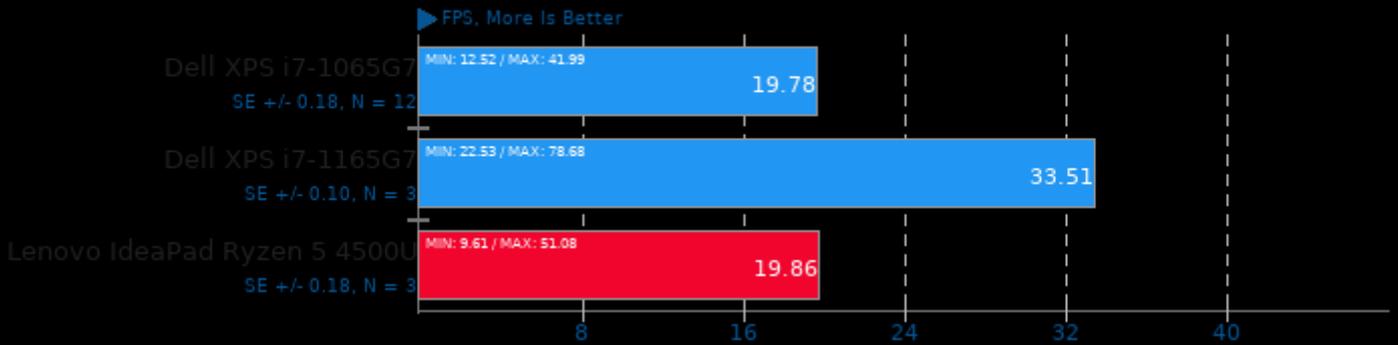
Preset: Thorough



1. (CXX) g++ options: -std=c++14 -fvisibility=hidden -O3 -fno-mfpmath=sse -mavx2 -mpopcnt -lpthread

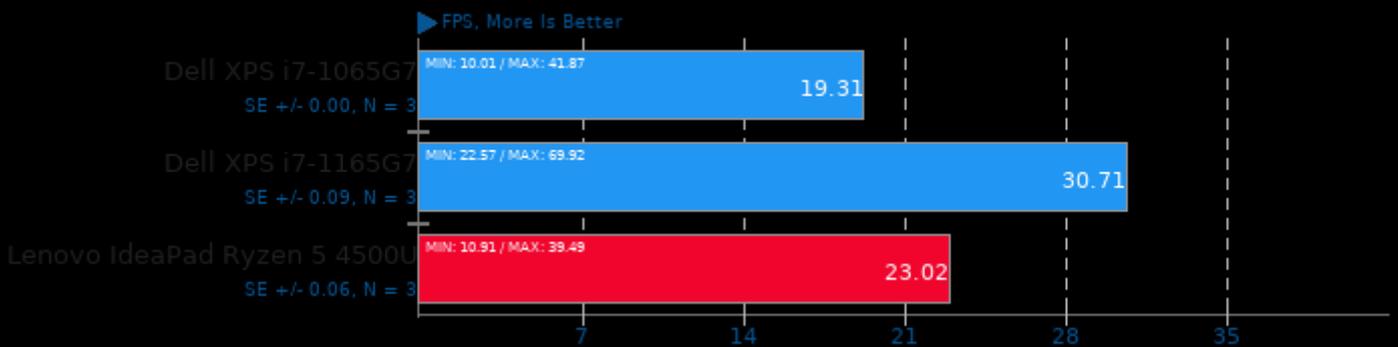
### Basemark GPU 1.2

Renderer: OpenGL - Resolution: 1920 x 1080 - Graphics Preset: High



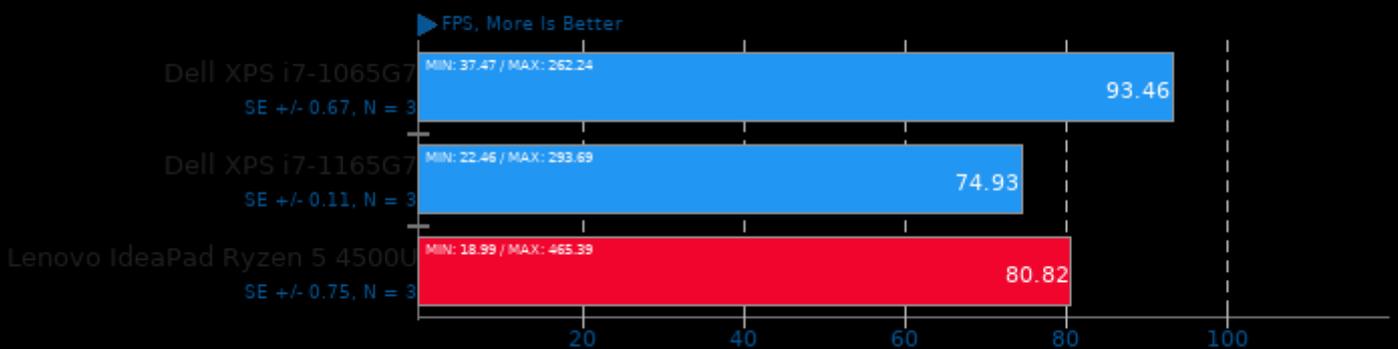
### Basemark GPU 1.2

Renderer: Vulkan - Resolution: 1920 x 1080 - Graphics Preset: High



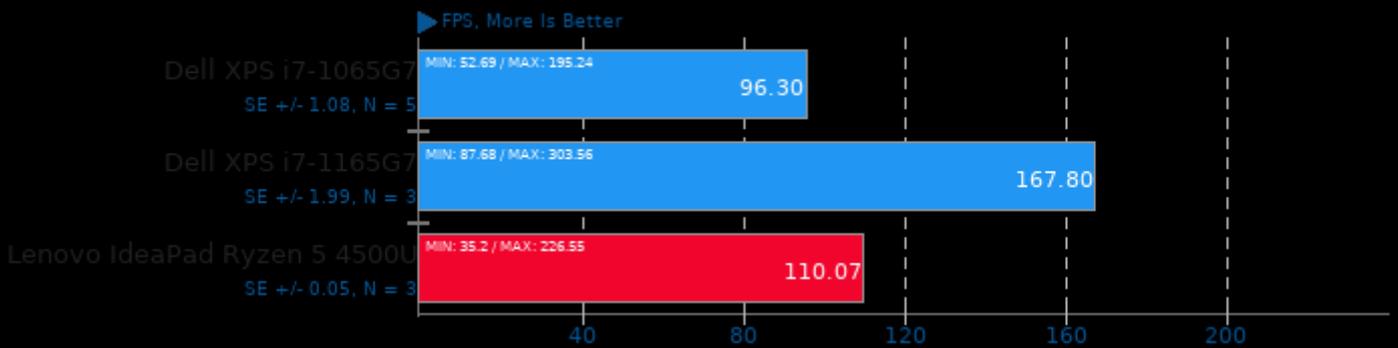
### Basemark GPU 1.2

Renderer: OpenGL - Resolution: 1920 x 1080 - Graphics Preset: Medium



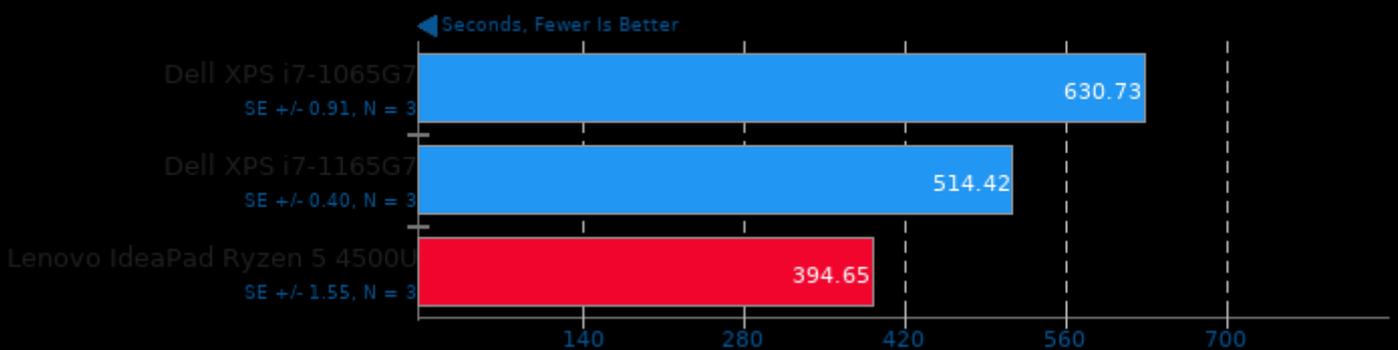
### Basemark GPU 1.2

Renderer: Vulkan - Resolution: 1920 x 1080 - Graphics Preset: Medium



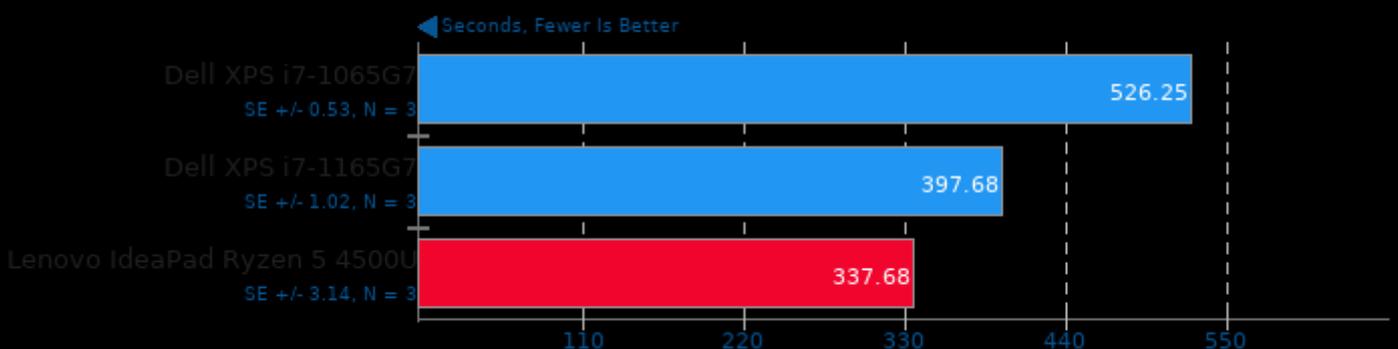
### Blender 2.90

Blend File: BMW27 - Compute: CPU-Only



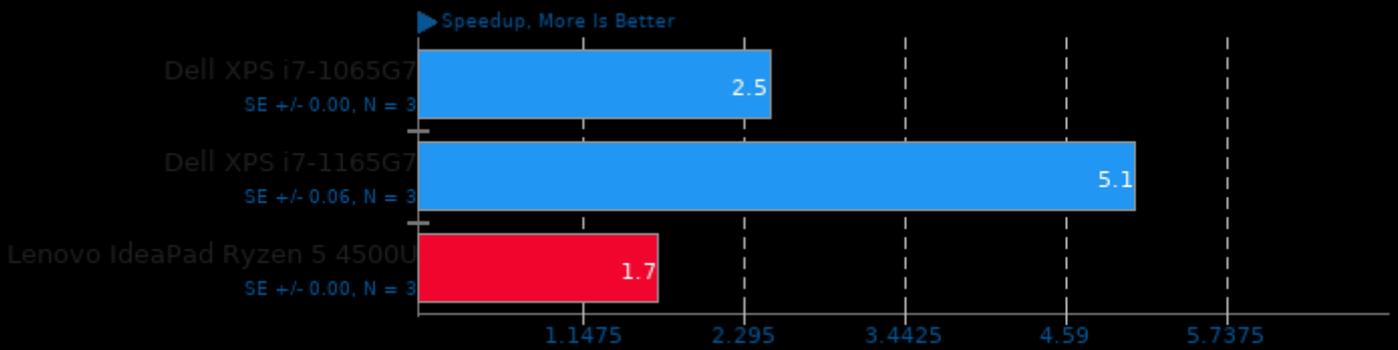
### Build2 0.13

Time To Compile



## CLOMP 1.2

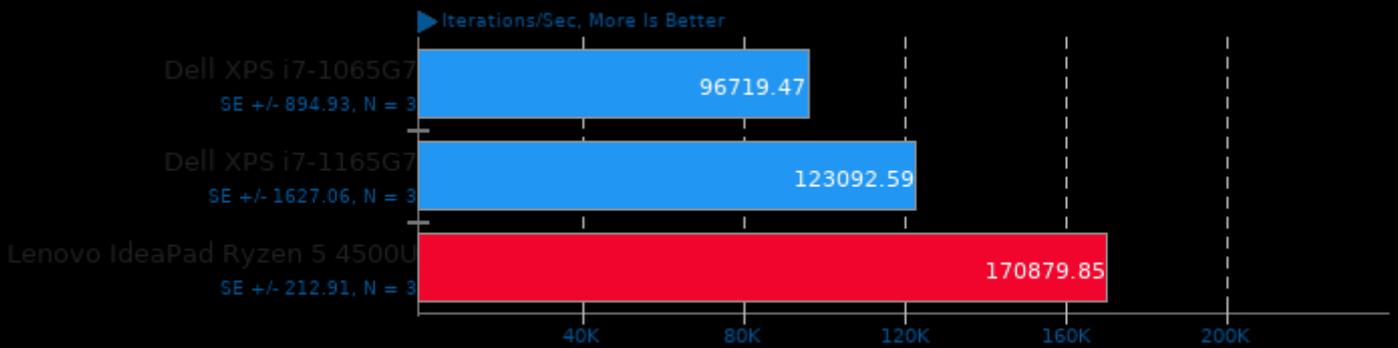
Static OMP Speedup



1. (CC) gcc options: -fopenmp -O3 -lm

## Coremark 1.0

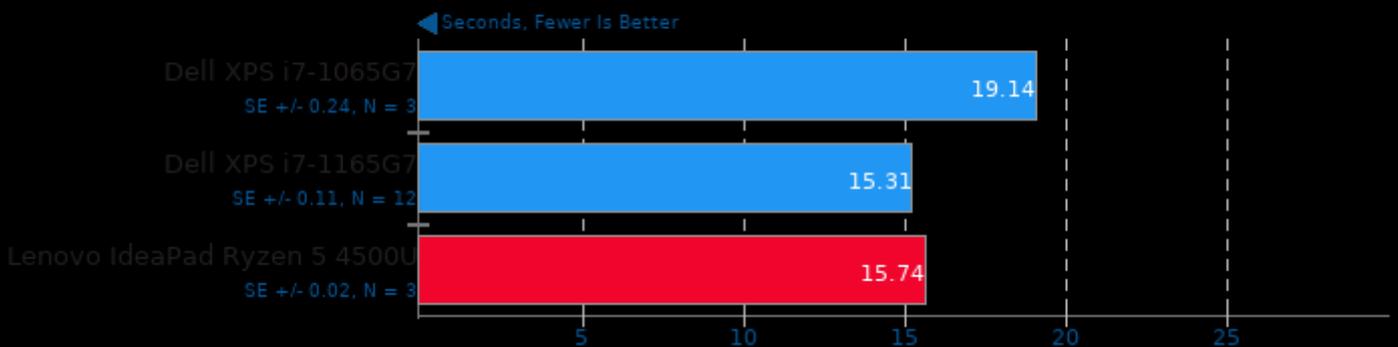
CoreMark Size 666 - Iterations Per Second



1. (CC) gcc options: -O2 -lrt -lrt

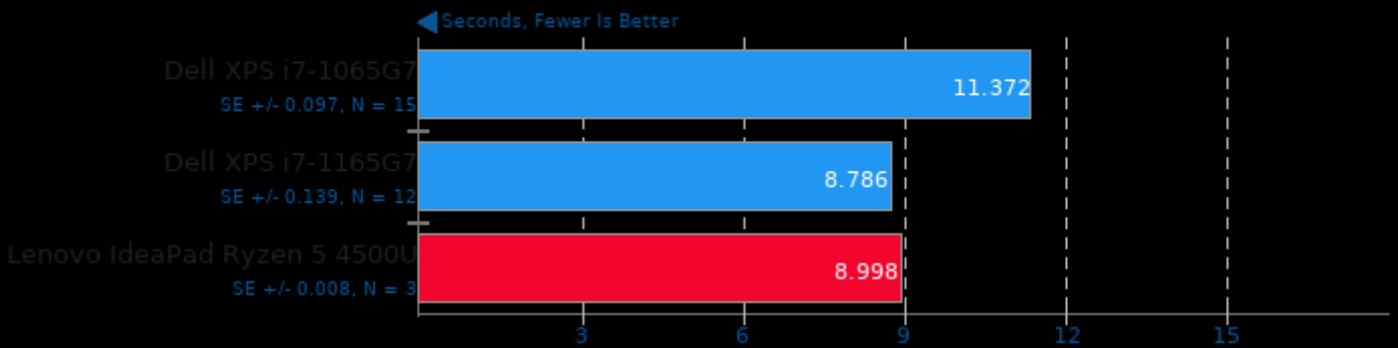
## Darktable 3.2.1

Test: Boat - Acceleration: CPU-only



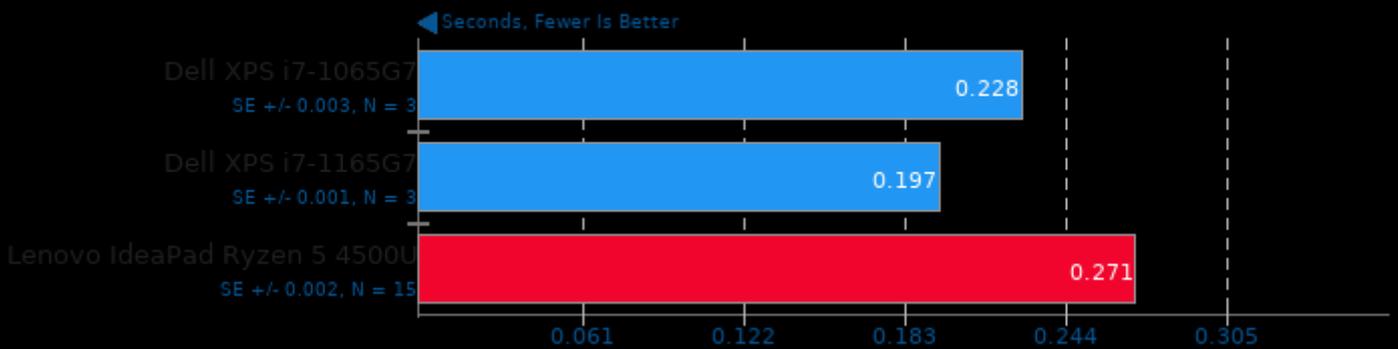
### Darktable 3.2.1

Test: Masskrug - Acceleration: CPU-only



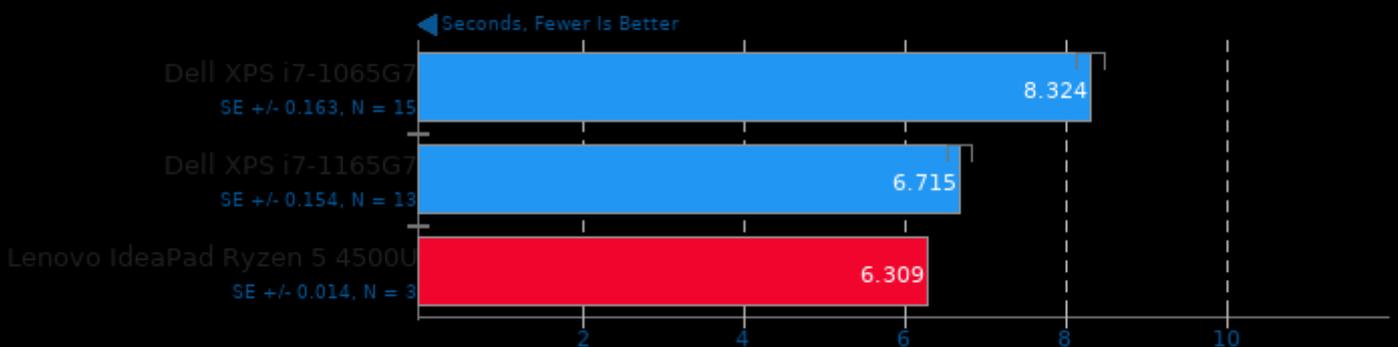
### Darktable 3.2.1

Test: Server Rack - Acceleration: CPU-only



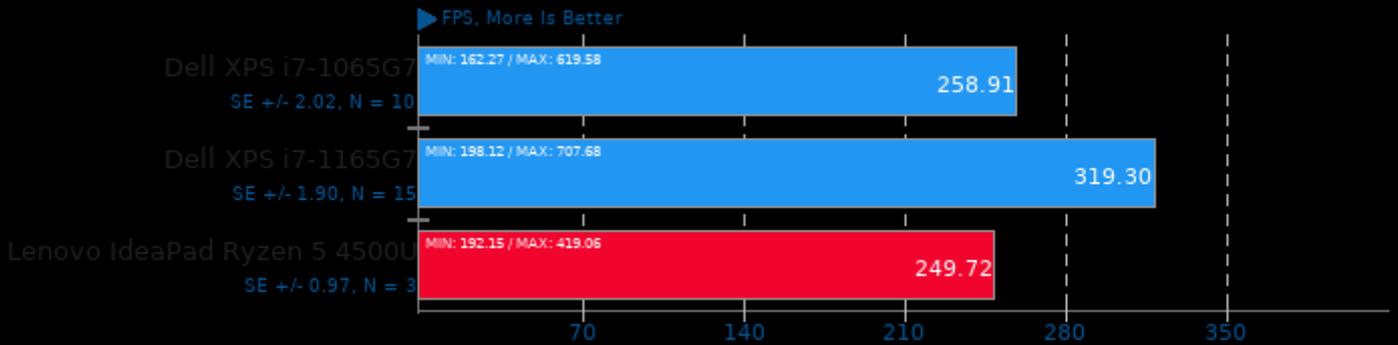
### Darktable 3.2.1

Test: Server Room - Acceleration: CPU-only



## dav1d 0.8.1

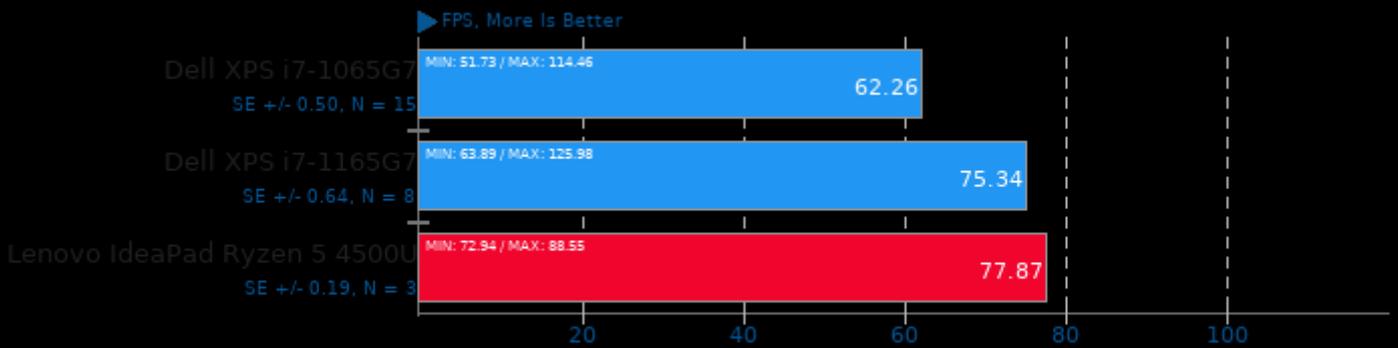
Video Input: Chimera 1080p



1. (CC) gcc options: -pthread

## dav1d 0.8.1

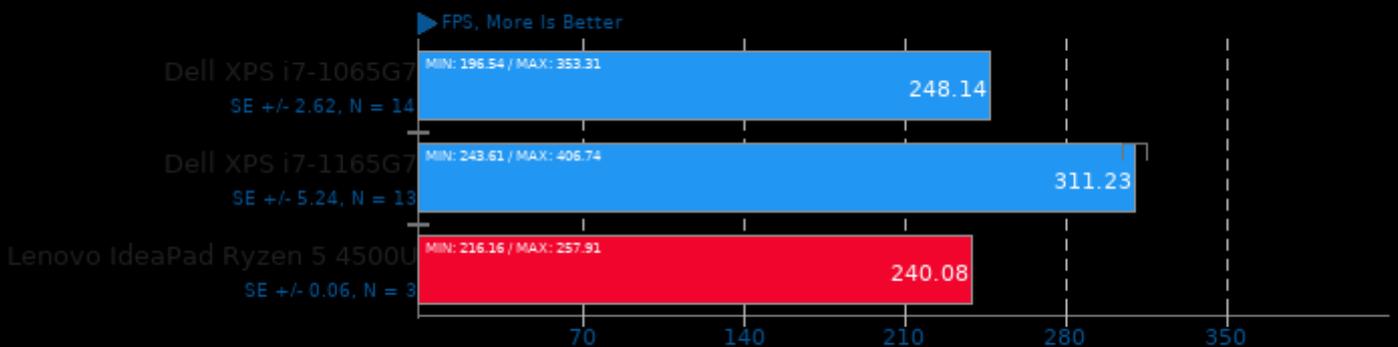
Video Input: Summer Nature 4K



1. (CC) gcc options: -pthread

## dav1d 0.8.1

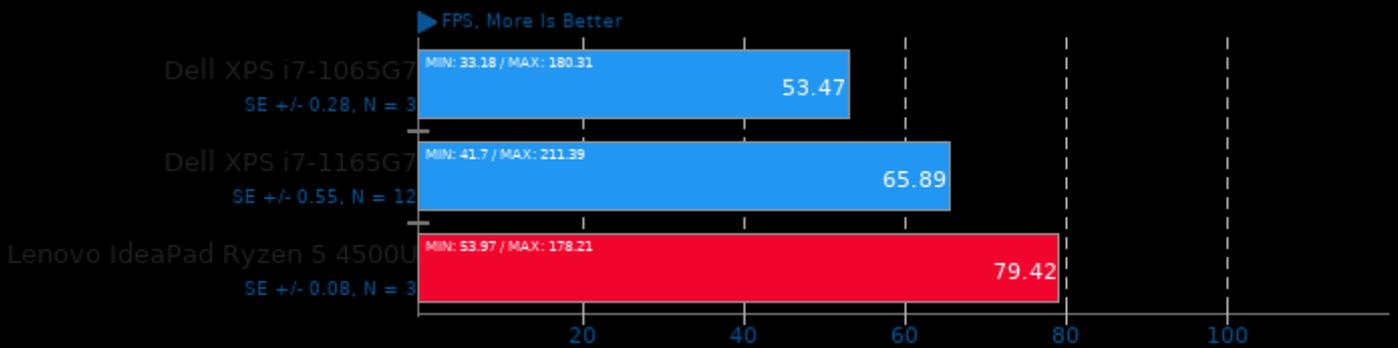
Video Input: Summer Nature 1080p



1. (CC) gcc options: -pthread

## dav1d 0.8.1

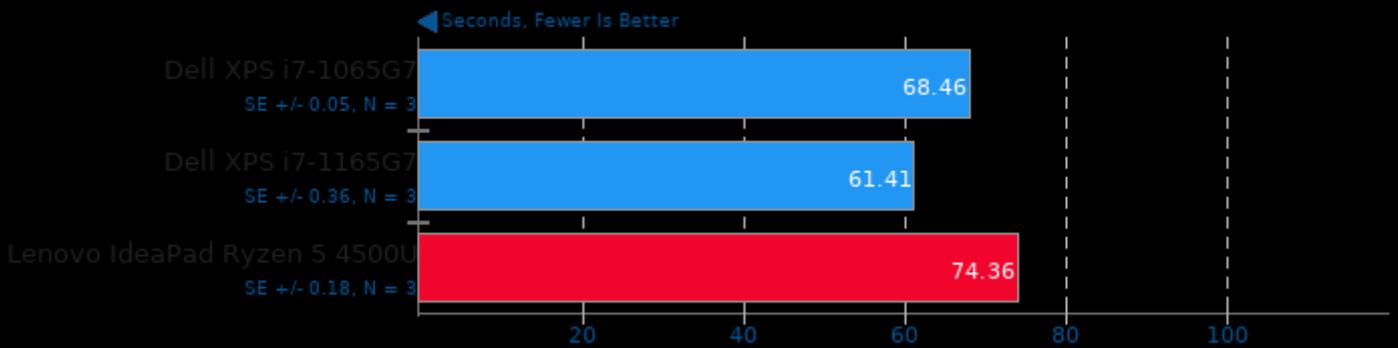
Video Input: Chimera 1080p 10-bit



1. (CC) gcc options: -pthread

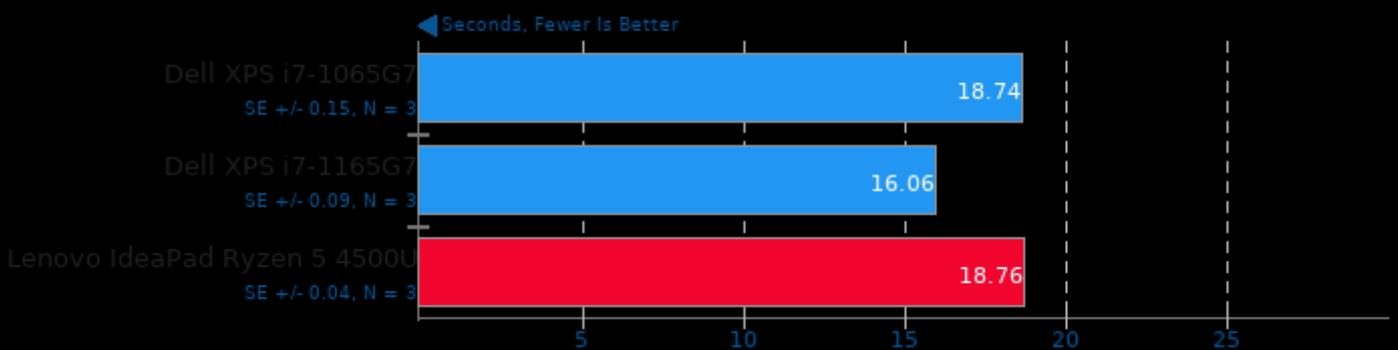
## DeepSpeech 0.6

Acceleration: CPU



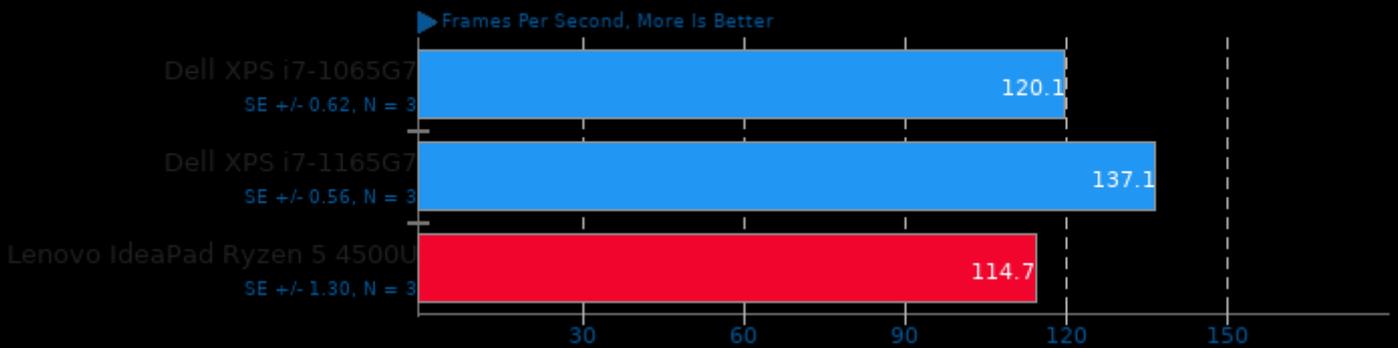
## Dolfyn 0.527

Computational Fluid Dynamics



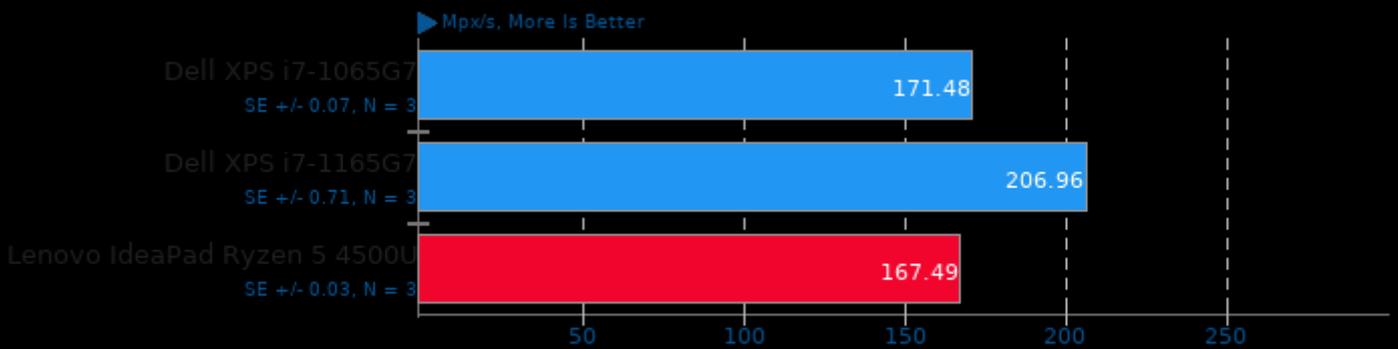
## ET: Legacy 2.75

Renderer: Renderer2 - Resolution: 1920 x 1080



## Etcpak 0.7

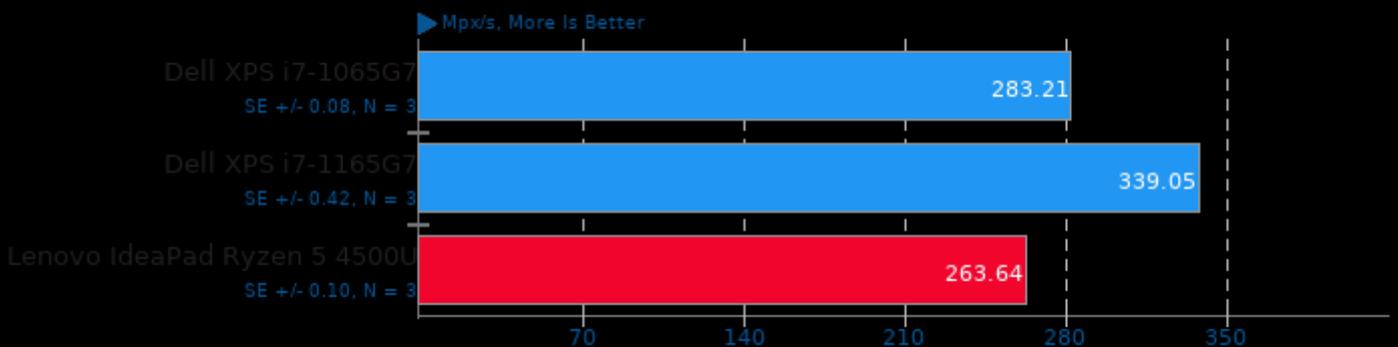
Configuration: ETC2



1. (CXX) g++ options: -O3 -march=native -std=c++11 -pthread

## Etcpak 0.7

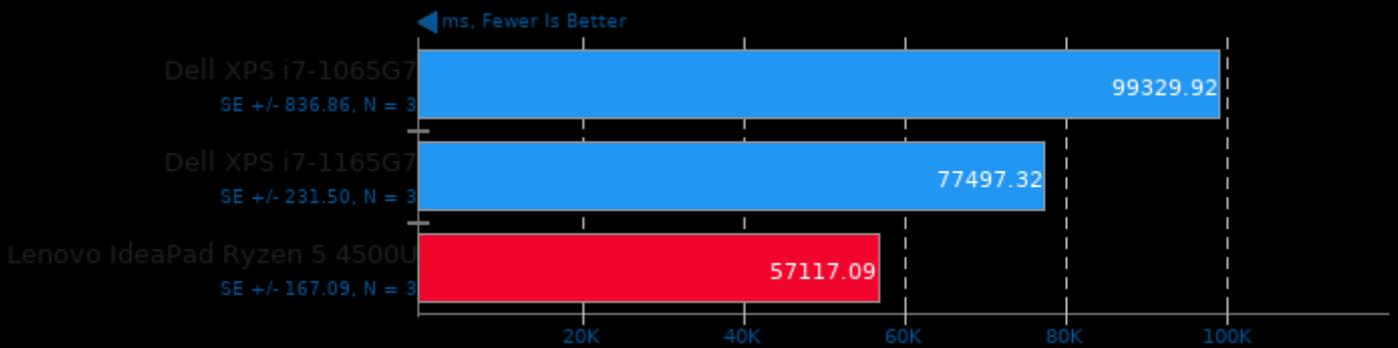
Configuration: ETC1 + Dithering



1. (CXX) g++ options: -O3 -march=native -std=c++11 -pthread

## FinanceBench 2016-07-25

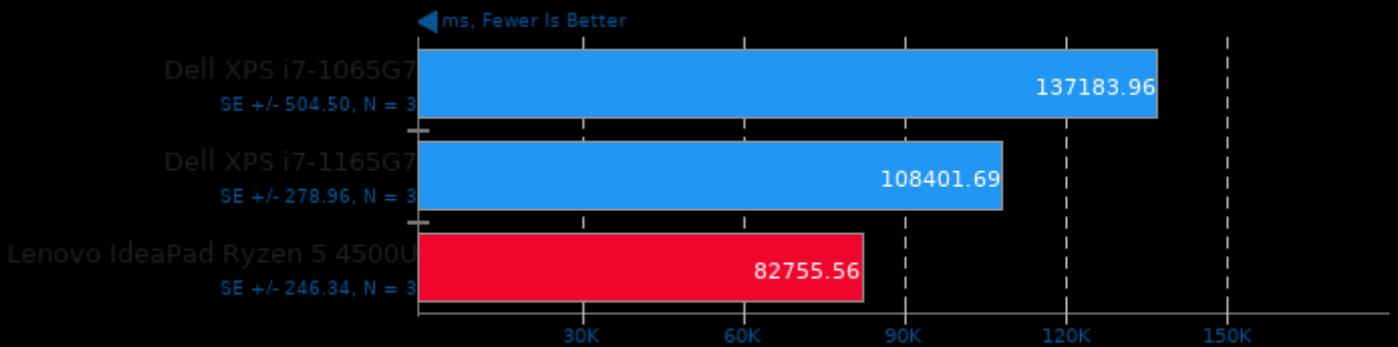
Benchmark: Repo OpenMP



1. (CXX) g++ options: -O3 -march=native -fopenmp

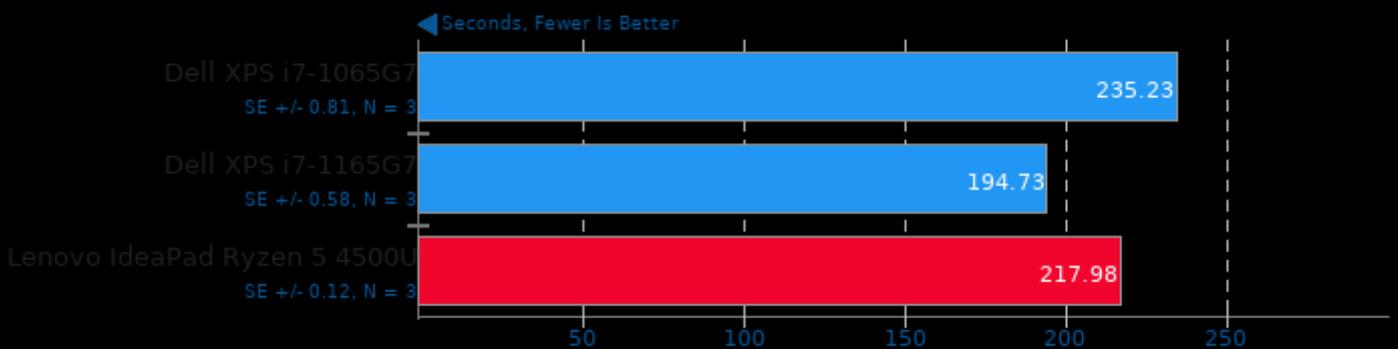
## FinanceBench 2016-07-25

Benchmark: Bonds OpenMP



1. (CXX) g++ options: -O3 -march=native -fopenmp

## Gcrypt Library 1.9

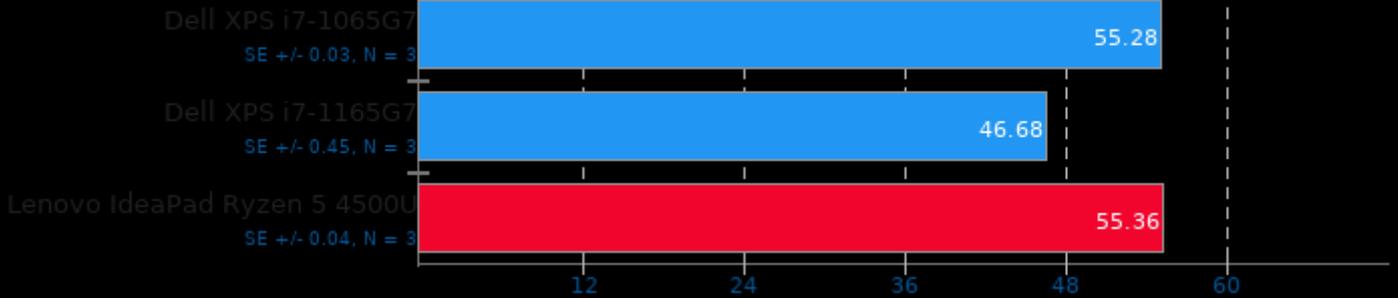


1. (CC) gcc options: -O2 -fvisibility=hidden -lgpg-error

## Git

Time To Complete Common Git Commands

← Seconds, Fewer Is Better



1. git version 2.27.0

## GLmark2 2020.04

Resolution: 1920 x 1080

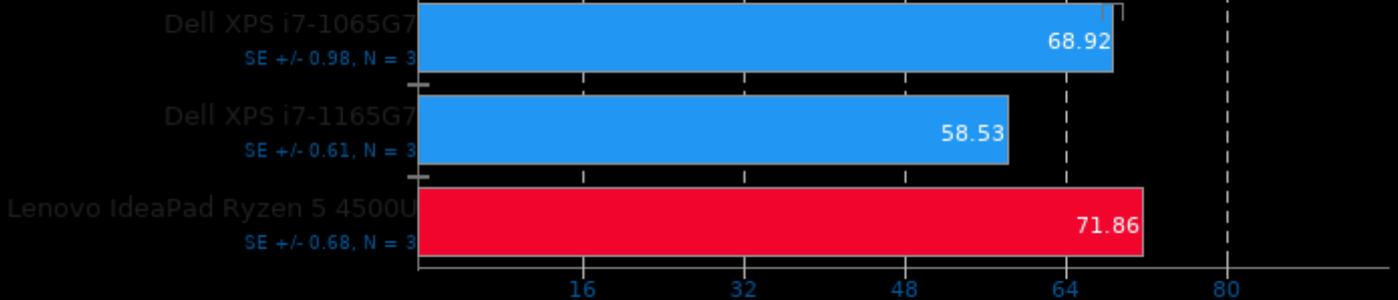
▶ Score, More Is Better



## GnuPG 2.2.27

2.7GB Sample File Encryption

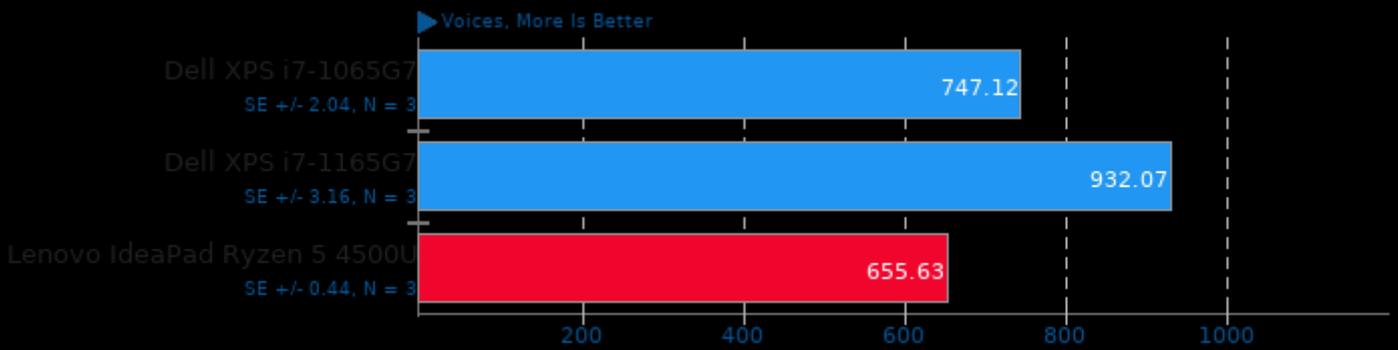
← Seconds, Fewer Is Better



1. (CC) gcc options: -O2

## Google SynthMark 20201109

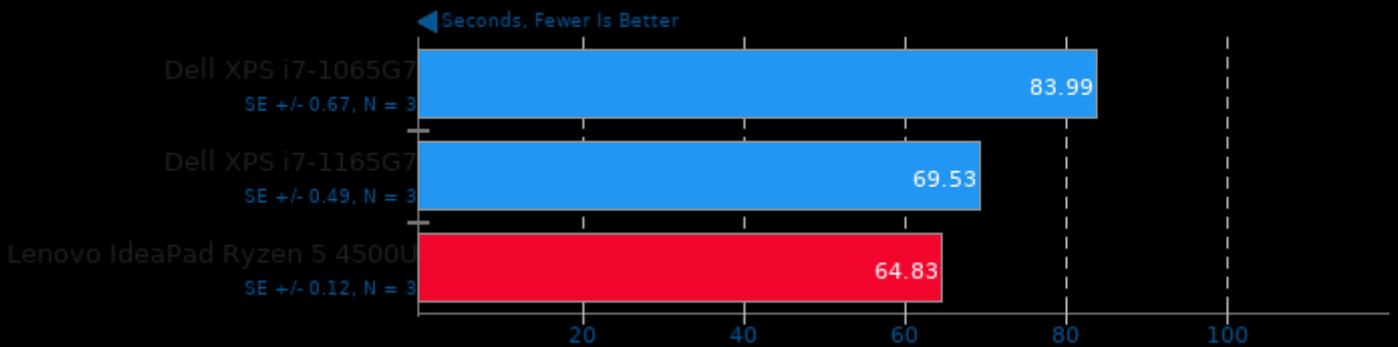
Test: VoiceMark\_100



1. (CXX) g++ options: -lm -lpthread -std=c++11 -Ofast

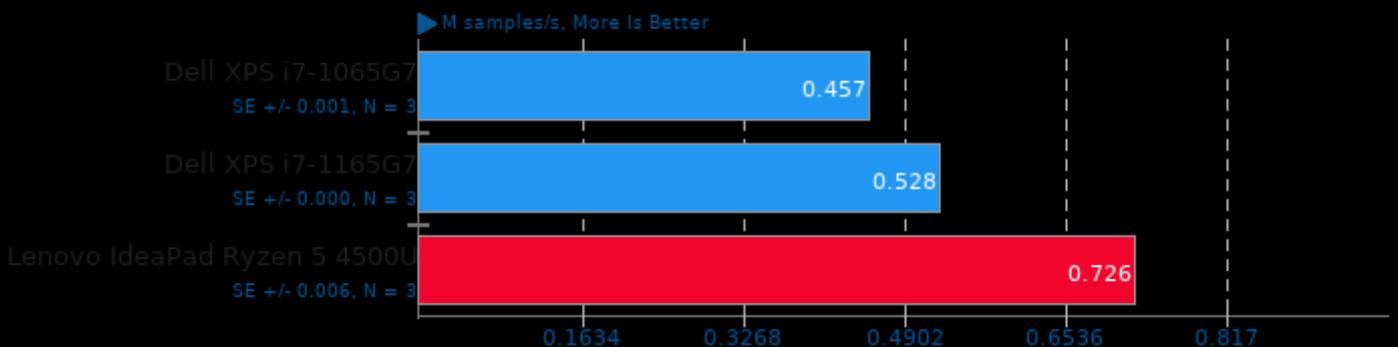
## Hugin

Panorama Photo Assistant + Stitching Time



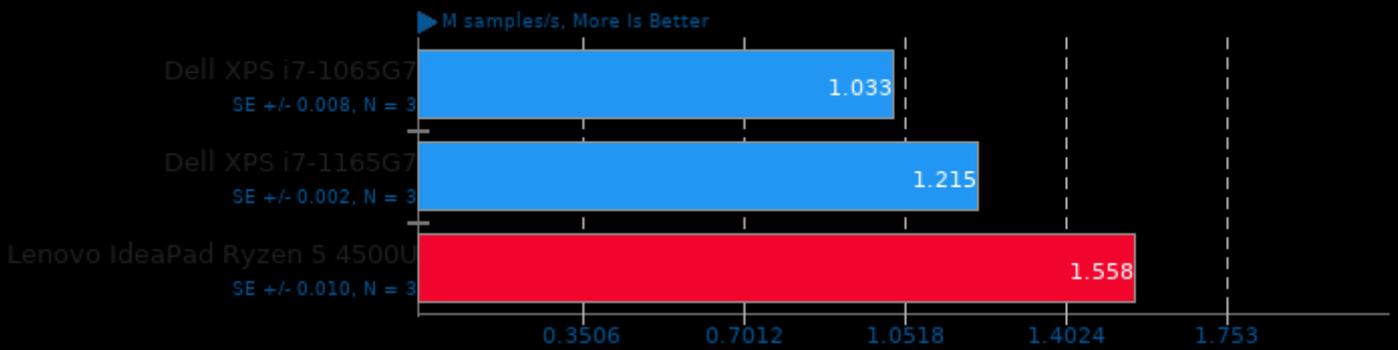
## IndigoBench 4.4

Acceleration: CPU - Scene: Bedroom



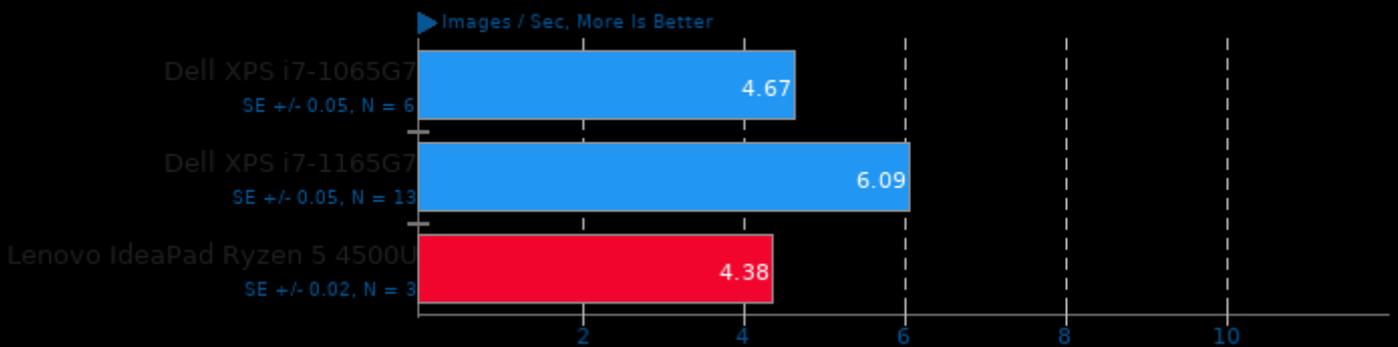
### IndigoBench 4.4

Acceleration: CPU - Scene: Supercar



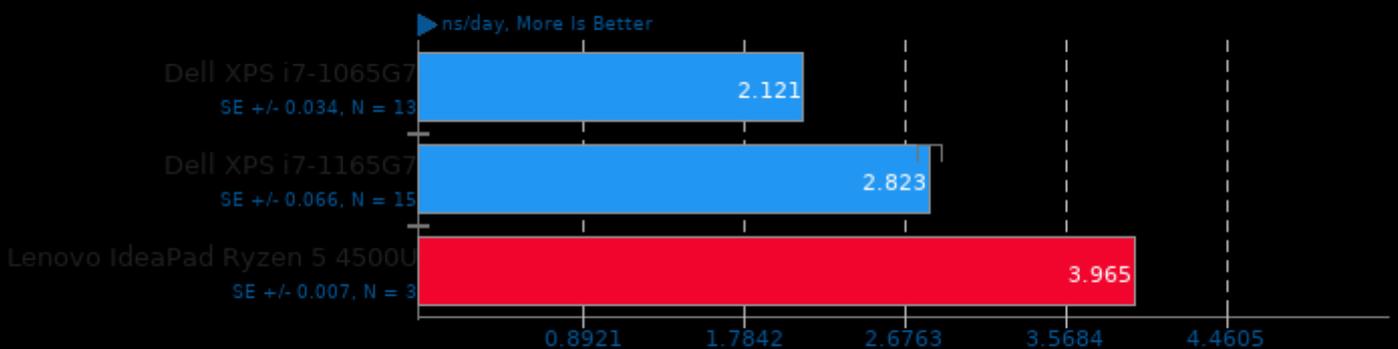
### Intel Open Image Denoise 1.2.0

Scene: Memorial



### LAMMPS Molecular Dynamics Simulator 29Oct2020

Model: Rhodopsin Protein

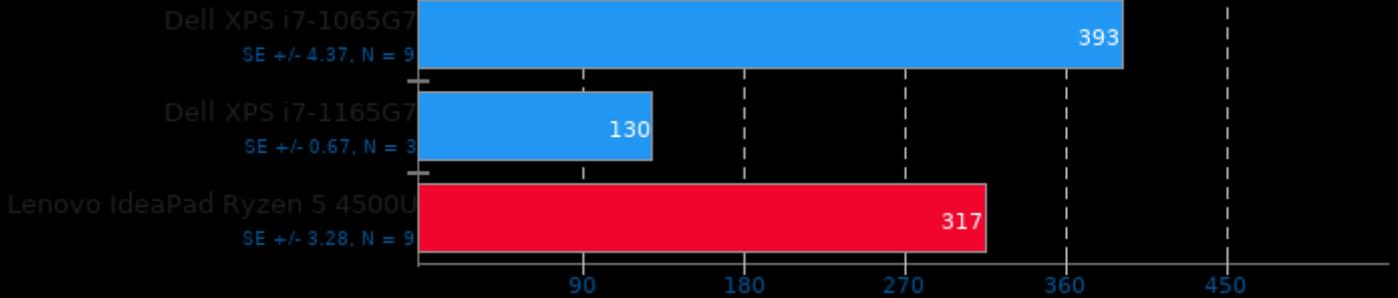


1. (CXX) g++ options: -O3 -pthread -lm

## LeelaChessZero 0.26

Backend: BLAS

► Nodes Per Second, More Is Better

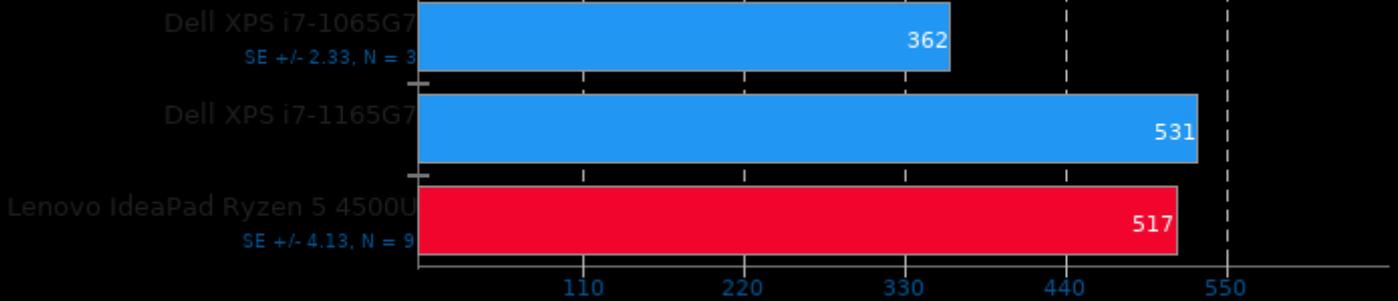


1. (CXX) g++ options: -fno -pthread

## LeelaChessZero 0.26

Backend: Eigen

► Nodes Per Second, More Is Better

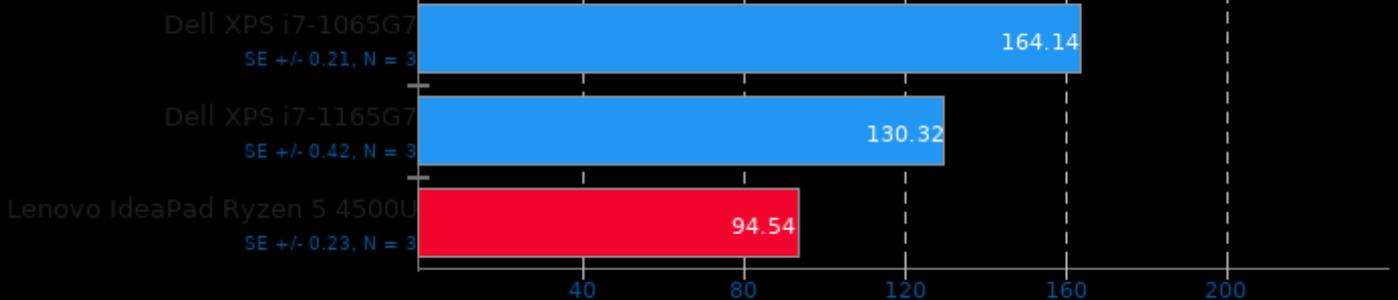


1. (CXX) g++ options: -fno -pthread

## libavif avifenc 0.7.3

Encoder Speed: 2

◄ Seconds, Fewer Is Better

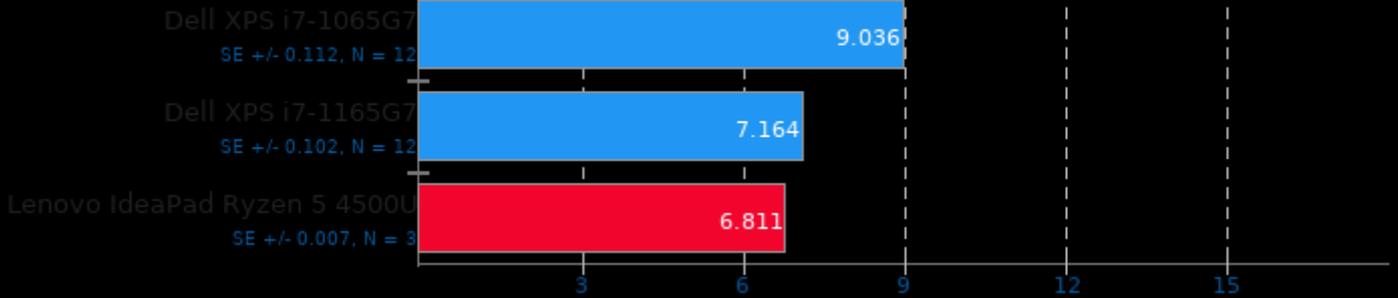


1. (CXX) g++ options: -O3 -fPIC

### libavif avifenc 0.7.3

Encoder Speed: 8

← Seconds, Fewer Is Better

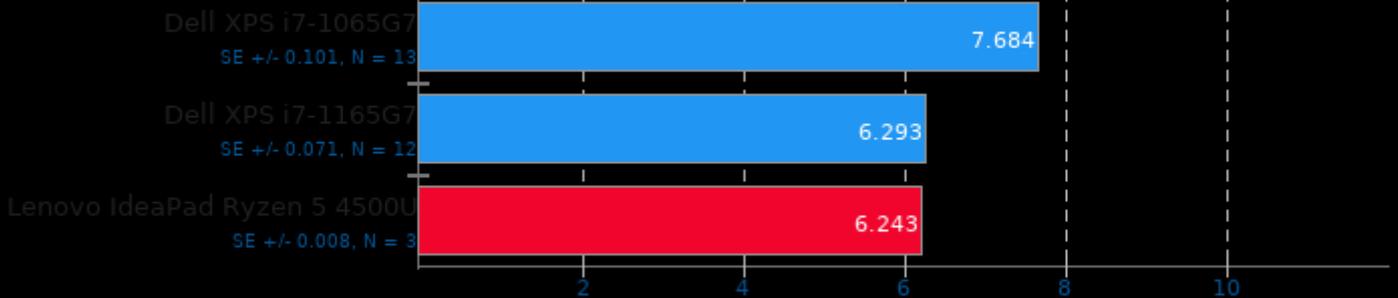


1. (CXX) g++ options: -O3 -fPIC

### libavif avifenc 0.7.3

Encoder Speed: 10

← Seconds, Fewer Is Better

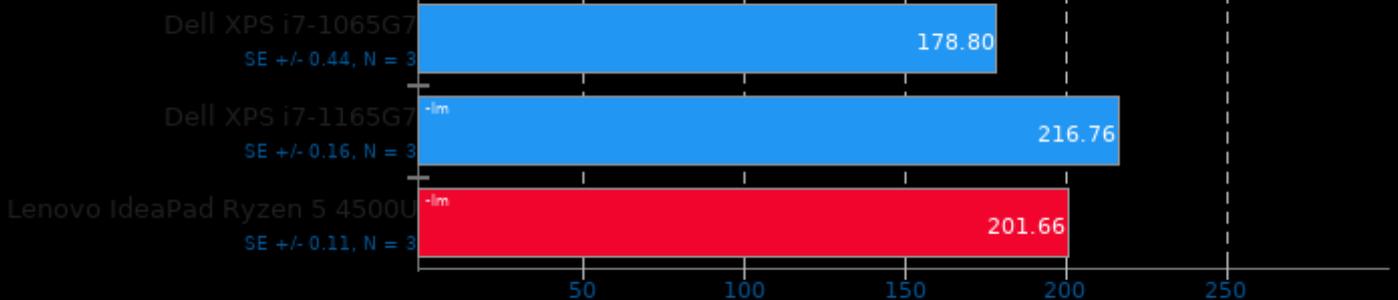


1. (CXX) g++ options: -O3 -fPIC

### libjpeg-turbo tjbench 2.0.2

Test: Decompression Throughput

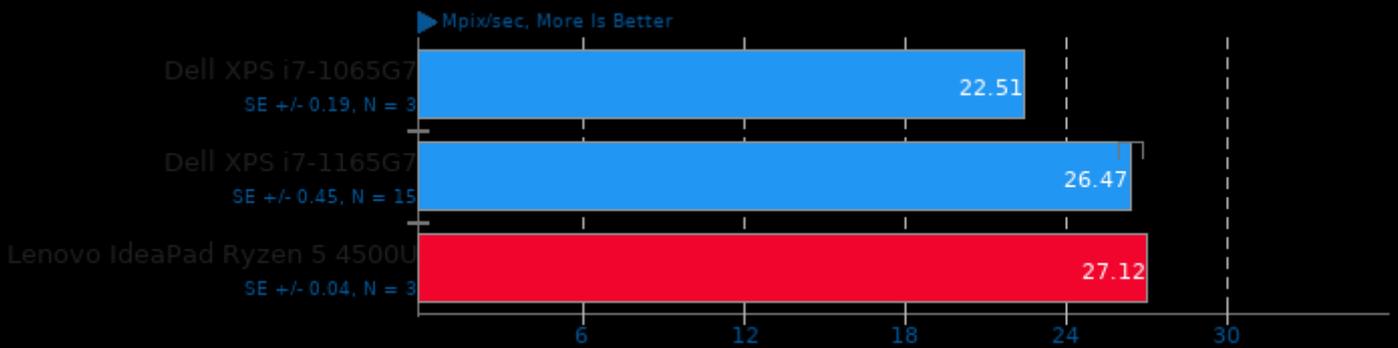
► Megapixels/sec, More Is Better



1. (CC) gcc options: -O3 -rdynamic

## LibRaw 0.20

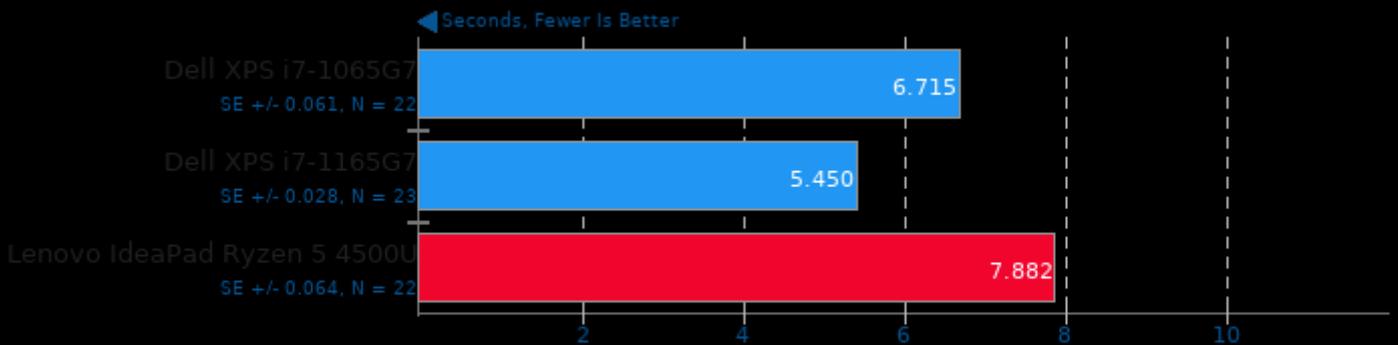
Post-Processing Benchmark



1. (CXX) g++ options: -O2 -fopenmp -ljpeg -lz -lm

## LibreOffice

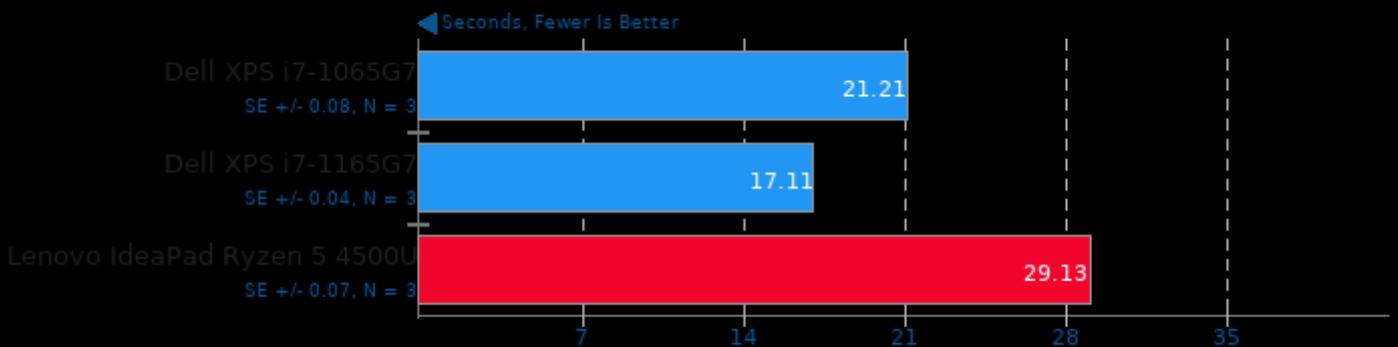
Test: 20 Documents To PDF



1. LibreOffice 7.0.3.1 00(Build:1)

## librsvg

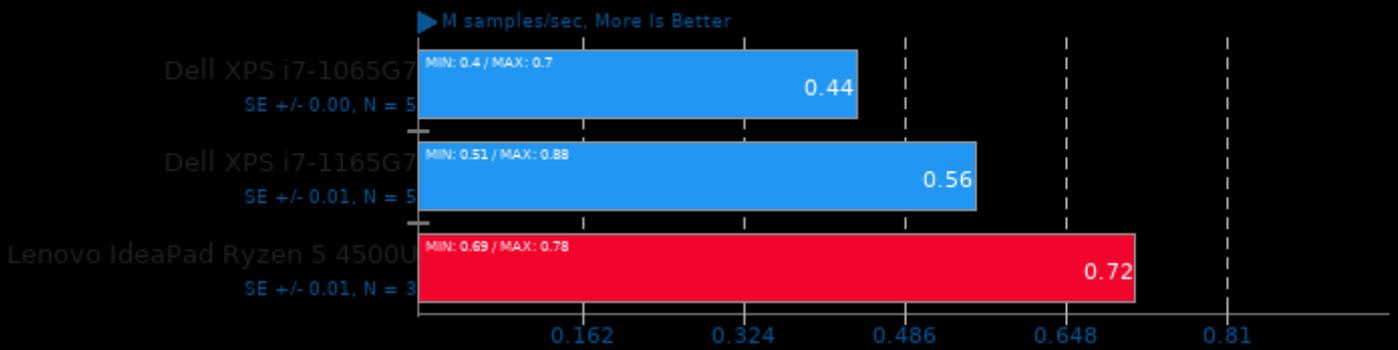
Operation: SVG Files To PNG



1. rsvg-convert version 2.50.1

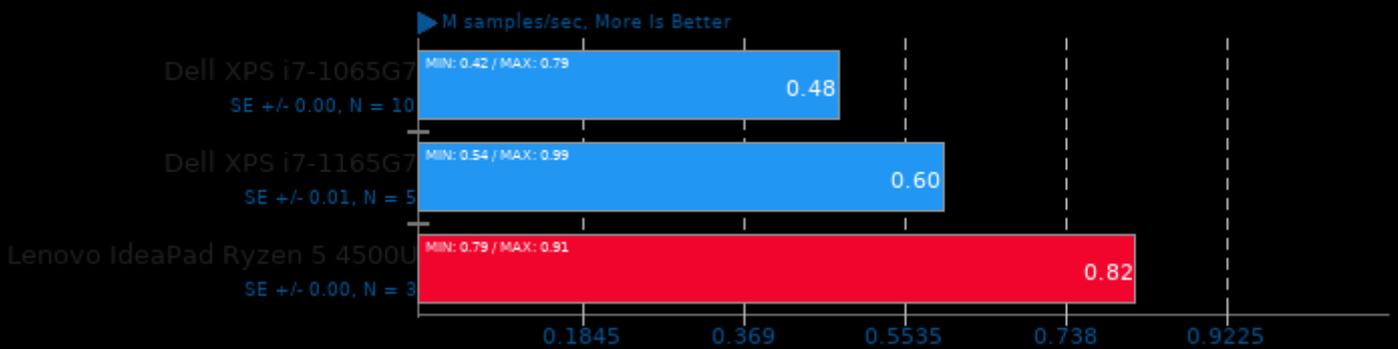
### LuxCoreRender 2.3

Scene: DLSC



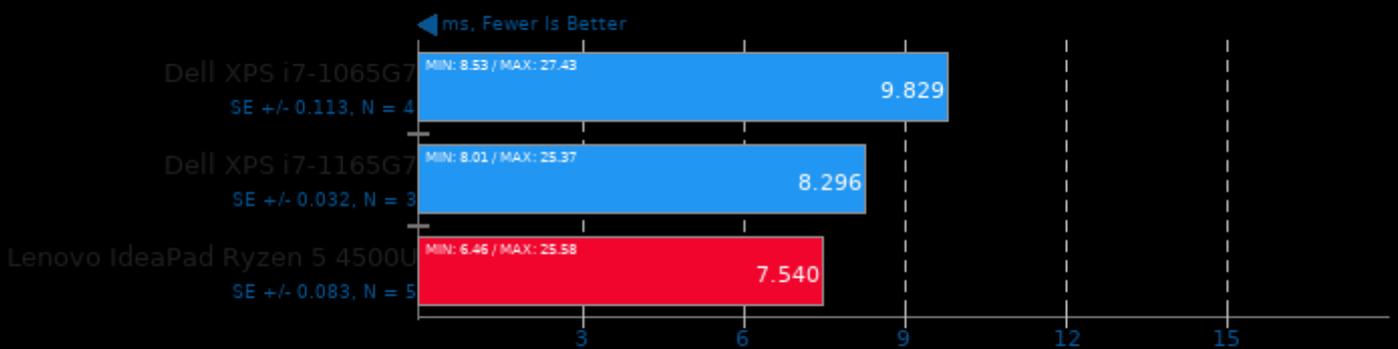
### LuxCoreRender 2.3

Scene: Rainbow Colors and Prism



### Mobile Neural Network 1.1.1

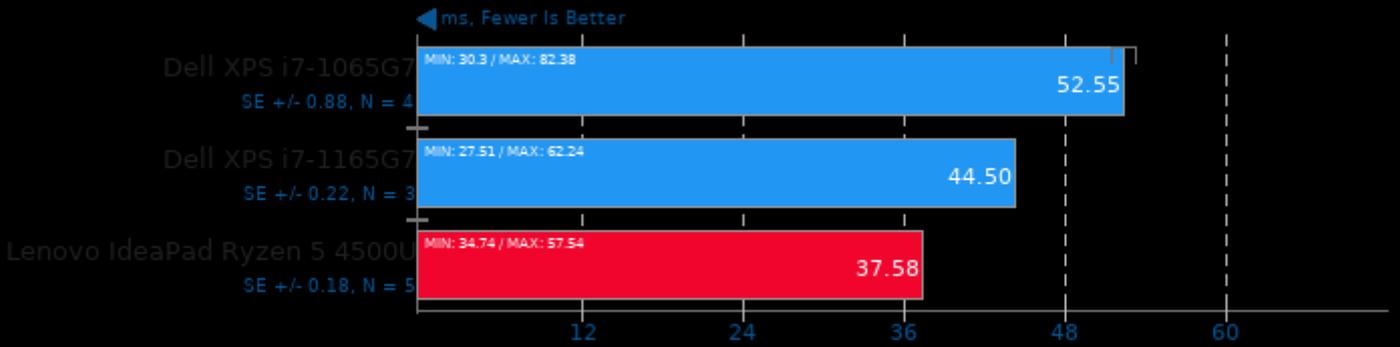
Model: SqueezeNetV1.0



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-

### Mobile Neural Network 1.1.1

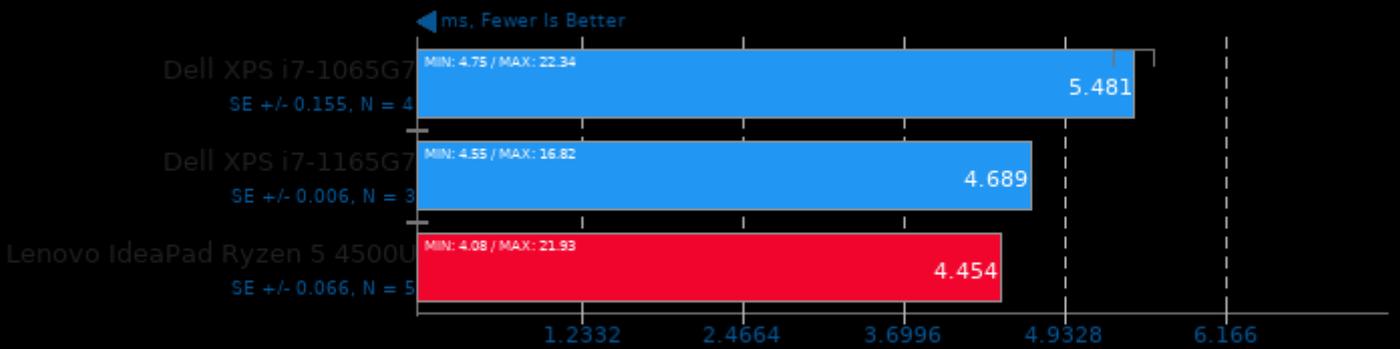
Model: resnet-v2-50



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-

### Mobile Neural Network 1.1.1

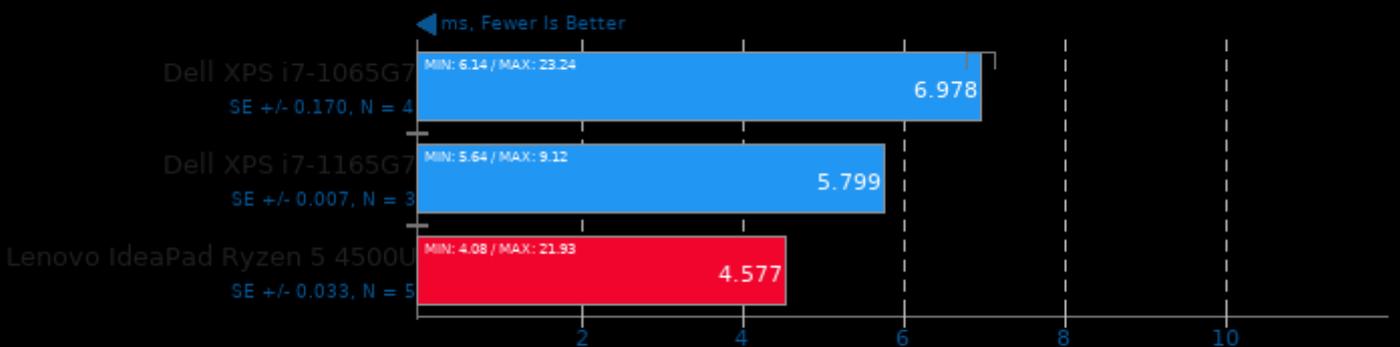
Model: MobileNetV2\_224



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-

### Mobile Neural Network 1.1.1

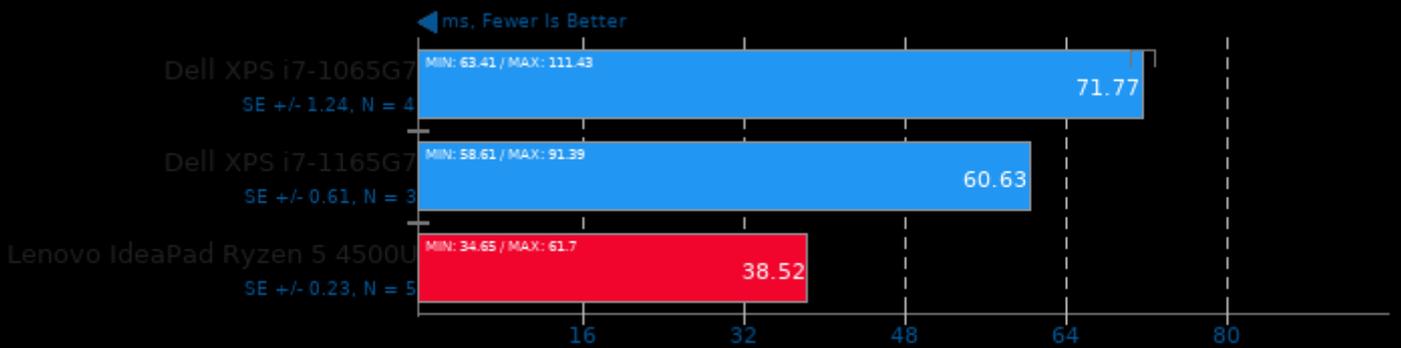
Model: mobilenet-v1-1.0



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-

## Mobile Neural Network 1.1.1

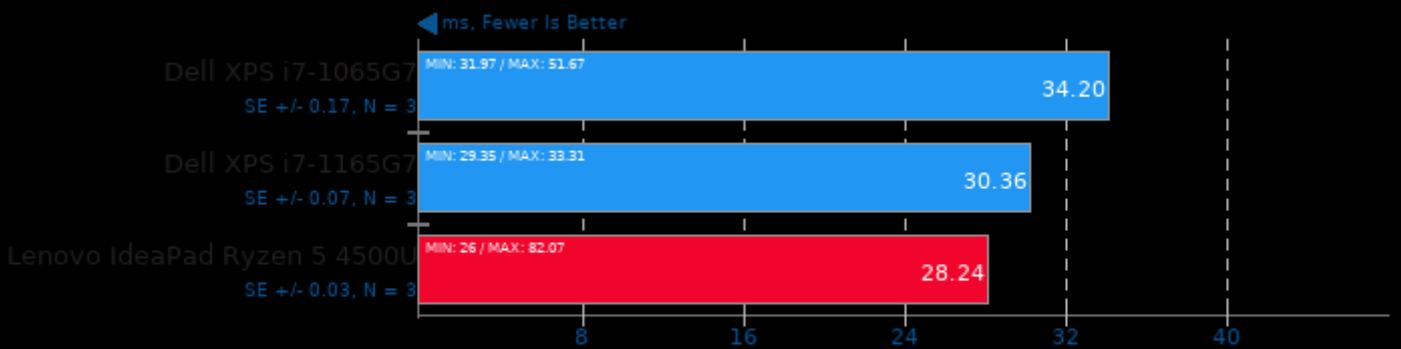
Model: inception-v3



1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fno-

## NCNN 20201218

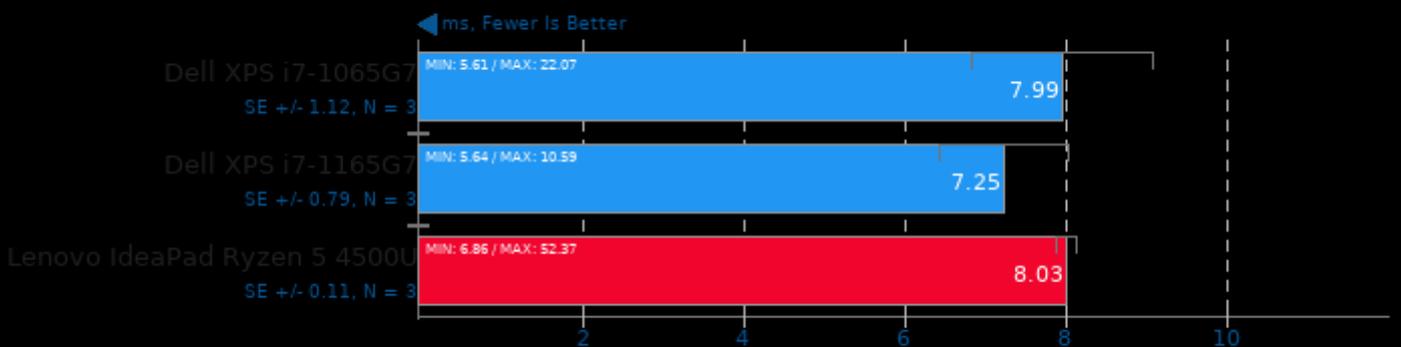
Target: CPU - Model: mobilenet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

## NCNN 20201218

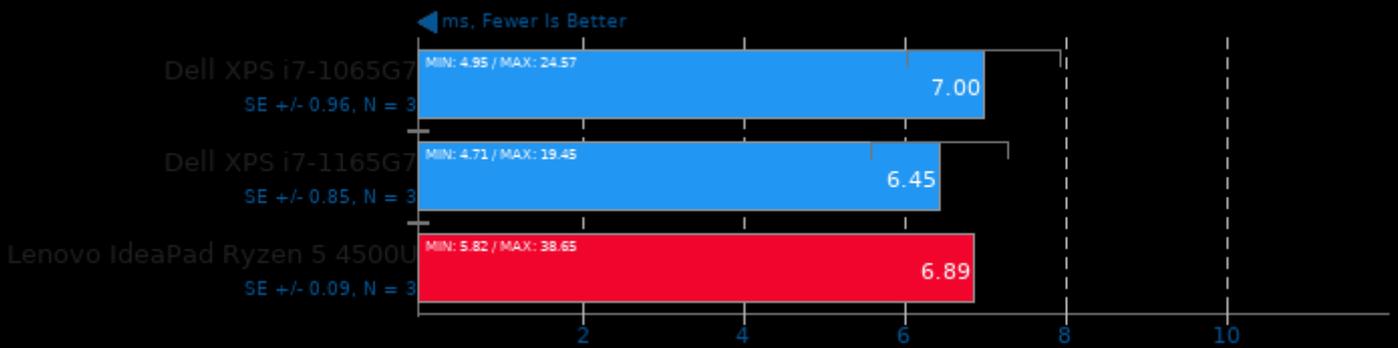
Target: CPU-v2-v2 - Model: mobilenet-v2



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

### NCNN 20201218

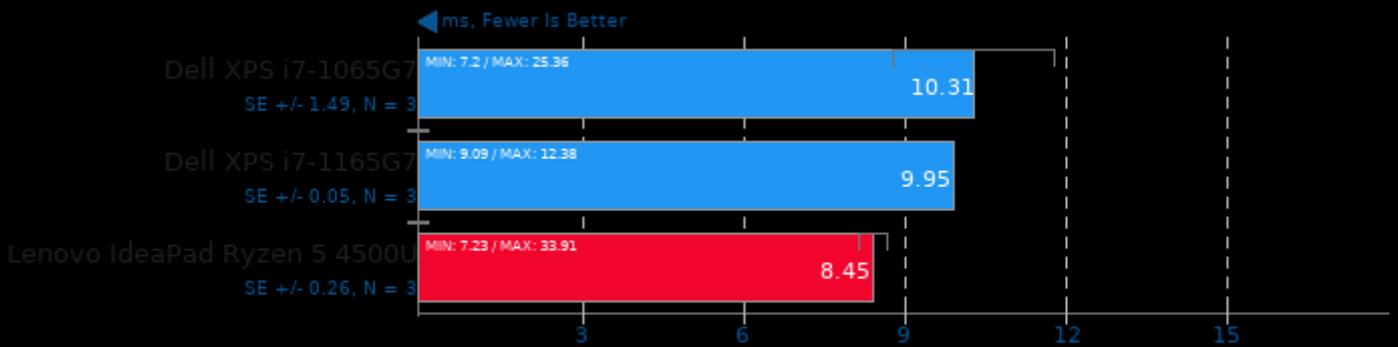
Target: CPU-v3-v3 - Model: mobilenet-v3



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

### NCNN 20201218

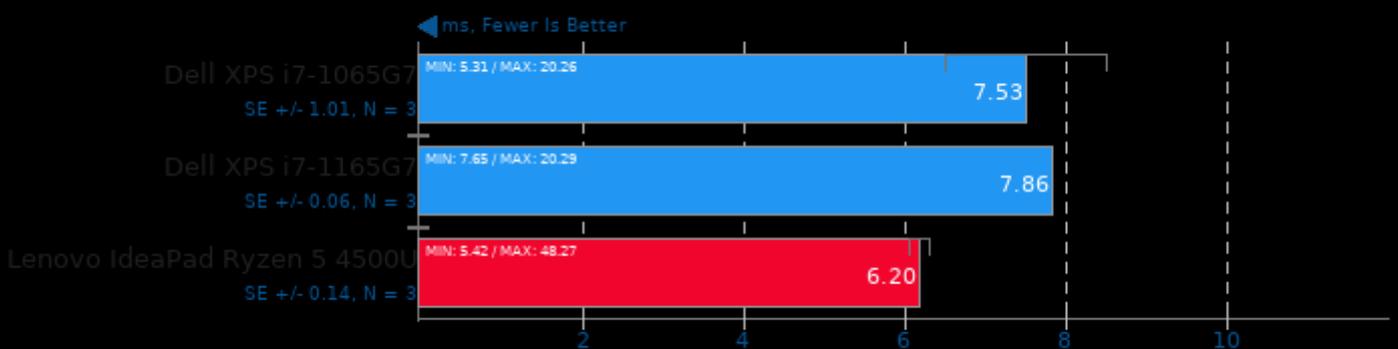
Target: CPU - Model: shufflenet-v2



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

### NCNN 20201218

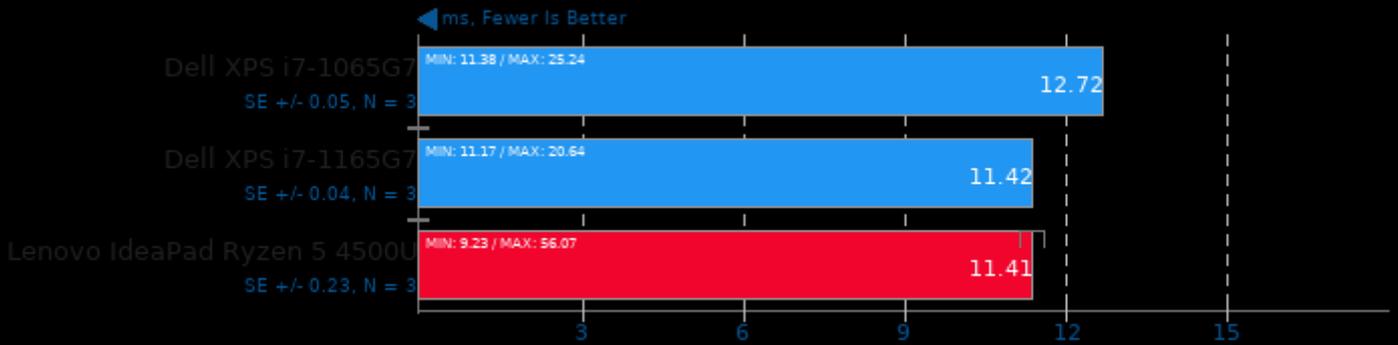
Target: CPU - Model: mnasnet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

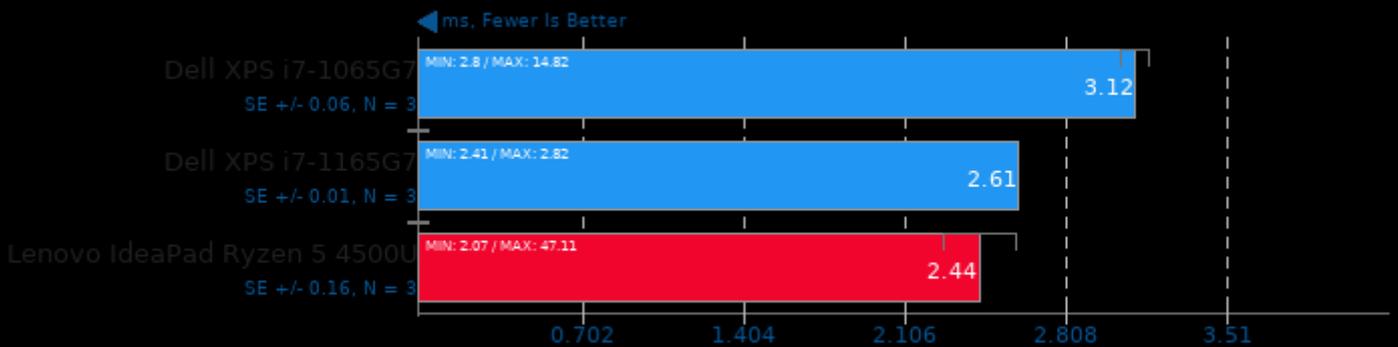
Target: CPU - Model: efficientnet-b0



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

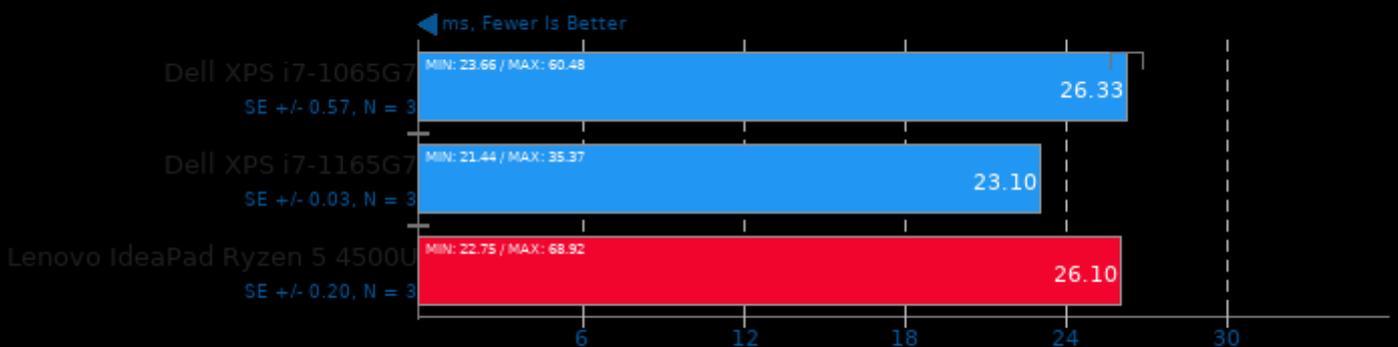
Target: CPU - Model: blazeface



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

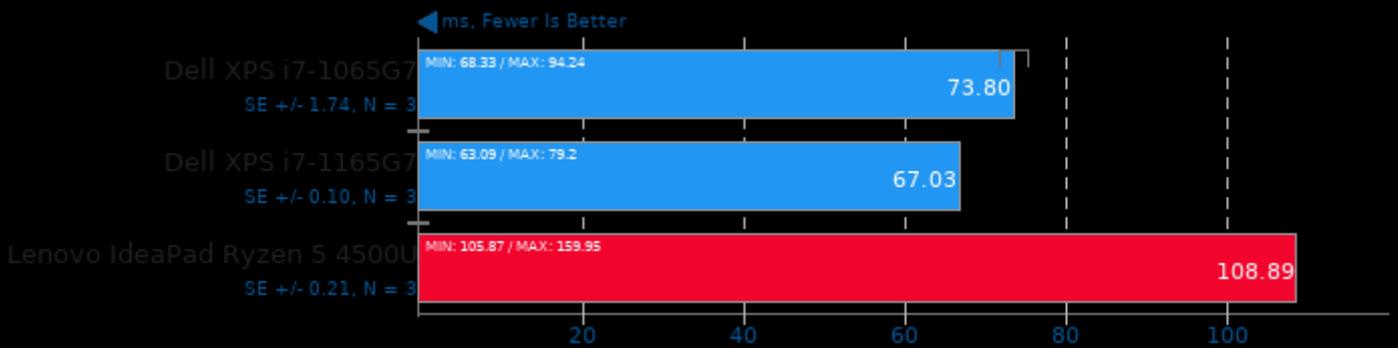
Target: CPU - Model: googlenet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

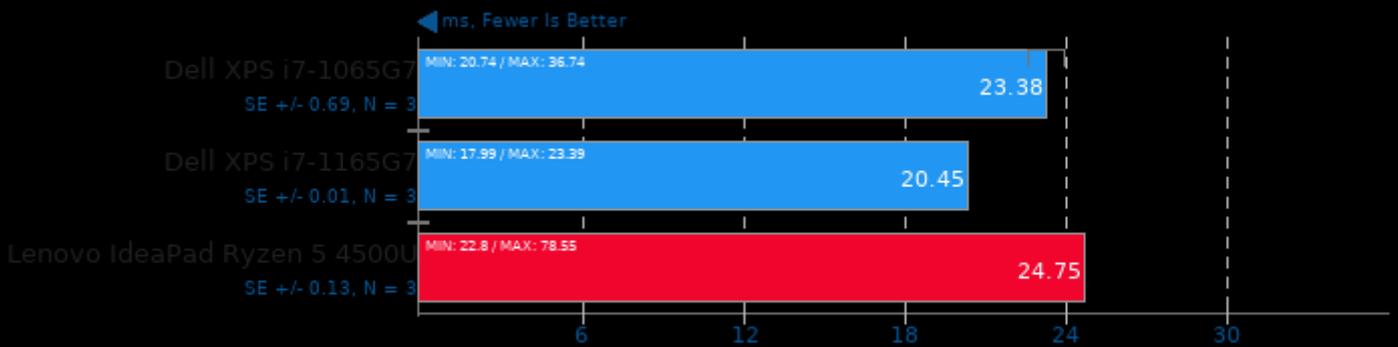
Target: CPU - Model: vgg16



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lthread

NCNN 20201218

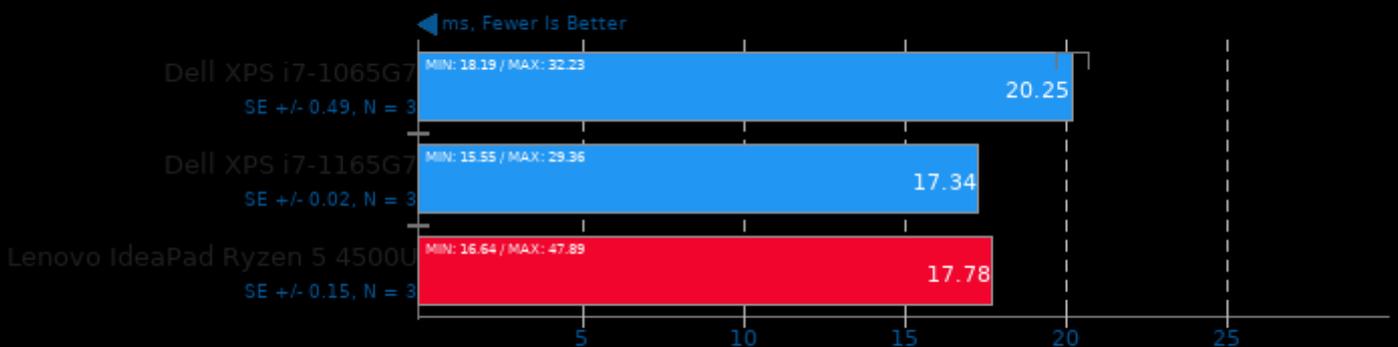
Target: CPU - Model: resnet18



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lthread

NCNN 20201218

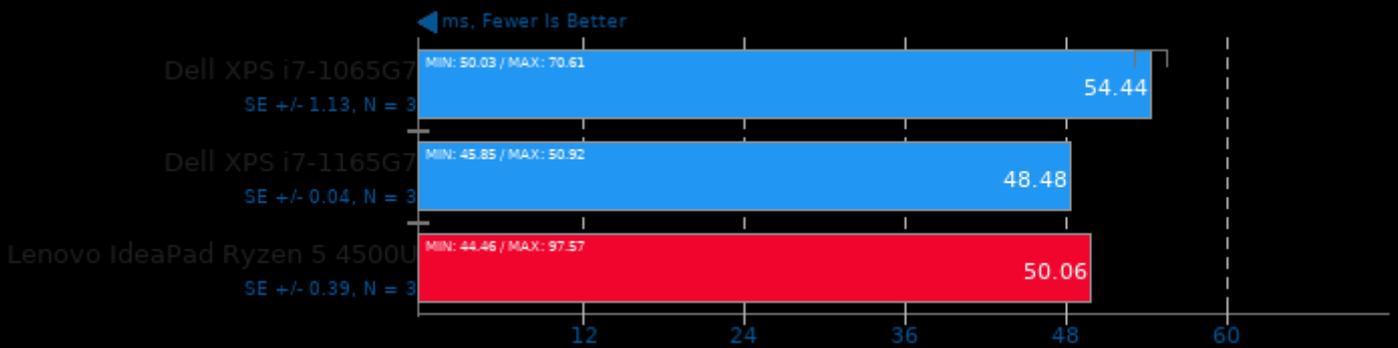
Target: CPU - Model: alexnet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lthread

NCNN 20201218

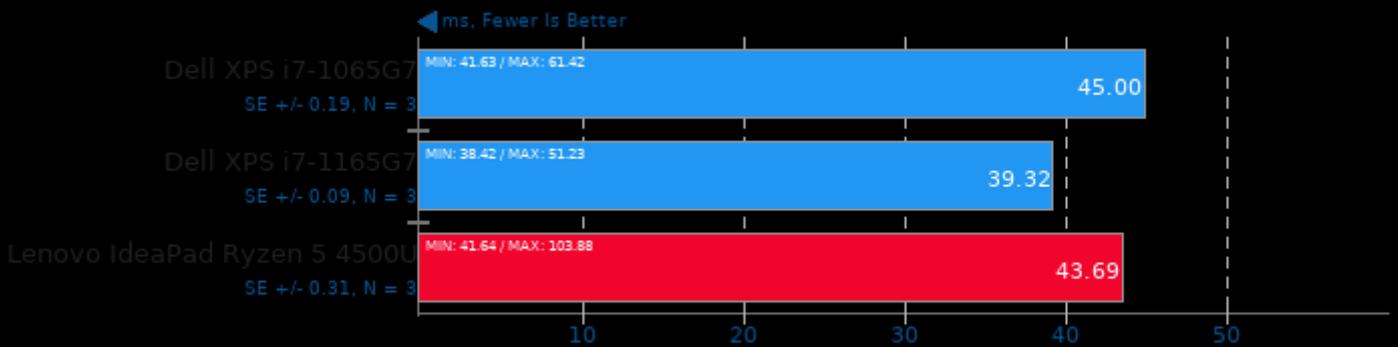
Target: CPU - Model: resnet50



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

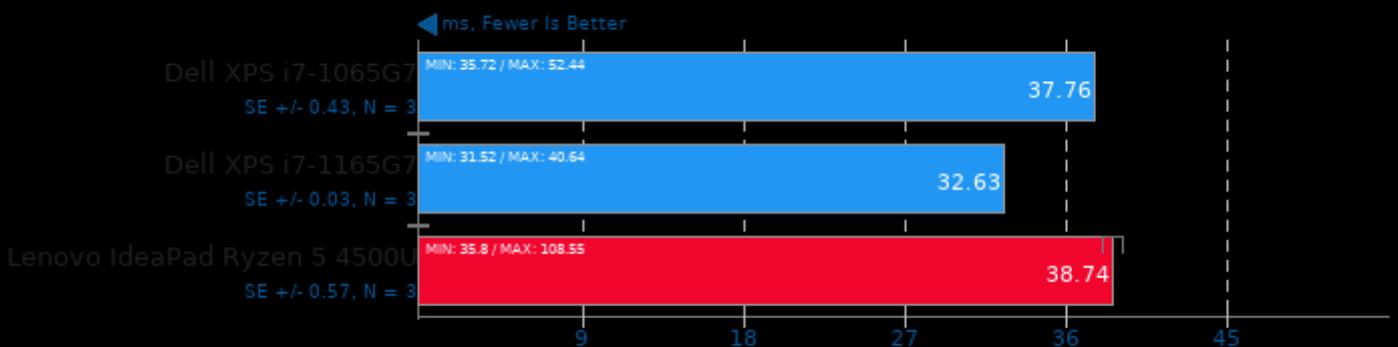
Target: CPU - Model: yolov4-tiny



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

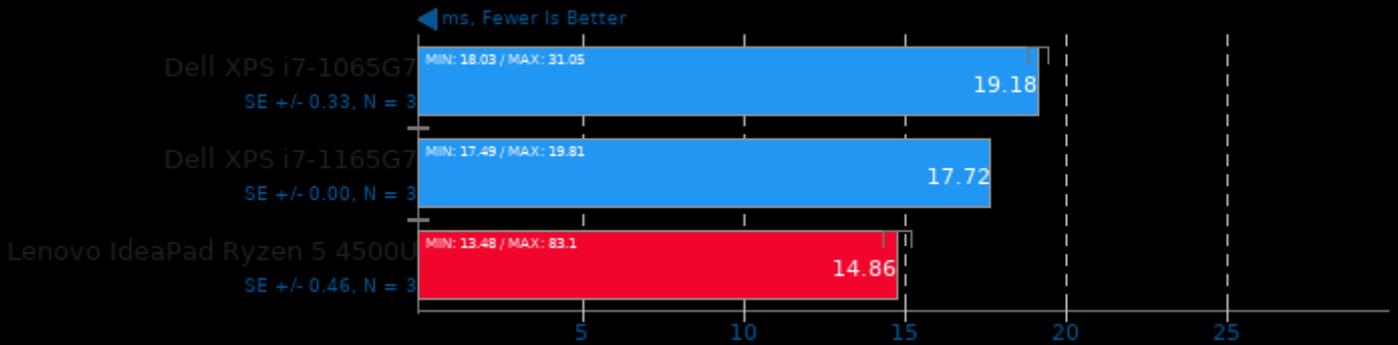
Target: CPU - Model: squeezenet\_ssd



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

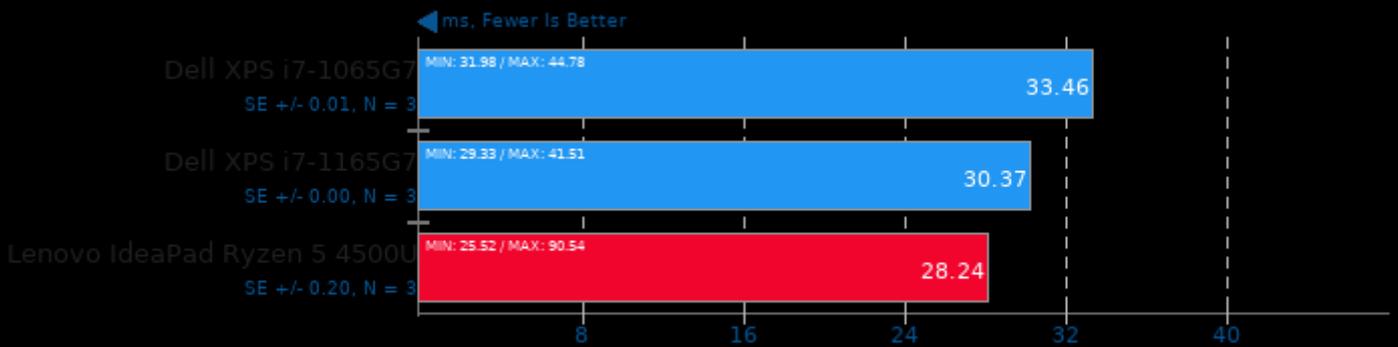
Target: CPU - Model: regnety\_400m



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

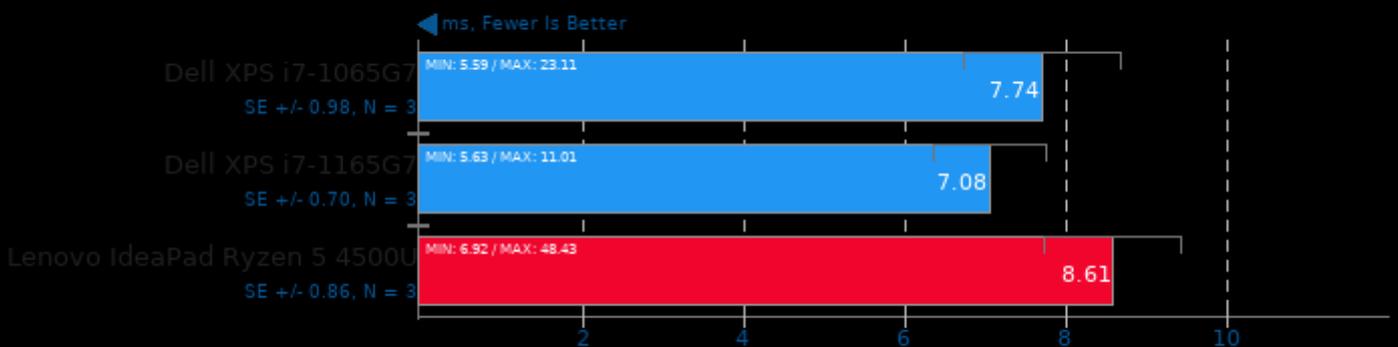
Target: Vulkan GPU - Model: mobilenet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

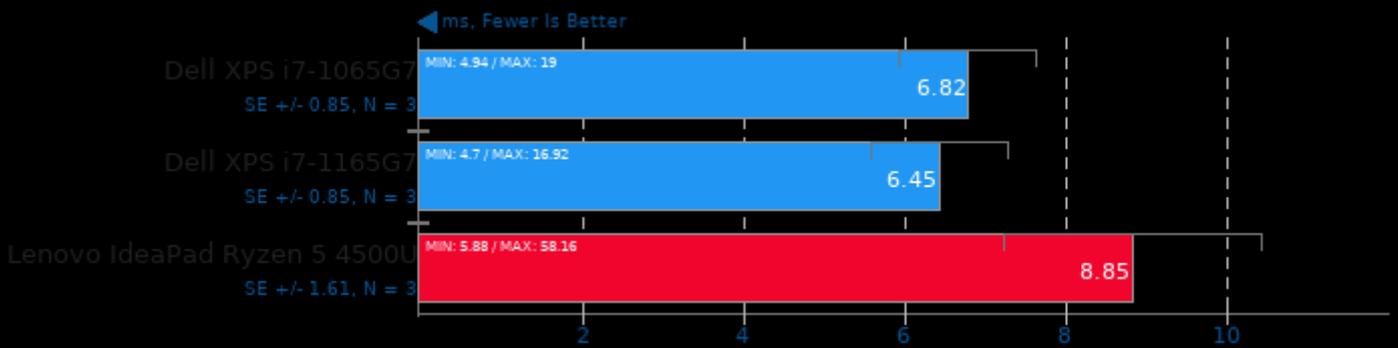
Target: Vulkan GPU-v2-v2 - Model: mobilenet-v2



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

### NCNN 20201218

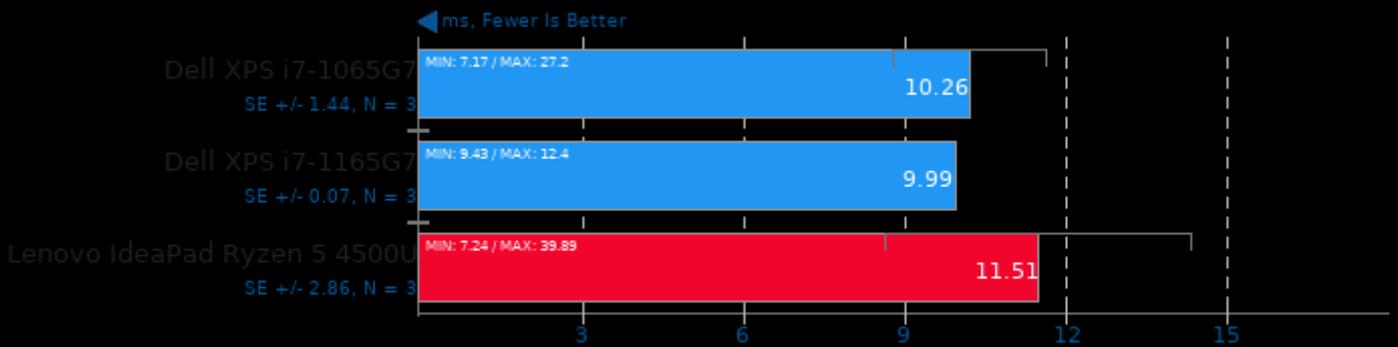
Target: Vulkan GPU-v3-v3 - Model: mobilenet-v3



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

### NCNN 20201218

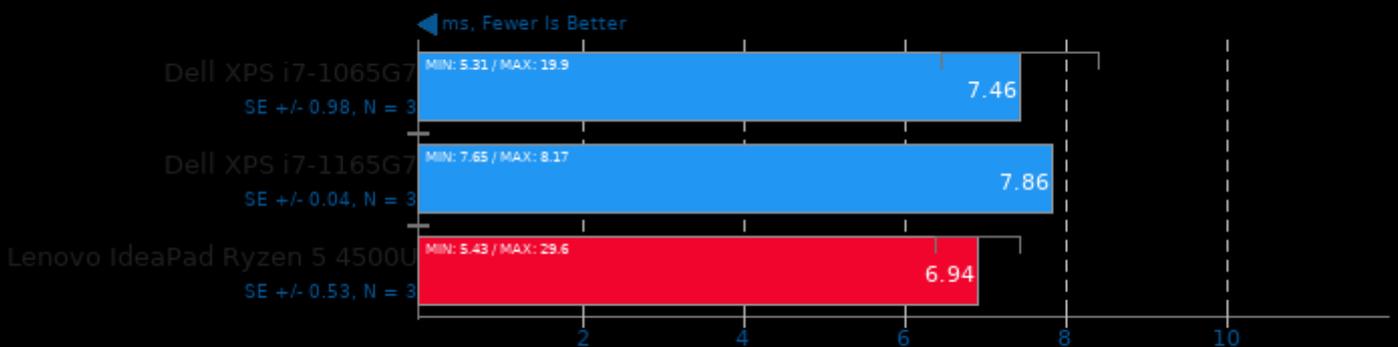
Target: Vulkan GPU - Model: shufflenet-v2



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

### NCNN 20201218

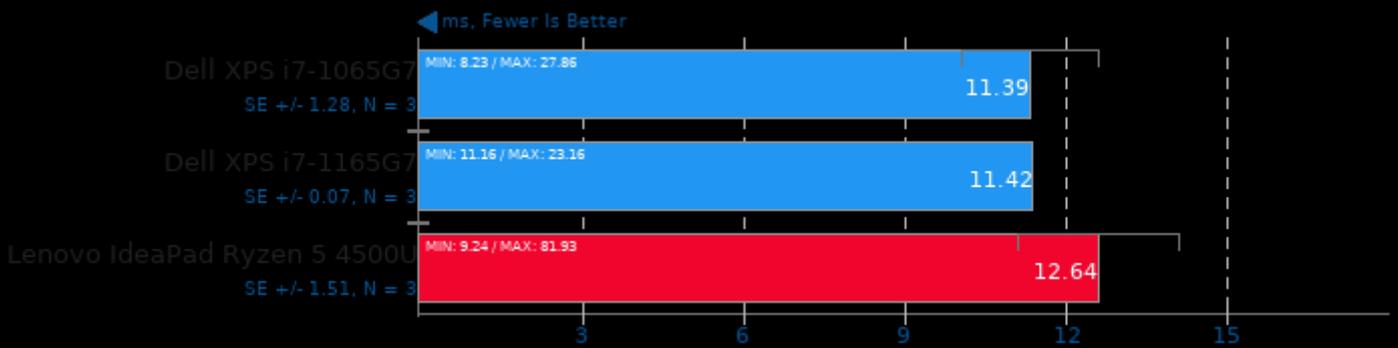
Target: Vulkan GPU - Model: mnasnet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

### NCNN 20201218

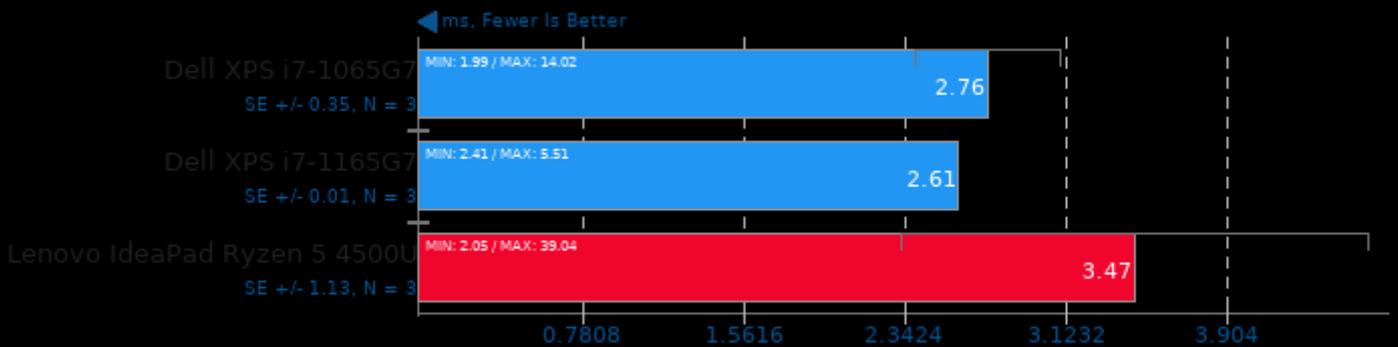
Target: Vulkan GPU - Model: efficientnet-b0



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

### NCNN 20201218

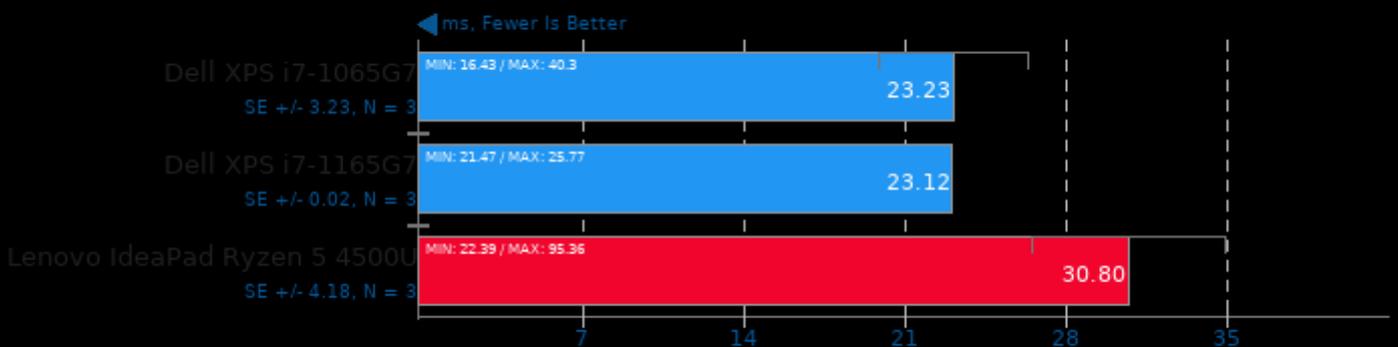
Target: Vulkan GPU - Model: blazeface



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

### NCNN 20201218

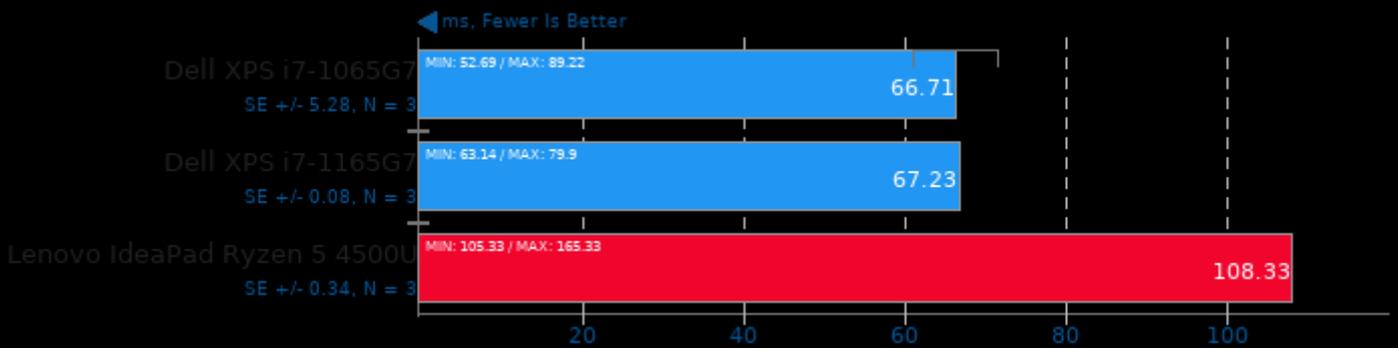
Target: Vulkan GPU - Model: googlenet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

## NCNN 20201218

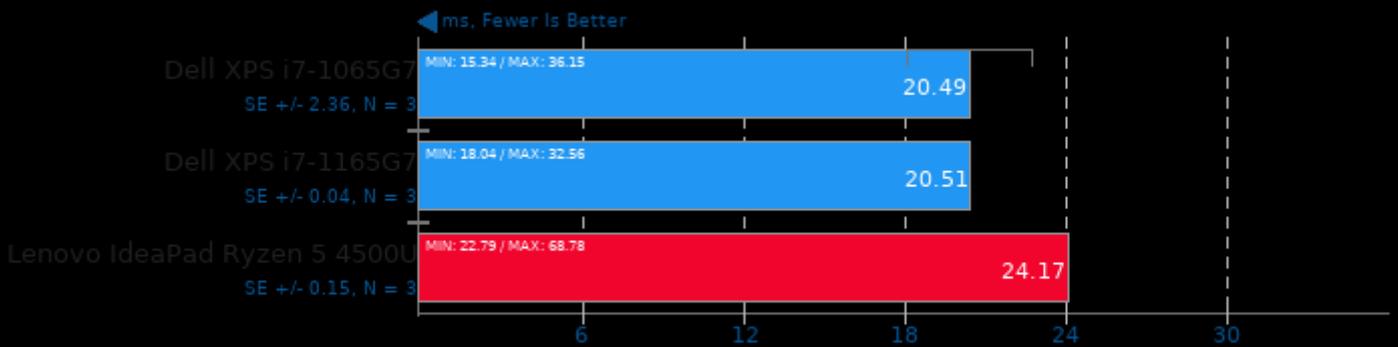
Target: Vulkan GPU - Model: vgg16



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

## NCNN 20201218

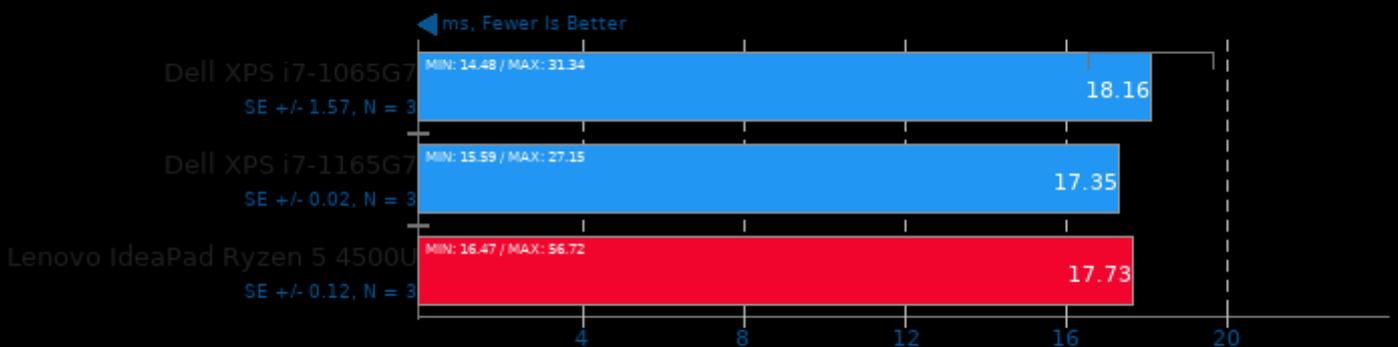
Target: Vulkan GPU - Model: resnet18



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

## NCNN 20201218

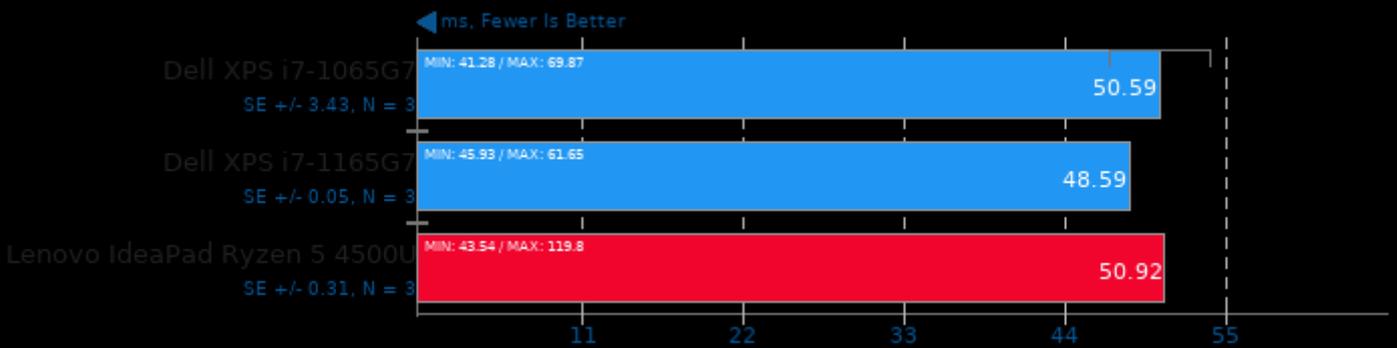
Target: Vulkan GPU - Model: alexnet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

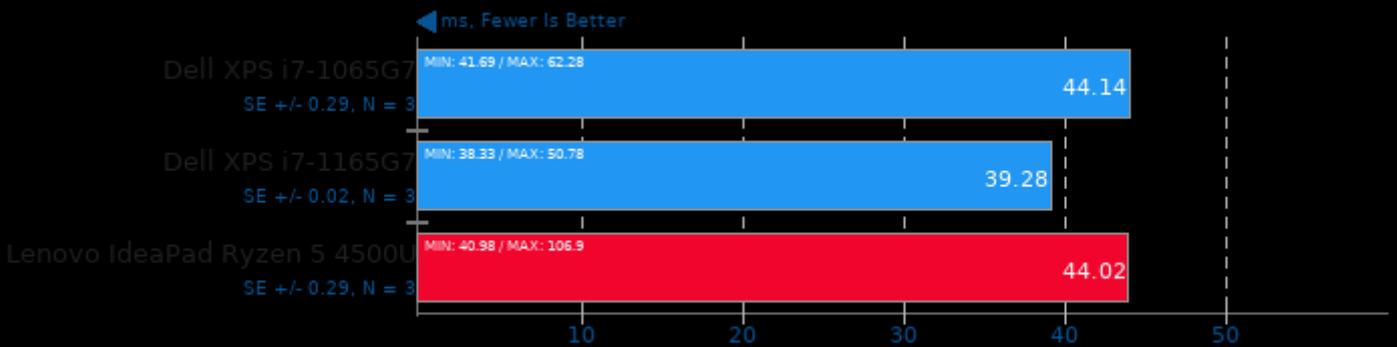
Target: Vulkan GPU - Model: resnet50



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

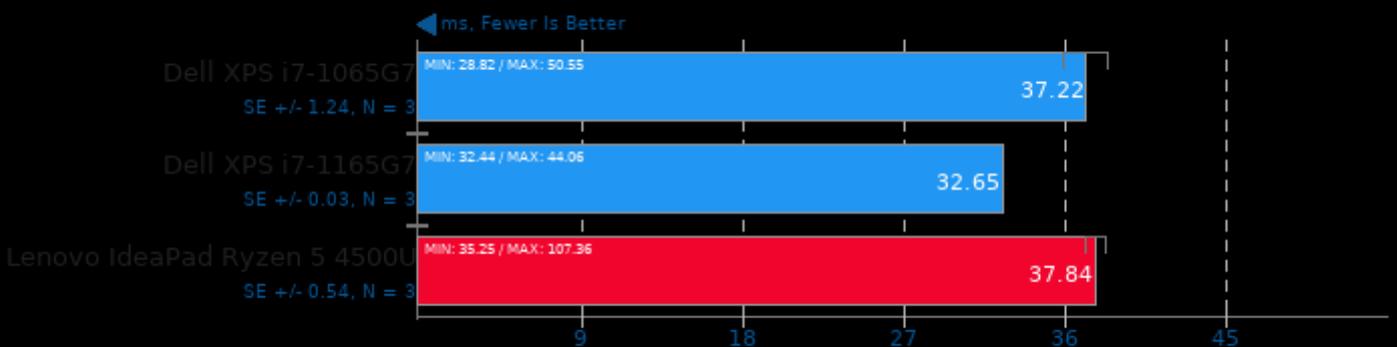
Target: Vulkan GPU - Model: yolov4-tiny



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

NCNN 20201218

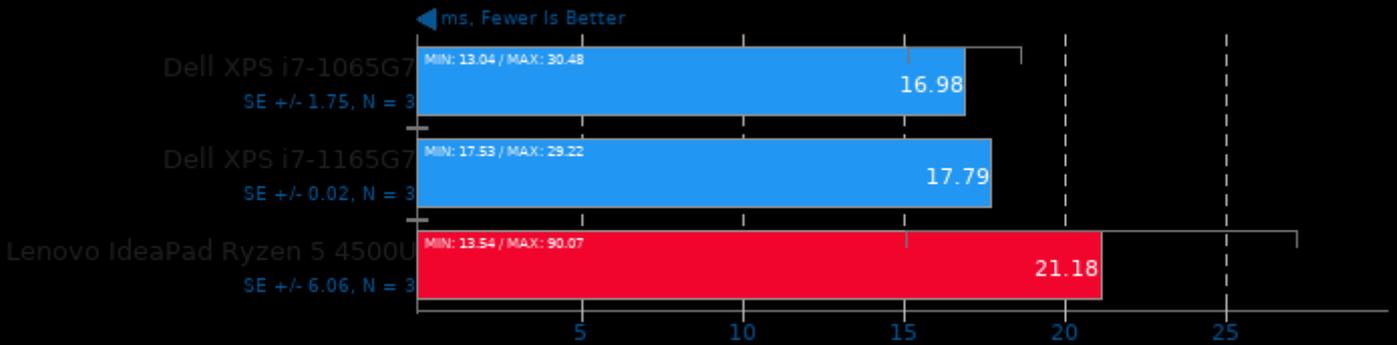
Target: Vulkan GPU - Model: squeezenet\_ssd



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

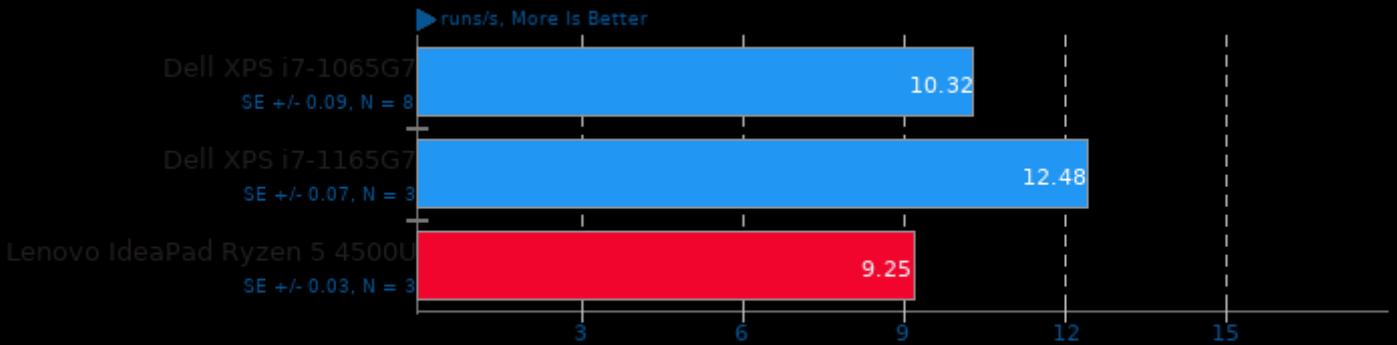
## NCNN 20201218

Target: Vulkan GPU - Model: regnety\_400m



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

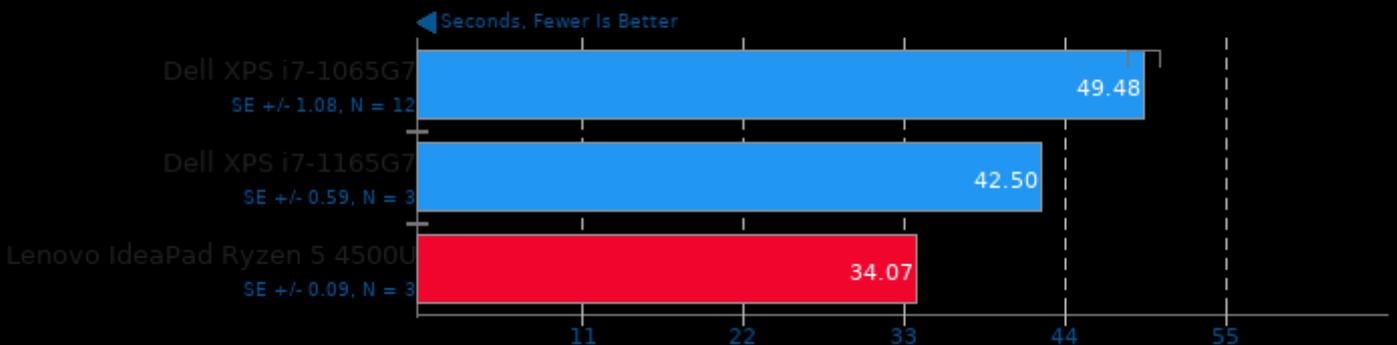
## Node.js V8 Web Tooling Benchmark



1. Node.js v12.18.2

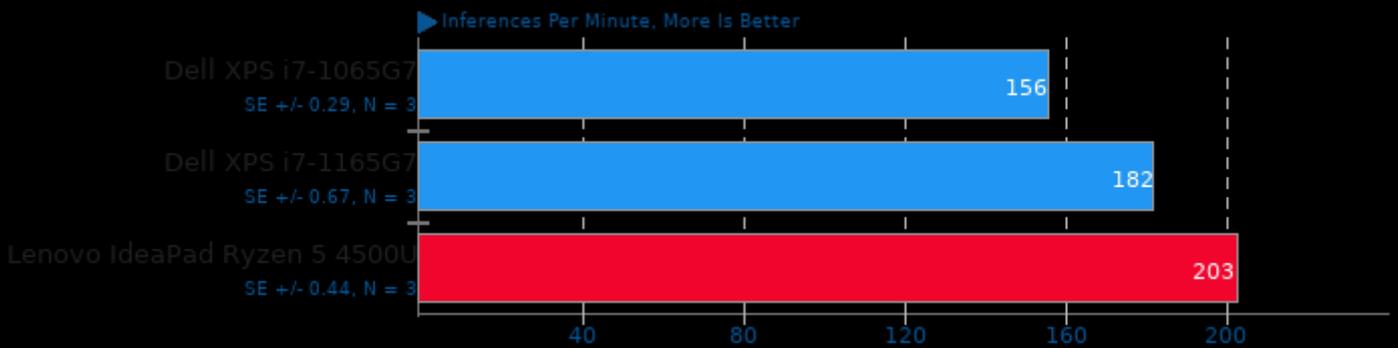
## OCRMyPDF 10.3.1+dfsg

Processing 60 Page PDF Document



## ONNX Runtime 1.6

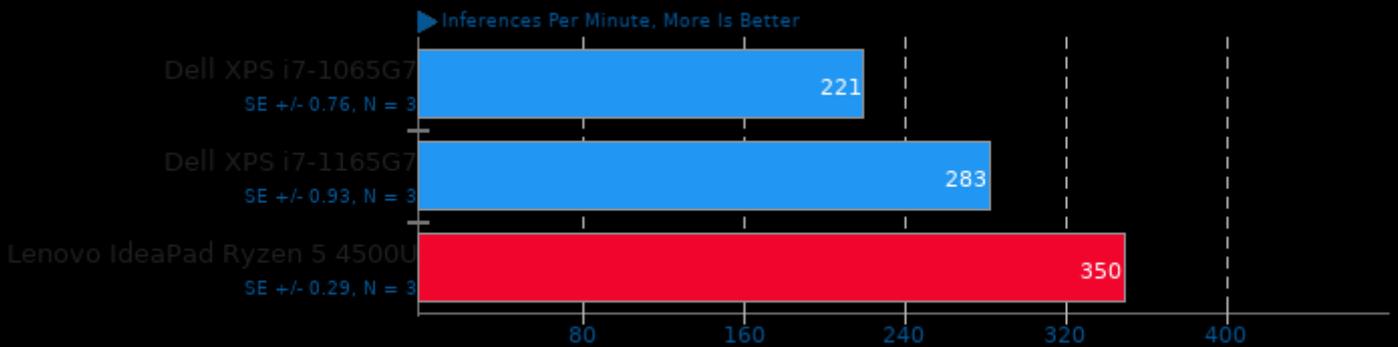
Model: yolov4 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -function-sections -fdata-sections -O3 -ldl -lrt

## ONNX Runtime 1.6

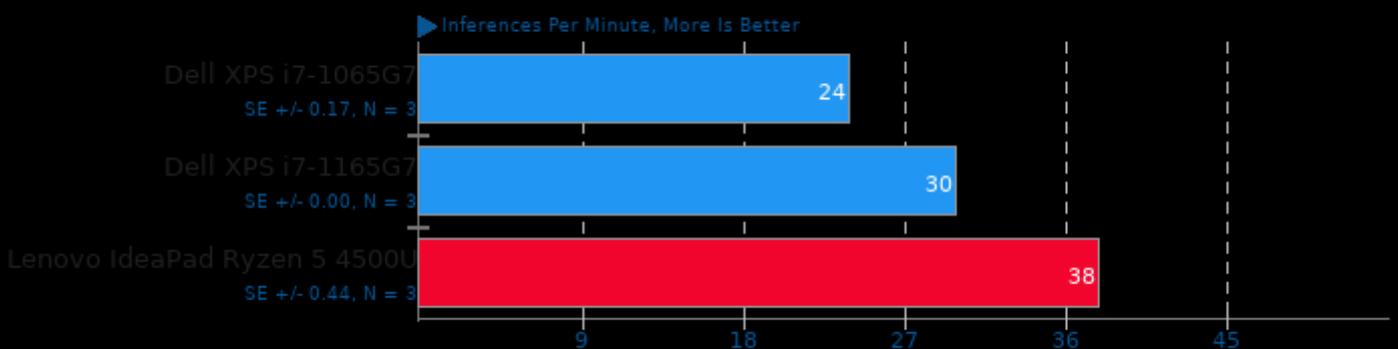
Model: bertseqad-10 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -function-sections -fdata-sections -O3 -ldl -lrt

## ONNX Runtime 1.6

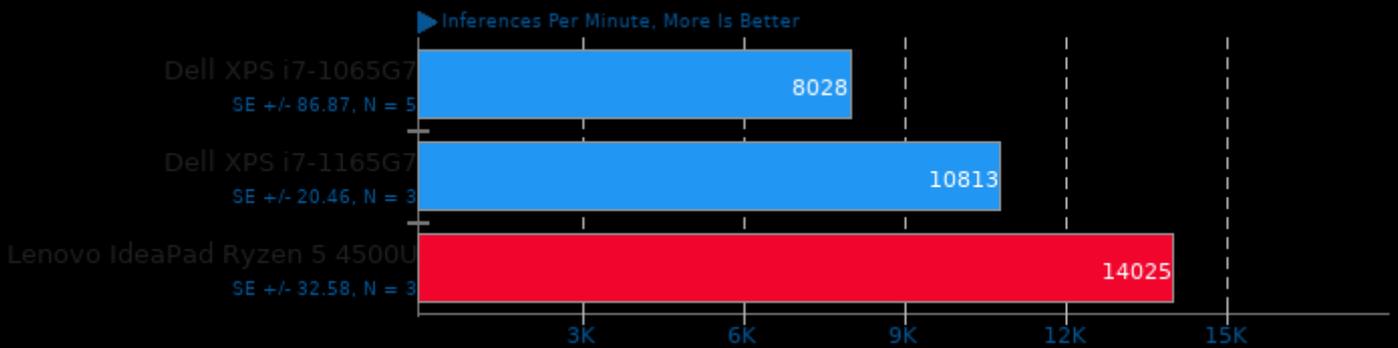
Model: fcn-resnet101-11 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -function-sections -fdata-sections -O3 -ldl -lrt

### ONNX Runtime 1.6

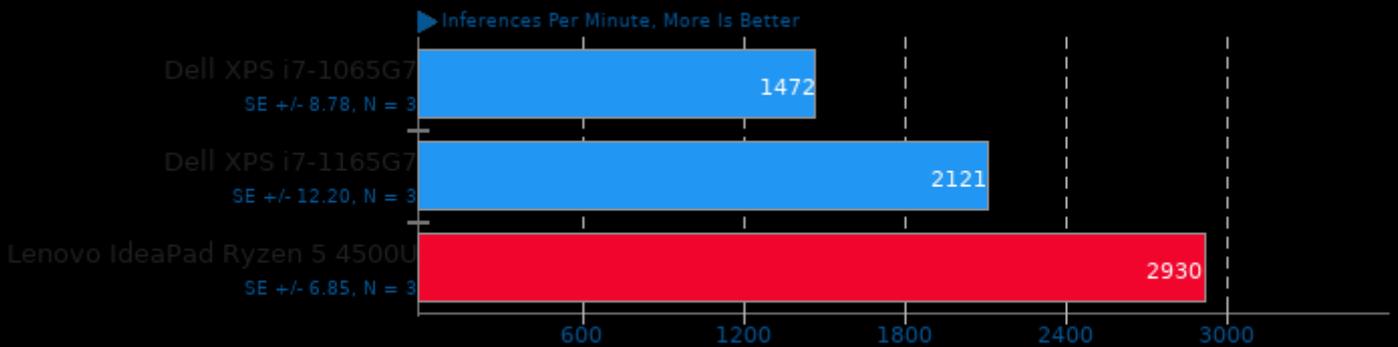
Model: shufflenet-v2-10 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -function-sections -fdata-sections -O3 -ldl -lrt

### ONNX Runtime 1.6

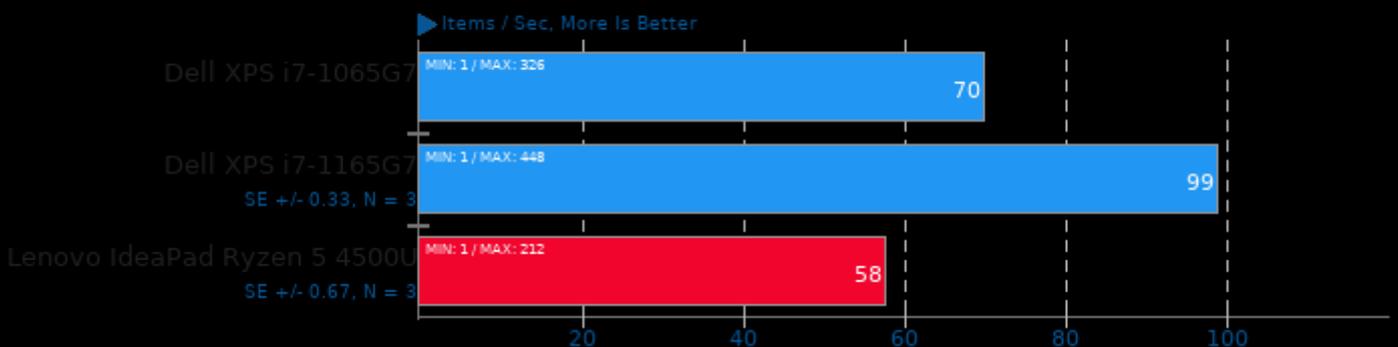
Model: super-resolution-10 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -function-sections -fdata-sections -O3 -ldl -lrt

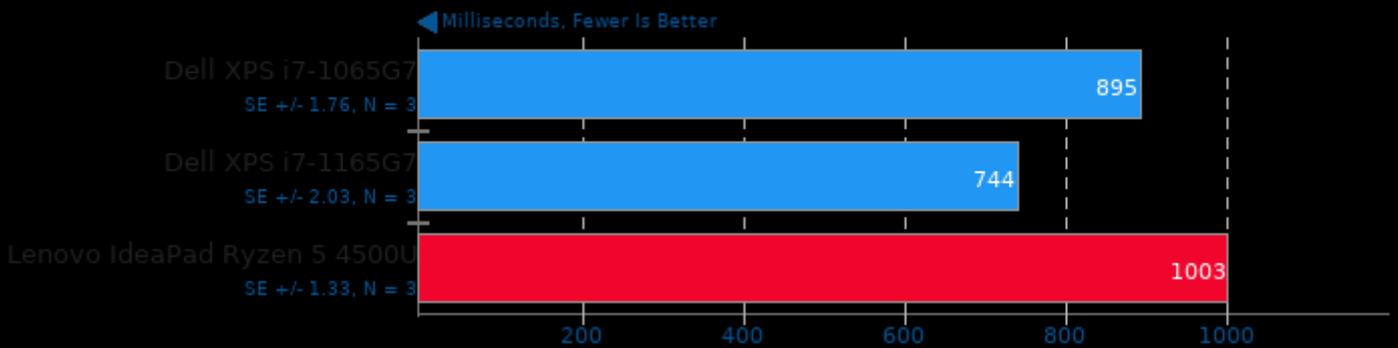
### OpenVKL 0.9

Benchmark: vkiBenchmark

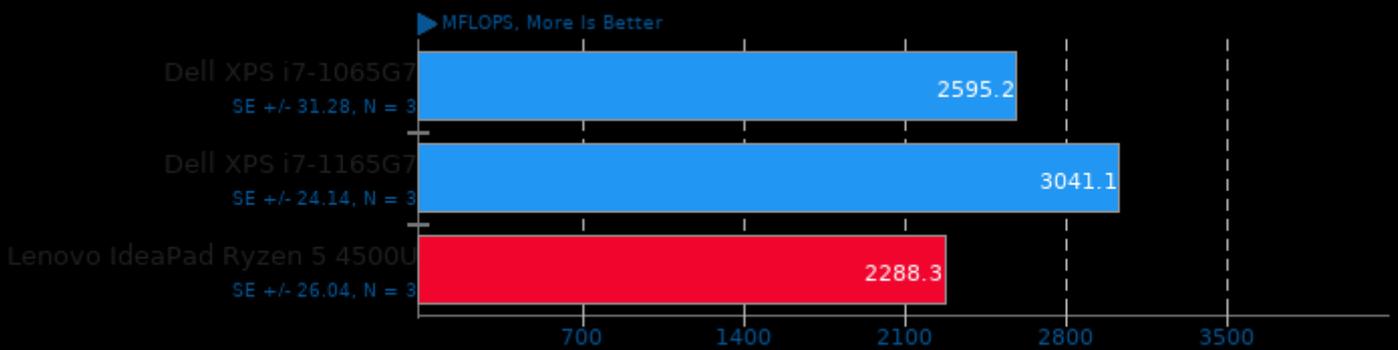


## PyBench 2018-02-16

Total For Average Test Times



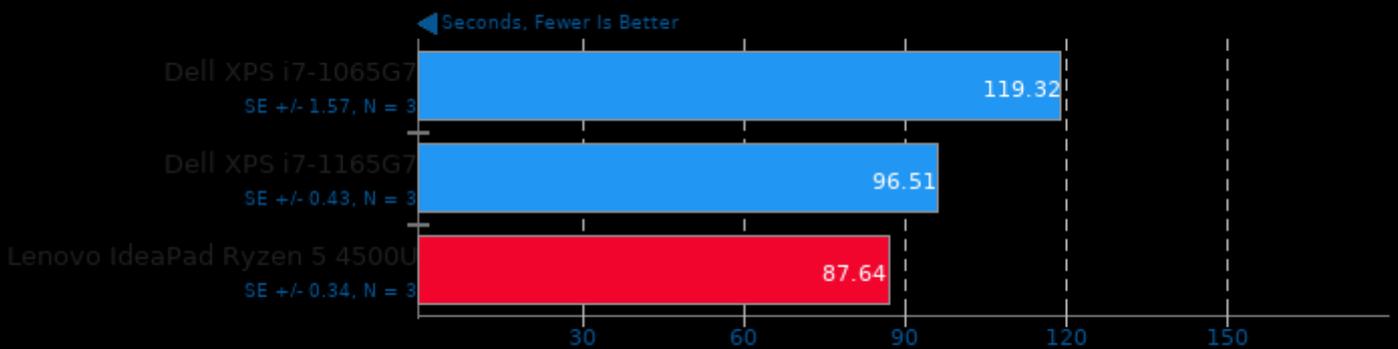
## QuantLib 1.21



1. (CXX) g++ options: -O3 -march=native -rdynamic

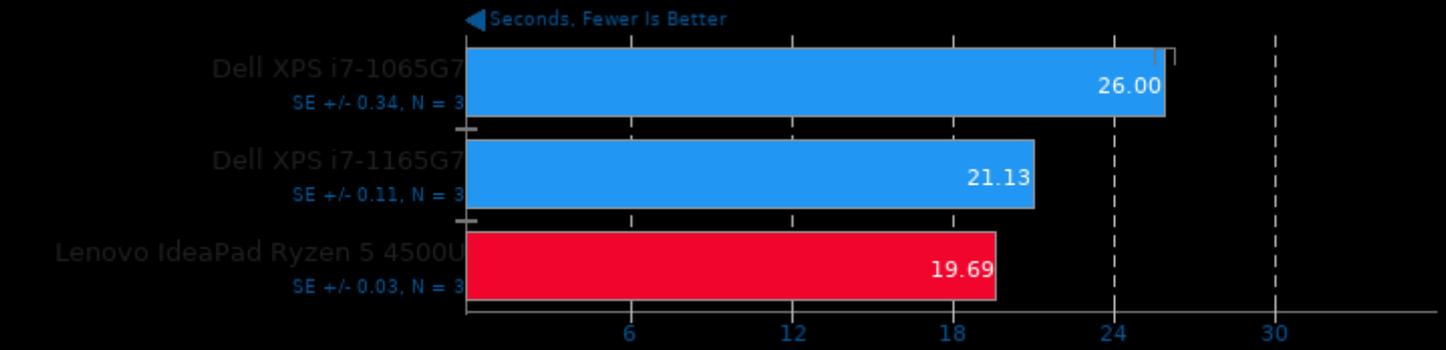
## RawTherapee

Total Benchmark Time



1. RawTherapee, version 5.8, command line.

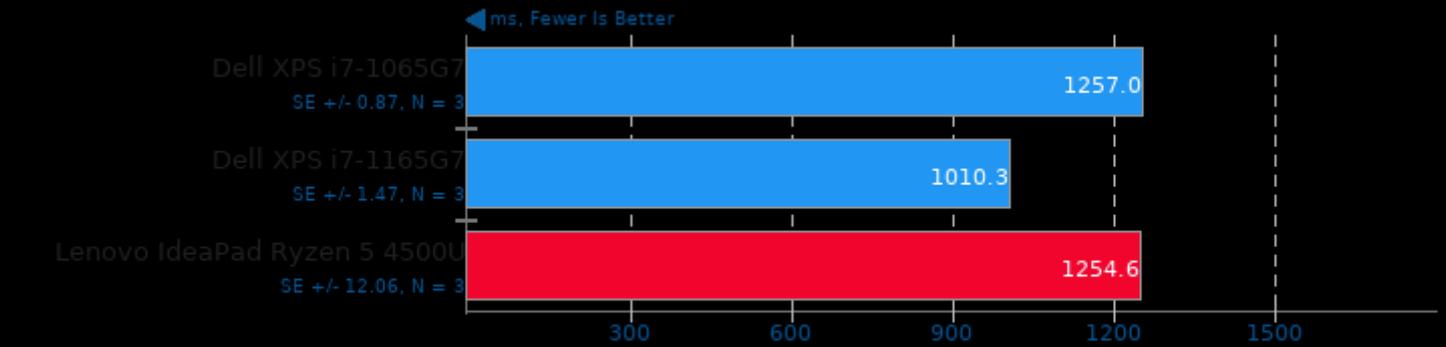
## RNNoise 2020-06-28



1. (CC) gcc options: -O2 -pedantic -fvisibility=hidden

## Selenium

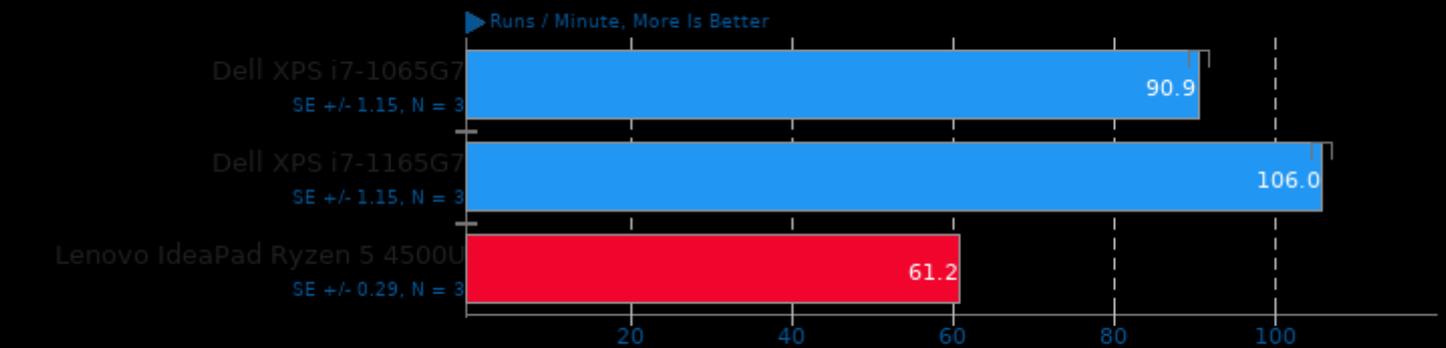
Benchmark: Kraken - Browser: Firefox



1. firefox 84.0.2

## Selenium

Benchmark: StyleBench - Browser: Firefox

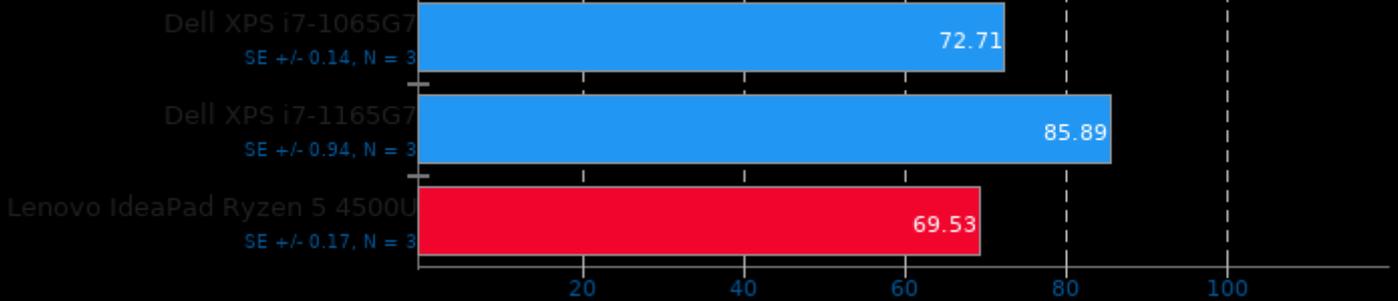


1. firefox 84.0.2

## Selenium

Benchmark: Jetstream 2 - Browser: Firefox

▶ Score, More Is Better

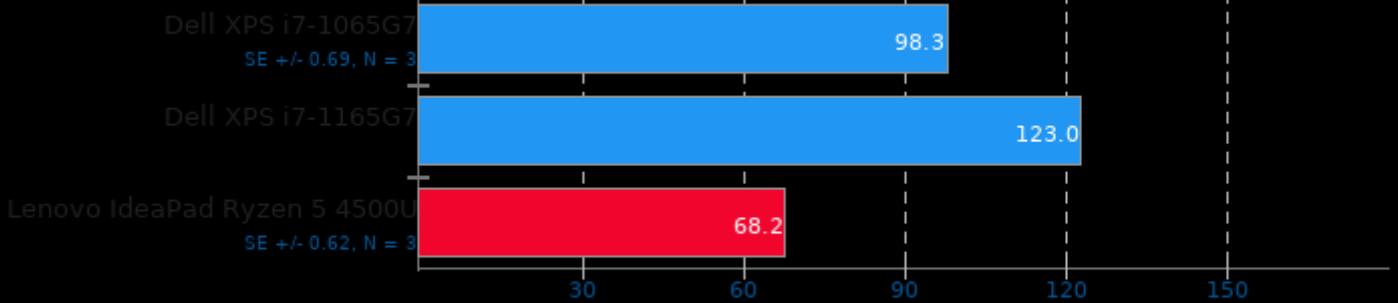


1. firefox 84.0.2

## Selenium

Benchmark: Speedometer - Browser: Firefox

▶ Runs Per Minute, More Is Better

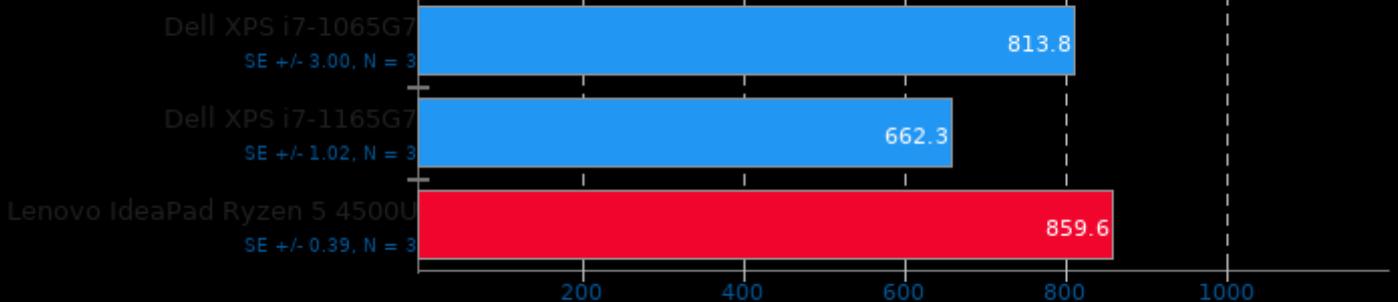


1. firefox 84.0.2

## Selenium

Benchmark: Kraken - Browser: Google Chrome

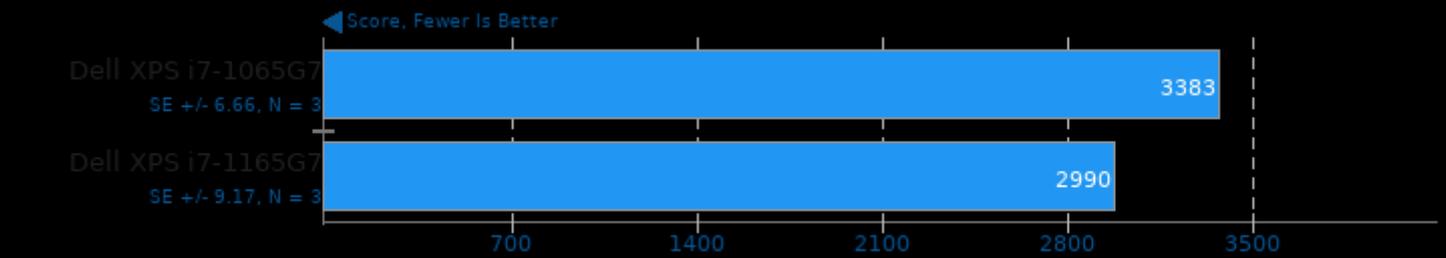
◀ ms, Fewer Is Better



1. chrome 88.0.4324.96

## Selenium

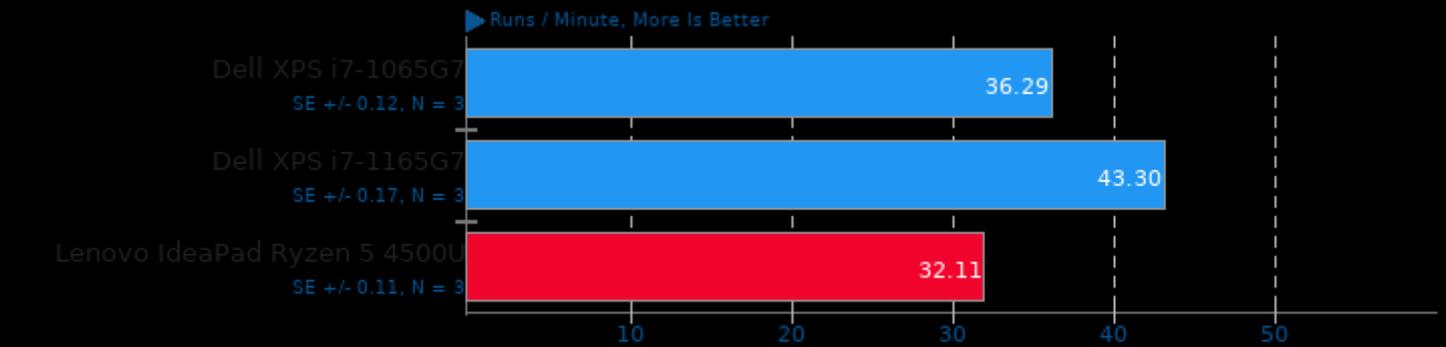
Benchmark: PSPDFKit WASM - Browser: Firefox



1. firefox 84.0.2

## Selenium

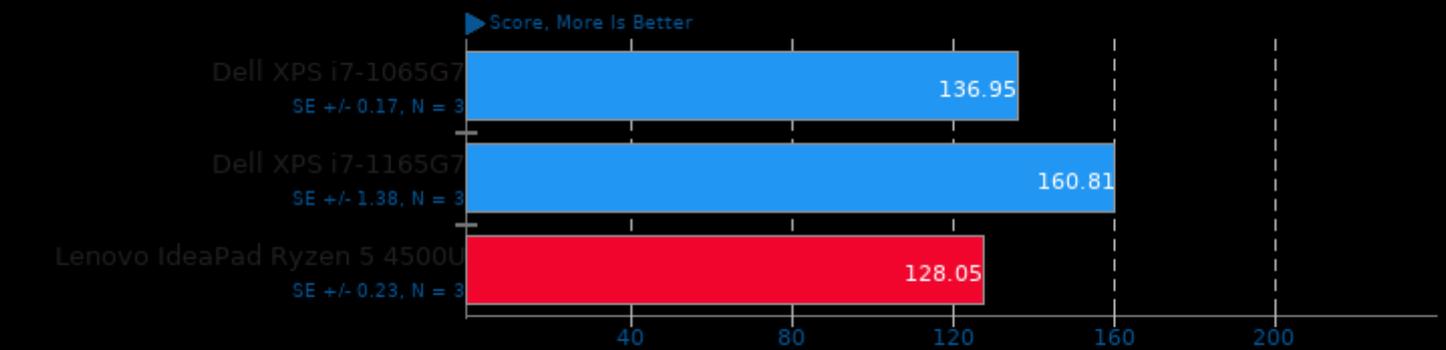
Benchmark: StyleBench - Browser: Google Chrome



1. chrome 88.0.4324.96

## Selenium

Benchmark: Jetstream 2 - Browser: Google Chrome

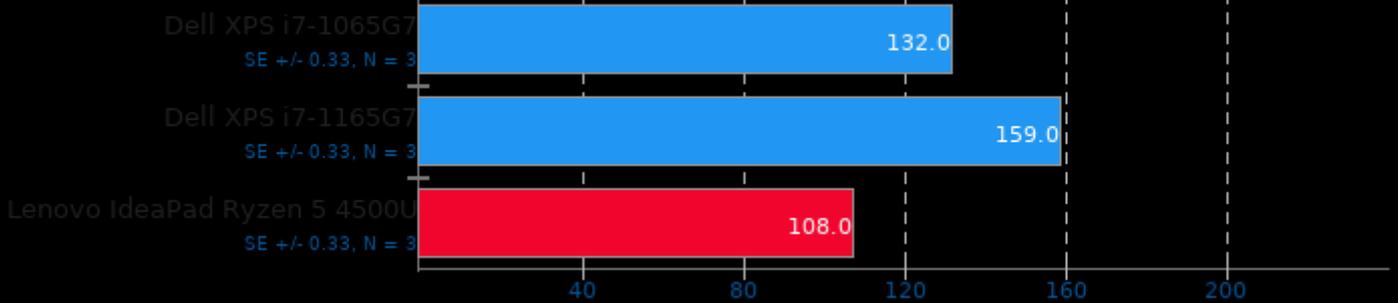


1. chrome 88.0.4324.96

## Selenium

Benchmark: Speedometer - Browser: Google Chrome

Runs Per Minute, More Is Better

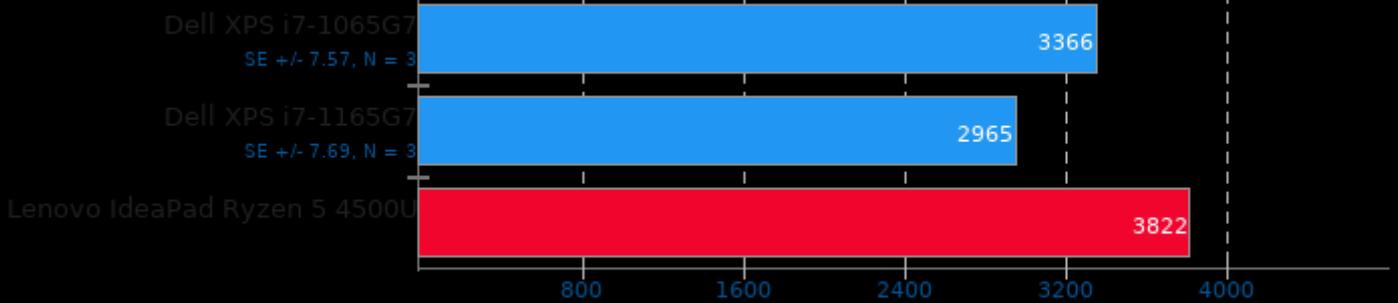


1. chrome 88.0.4324.96

## Selenium

Benchmark: PSPDFKit WASM - Browser: Google Chrome

Score, Fewer Is Better

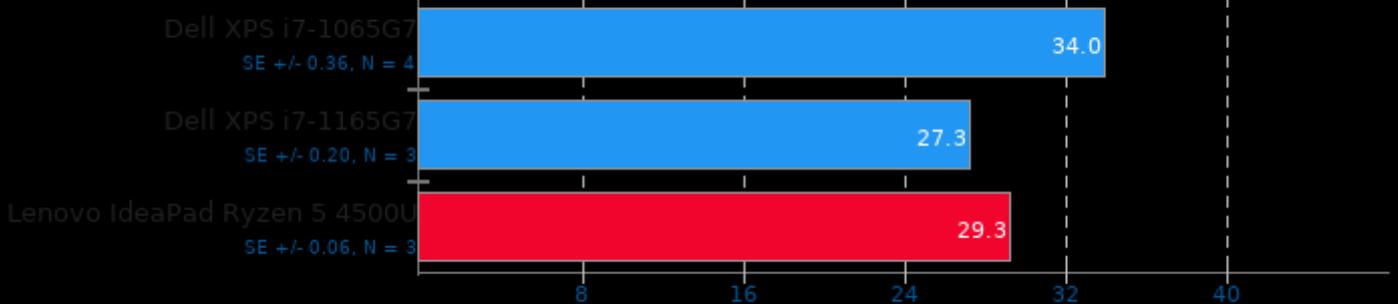


1. chrome 88.0.4324.96

## Selenium

Benchmark: WASM imageConvolute - Browser: Firefox

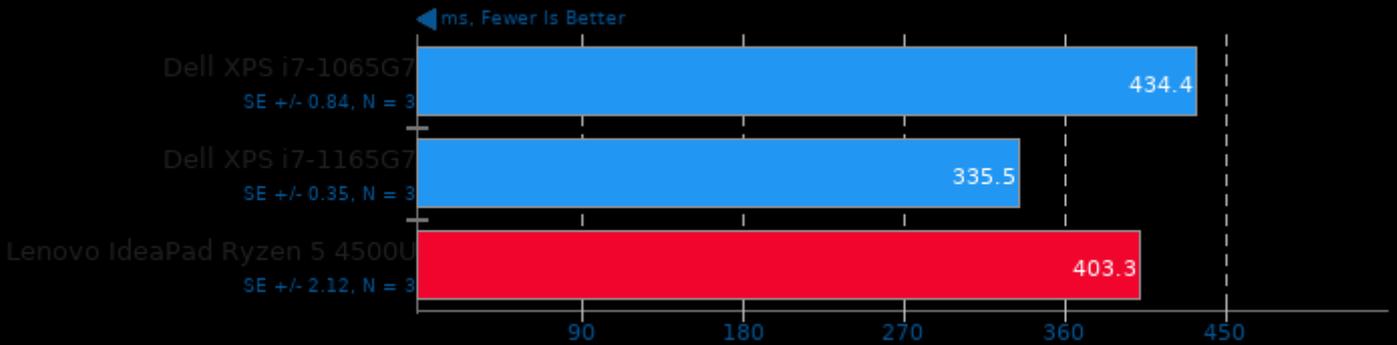
ms, Fewer Is Better



1. firefox 84.0.2

## Selenium

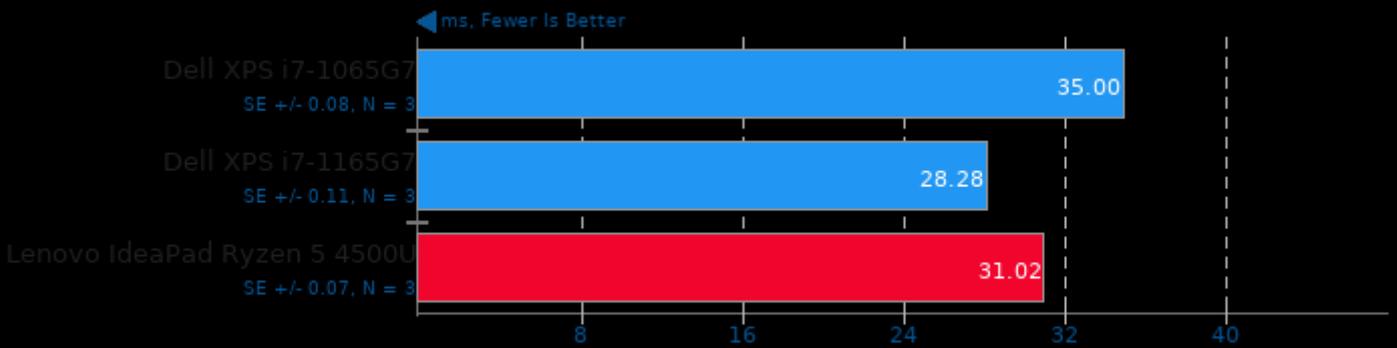
Benchmark: WASM collisionDetection - Browser: Firefox



1. firefox 84.0.2

## Selenium

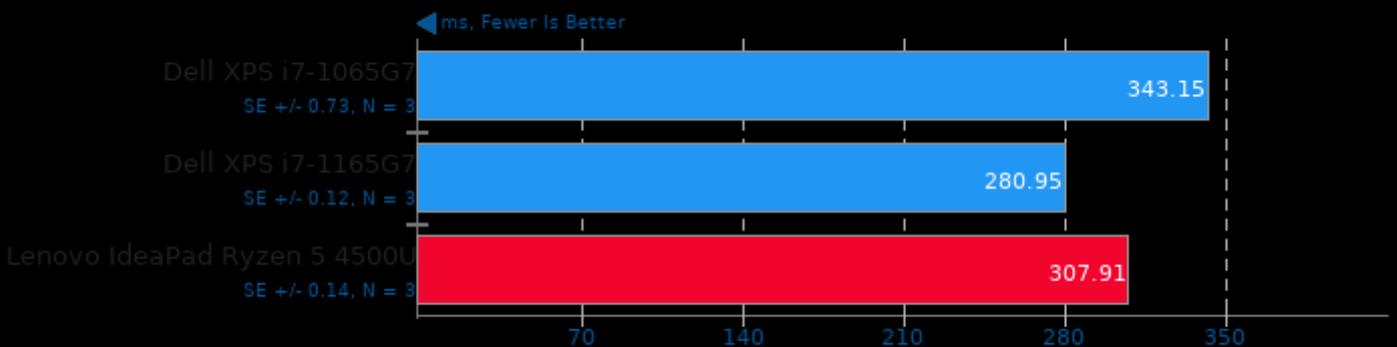
Benchmark: WASM imageConvolute - Browser: Google Chrome



1. chrome 88.0.4324.96

## Selenium

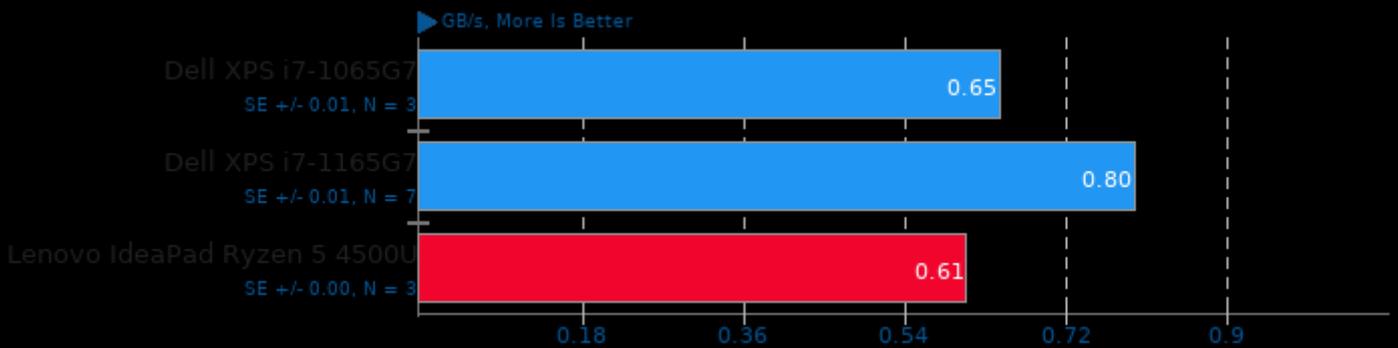
Benchmark: WASM collisionDetection - Browser: Google Chrome



1. chrome 88.0.4324.96

## simdjson 0.7.1

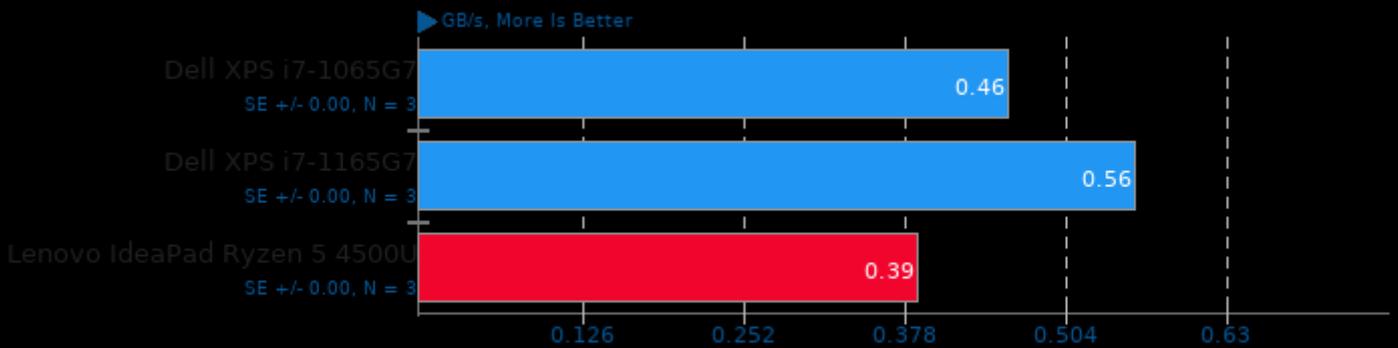
Throughput Test: Kostya



1. (CXX) g++ options: -O3 -pthread

## simdjson 0.7.1

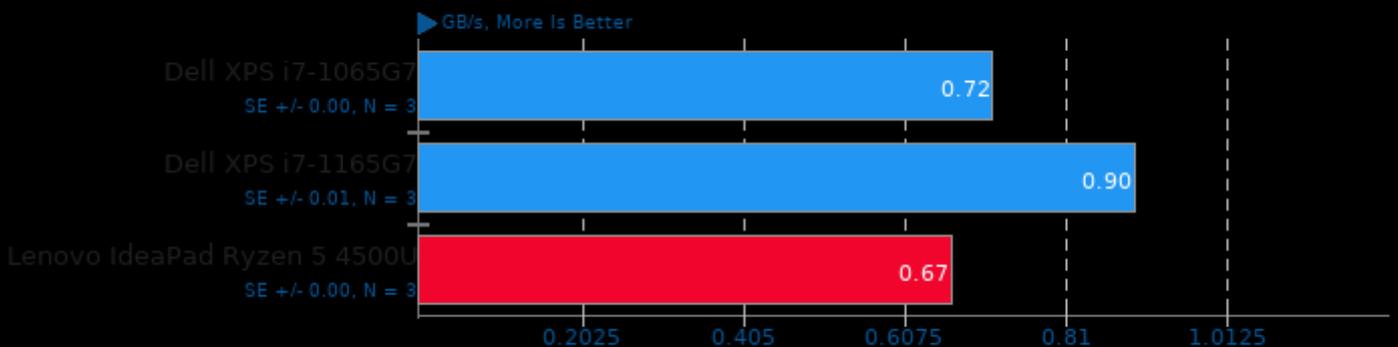
Throughput Test: LargeRandom



1. (CXX) g++ options: -O3 -pthread

## simdjson 0.7.1

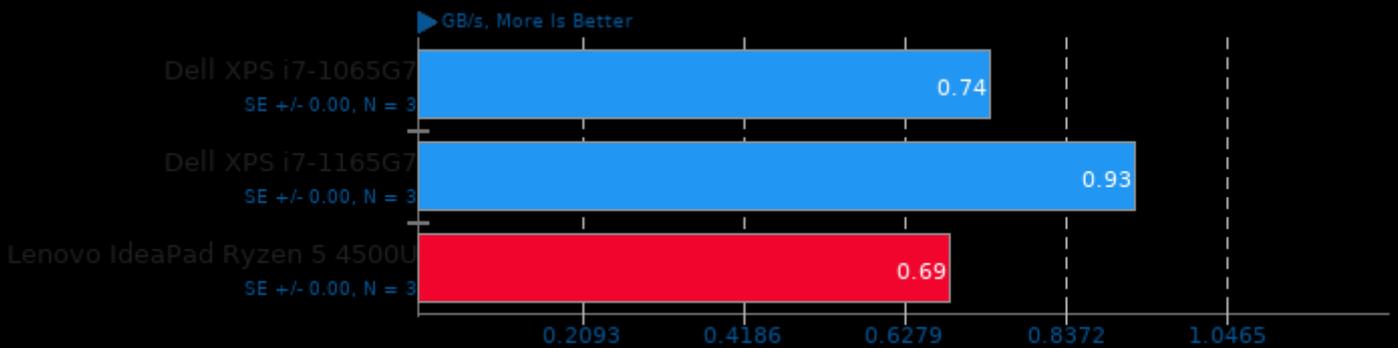
Throughput Test: PartialTweets



1. (CXX) g++ options: -O3 -pthread

### simdjson 0.7.1

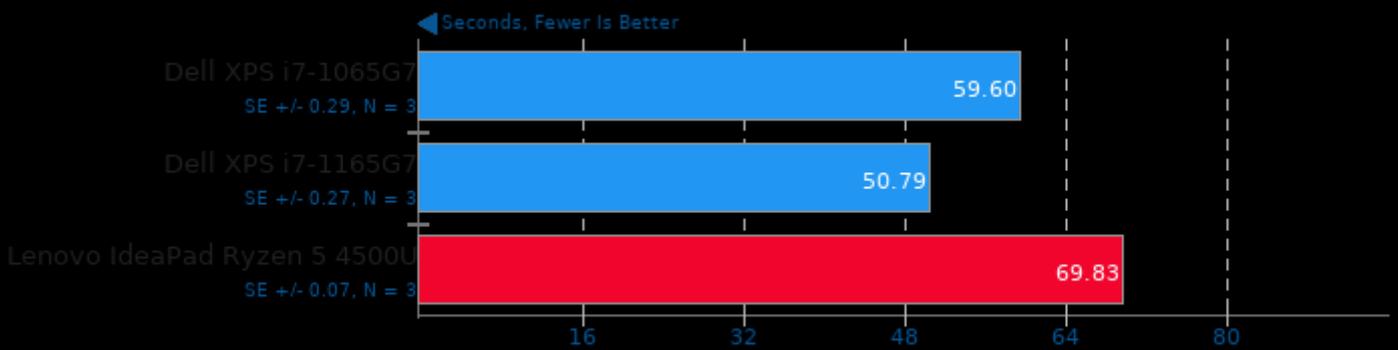
Throughput Test: DistinctUserID



1. (CXX) g++ options: -O3 -pthread

### SQLite Speedtest 3.30

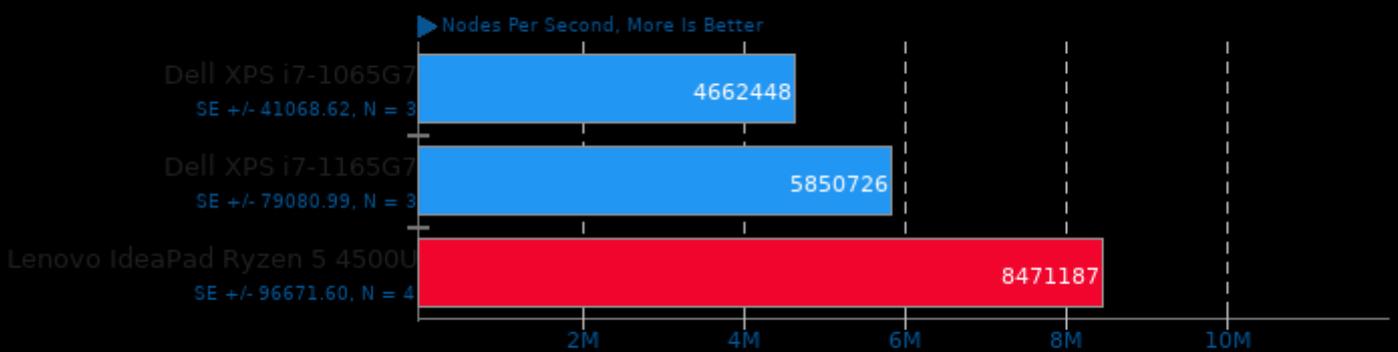
Timed Time - Size 1,000



1. (C) gcc options: -O2 -ldl -lz -pthread

### Stockfish 12

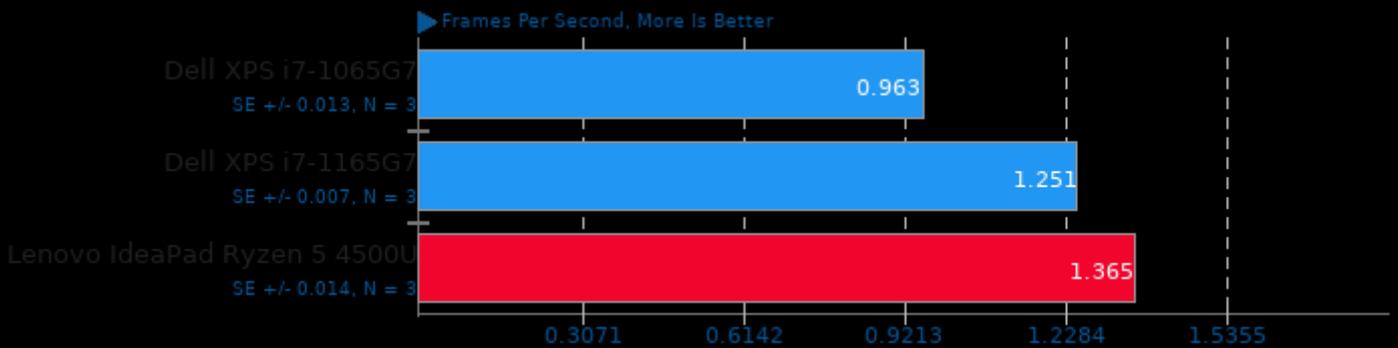
Total Time



1. (CXX) g++ options: -m64 -pthread -fno-exceptions -std=c++17 -pedantic -O3 -msse -msse3 -mpopcnt -msse4.1 -msse3 -msse2 -fipo -fipo=jobserver

### SVT-AV1 0.8

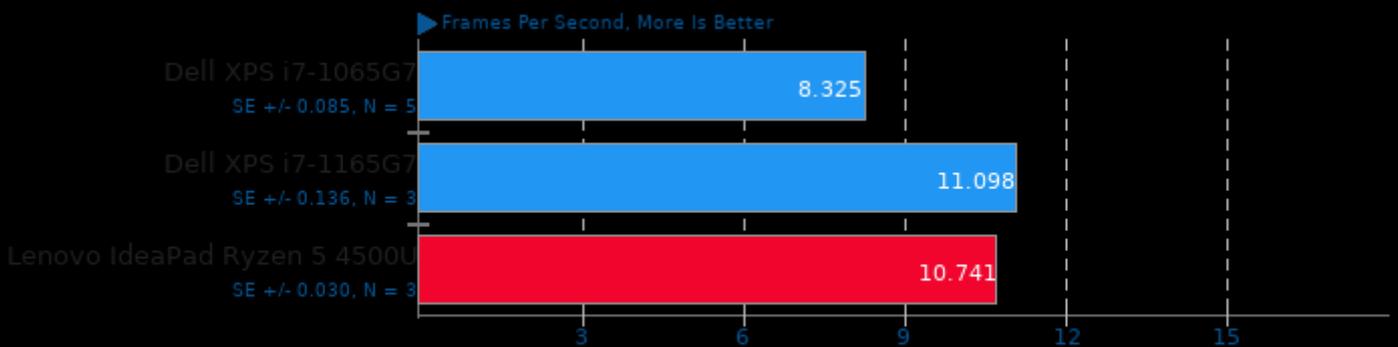
Encoder Mode: Enc Mode 4 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

### SVT-AV1 0.8

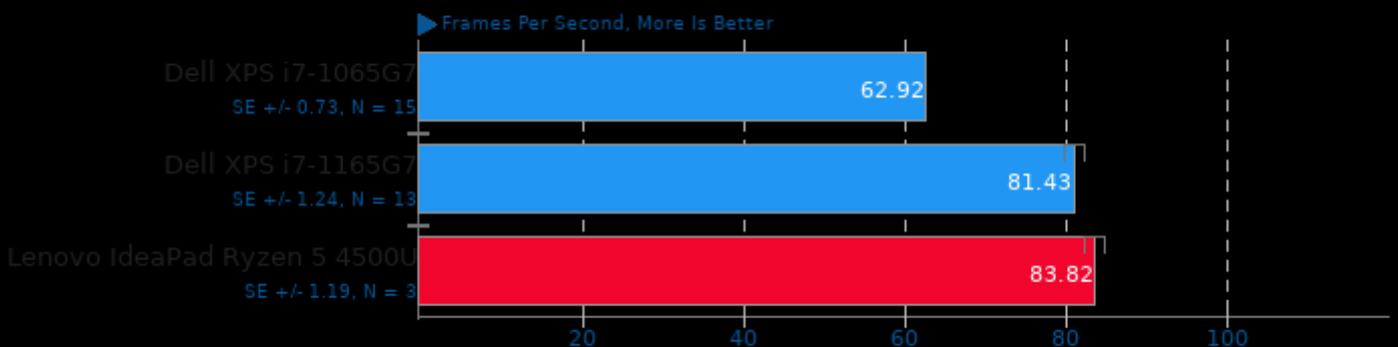
Encoder Mode: Enc Mode 8 - Input: 1080p



1. (CXX) g++ options: -O3 -fcommon -fPIE -fPIC -pie

### SVT-VP9 0.1

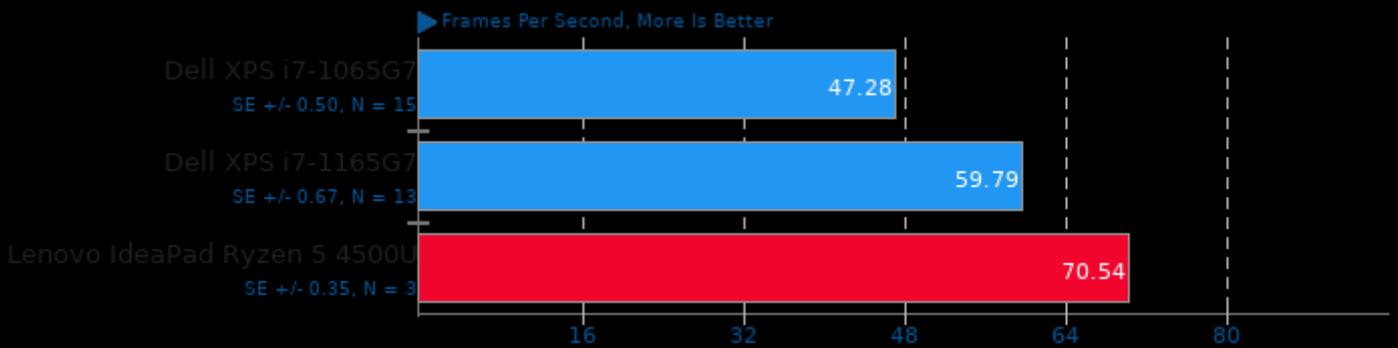
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -pthread -lrt -lm

### SVT-VP9 0.1

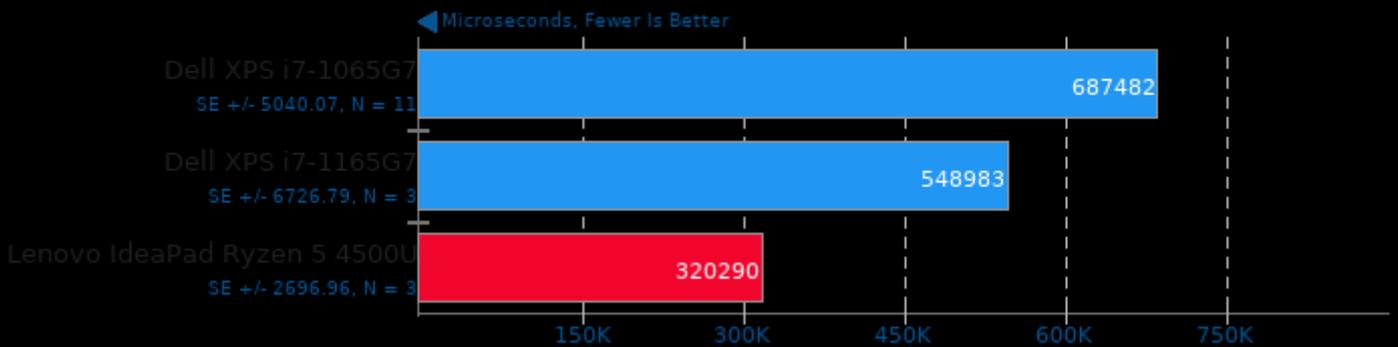
Tuning: Visual Quality Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

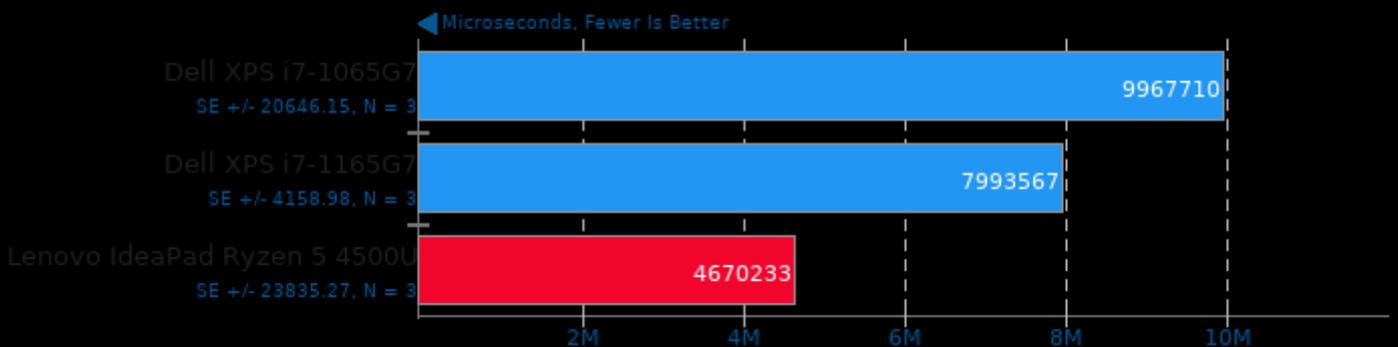
### TensorFlow Lite 2020-08-23

Model: SqueezeNet



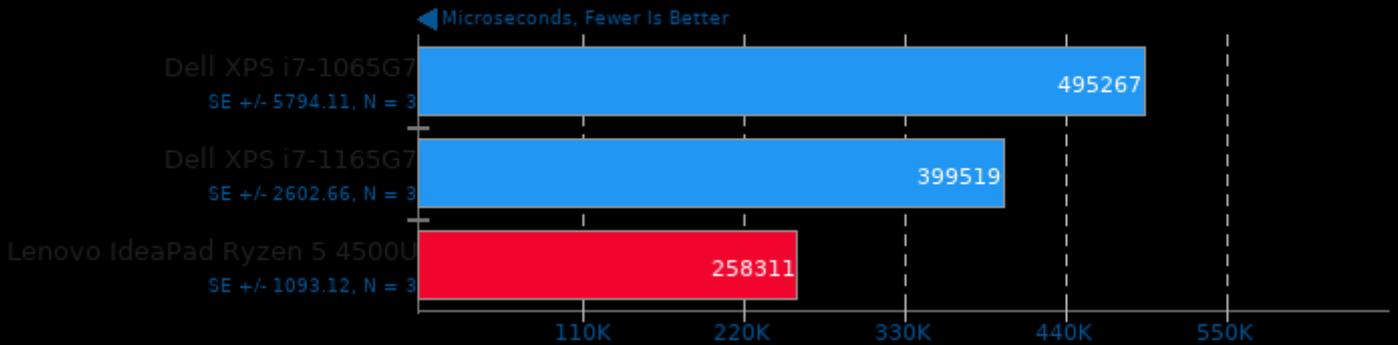
### TensorFlow Lite 2020-08-23

Model: Inception V4



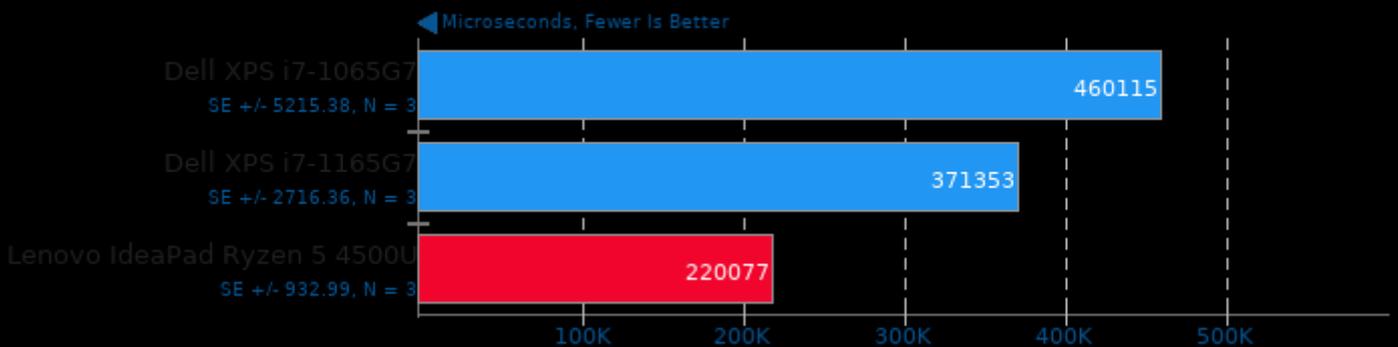
## TensorFlow Lite 2020-08-23

Model: NASNet Mobile



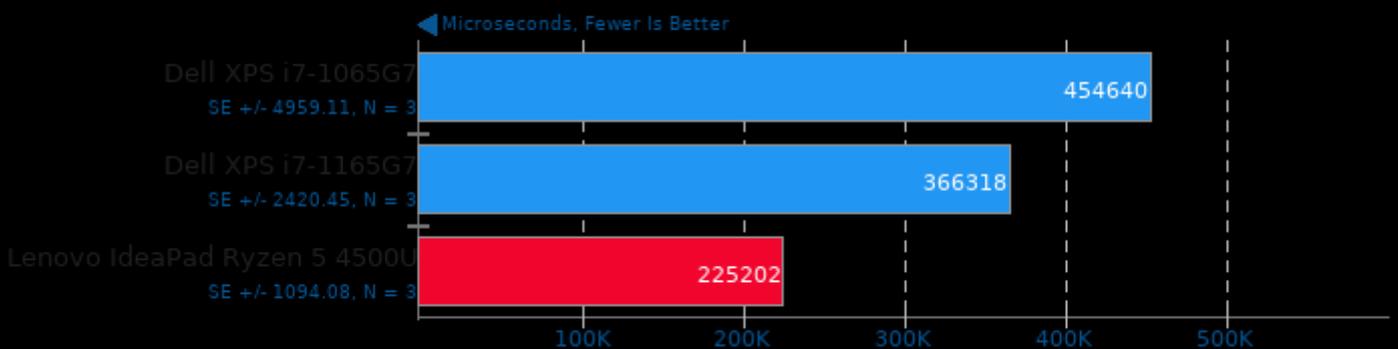
## TensorFlow Lite 2020-08-23

Model: Mobilenet Float



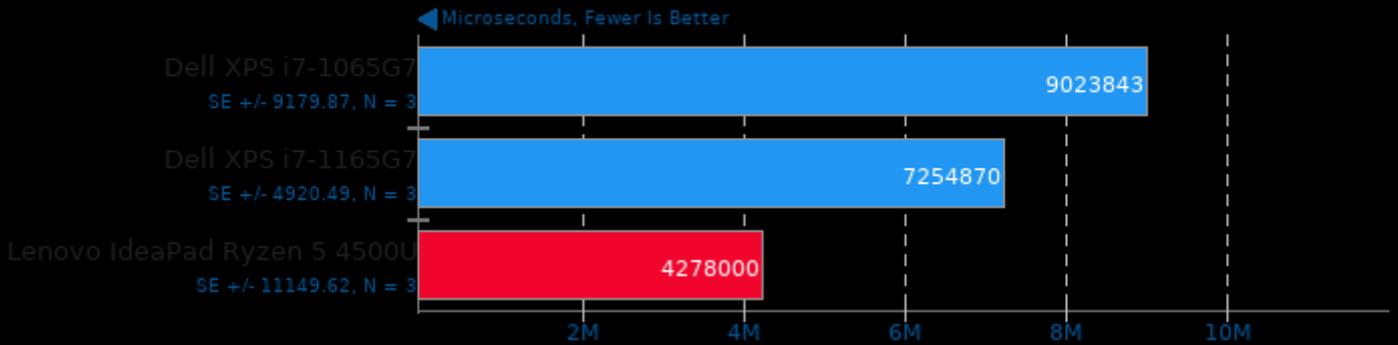
## TensorFlow Lite 2020-08-23

Model: Mobilenet Quant



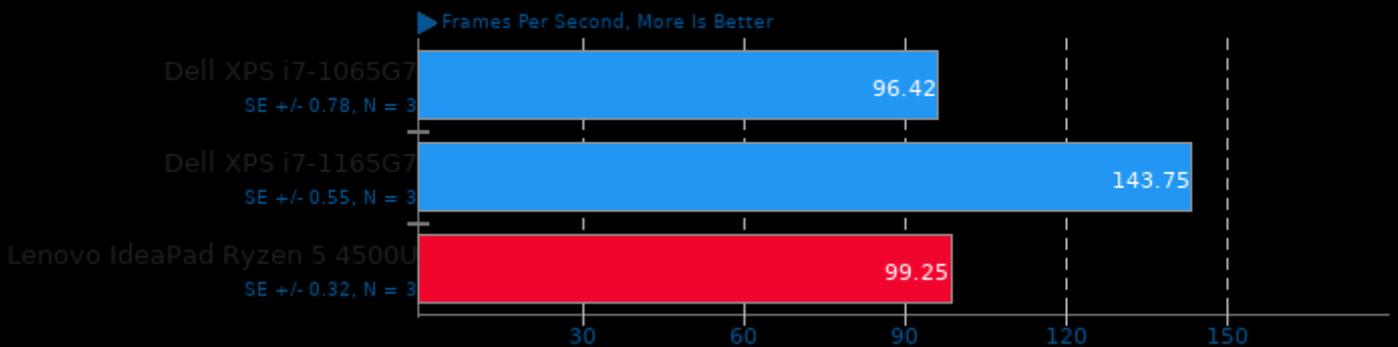
### TensorFlow Lite 2020-08-23

Model: Inception ResNet V2



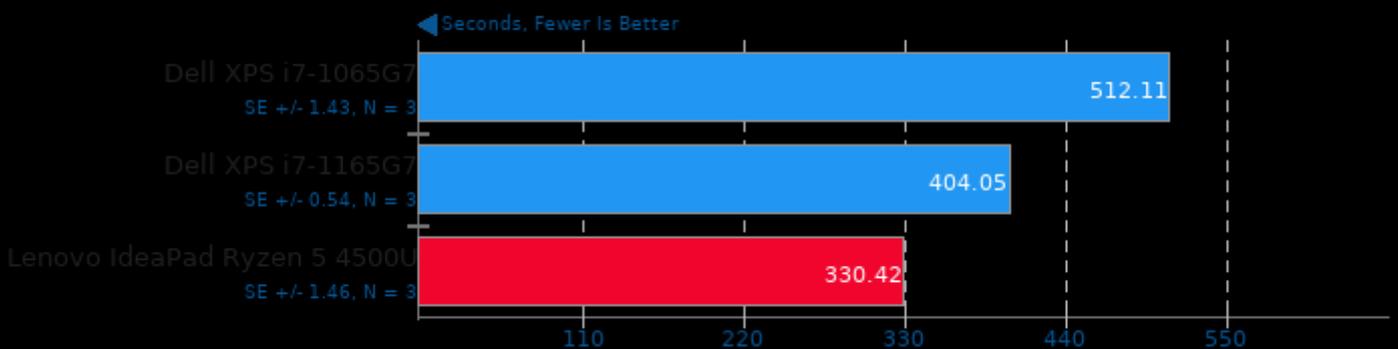
### Tesseract 2014-05-12

Resolution: 1920 x 1080



### Timed Godot Game Engine Compilation 3.2.3

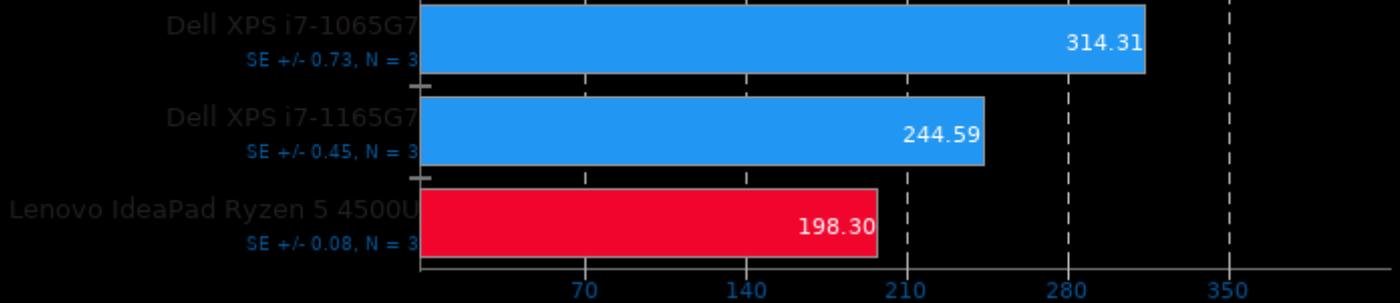
Time To Compile



## Timed Linux Kernel Compilation 5.4

Time To Compile

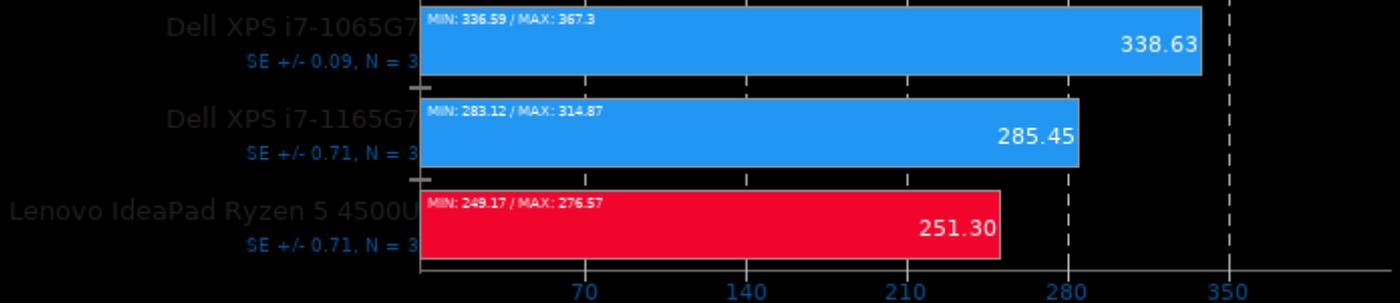
← Seconds, Fewer Is Better



## TNN 0.2.3

Target: CPU - Model: MobileNet v2

← ms, Fewer Is Better

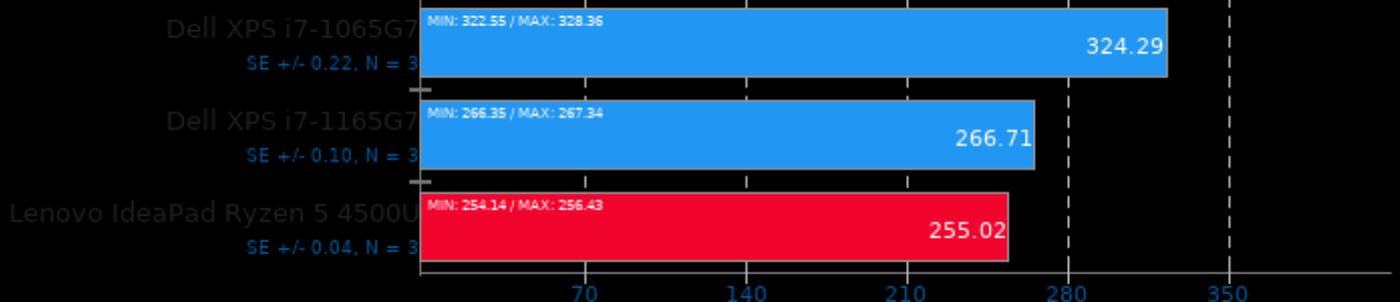


1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -O3 -rdynamic -ldl

## TNN 0.2.3

Target: CPU - Model: SqueezeNet v1.1

← ms, Fewer Is Better

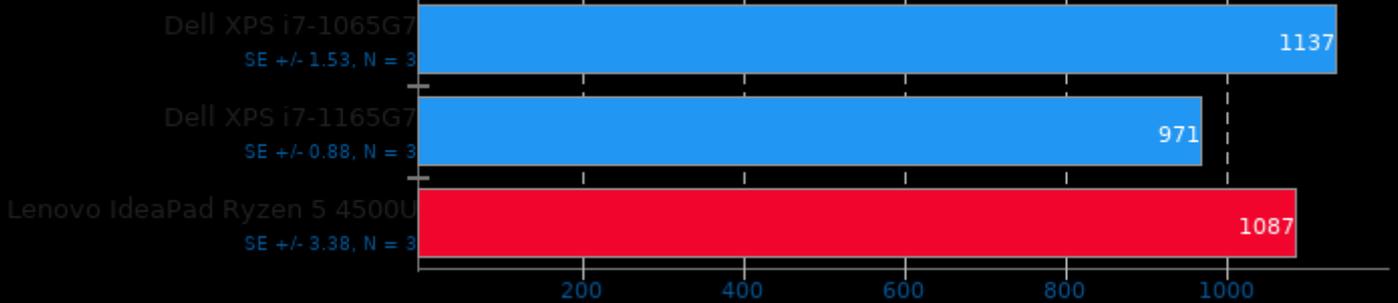


1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -O3 -rdynamic -ldl

### VKMark 2020-05-21

Resolution: 1920 x 1080

▶ VKMark Score, More Is Better

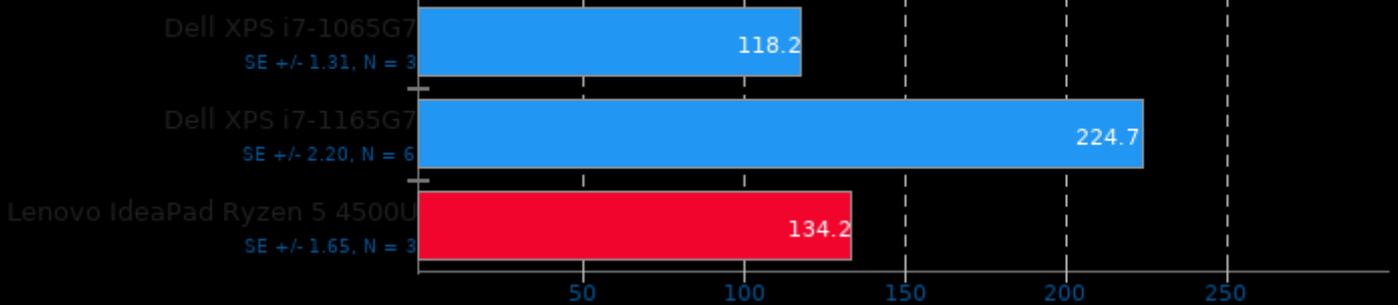


1. (CXX) g++ options: -pthread -ldl -pipe -std=c++14 -MD -MQ -MF

### Warsow 2.5 Beta

Resolution: 1920 x 1080

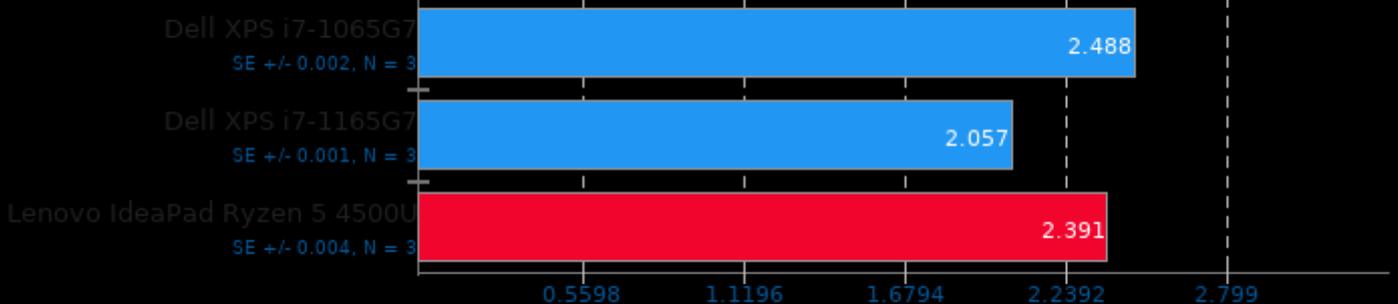
▶ Frames Per Second, More Is Better



### WebP Image Encode 1.1

Encode Settings: Quality 100

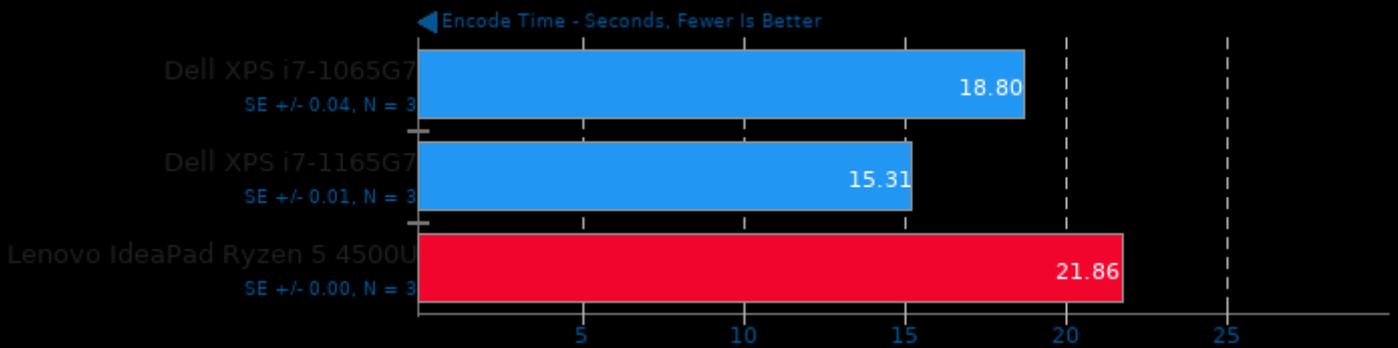
◀ Encode Time - Seconds, Fewer Is Better



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

## WebP Image Encode 1.1

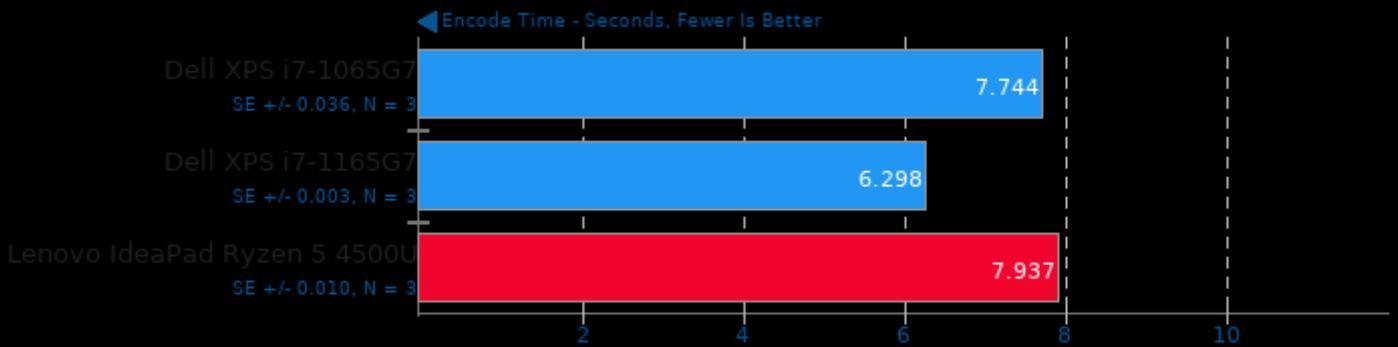
Encode Settings: Quality 100, Lossless



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

## WebP Image Encode 1.1

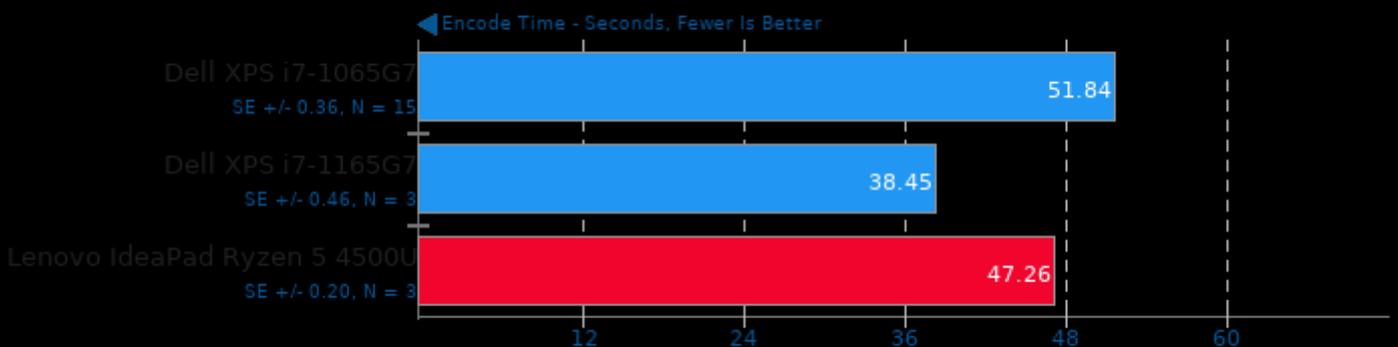
Encode Settings: Quality 100, Highest Compression



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

## WebP Image Encode 1.1

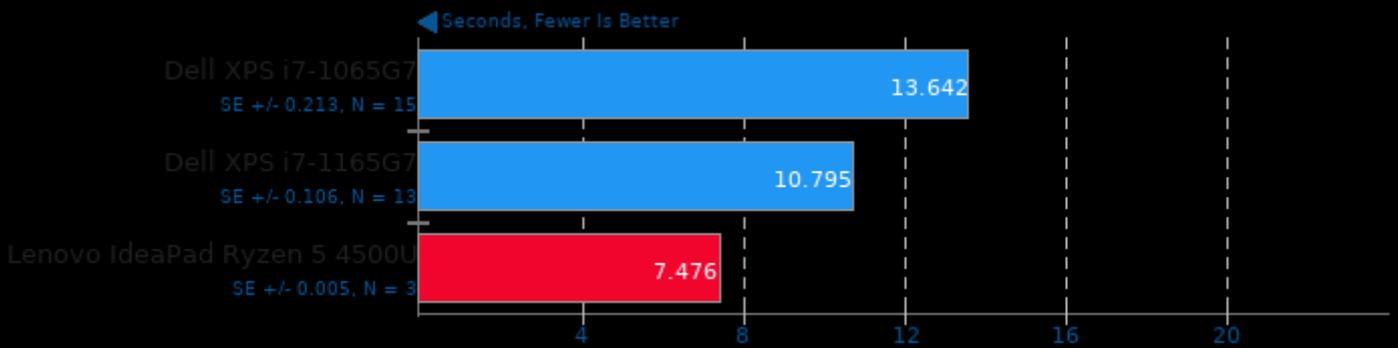
Encode Settings: Quality 100, Lossless, Highest Compression



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

## WebP2 Image Encode 20210126

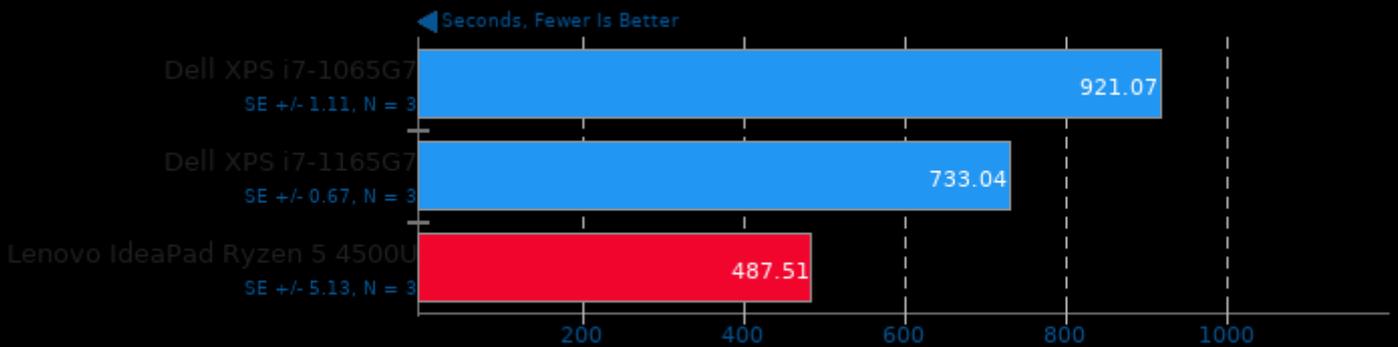
Encode Settings: Default



1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lpthread -ljpeg -lwebp -lwebpdemux

## WebP2 Image Encode 20210126

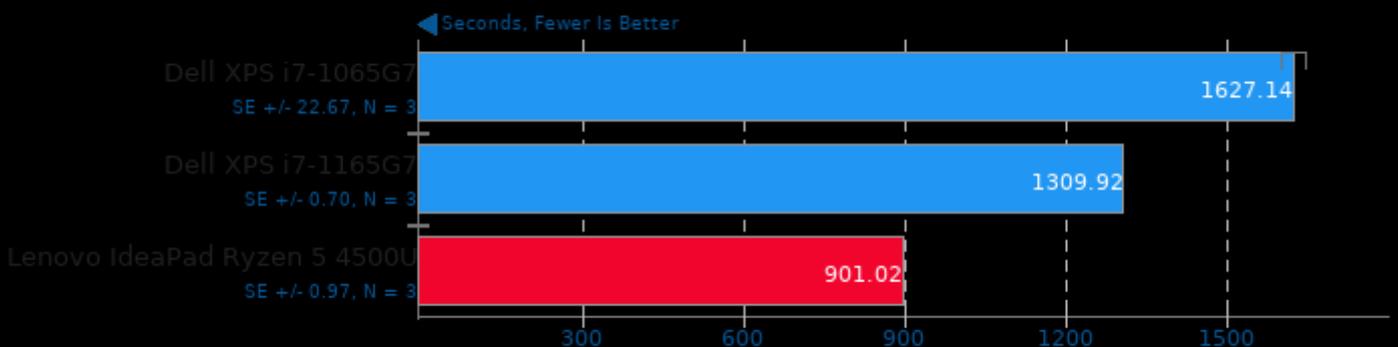
Encode Settings: Quality 75, Compression Effort 7



1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lpthread -ljpeg -lwebp -lwebpdemux

## WebP2 Image Encode 20210126

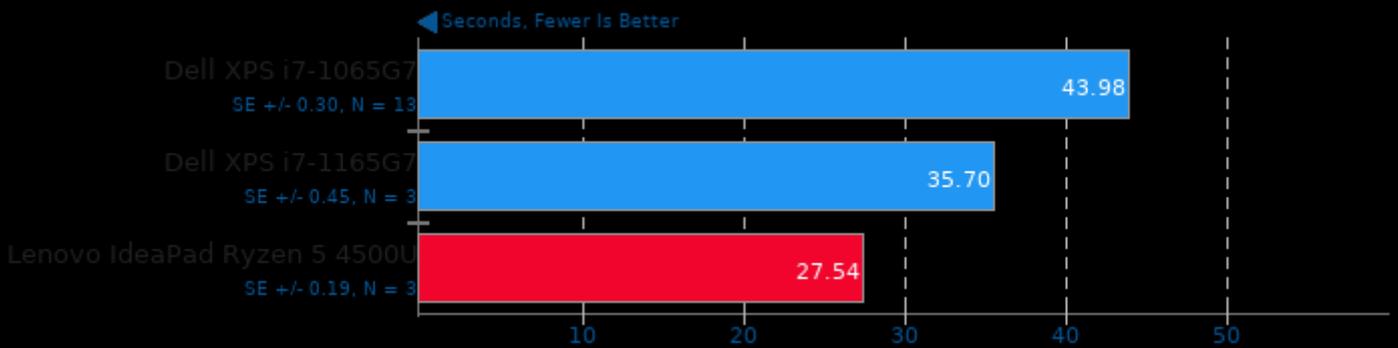
Encode Settings: Quality 95, Compression Effort 7



1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lpthread -ljpeg -lwebp -lwebpdemux

## WebP2 Image Encode 20210126

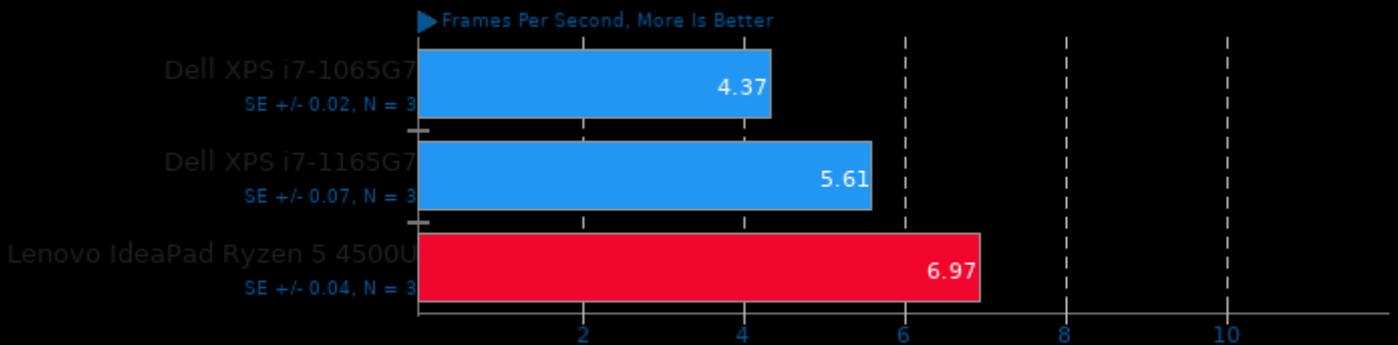
Encode Settings: Quality 100, Compression Effort 5



1. (CXX) g++ options: -msse4.2 -fno-rtti -O3 -rdynamic -lpthread -ljpeg -lwebp -lwebpdemux

## x265 3.4

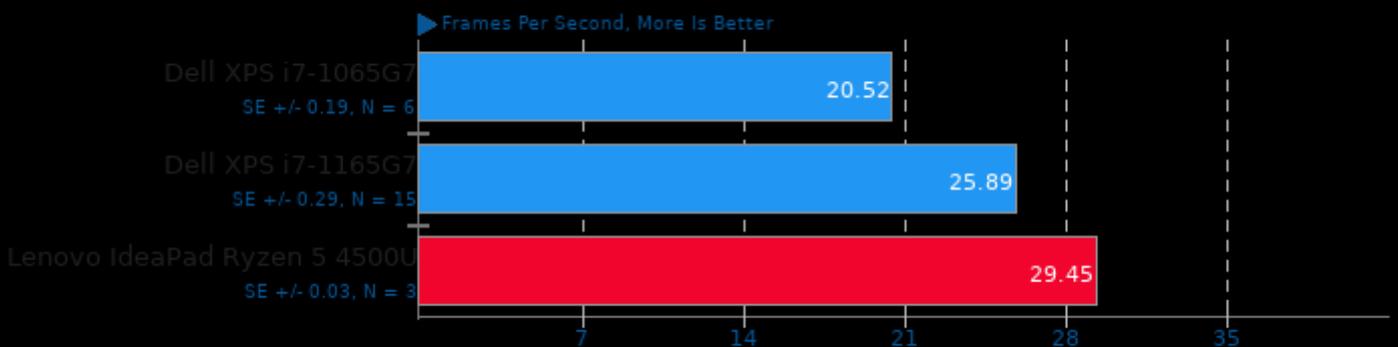
Video Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

## x265 3.4

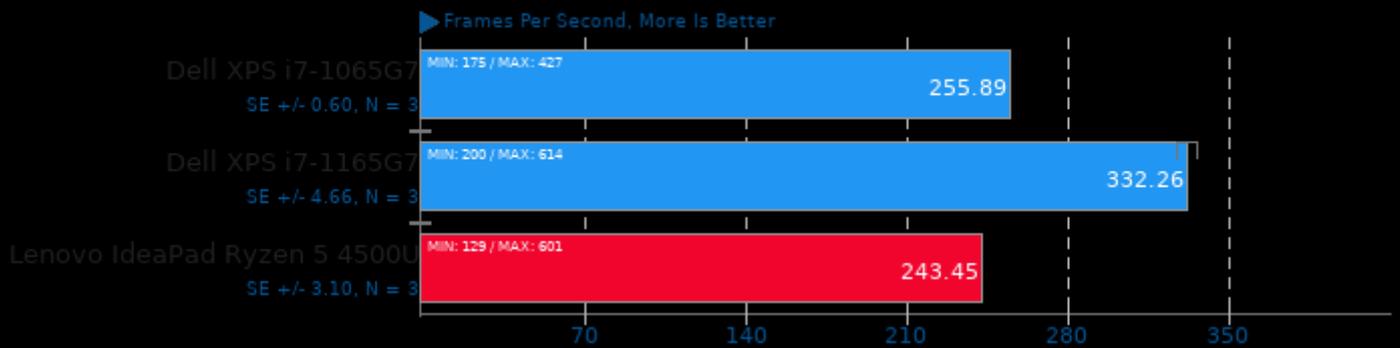
Video Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

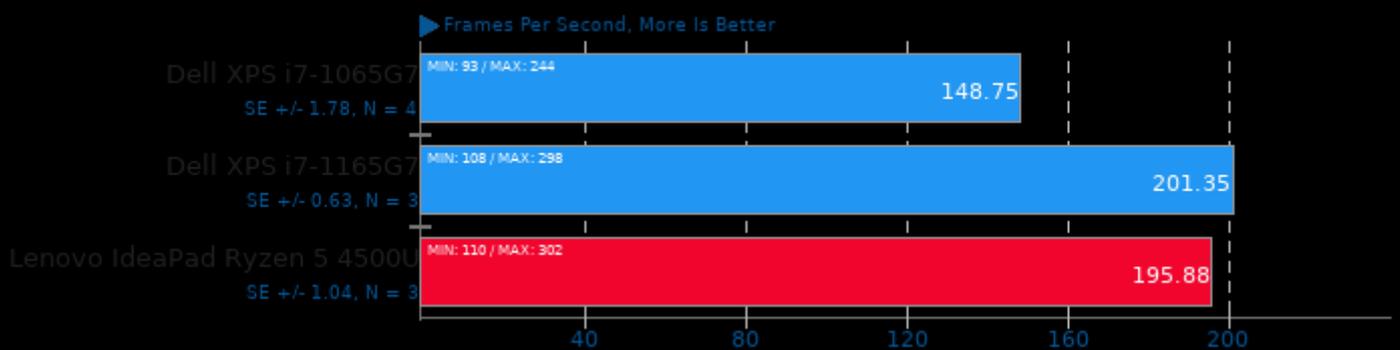
## Xonotic 0.8.2

Resolution: 1920 x 1080 - Effects Quality: Low



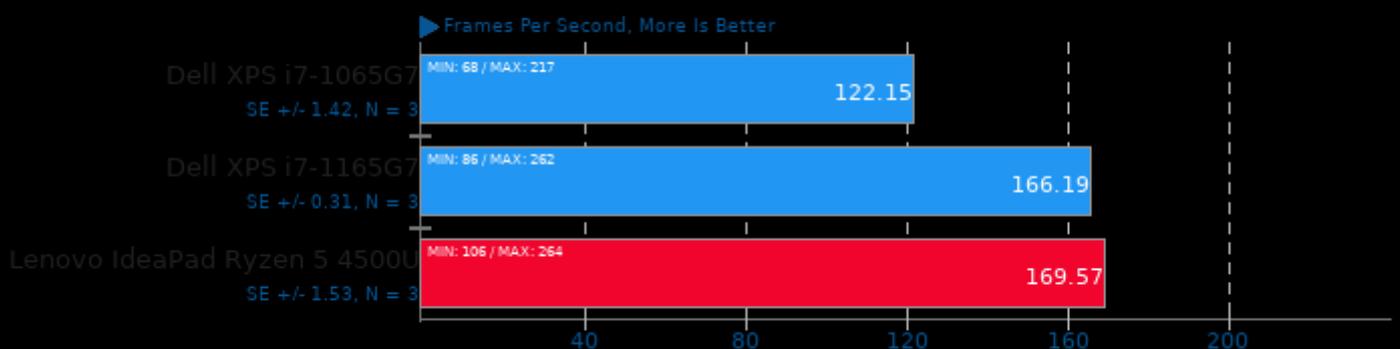
## Xonotic 0.8.2

Resolution: 1920 x 1080 - Effects Quality: High



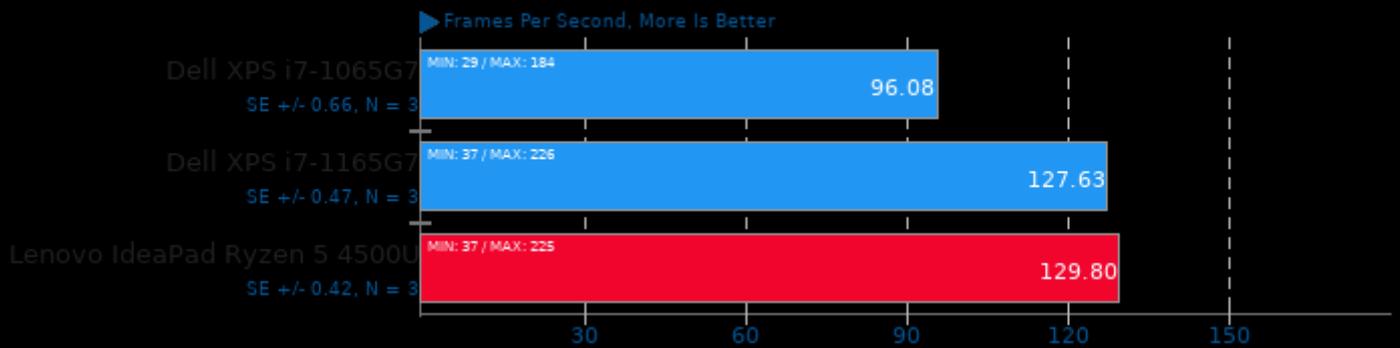
## Xonotic 0.8.2

Resolution: 1920 x 1080 - Effects Quality: Ultra



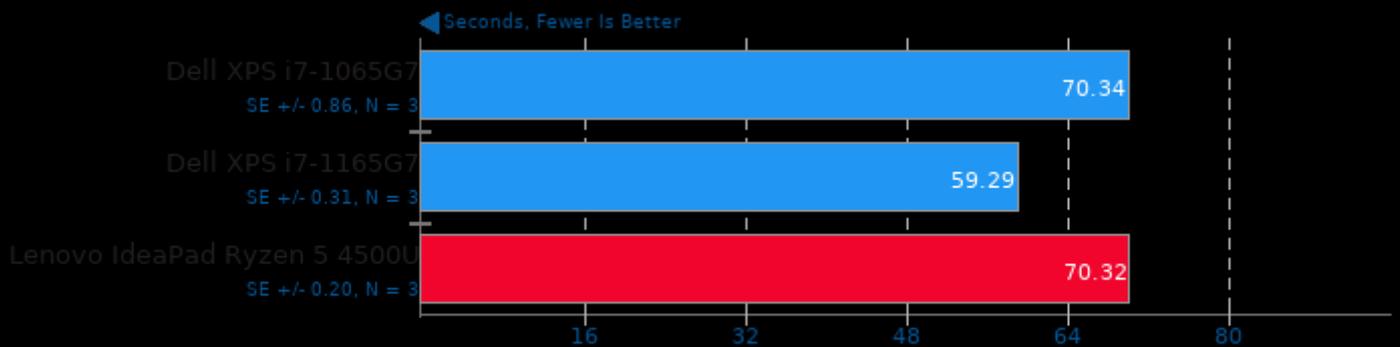
## Xonotic 0.8.2

Resolution: 1920 x 1080 - Effects Quality: Ultimate



## XZ Compression 5.2.4

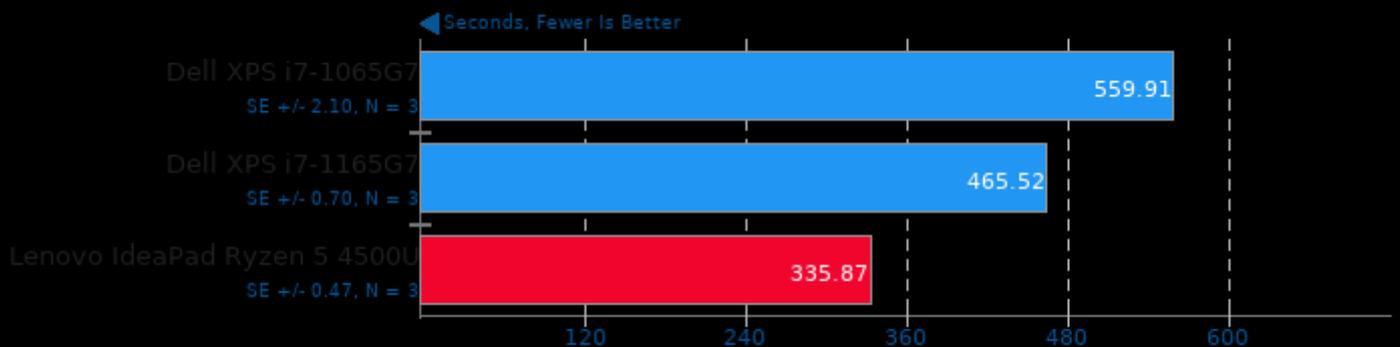
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 9



1. (CC) gcc options: -pthread -fvisibility=hidden -O2

## YafaRay 3.4.1

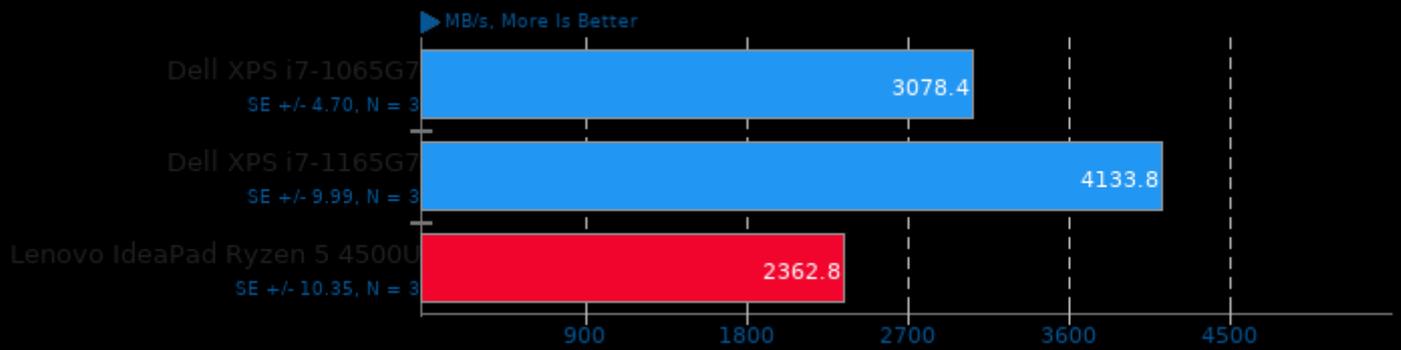
Total Time For Sample Scene



1. (CXX) g++ options: -std=c++11 -O3 -ffast-math -rdynamic -ldl -lm -lmf -llex -lhalf -lz -lthread -lxml2 -lfreetype -lpthread

## Zstd Compression 1.4.5

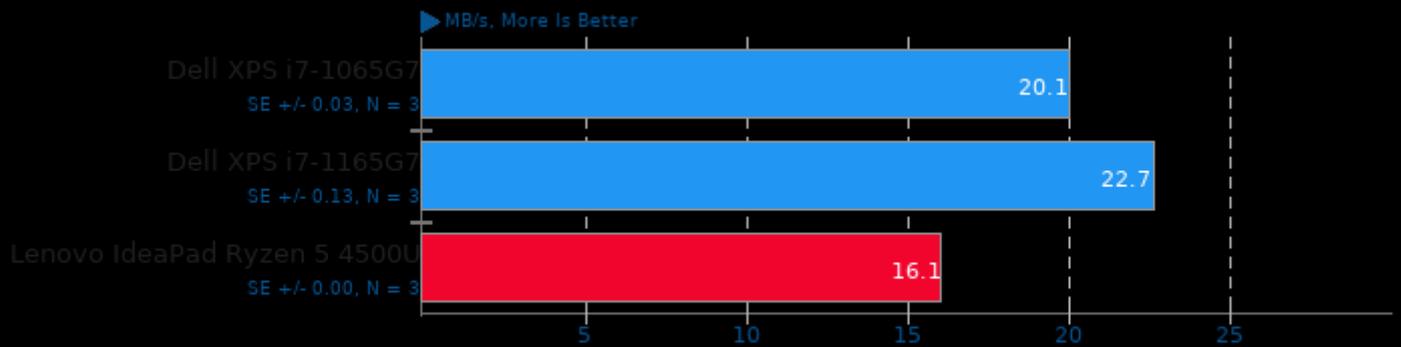
Compression Level: 3



1. (CC) gcc options: -O3 -pthread -lz -lzma

## Zstd Compression 1.4.5

Compression Level: 19

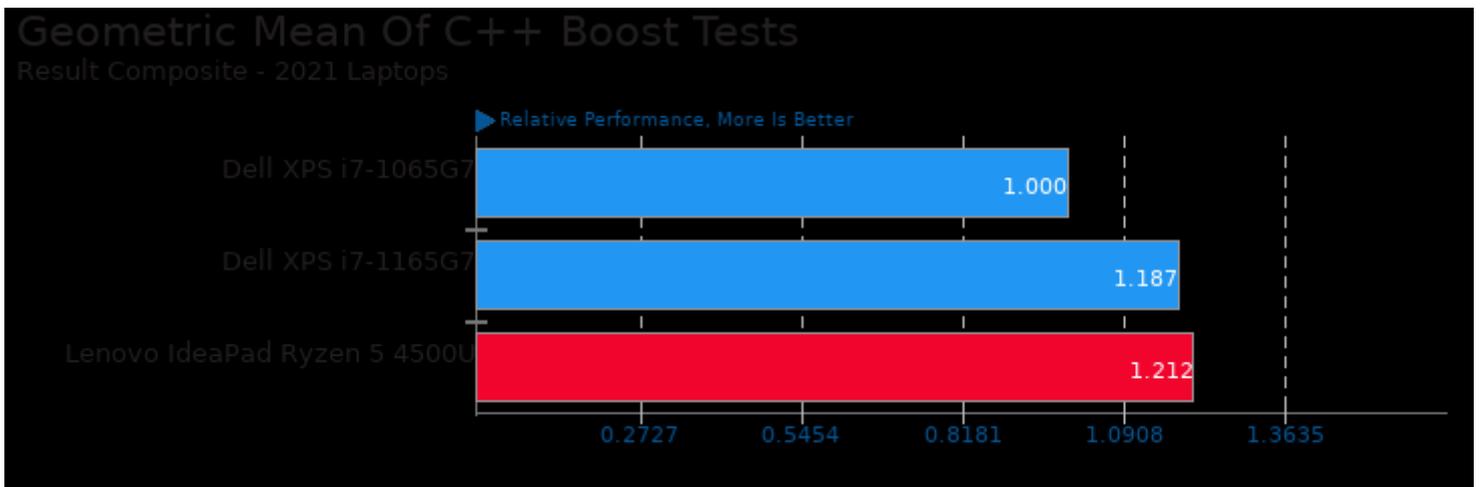


1. (CC) gcc options: -O3 -pthread -lz -lzma

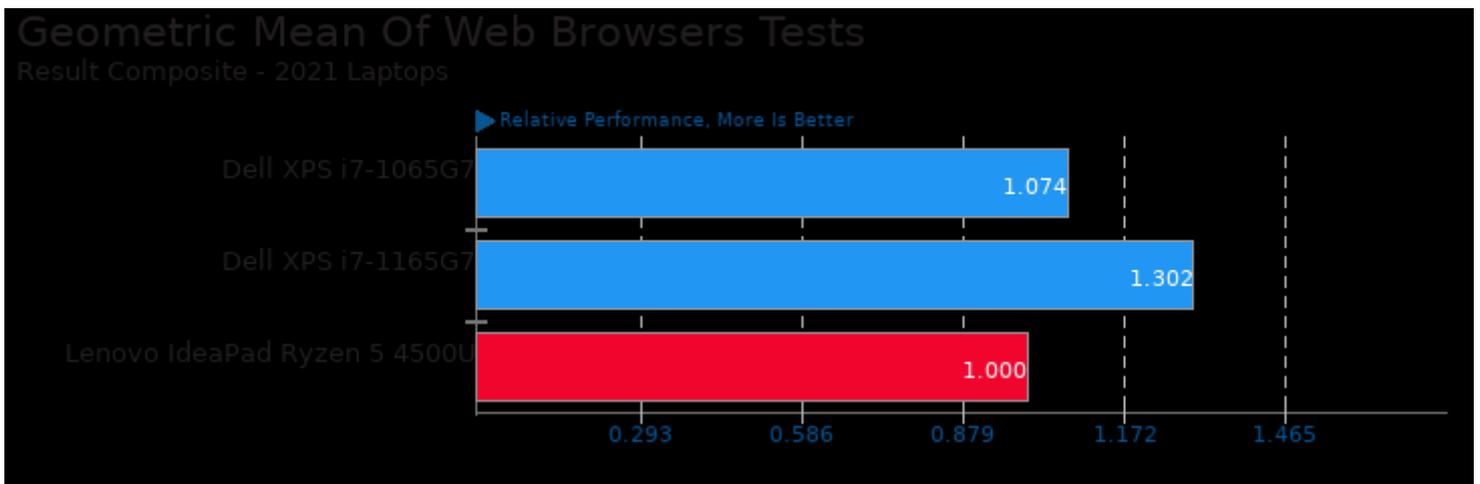
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/dav1d, pts/svt-av1 and pts/avifenc



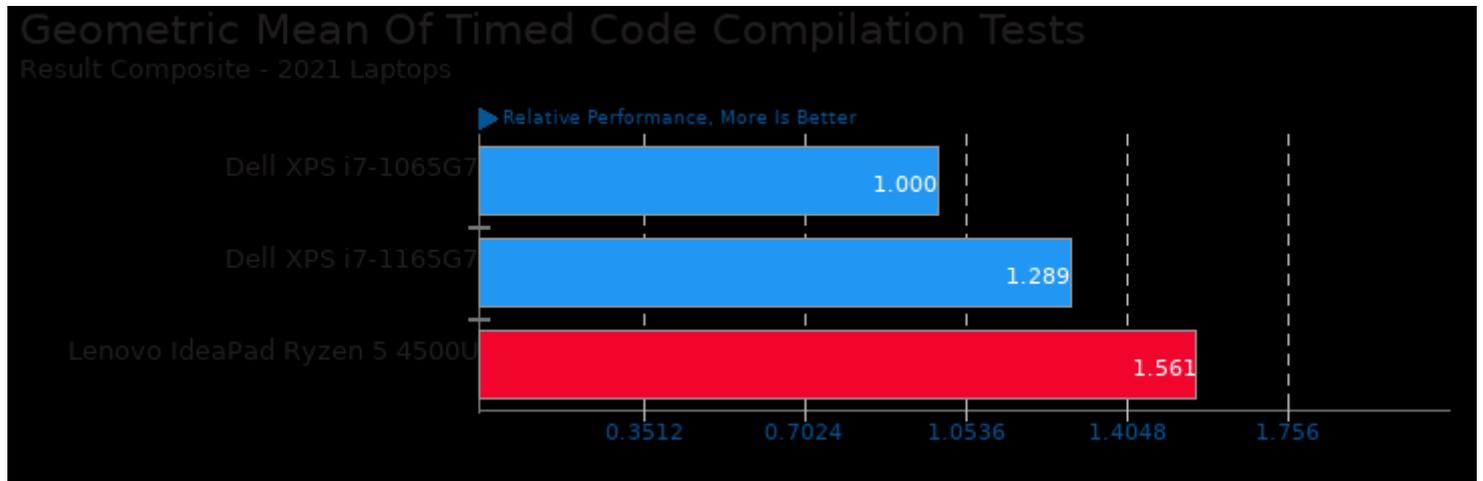
Geometric mean based upon tests: pts/quantlib and pts/yafaray



Geometric mean based upon tests: system/selenium



Geometric mean based upon tests: pts/lczero and pts/stockfish



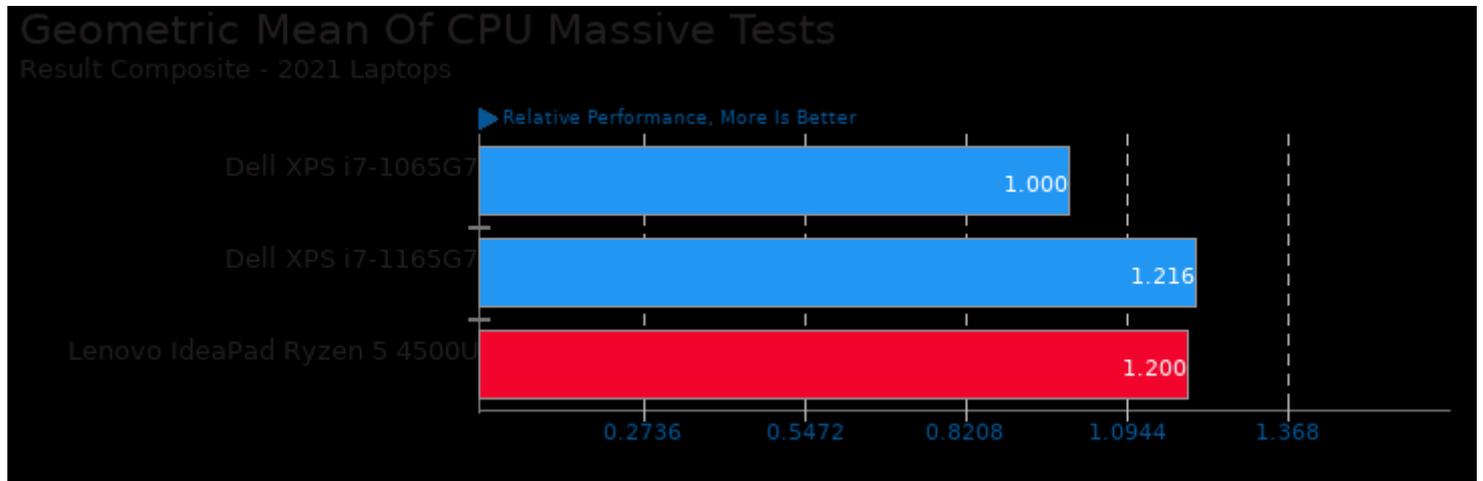
Geometric mean based upon tests: pts/build-linux-kernel, pts/build2 and pts/build-godot



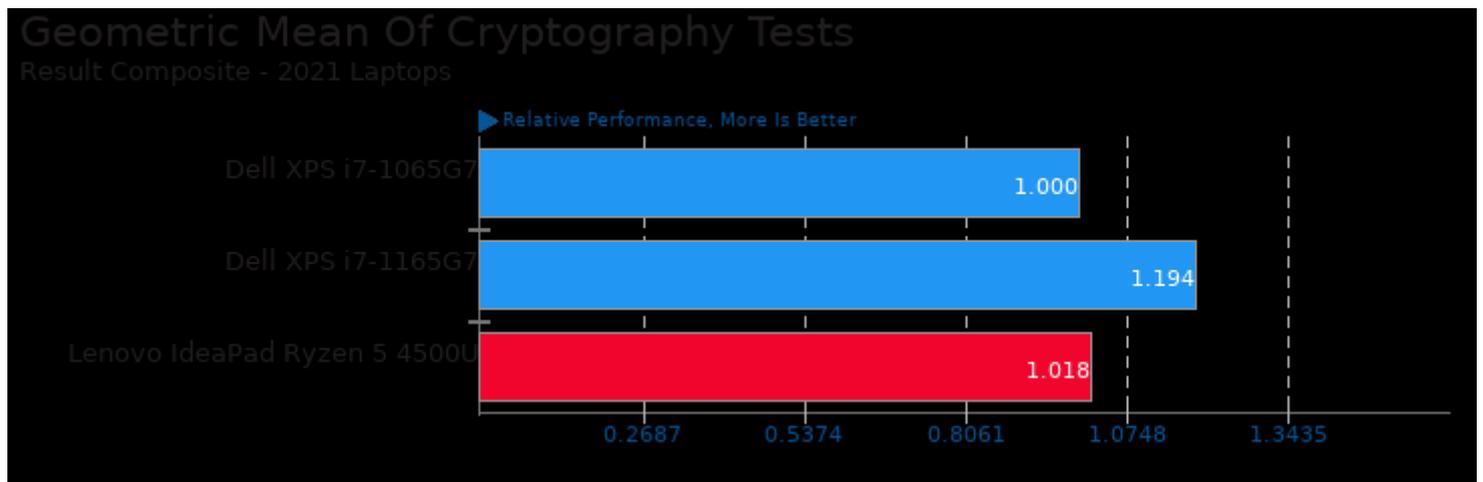
Geometric mean based upon tests: pts/stockfish, pts/sqlite-speedtest, pts/dav1d, pts/x265, pts/clomp, pts/compress-xz, pts/compress-zstd, pts/lammps, pts/svt-av1 and pts/svt-vp9



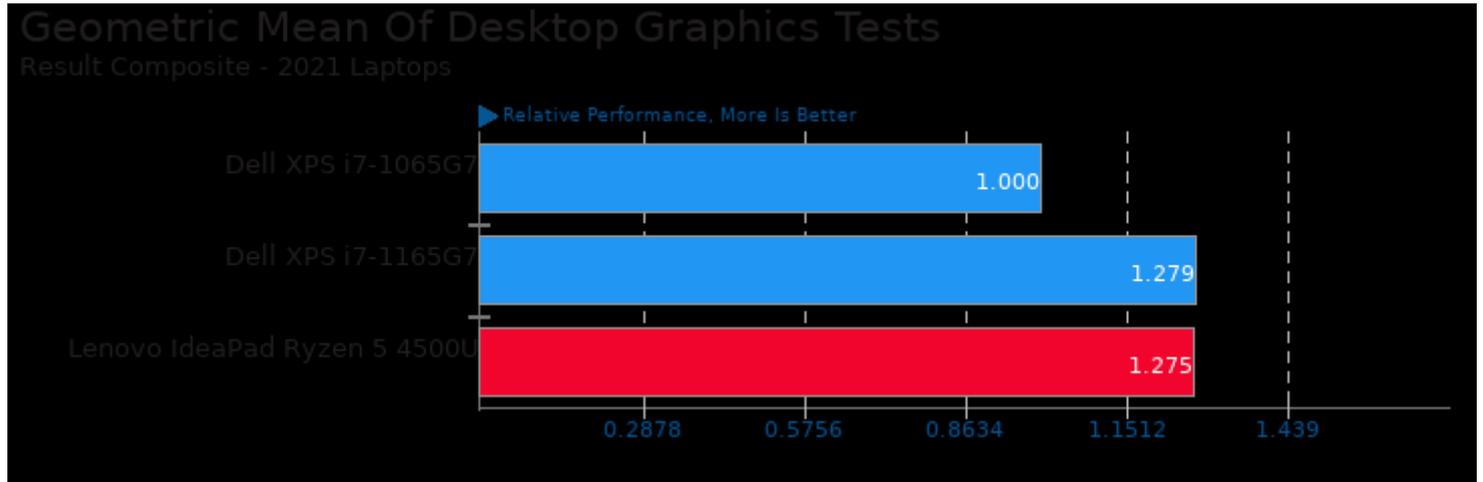
Geometric mean based upon tests: pts/compress-zstd and pts/compress-xz



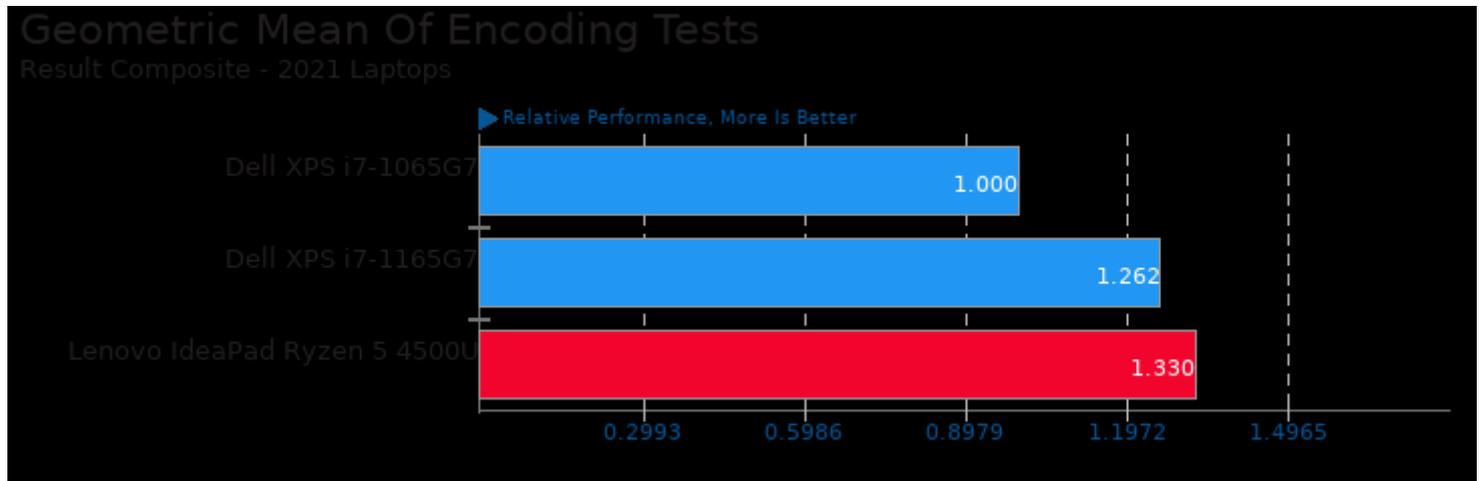
Geometric mean based upon tests: pts/build-linux-kernel, pts/compress-xz, pts/compress-zstd, pts/dav1d, pts/svt-av1, pts/svt-vp9, pts/x265, pts/dolfyn, pts/lammps, pts/lczero, pts/stockfish, pts/blender, system/darktable, pts/clomp and pts/tjbench



Geometric mean based upon tests: pts/gnupg and pts/gcrypt



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



Geometric mean based upon tests: pts/svt-vp9, pts/x265, pts/dav1d, pts/svt-av1 and pts/avifenc



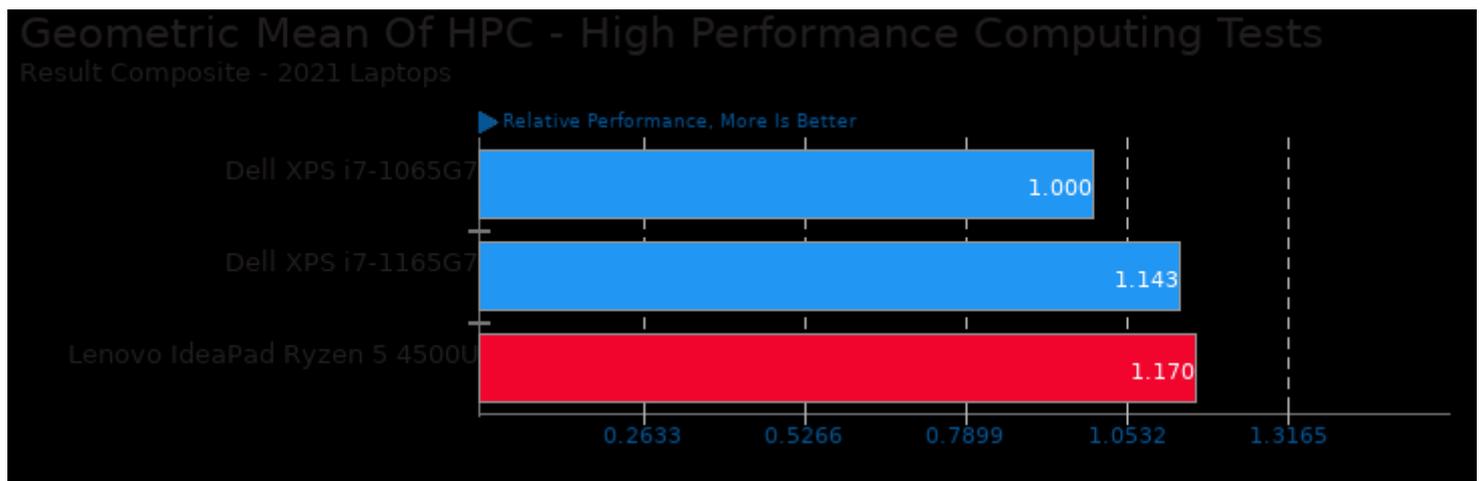
Geometric mean based upon tests: pts/financebench and pts/quantlib



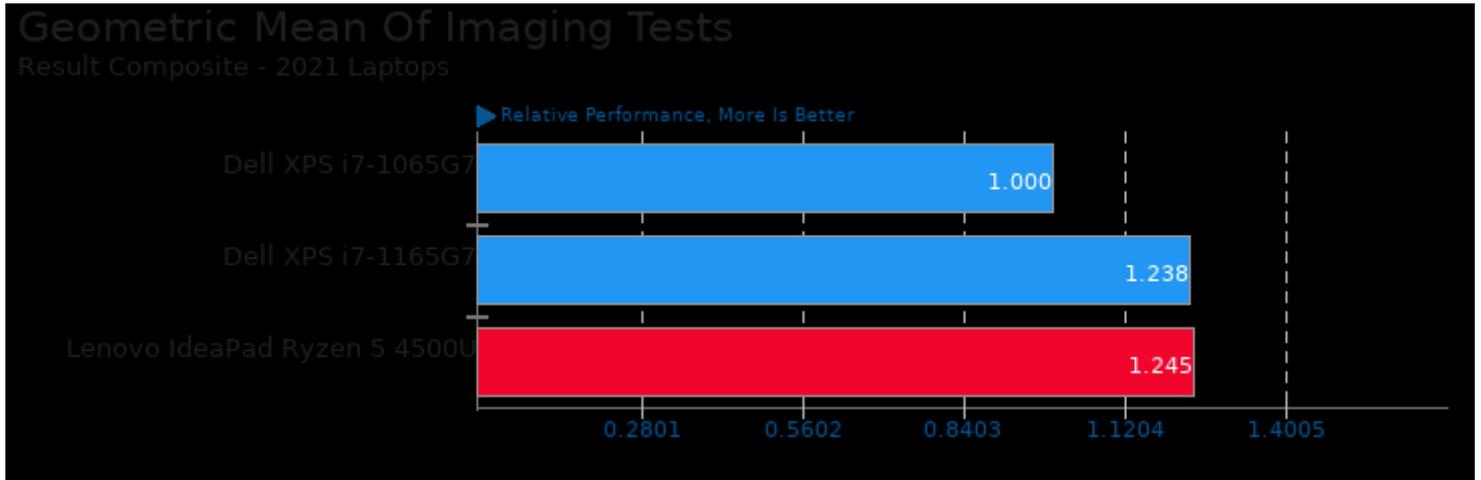
Geometric mean based upon tests: pts/dolfyn and pts/lammps



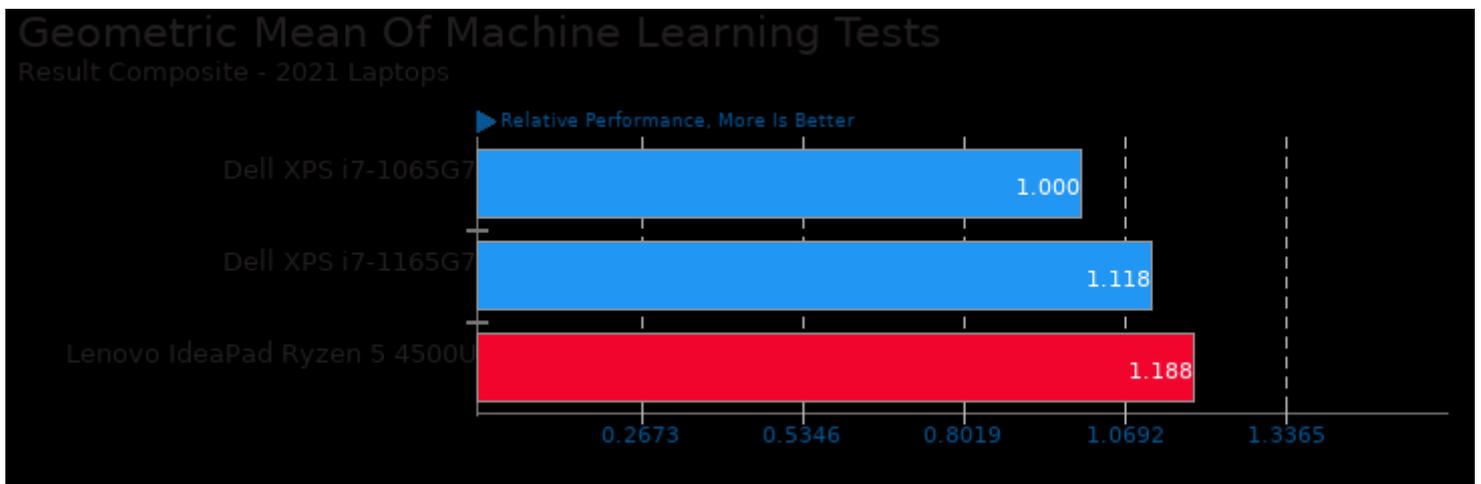
Geometric mean based upon tests: pts/astcenc, pts/etcpak, pts/build-godot, pts/blender, pts/oidn and pts/opencvkl



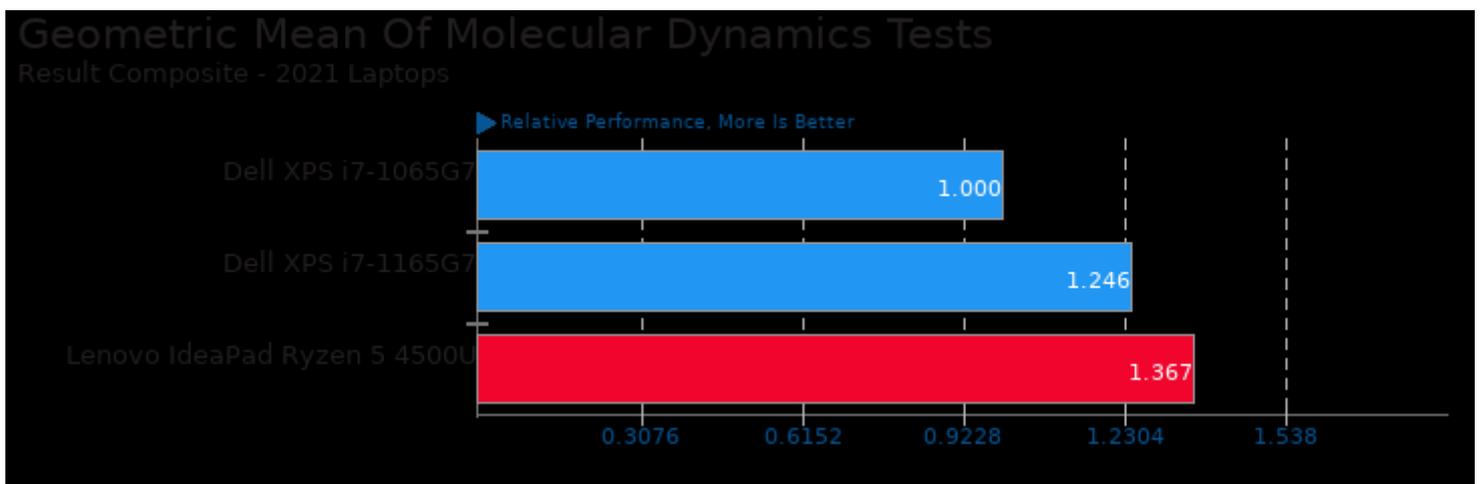
Geometric mean based upon tests: pts/askap, pts/dolfyn, pts/lammps, pts/mnn, pts/ncnn, pts/tnn, pts/ai-benchmark, pts/deepspeech, pts/rnoise, pts/tensorflow-lite, pts/onnx and pts/lczero



Geometric mean based upon tests: pts/libraw, pts/webp, pts/webp2, system/rawtherapee, pts/tjbench, system/hugin, system/darktable, system/rsvg and pts/avifenc



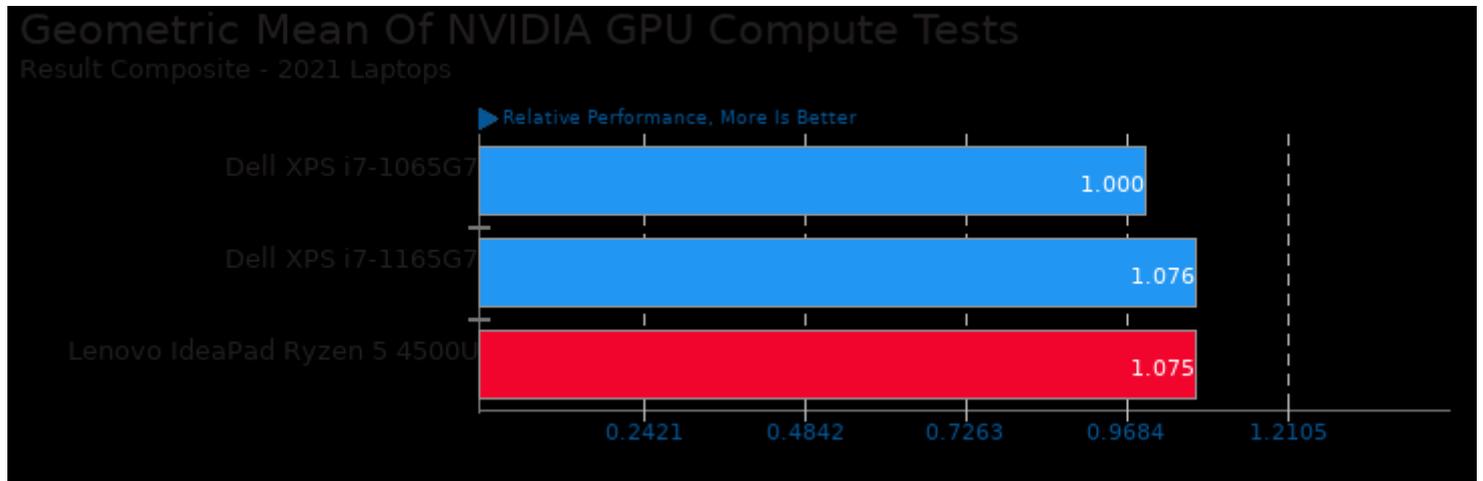
Geometric mean based upon tests: pts/mnn, pts/ncnn, pts/tnn, pts/ai-benchmark, pts/deepspeech, pts/rnnoise, pts/tensorflow-lite, pts/onnx and pts/lczero



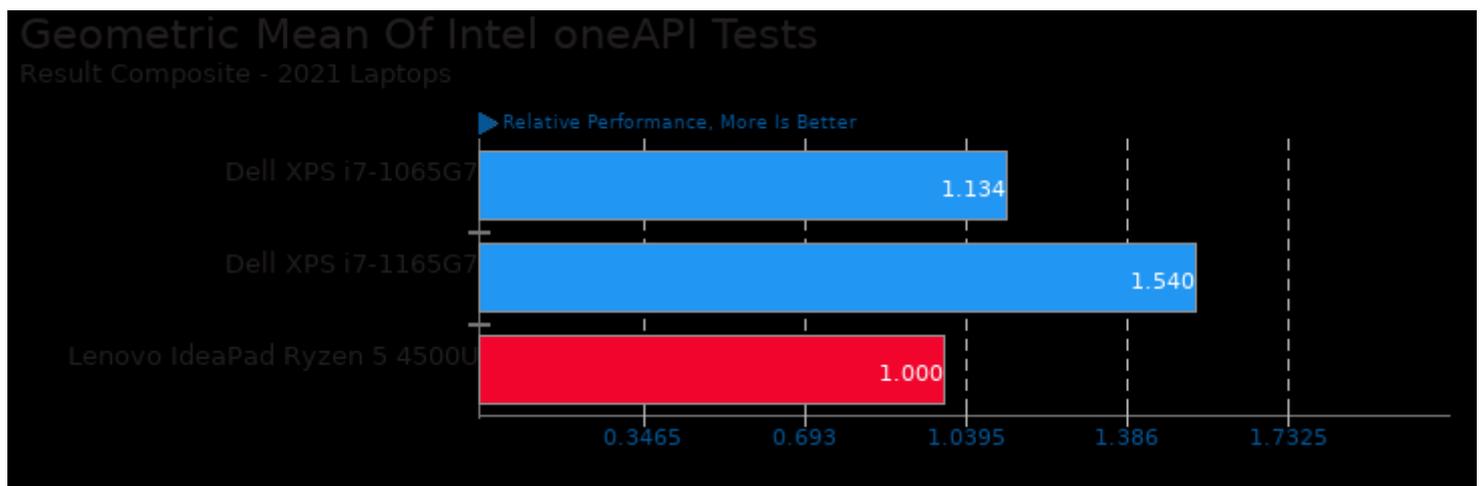
Geometric mean based upon tests: pts/dolfyn and pts/lammps



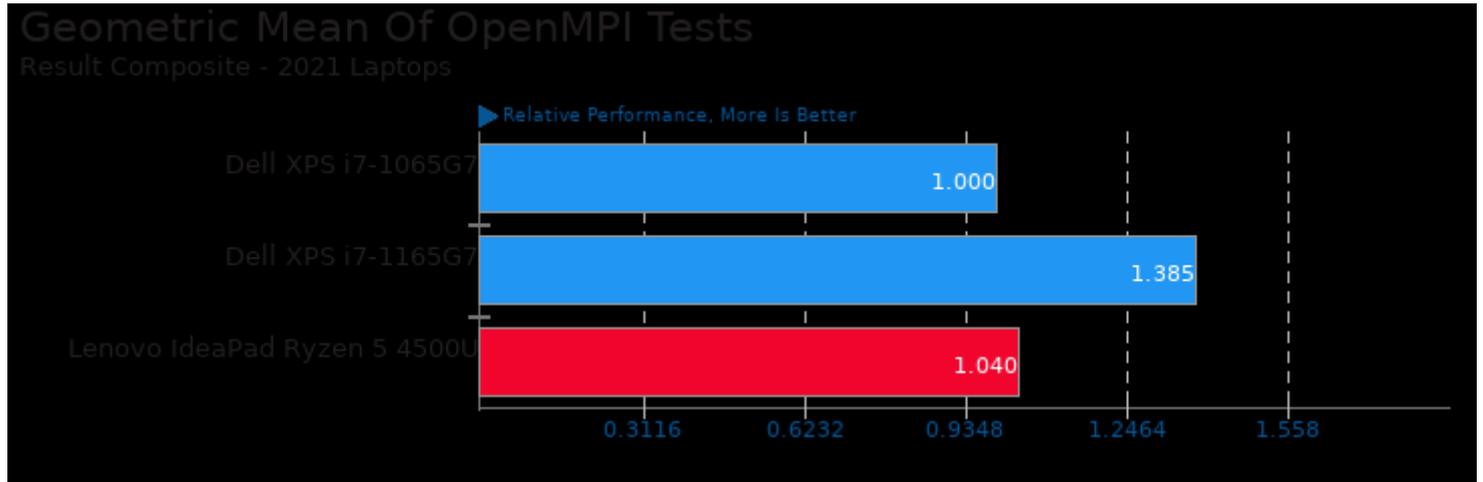
Geometric mean based upon tests: pts/askap and pts/lammps



Geometric mean based upon tests: pts/luxcorerender, pts/financebench, pts/lczero, pts/indigobench, pts/blender and pts/ncnn



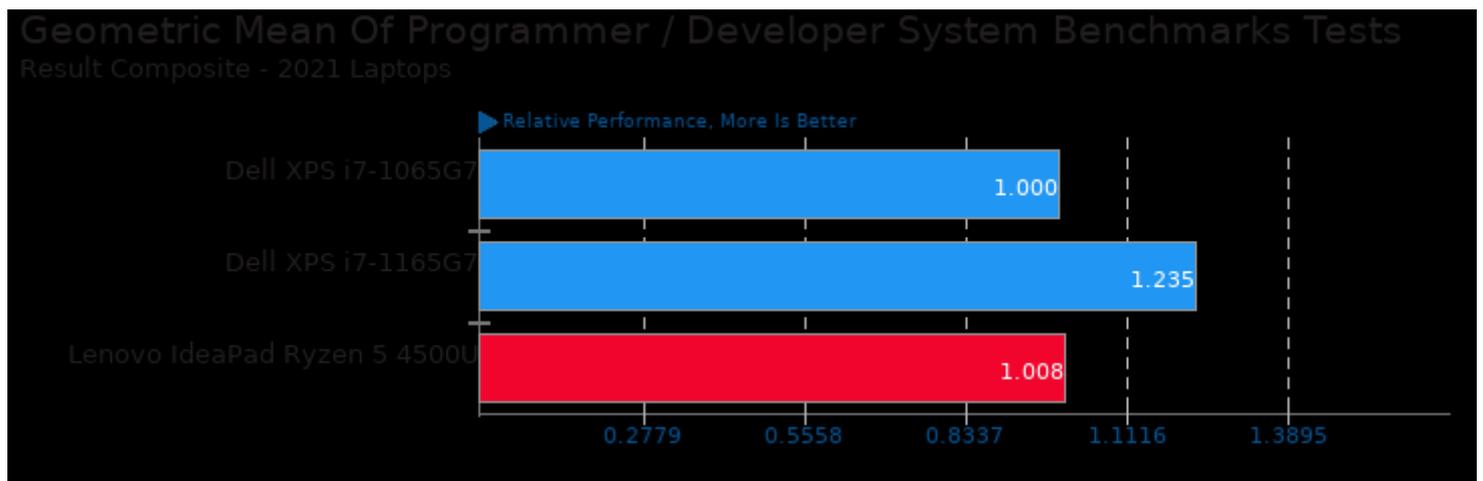
Geometric mean based upon tests: pts/oidn and pts/openvkl



Geometric mean based upon tests: pts/askap and pts/lammps



Geometric mean based upon tests: system/libreoffice and system/rsvg



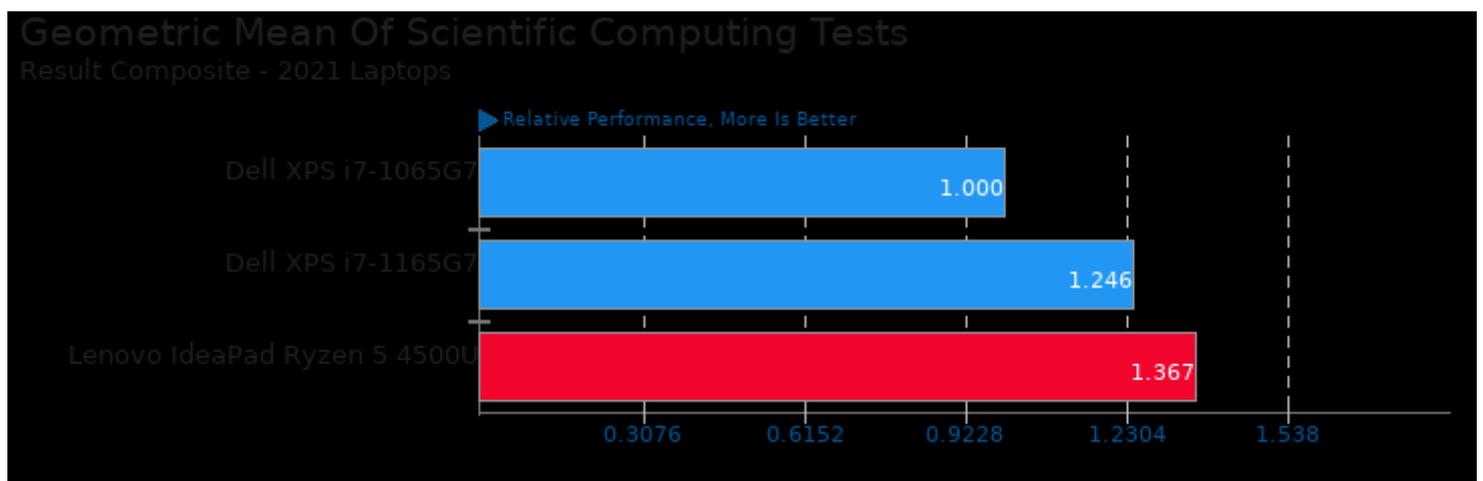
Geometric mean based upon tests: pts/simdjson, pts/sqlite-speedtest, pts/node-web-tooling, pts/git, pts/compress-zstd, pts/pybench, pts/build-linux-kernel, pts/build2 and pts/build-godot



Geometric mean based upon tests: pts/ai-benchmark, pts/glmark2, system/ocrmypdf, pts/onnx, pts/pybench, system/selenium, pts/build-godot and pts/yafaray



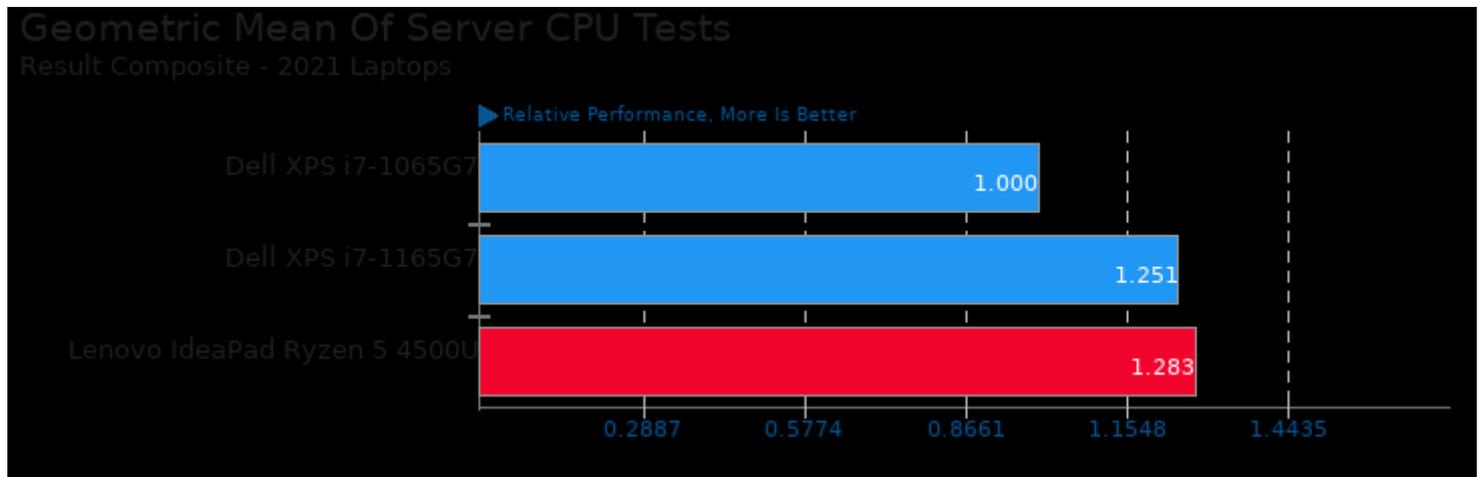
Geometric mean based upon tests: pts/yafaray, pts/blender, pts/appleseed, pts/luxcorerender and pts/indigobench



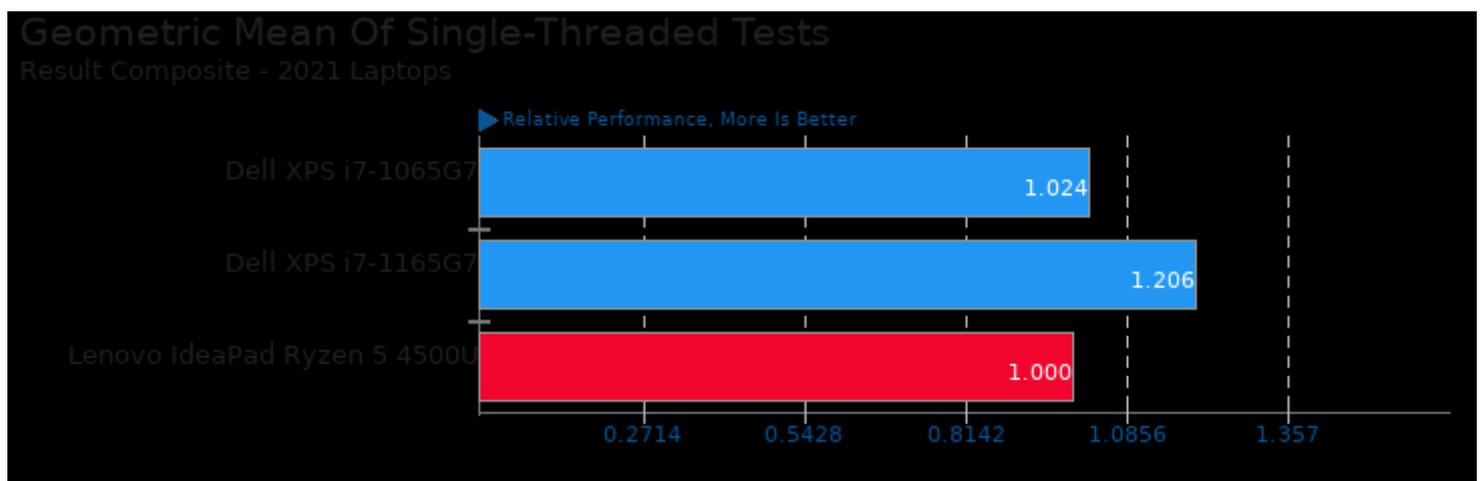
Geometric mean based upon tests: pts/dolfyn and pts/lammps



Geometric mean based upon tests: pts/simdjson, pts/node-web-tooling and pts/sqlite-speedtest



Geometric mean based upon tests: pts/svt-av1, pts/svt-vp9, pts/x265, pts/dav1d, pts/stockfish, pts/build-linux-kernel, pts/compress-zstd, pts/tjbench, pts/blender, pts/appleseed and pts/pybench



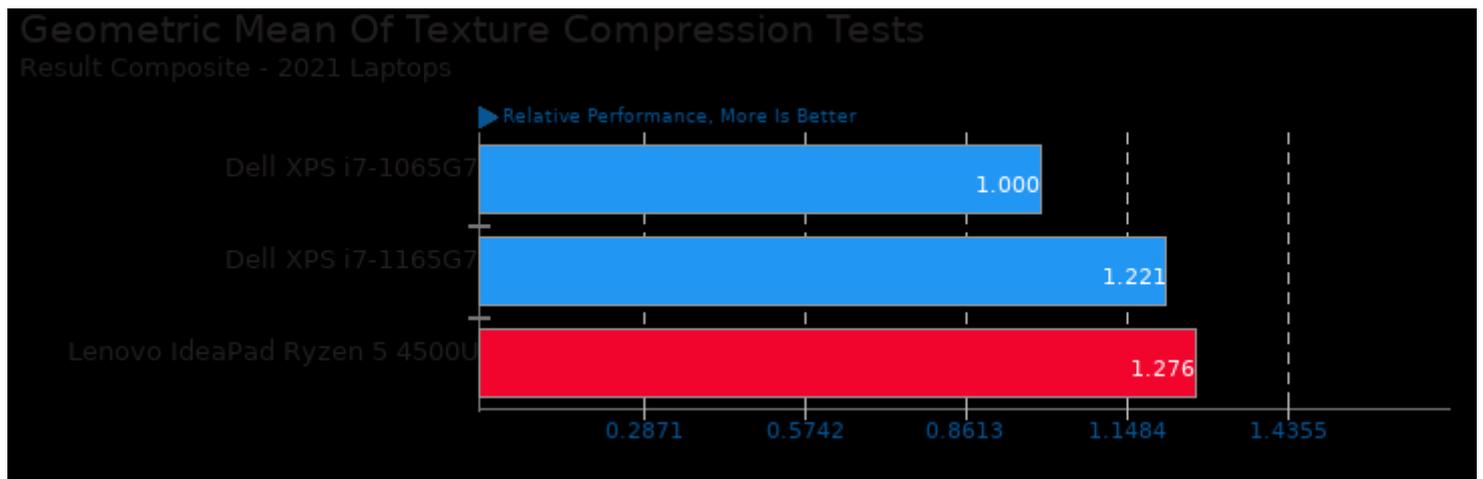
Geometric mean based upon tests: pts/deepspeech, pts/gnupg, pts/tjbench, pts/pybench and pts/git



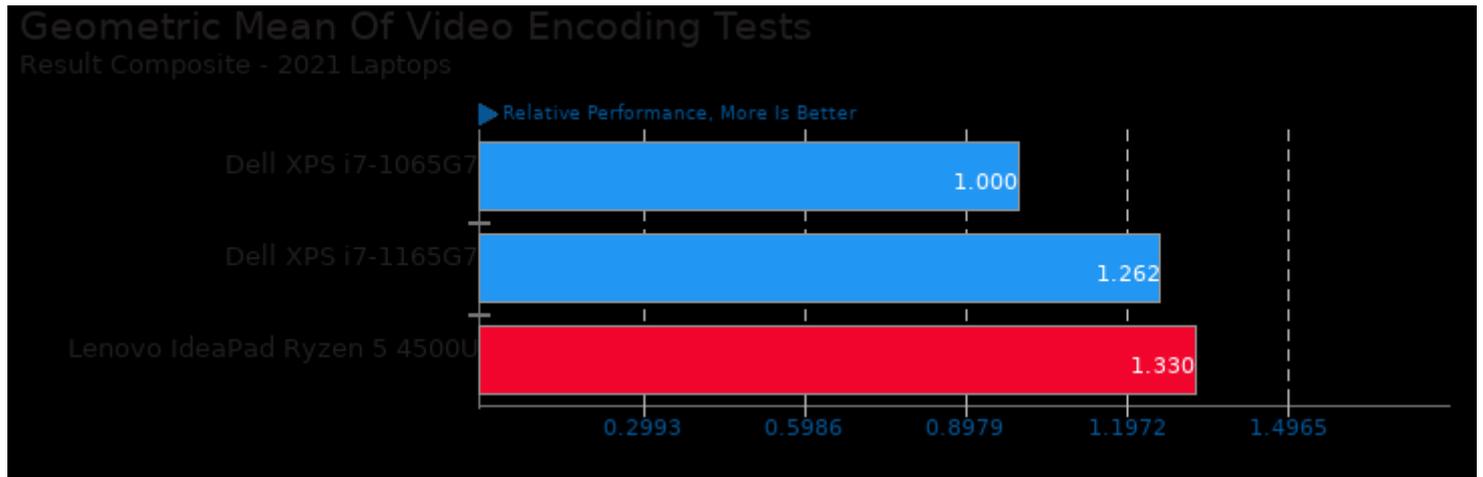
Geometric mean based upon tests: pts/deepspeech, pts/rnnoise and pts/synthmark



Geometric mean based upon tests: pts/deepspeech, pts/rnnoise and pts/synthmark



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



Geometric mean based upon tests: pts/svt-vp9, pts/x265, pts/dav1d, pts/svt-av1 and pts/avifenc



Geometric mean based upon tests: pts/blender, pts/x265 and pts/git

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 21:40.*