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# OpenCL Intel Beignet

Intel Core i7-7700K testing with a ASUS PRIME Z270-P and Intel Kabylake GT2 3072MB on Clear Linux 12960 via the Phoronix Test Suite.

**Automated Executive Summary**

*Core i7 7700K had the most wins, coming in first place for 66% of the tests.*

*Based on the geometric mean of all complete results, the fastest (Core i7 7700K) was 1.11x the speed of the slowest (Core i3 7100). Core i5 7600K was 0.966x the speed of Core i7 7700K and Core i3 7100 was 0.932x the speed of Core i5 7600K.*

## Test Systems:

### Core i3 7100

Processor: Intel Core i3-7100 @ 3.90GHz (4 Cores), Motherboard: ASUS PRIME Z270-P, Chipset: Intel Device 590f, Memory: 16384MB, Disk: Samsung SSD 950 PRO 256GB, Graphics: Intel Kabylake GT2 3072MB (1100MHz), Audio:

Realtek ALC887-VD, Monitor: DELL P2415Q, Network: Realtek RTL8111/8168/8411

OS: Clear Linux 12950, Kernel: 4.9.5-302.native (x86_64), Desktop: Xfce 4.12, Display Server: X Server 1.19.1, Display Driver: modesetting 1.19.1, OpenGL: 4.5 Mesa 17.0.0-devel, OpenCL: OpenCL 2.0 beignet 1.3, Vulkan: 1.0.37, Compiler: GCC 6.3.0 + Clang 3.9.1 + LLVM 3.9.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-generic-linux --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libmpx --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: acpi-cpufreq performance

## Core i5 7600K

Processor: Intel Core i5-7600K @ 3.80GHz (4 Cores), Motherboard: ASUS PRIME Z270-P, Chipset: Intel Device 591f, Memory: 16384MB, Disk: Samsung SSD 950 PRO 256GB, Graphics: Intel Kabylake GT2 3072MB (1150MHz), Audio: Realtek ALC887-VD, Monitor: DELL P2415Q, Network: Realtek RTL8111/8168/8411

OS: Clear Linux 12950, Kernel: 4.9.5-302.native (x86_64), Desktop: Xfce 4.12, Display Server: X Server 1.19.1, Display Driver: modesetting 1.19.1, OpenGL: 4.5 Mesa 17.0.0-devel, OpenCL: OpenCL 2.0 beignet 1.3, Vulkan: 1.0.37, Compiler: GCC 6.3.0 + Clang 3.9.1 + LLVM 3.9.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-generic-linux --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libmpx --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: acpi-cpufreq performance

## Core i7 7700K

Processor: Intel Core i7-7700K @ 4.20GHz (8 Cores), Motherboard: ASUS PRIME Z270-P, Chipset: Intel Device 591f, Memory: 16384MB, Disk: Samsung SSD 950 PRO 256GB, Graphics: Intel Kabylake GT2 3072MB (1150MHz), Audio: Realtek ALC887-VD, Monitor: DELL P2415Q, Network: Realtek RTL8111/8168/8411

OS: Clear Linux 12960, Kernel: 4.9.5-302.native (x86_64), Desktop: Xfce 4.12, Display Server: X Server 1.19.1, Display Driver: modesetting 1.19.1, OpenGL: 4.5 Mesa 17.0.0-devel, OpenCL: OpenCL 2.0 beignet 1.3, Vulkan: 1.0.37, Compiler: GCC 6.3.0 + Clang 3.9.1 + LLVM 3.9.1, File-System: ext4, Screen Resolution: 1920x1080

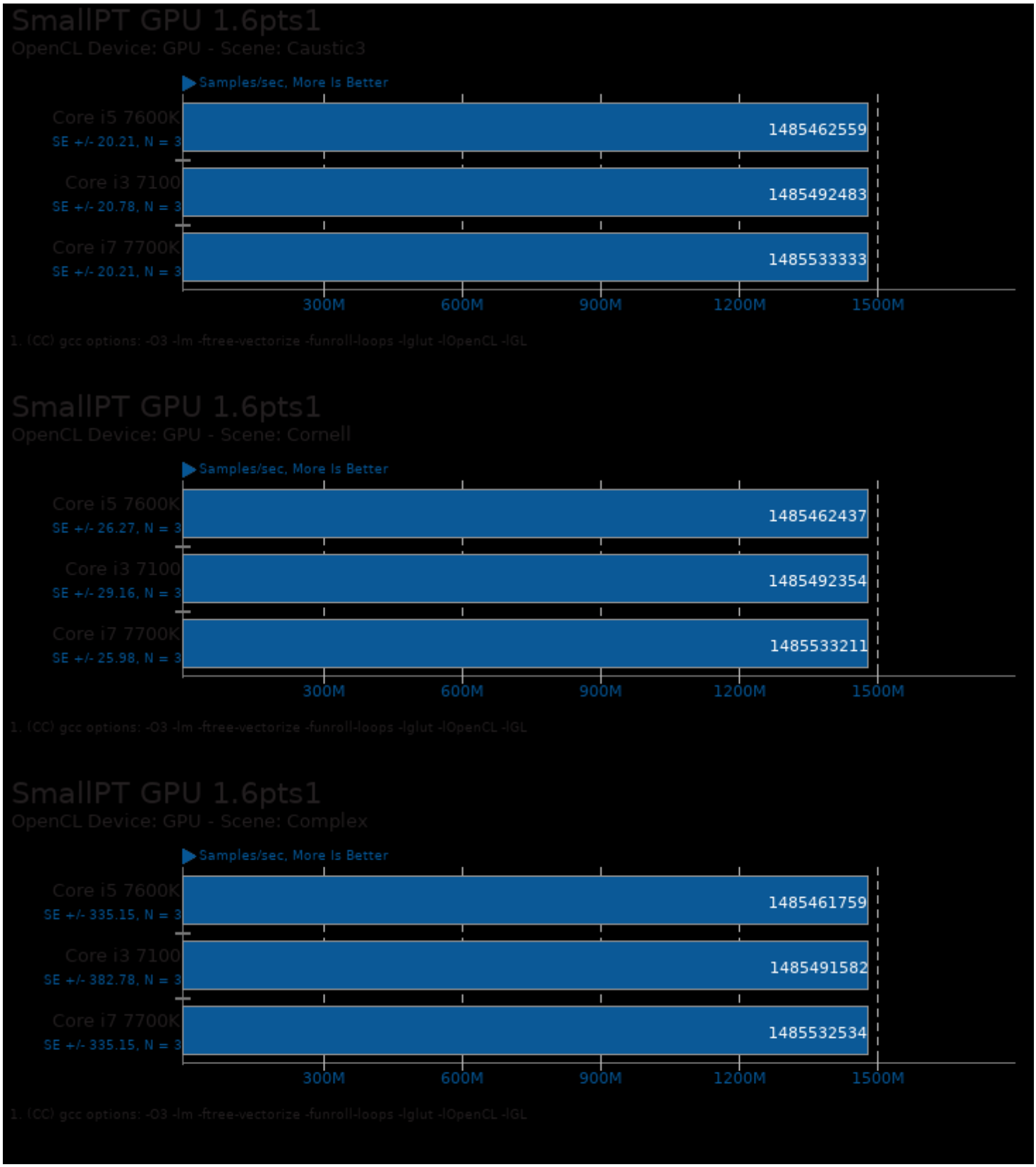
Compiler Notes: --build=x86_64-generic-linux --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --enable-__cxa_atexit --enable-bootstrap --enable-clocale=gnu --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libmpx --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: acpi-cpufreq performance

| | Core i3 7100 | Core i5 7600K | Core i7 7700K |
|---|---|---|---|
| **SmallPT GPU - GPU - Caustic3** | 1485492483 | **1485462559** | **1485533333** |
| **Normalized** | 100% | 100% | 100% |
| **Standard Deviation** | 0% | 0% | 0% |
| **SmallPT GPU - GPU - Cornell (Samples/sec)** | 1485492354 | **1485462437** | **1485533211** |
| **Normalized** | 100% | 100% | 100% |
| **Standard Deviation** | 0% | 0% | 0% |
| **SmallPT GPU - GPU - Complex (Samples/sec)** | 1485491582 | **1485461759** | **1485532534** |

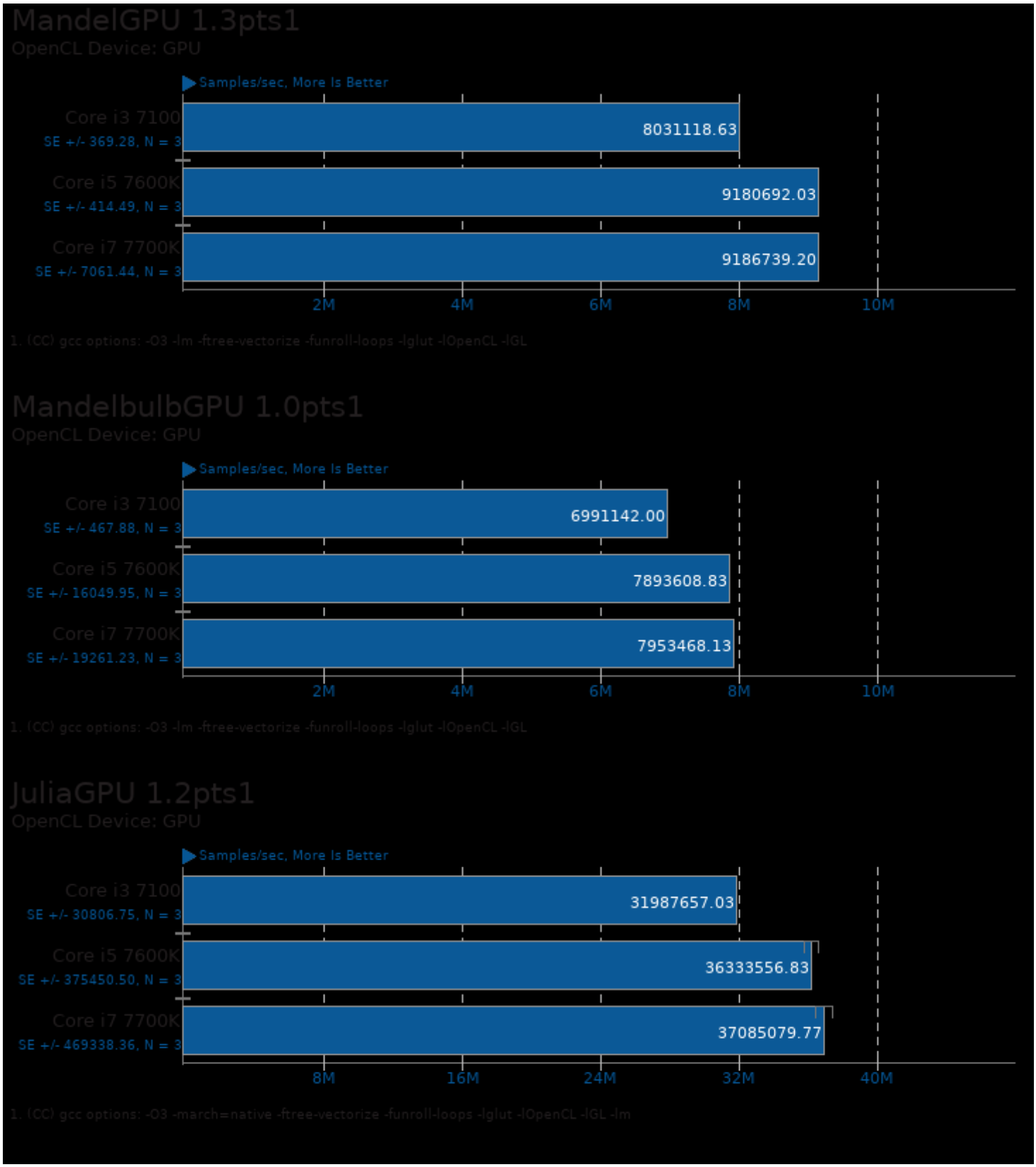
# OpenCL Intel Beignet

| | | | |
|---|---|---|---|
| Normalized | 100% | 100% | 100% |
| Standard Deviation | 0% | 0% | 0% |
| **MandelGPU - GPU (Samples/sec)** | **8031119** | 9180692 | **9186739** |
| Normalized | 87.42% | 99.93% | 100% |
| Standard Deviation | 0% | 0% | 0.1% |
| **MandelbulbGPU - GPU (Samples/sec)** | **6991142** | 7893609 | **7953468** |
| Normalized | 87.9% | 99.25% | 100% |
| Standard Deviation | 0% | 0.4% | 0.4% |
| **JuliaGPU - GPU (Samples/sec)** | **31987657** | 36333557 | **37085080** |
| Normalized | 86.25% | 97.97% | 100% |
| Standard Deviation | 0.2% | 1.8% | 2.2% |
| **cl-mem - Write (GB/s)** | **47.97** | 42.92 | **39.13** |
| Normalized | 100% | 89.47% | 81.57% |
| Standard Deviation | 17.1% | 11.6% | 3.4% |
| **cl-mem - Read (GB/s)** | **44.12** | **39.72** | 41.07 |
| Normalized | 100% | 90.03% | 93.09% |
| Standard Deviation | 8% | 8.5% | 14.3% |
| **SHOC Scalable HeterOgeneous Computing - OpenCL - T.R.B (GB/s)** | **51.52** | **58.11** | 57.89 |
| Normalized | 88.66% | 100% | 99.62% |
| Standard Deviation | 0% | 0% | 0.7% |
| **SHOC Scalable HeterOgeneous Computing - OpenCL - Bus Speed Readback (GB/s)** | **32.08** | 35.12 | **38.52** |
| Normalized | 83.28% | 91.17% | 100% |
| Standard Deviation | 1.6% | 1.8% | 1.4% |
| **SHOC Scalable HeterOgeneous Computing - OpenCL - Bus Speed Download (GB/s)** | **24.86** | 26.18 | **28.39** |
| Normalized | 87.57% | 92.22% | 100% |
| Standard Deviation | 0.2% | 1.3% | 0.3% |
| **SHOC Scalable HeterOgeneous Computing - OpenCL - Max SP Flops (GFLOPS)** | **297.39** | 340.69 | **340.71** |
| Normalized | 87.29% | 99.99% | 100% |
| Standard Deviation | 0% | 0% | 0% |
| **SHOC Scalable HeterOgeneous Computing - OpenCL - MD5 Hash (GHash/s)** | **0.28** | **0.32** | **0.32** |
| Normalized | 87.5% | 100% | 100% |
| Standard Deviation | 0% | 0% | 0% |
| **SHOC Scalable HeterOgeneous Computing - OpenCL - FFT SP (GFLOPS)** | **9.67** | **10.90** | 10.88 |
| Normalized | 88.72% | 100% | 99.82% |
| Standard Deviation | 0.1% | 0% | 0% |
| **SHOC Scalable HeterOgeneous Computing - OpenCL - Triad (GB/s)** | **6.61** | 8.37 | **12.23** |
| Normalized | 54.05% | 68.44% | 100% |
| Standard Deviation | 0.2% | 0.4% | 2.7% |

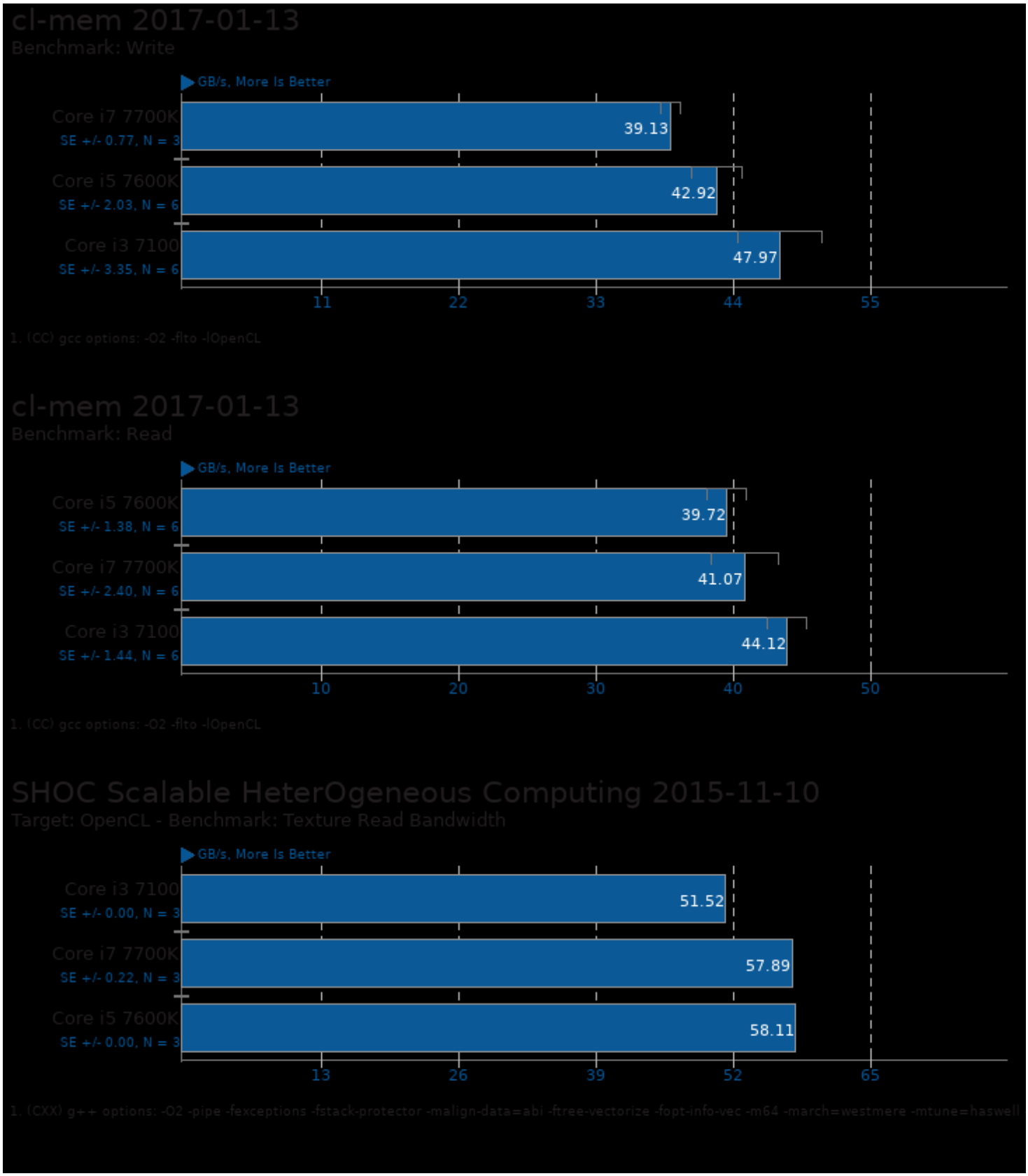
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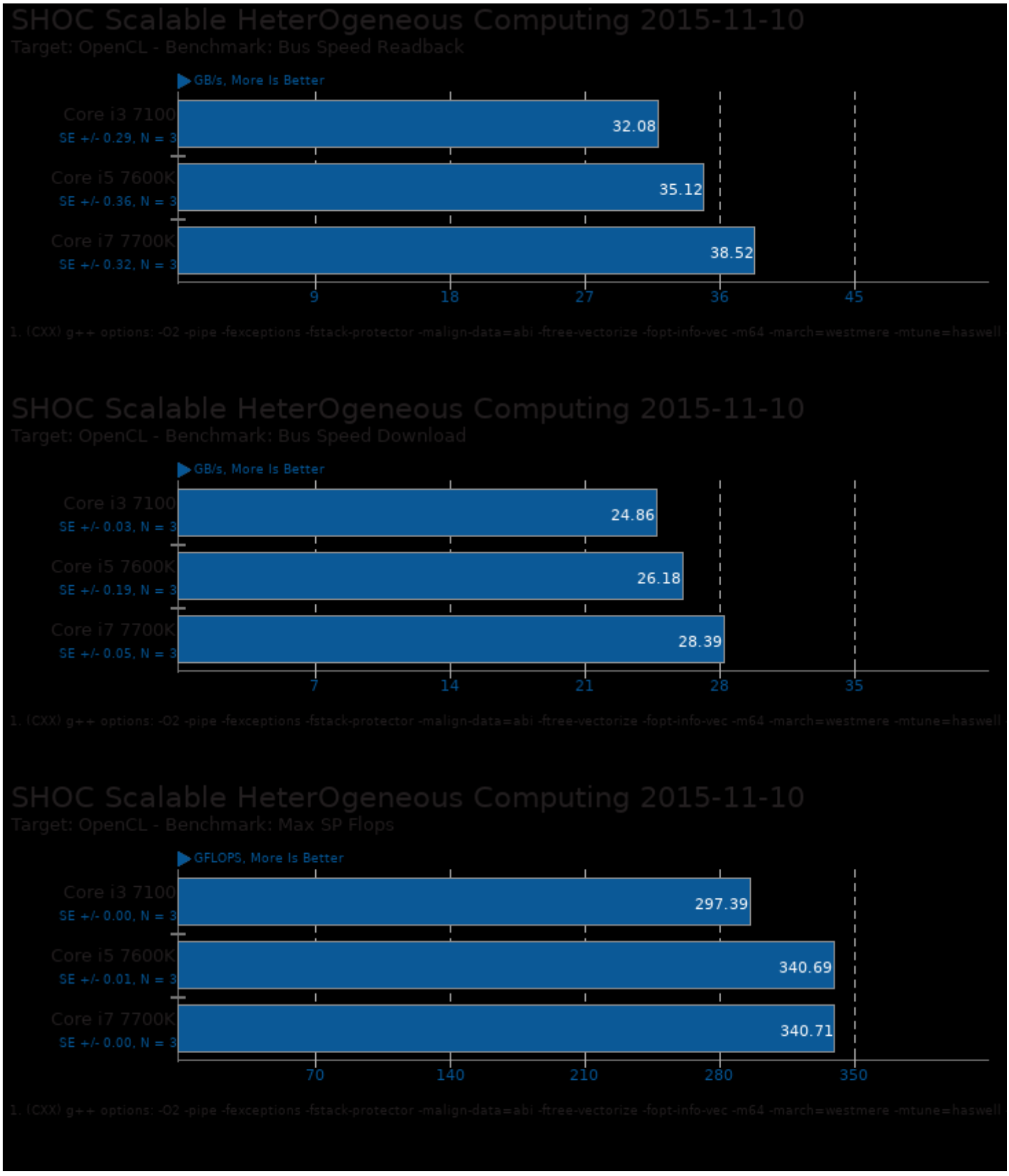
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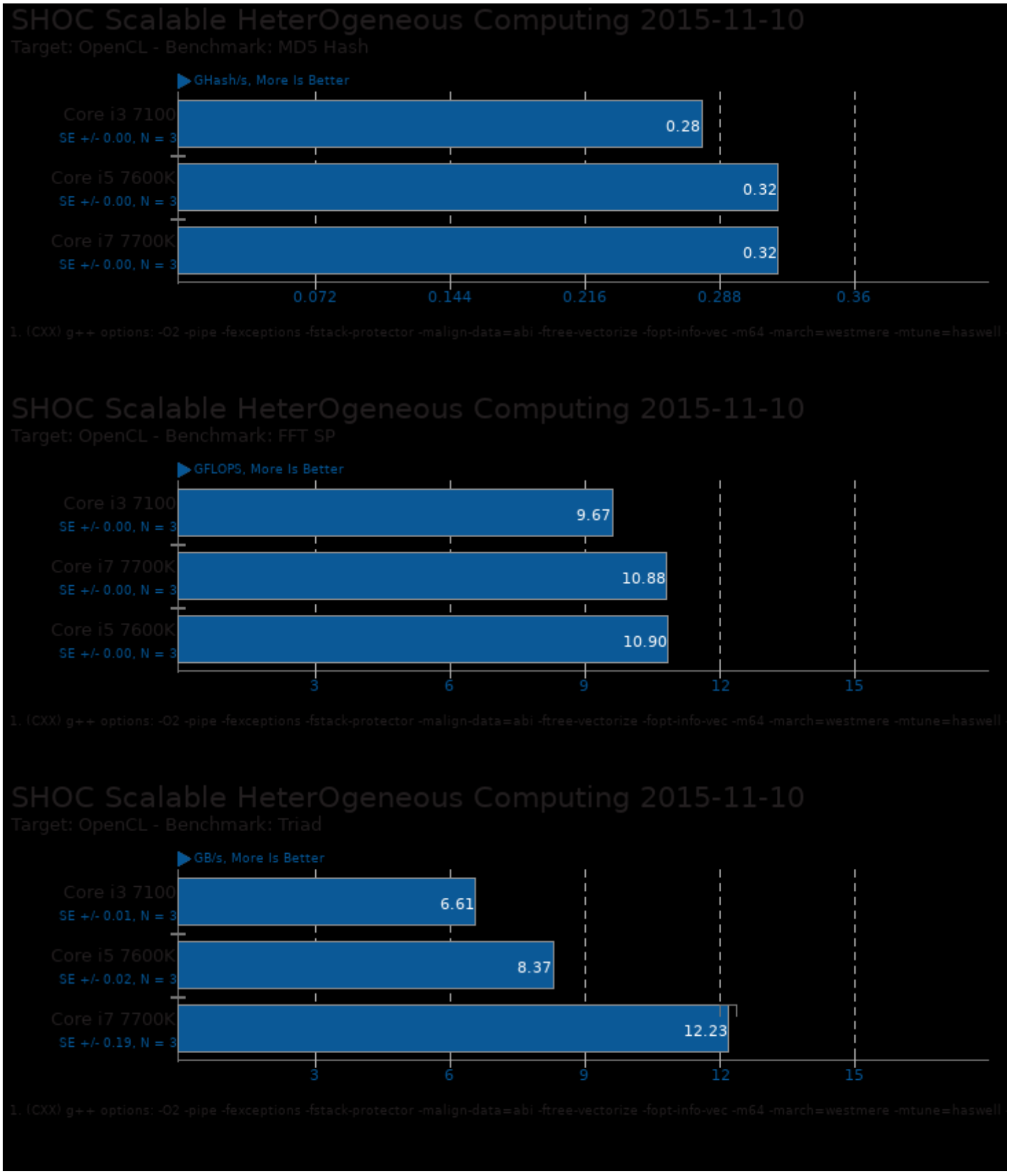
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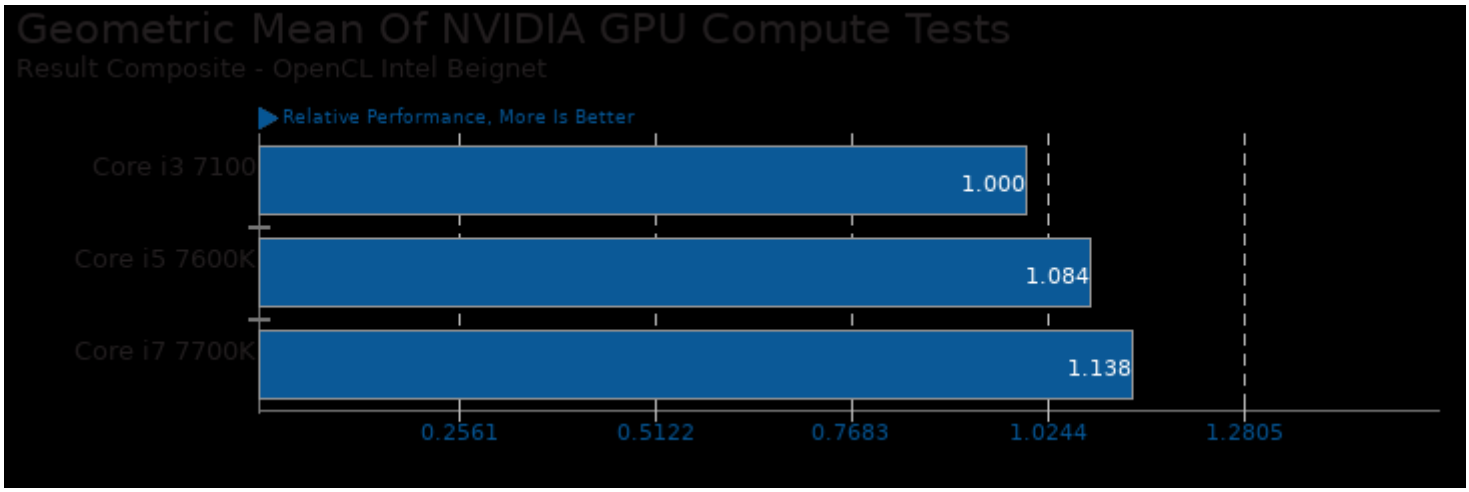
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These geometric means are based upon test groupings / test suites for this result file.




Geometric mean based upon tests: pts/cl-mem, pts/mandelgpu and pts/shoc




Geometric mean based upon tests: pts/juliagpu, pts/mandelgpu, pts/smallpt-gpu, pts/mandelbulbgpu, pts/shoc and pts/cl-mem

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 07:47.*