Phoronix Test Suite

www.phoronix-test-suite.com

egpuperf

7700K w/1080FE in PCI-E slot

Automated Executive Summary

1080_Direct_Mode had the most wins, coming in first place for 75% of the tests.

Based on the geometric mean of all complete results, the fastest (1080_Direct_Mode) was 1.05x the speed of the slowest (1080_eGPU_Mode).

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

JuliaGPU (OpenCL Device: CPU+GPU) at 1.25x
JuliaGPU (OpenCL Device: GPU) at 1.248x
LuxMark (OpenCL Device: GPU - Scene: Hotel) at 1.038x
LuxMark (OpenCL Device: CPU+GPU - Scene: Hotel) at 1.034x
LuxMark (OpenCL Device: GPU - Scene: Luxball HDR) at 1.006x
LuxMark (OpenCL Device: CPU+GPU - Scene: Luxball HDR) at 1.005x
LuxMark (OpenCL Device: GPU - Scene: Microphone) at 1.001x
LuxMark (OpenCL Device: CPU+GPU - Scene: Microphone) at 1.001x
MandelbulbGPU (OpenCL Device: GPU) at 1x
MandelbulbGPU (OpenCL Device: CPU+GPU) at 1x.

Test Systems:

1080_eGPU_Mode

Processor: Intel Core i7-7700K @ 0.80GHz (8 Cores), Motherboard: Gigabyte Z170X-Gaming 7, Chipset: Intel Device 591f, Memory: 15360MB, Disk: 2 x VisionTek 120GB + 2000GB Western Digital WD20PURX-64P + 512GB TOSHIBA-RD400, Graphics: Gigabyte NVIDIA GeForce GTX 1080 8192MB (1607/5005MHz), Audio: Creative CA0132, Monitor: SONY TV, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.12.0-11-generic (x86_64), Desktop: GNOME Shell 3.24.3, Display Driver: NVIDIA 375.82, OpenGL: 4.5.0, Vulkan: 1.0.54, Compiler: GCC 7.2.0 + CUDA 8.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave
OpenCL Notes: GPU Compute Cores: 2560
System Notes: GPU Compute Cores: 2560.

1080_Direct_Mode

Processor: Intel Core i7-7700K @ 0.80GHz (8 Cores), Motherboard: Gigabyte Z170X-Gaming 7, Chipset: Intel Device 591f, Memory: 16384MB, Disk: 2 x VisionTek 120GB + 2000GB Western Digital WD20PURX-64P + 512GB TOSHIBA-RD400, Graphics: NVIDIA GeForce GTX 1080 8192MB (139/405MHz), Audio: Creative CA0132, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.11.0-13-generic (x86_64), Desktop: GNOME Shell 3.24.3, Display Driver: NVIDIA 375.82, OpenGL: 4.5.0, Vulkan: 1.0.24, Compiler: GCC 7.2.0 + CUDA 8.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave
OpenCL Notes: GPU Compute Cores: 2560
System Notes: GPU Compute Cores: 2560.

	1080_eGPU_Mode	1080_Direct_Mode
JuliaGPU - GPU (Samples/sec)	55157231	68819006
Normalized	80.15%	100%
Standard Deviation	0.1%	0.3%
JuliaGPU - CPU+GPU (Samples/sec)	55154187	68957946
Normalized	79.98%	100%
Standard Deviation	0.1%	0.1%
LuxMark - GPU - Hotel (Score)	3067	2955
Normalized	100%	96.35%
Standard Deviation	0.7%	
LuxMark - CPU+GPU - Hotel (Score)	3056	2955
Normalized	100%	96.7%
Standard Deviation	0.1%	0%

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LuxMark - GPU - Microphone (Score)	6310	6319
Normalized	99.86%	100%
Standard Deviation	0.1%	0.1%
LuxMark - GPU - Luxball HDR (Score)	12995	13074
Normalized	99.4%	100%
Standard Deviation		0.2%
LuxMark - CPU+GPU - Microphone (Score)	6306	6314
Normalized	99.87%	100%
Standard Deviation	0%	0%
LuxMark - CPU+GPU - Luxball HDR (Score)	13019	13088
Normalized	99.47%	100%
Standard Deviation		0.1%
MandelbulbGPU - GPU (Samples/sec)		34557498
Standard Deviation		0.2%
MandelbulbGPU - CPU+GPU (Samples/sec)		34613281
Standard Deviation		0.1%
SHOC Scalable HeterOgeneous Computing - OpenCL - Triad (GB/s)		12.27
Standard Deviation		0%
SHOC Scalable HeterOgeneous Computing - OpenCL - FFT SP (GFLOPS)		550.27
Standard Deviation		1.4%
SHOC Scalable HeterOgeneous Computing - OpenCL - MD5 Hash (GHash/s)		14.18
Standard Deviation		0.2%
SHOC Scalable HeterOgeneous Computing - OpenCL - Max SP Flops (GFLOPS)		9198
Standard Deviation		1.1%
SHOC Scalable HeterOgeneous Computing - OpenCL - Bus Speed Download (GB/s)		12.97
Standard Deviation		0%
SHOC Scalable HeterOgeneous Computing - OpenCL - Bus Speed Readback (GB/s)		13.20
Standard Deviation		0%
SHOC Scalable HeterOgeneous Computing - OpenCL - T.R.B (GB/s)		473.31
Standard Deviation		0.5%

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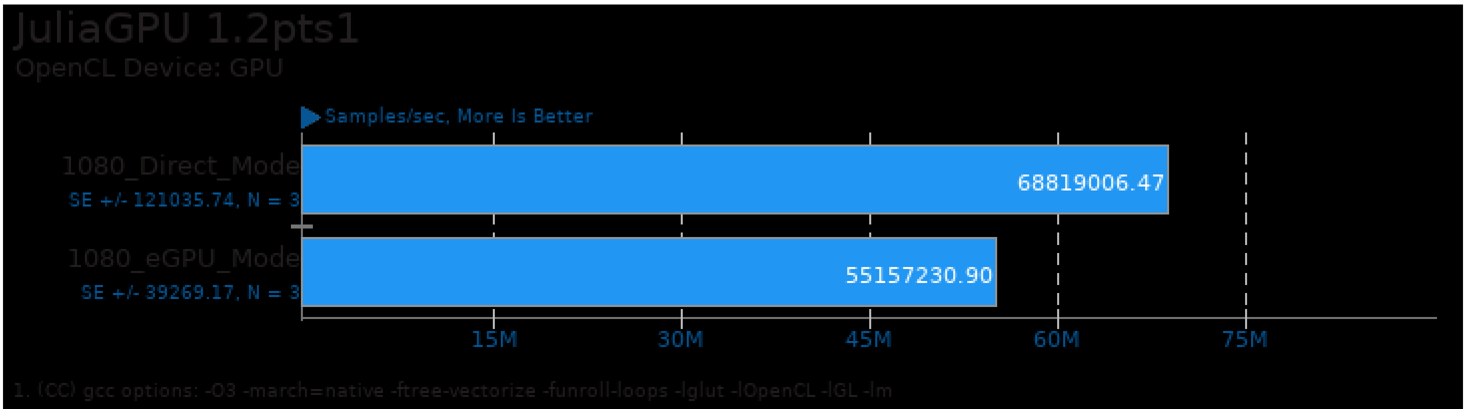
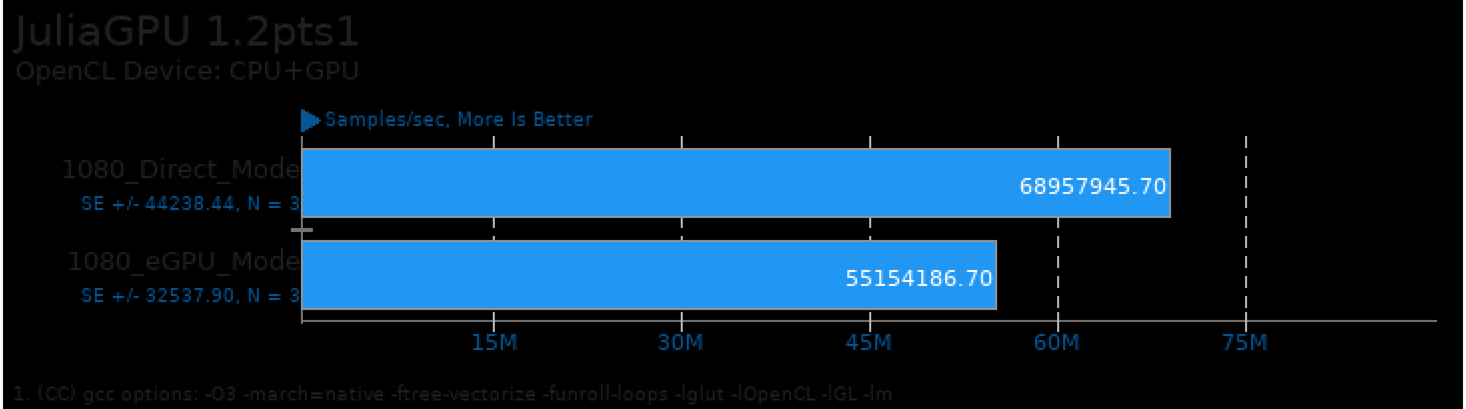
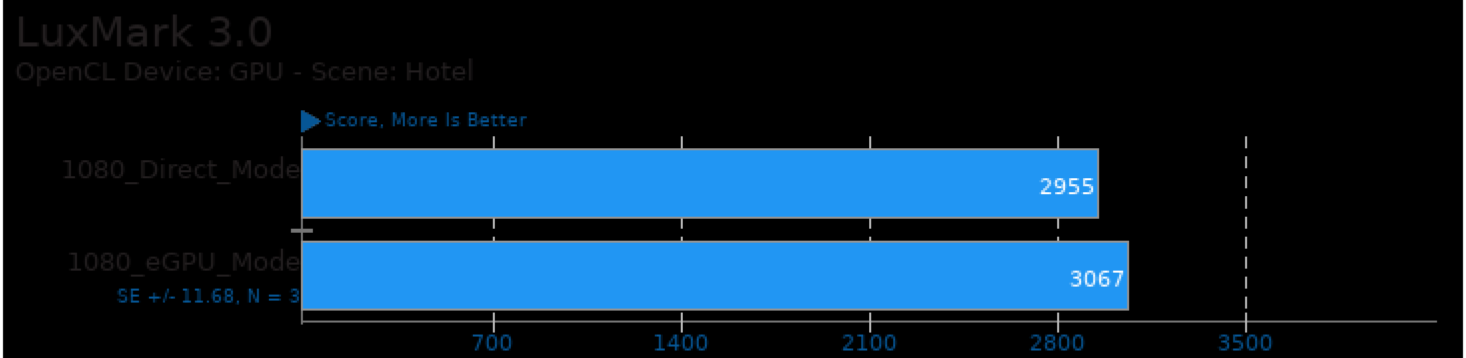
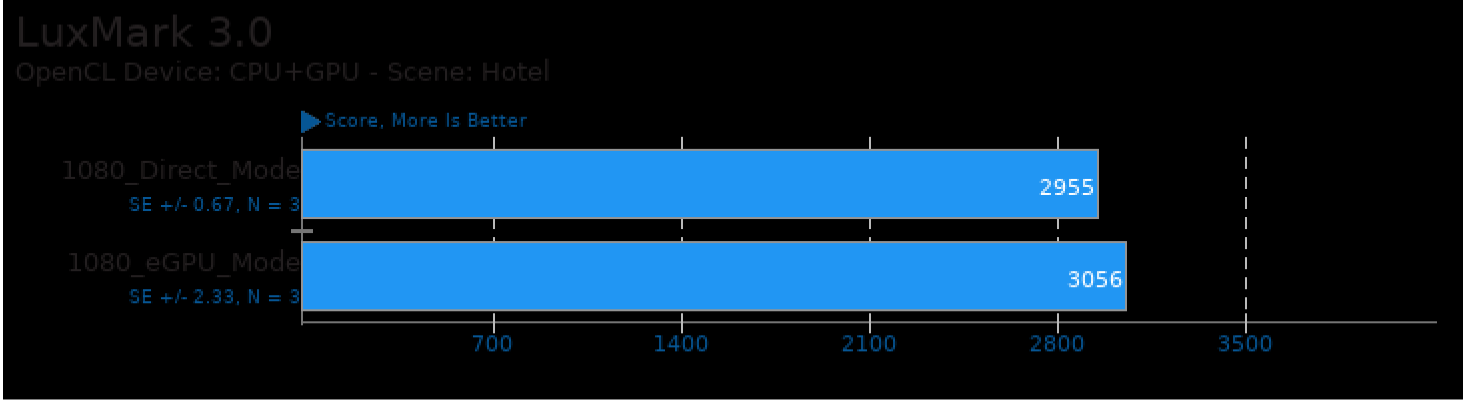

JuliaGPU 1.2pts1
OpenCL Device: GPU
Samples/sec, More Is Better
1080_Direct_Mode
SE +/- 121035.74, N = 3
68819006.47
1080_eGPU_Mode
SE +/- 39269.17, N = 3
55157230.90
15M
30M
45M
60M
75M
1. (CC) gcc options: -O3 -march=native -ftree-vectorize -funroll-loops -lglut -lOpenCL -lGL -lm


JuliaGPU 1.2pts1
OpenCL Device: CPU+GPU
Samples/sec, More Is Better
1080_Direct_Mode
SE +/- 44238.44, N = 3
68957945.70
1080_eGPU_Mode
SE +/- 32537.90, N = 3
55154186.70
15M
30M
45M
60M
75M
1. (CC) gcc options: -O3 -march=native -ftree-vectorize -funroll-loops -lglut -lOpenCL -lGL -lm


LuxMark 3.0
OpenCL Device: GPU - Scene: Hotel
Score, More Is Better
1080_Direct_Mode
2955
1080_eGPU_Mode
SE +/- 11.68, N = 3
3067
700
1400
2100
2800
3500


LuxMark 3.0
OpenCL Device: CPU+GPU - Scene: Hotel
Score, More Is Better
1080_Direct_Mode
SE +/- 0.67, N = 3
2955
1080_eGPU_Mode
SE +/- 2.33, N = 3
3056
700
1400
2100
2800
3500

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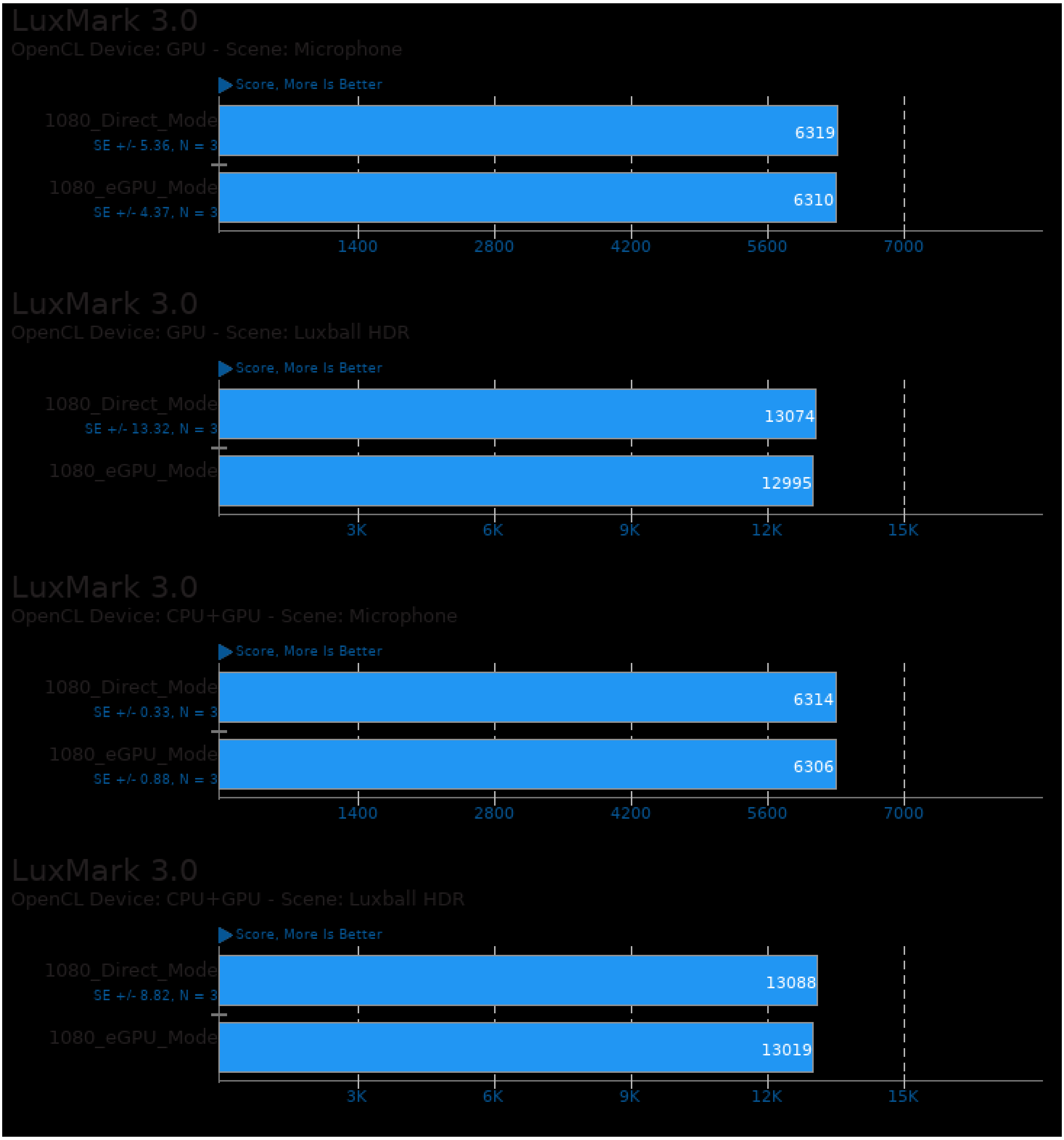
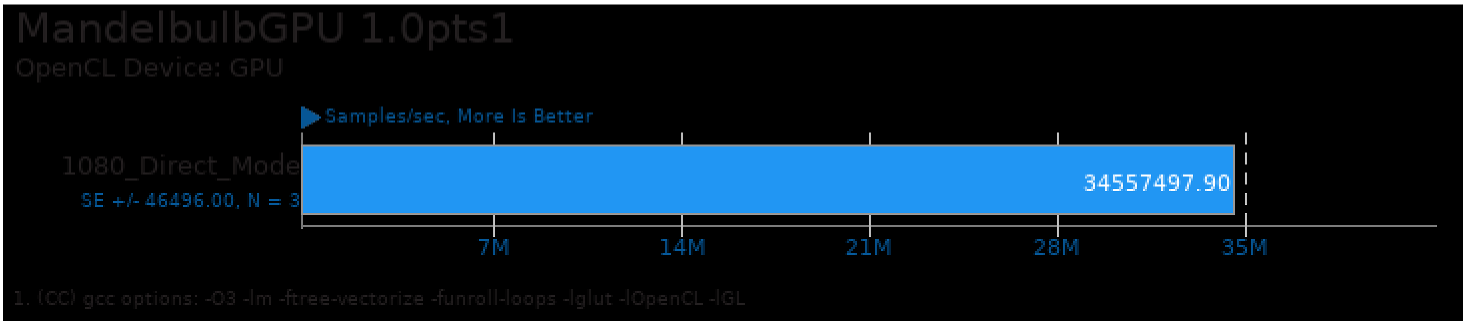
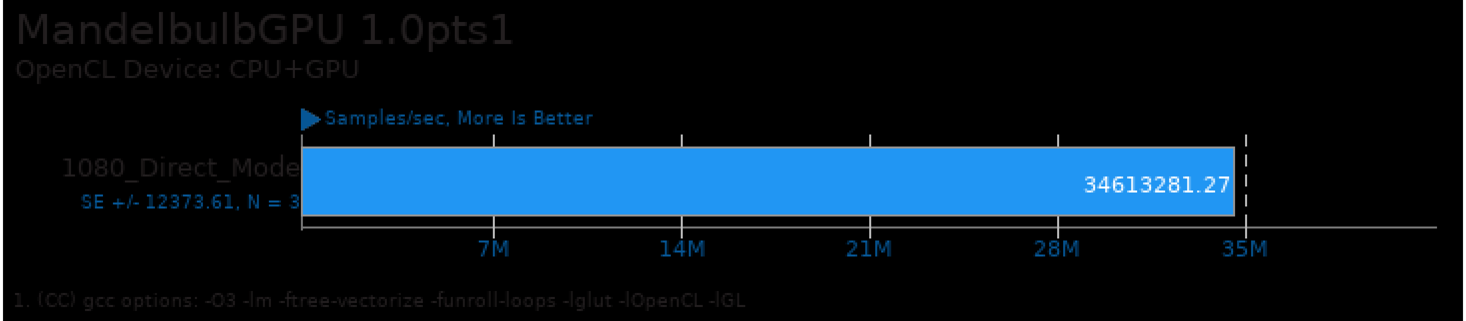
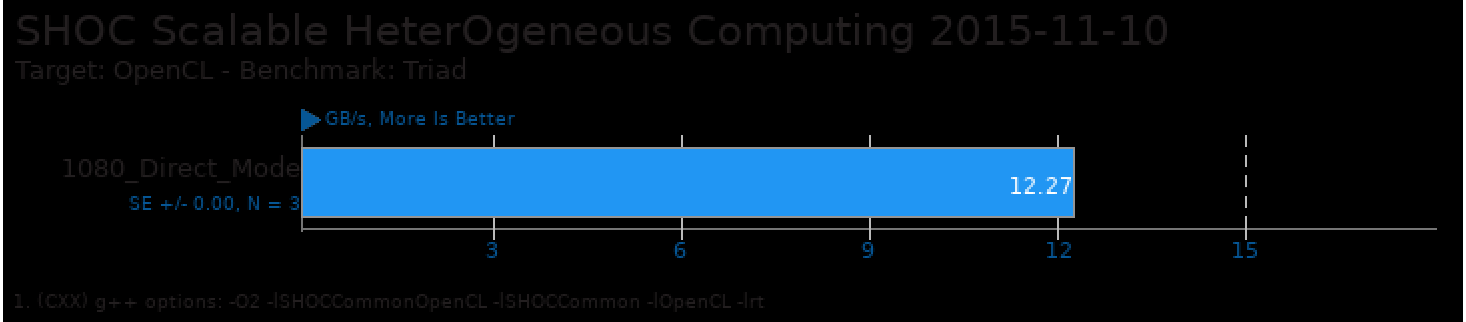
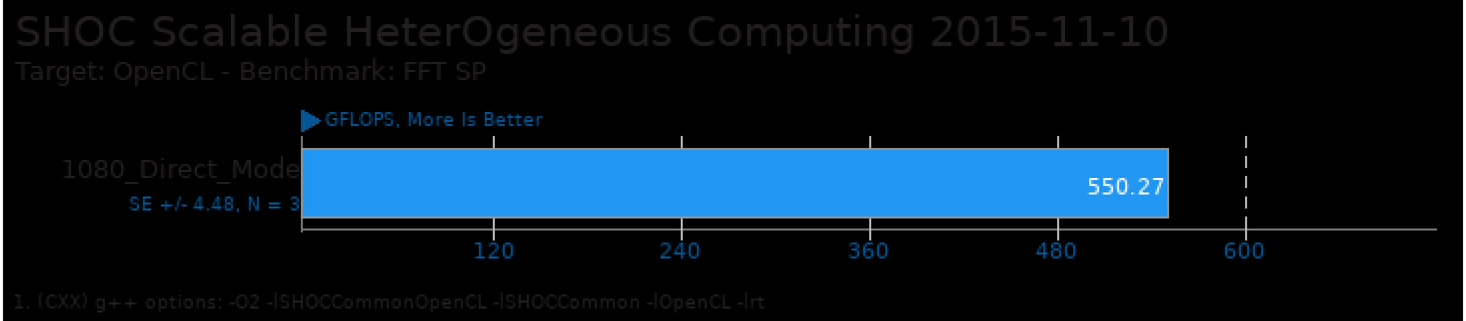
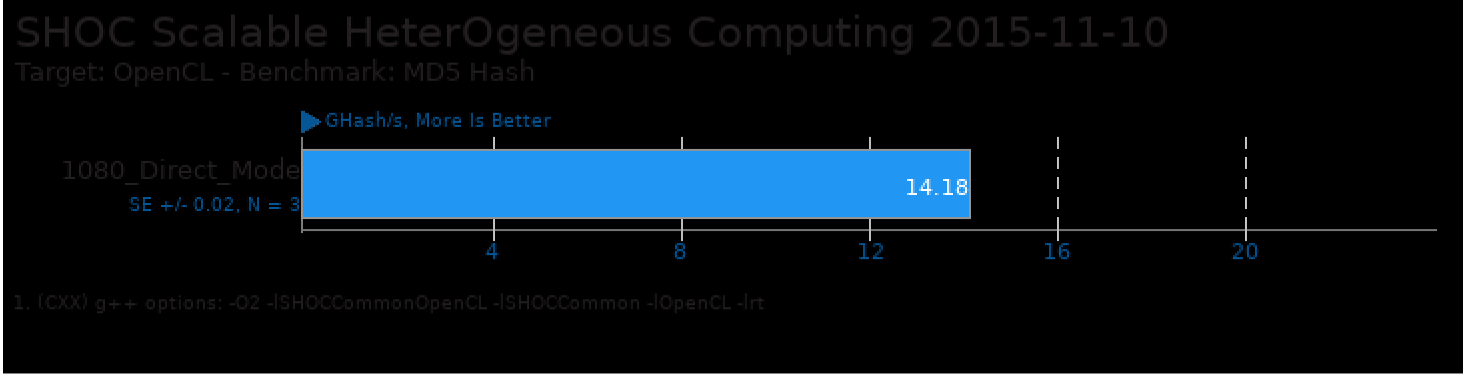

LuxMark 3.0
OpenCL Device: GPU - Scene: Microphone
Score, More Is Better
1080_Direct_Mode
SE +/- 5.36, N = 3
6319
1080_eGPU_Mode
SE +/- 4.37, N = 3
6310
1400
2800
4200
5600
7000
LuxMark 3.0
OpenCL Device: GPU - Scene: Luxball HDR
Score, More Is Better
1080_Direct_Mode
SE +/- 13.32, N = 3
13074
1080_eGPU_Mode
12995
3K
6K
9K
12K
15K
LuxMark 3.0
OpenCL Device: CPU+GPU - Scene: Microphone
Score, More Is Better
1080_Direct_Mode
SE +/- 0.33, N = 3
6314
1080_eGPU_Mode
SE +/- 0.88, N = 3
6306
1400
2800
4200
5600
7000
LuxMark 3.0
OpenCL Device: CPU+GPU - Scene: Luxball HDR
Score, More Is Better
1080_Direct_Mode
SE +/- 8.82, N = 3
13088
1080_eGPU_Mode
13019
3K
6K
9K
12K
15K

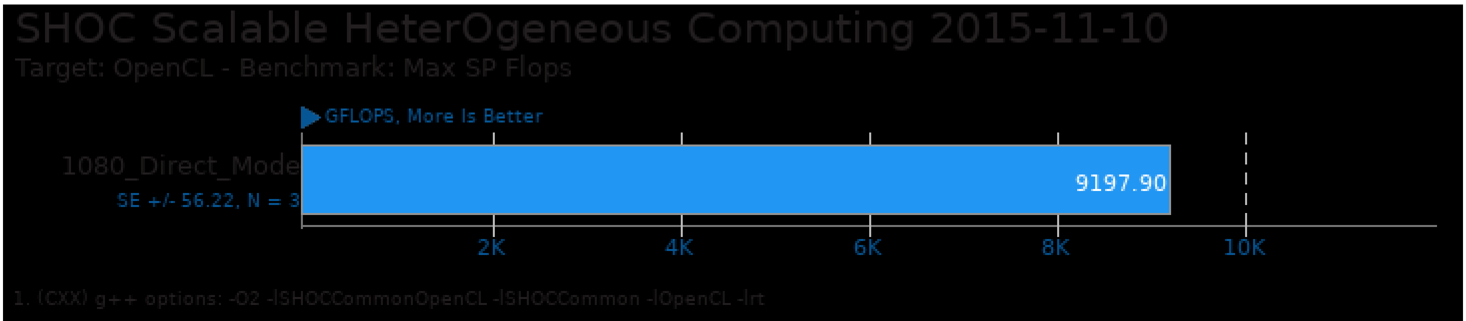

MandelbulbGPU 1.0pts1
OpenCL Device: GPU
Samples/sec, More Is Better
1080_Direct_Mode
SE +/- 46496.00, N = 3
34557497.90
7M
14M
21M
28M
35M
1. (CC) gcc options: -O3 -lm -ftree-vectorize -funroll-loops -lglut -lOpenCL -lGL

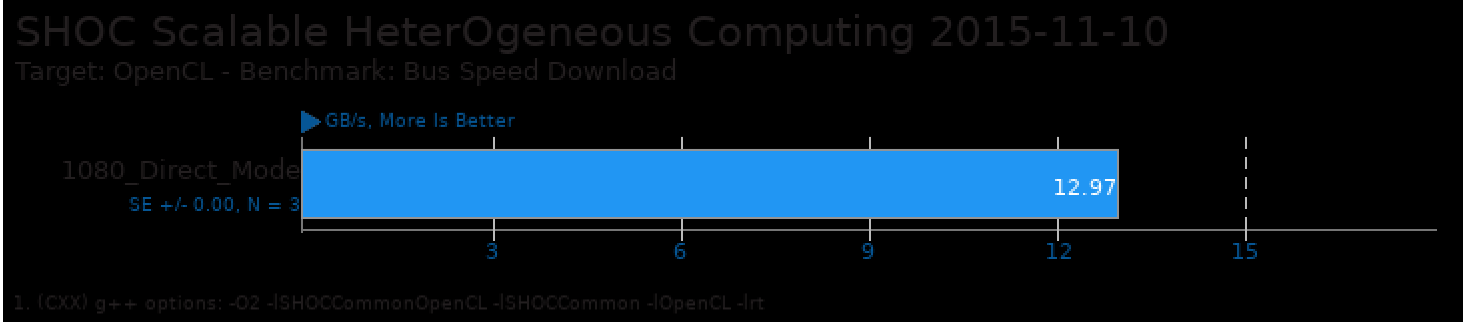

MandelbulbGPU 1.0pts1
OpenCL Device: CPU+GPU
Samples/sec, More Is Better
1080_Direct_Mode
SE +/- 12373.61, N = 3
34613281.27
7M
14M
21M
28M
35M
1. (CC) gcc options: -O3 -lm -ftree-vectorize -funroll-loops -lglut -lOpenCL -lGL

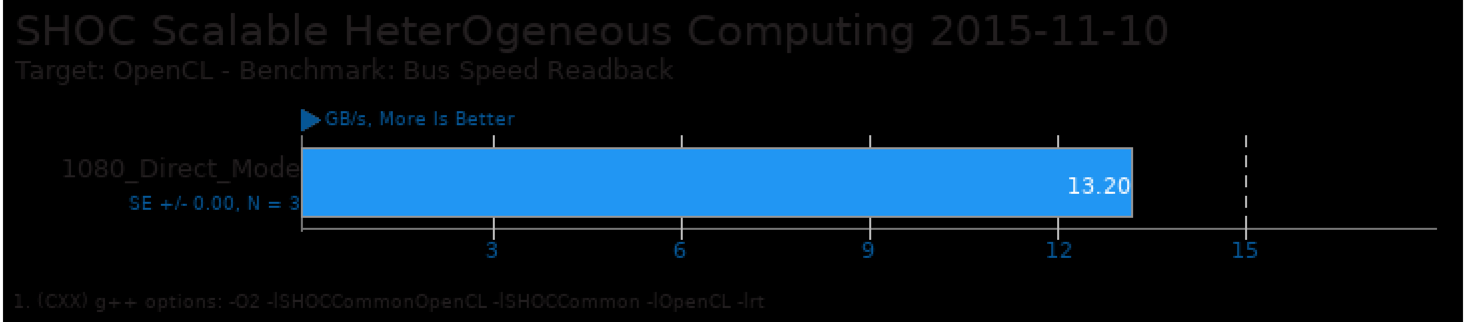

SHOC Scalable HeterOgeneous Computing 2015-11-10
Target: OpenCL - Benchmark: Triad
GB/s, More Is Better
1080_Direct_Mode
SE +/- 0.00, N = 3
12.27
3
6
9
12
15
1. (CXX) g++ options: -O2 -lSHOCCommonOpenCL -lSHOCCommon -lOpenCL -lrt

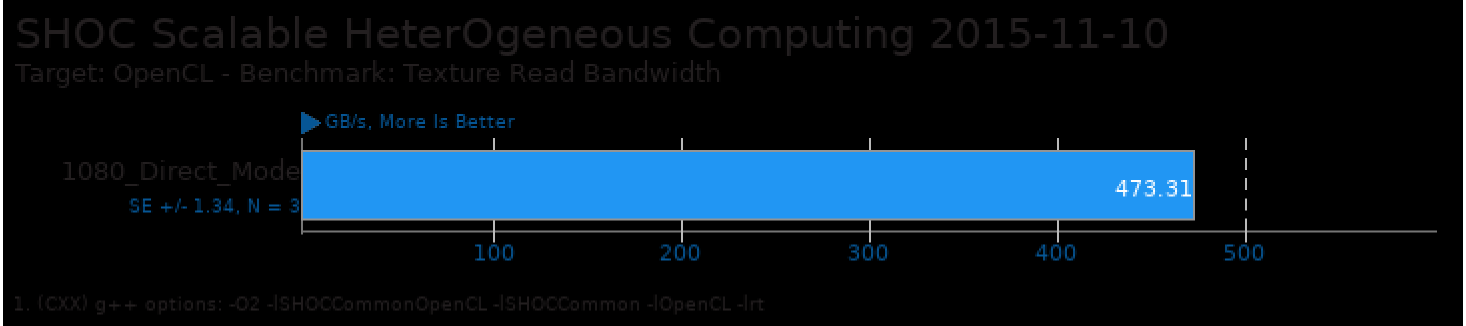

SHOC Scalable HeterOgeneous Computing 2015-11-10
Target: OpenCL - Benchmark: FFT SP
GFLOPS, More Is Better
1080_Direct_Mode
SE +/- 4.48, N = 3
550.27
120
240
360
480
600
1. (CXX) g++ options: -O2 -lSHOCCommonOpenCL -lSHOCCommon -lOpenCL -lrt


SHOC Scalable HeterOgeneous Computing 2015-11-10
Target: OpenCL - Benchmark: MD5 Hash
GHash/s, More Is Better
1080_Direct_Mode
SE +/- 0.02, N = 3
14.18
4
8
12
16
20
1. (CXX) g++ options: -O2 -lSHOCCommonOpenCL -lSHOCCommon -lOpenCL -lrt

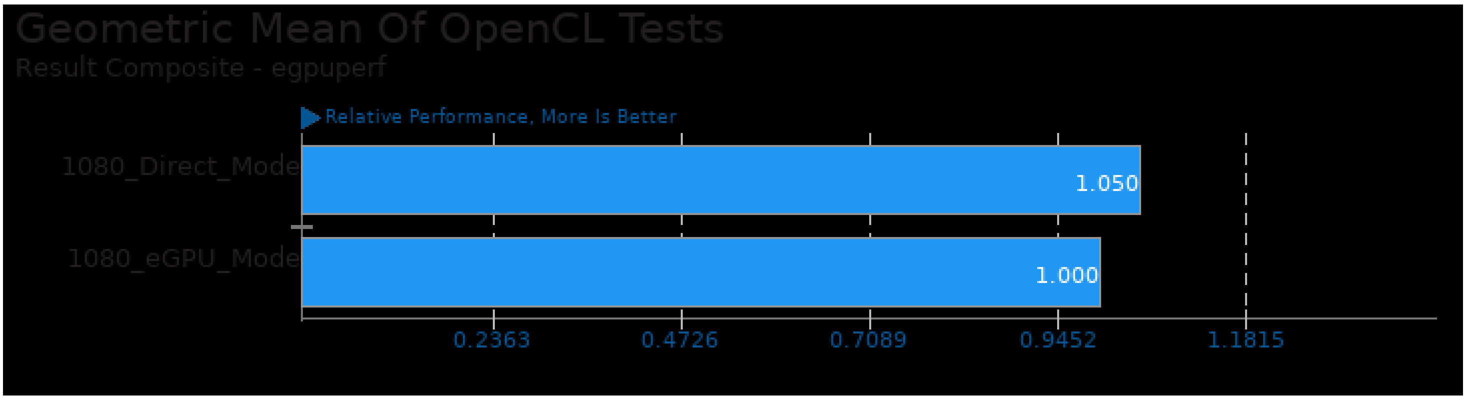

SHOC Scalable HeterOgeneous Computing 2015-11-10
Target: OpenCL - Benchmark: Max SP Flops
GFLOPS, More Is Better
1080_Direct_Mode
SE +/- 56.22, N = 3
9197.90
2K
4K
6K
8K
10K
1. (CXX) g++ options: -O2 -lSHOCCommonOpenCL -lSHOCCommon -lOpenCL -lrt


SHOC Scalable HeterOgeneous Computing 2015-11-10
Target: OpenCL - Benchmark: Bus Speed Download
GB/s, More Is Better
1080_Direct_Mode
SE +/- 0.00, N = 3
12.97
3
6
9
12
15
1. (CXX) g++ options: -O2 -lSHOCCommonOpenCL -lSHOCCommon -lOpenCL -lrt


SHOC Scalable HeterOgeneous Computing 2015-11-10
Target: OpenCL - Benchmark: Bus Speed Readback
GB/s, More Is Better
1080_Direct_Mode
SE +/- 0.00, N = 3
13.20
3
6
9
12
15
1. (CXX) g++ options: -O2 -lSHOCCommonOpenCL -lSHOCCommon -lOpenCL -lrt


SHOC Scalable HeterOgeneous Computing 2015-11-10
Target: OpenCL - Benchmark: Texture Read Bandwidth
GB/s, More Is Better
1080_Direct_Mode
SE +/- 1.34, N = 3
473.31
100
200
300
400
500
1. (CXX) g++ options: -O2 -lSHOCCommonOpenCL -lSHOCCommon -lOpenCL -lrt

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



Geometric mean based upon tests: pts/juliagpu, pts/mandelbulbgpu, pts/luxmark and pts/shoc

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 3 October 2024 18:30.