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Intel Core i5-10500 testing with a LENOVO 3196 (M2VKT14A BIOS) and Intel UHD 630 1GB on Microsoft Windows 10 Build 19042 via the Phoronix Test Suite.

Test Systems:

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Intel HD 620

Processor: Intel Core i3-7100U @ 2.40GHz (2 Cores / 4 Threads), Motherboard: Intel NUC7i3BNB (BNKBL357.86A.0072.2018.1222.1129 BIOS), Chipset: Intel Xeon E3-1200 v6/7th, Memory: 4096MB, Disk: 250GB Samsung SSD 850, Graphics: Intel HD 620 3GB (1000MHz), Audio: Realtek ALC283, Monitor: 23MP65, Network: Intel Connection + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.15.0-43-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.19.6, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 18.0.5, Compiler: GCC 7.3.0, File-System: ext4, Screen Resolution: 1920x1080

Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

ASUS NVIDIA NVC1

Processor: Intel Core i3-7100U @ 2.40GHz (2 Cores / 4 Threads), Motherboard: Intel NUC7i3BNB (BNKBL357.86A.0072.2018.1222.1129 BIOS), Chipset: Intel Xeon E3-1200 v6/7th, Memory: 4096MB, Disk: 250GB Samsung SSD 850, Graphics: ASUS NVIDIA NVC1 2GB, Audio: Realtek ALC283, Monitor: 23MP65, Network: Intel Connection + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.15.0-43-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.19.6, Display Driver: nouveau 1.0.15, OpenGL: 4.3 Mesa 18.0.5, Compiler: GCC 7.3.0, File-System: ext4, Screen Resolution: 1920x1080

Processor Notes: Scaling Governor: intel_pstate performance
Graphics Notes: EXA
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

ASUS NVIDIA GeForce GT 630

Processor: Intel Core i3-7100U @ 2.40GHz (2 Cores / 4 Threads), Motherboard: Intel NUC7i3BNB (BNKBL357.86A.0072.2018.1222.1129 BIOS), Chipset: Intel Xeon E3-1200 v6/7th, Memory: 4096MB, Disk: 250GB Samsung SSD 850, Graphics: ASUS NVIDIA GeForce GT 630 2GB (810/896MHz), Audio: Realtek ALC283, Monitor: 23MP65, Network: Intel Connection + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.15.0-43-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.19.6, Display Driver: NVIDIA 390.77, OpenGL: 4.6.0, Compiler: GCC 7.3.0, File-System: ext4, Screen Resolution: 1920x1080

Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

Gigabyte AMD Radeon RX 470

Processor: Intel Core i3-7100U @ 2.40GHz (2 Cores / 4 Threads), Motherboard: Intel NUC7i3BNB (BNKBL357.86A.0072.2018.1222.1129 BIOS), Chipset: Intel Xeon E3-1200 v6/7th, Memory: 4096MB, Disk: 250GB Samsung SSD 850, Graphics: Gigabyte AMD Radeon RX 470/480/570/570X/580/580X 8GB (1340/2000MHz), Audio: Realtek ALC283, Monitor: 23MP65, Network: Intel Connection + Intel Wireless 8265 / 8275

OS: Ubuntu 18.10, Kernel: 4.18.0-13-generic (x86_64), Desktop: GNOME Shell 3.30.1, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, Compiler: GCC 8.2.0, File-System: ext4, Screen Resolution: 1920x1080

Processor Notes: Scaling Governor: intel_pstate performance
Graphics Notes: GLAMOR
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

Intel Core i3-7100U - Gigabyte AMD Radeon RX 470/480

Processor: Intel Core i3-7100U @ 2.40GHz (2 Cores / 4 Threads), Motherboard: Intel NUC7i3BNB (BNKBL357.86A.0072.2018.1222.1129 BIOS), Chipset: Intel Xeon E3-1200 v6/7th, Memory: 4096MB, Disk: 250GB Samsung SSD 850, Graphics: Gigabyte AMD Radeon RX 470/480 8GB (1340/2000MHz), Audio: Realtek ALC283, Monitor: 23MP65, Network: Intel Connection + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.20.4-042004-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.19.6, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 19.0.0-devel (git-41ddf1d 2019-01-26 bionic-oibaf-ppa) (LLVM 7.0.1), Compiler: GCC 7.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: amdgpu.ppfeaturemask=0xffffffff
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 performance
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

Gigabyte AMD Radeon RX 580

Intel Core i3-7100U - Gigabyte AMD Radeon RX 580 8GB

Processor: Intel Core i3-7100U @ 2.40GHz (2 Cores / 4 Threads), Motherboard: Intel NUC7i3BNB (BNKBL357.86A.0072.2018.1222.1129 BIOS), Chipset: Intel Xeon E3-1200 v6/7th, Memory: 4096MB, Disk: 250GB Samsung SSD 850, Graphics: Gigabyte AMD Radeon RX 580 8GB (1340/2000MHz), Audio: Realtek ALC283, Monitor: 23MP65, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.15.0-44-generic (x86_64), Desktop: GNOME Shell 3.28.3, Display Server: X Server 1.19.6, Display Driver: modesetting 1.19.6, OpenGL: 4.6.13542, OpenCL: OpenCL 2.1 AMD-APP (2766.4), Compiler: GCC 7.3.0, 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
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

wc1

Processor: Intel Core i5-10500 @ 3.10GHz (6 Cores / 12 Threads), Motherboard: LENOVO 3196 (M2VKT14A BIOS), Memory: 2 x 8192 MB 2666MHz SCC08GU03H1F1C-26V, Disk: 119GB Lenovo X800 SATA 128G SSD + 932GB WDC WD10EZEX-08WN4A0, Graphics: Intel UHD 630 1GB, Audio: + Realtek HD Audio, Network: Realtek PCIe GbE

OS: Microsoft Windows 10 Build 19042, Kernel: 10.0 (x86_64), Display Driver: 27.20.100.8783, File-System: NTFS, Screen Resolution: 1920x1080

Processor Notes: CPU Microcode: 00000000E0000000

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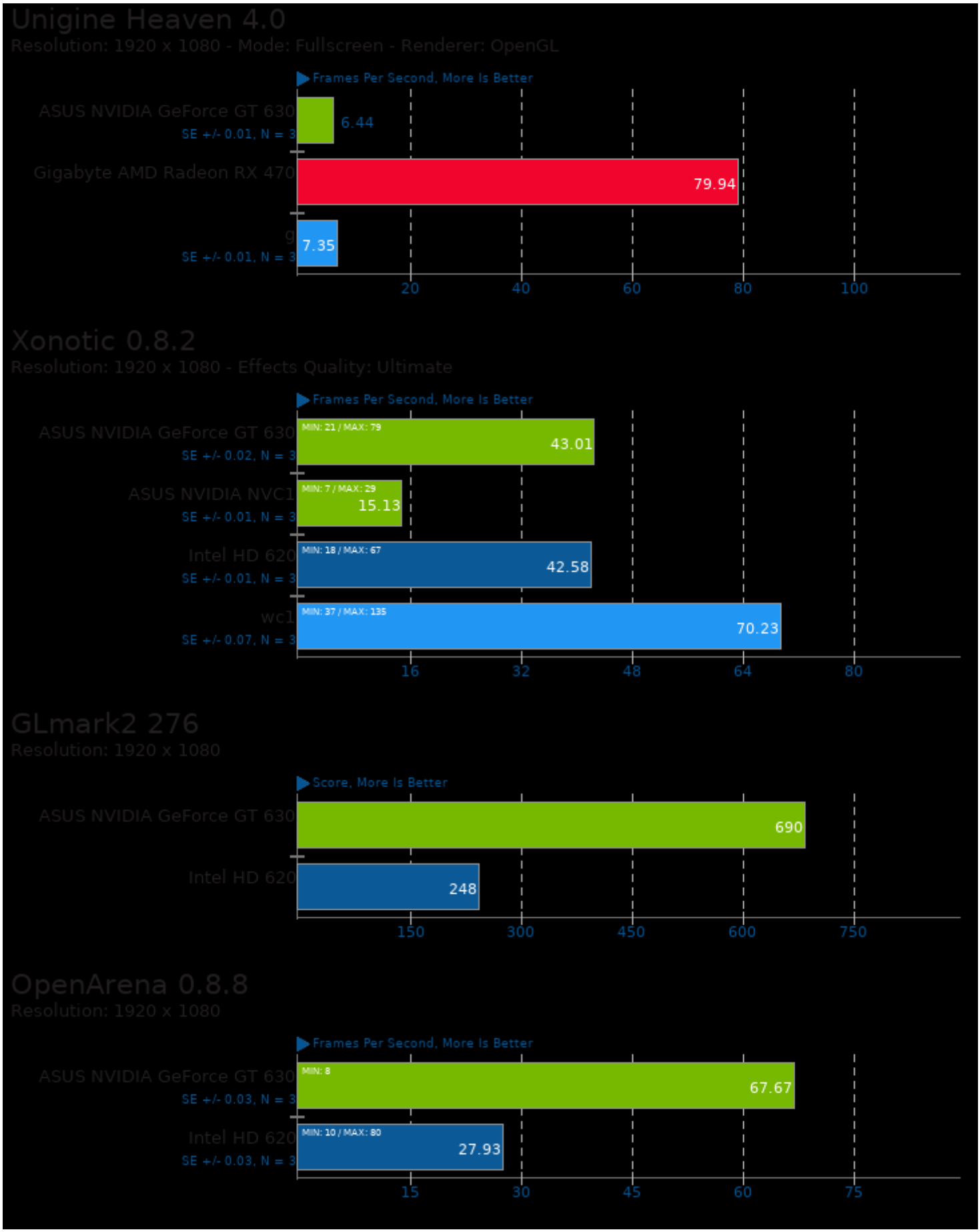
	g	Intel HD 620	ASUS NVIDIA NVC1	ASUS NVIDIA GeForce GT 630	Gigabyte AMD Radeon RX 470	Intel Core i3-7100U - Gigabyte AMD Radeon RX 470/480	Gigabyte AMD Radeon RX 580	Intel Core i3-7100U - Gigabyte AMD Radeon RX 580 8GB	wc1
Unigine Heaven - 1920 x 1080 - Fullscreen - OpenGL (FPS)	7.35			6.44	79.94				
Normalized	9.19%			8.06%	100%				
Standard Deviation	0.2%			0.3%					
Xonotic - 1920 x 1080 - Ultimate (FPS)		42.58	15.13	43.01					70.2283156
Normalized		60.63%	21.54%	61.24%					100%
Standard Deviation		0%	0.1%	0.1%					0.2%
GLmark2 - 1920 x 1080 (Score)		248		690					
Normalized		35.94%		100%					
OpenArena - 1920 x 1080 (FPS)		27.93		67.67					
Normalized		41.27%		100%					
Standard Deviation		0.2%		0.1%					
Counter-Strike: Global Offensive - 1920 x 1080 (FPS)				17.60					
Standard Deviation				0%					
GpuTest - Furmark - 1920 x 1080 - Fullscreen (Points)		351		509					
Normalized		68.96%		100%					
GpuTest - GiMark - 1920 x 1080 - Fullscreen (Points)				307	8840				
Normalized				3.47%	100%				
Standard Deviation					0%				
GpuTest - Plot3D - 1920 x 1080 - Fullscreen (Points)		6263		16755	102708				
Normalized		6.1%		16.31%	100%				
Standard Deviation		0.1%		0.2%	0.2%				
GpuTest - TessMark - 1920 x 1080 - Fullscreen (Points)				1070	18456				
Normalized				5.8%	100%				
Standard Deviation					0%				

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GpuTest - Triangle - 1920 x 1080 - Fullscreen (Points)	17510	67715	426117			
Normalized	4.11%	15.89%	100%			
Standard Deviation	0.1%	0.3%	0.6%			
GpuTest - Pixmark Piano - 1920 x 1080 - Fullscreen (Points)	112	94	1554			
Normalized	7.21%	6.05%	100%			
GpuTest - Pixmark Volplosion - 1920 x 1080 - Fullscreen (Points)	297	259	3921			
Normalized	7.57%	6.61%	100%			
Standard Deviation			0%			
GpuTest - GiMark - 1920 x 1080 - Windowed (Points)			8876			1613
Normalized			100%			18.17%
Standard Deviation			0.1%			0.6%
GpuTest - Plot3D - 1920 x 1080 - Windowed (Points)			90617			10176
Normalized			100%			11.23%
Standard Deviation			0.1%			1.6%
GpuTest - Furmark - 1920 x 1080 - Windowed (Points)			8147			812
Normalized			100%			9.97%
Standard Deviation			0.2%			0.2%
cl-mem - Copy				181.43		
Standard Deviation				0%		
cl-mem - Read				215.43		
Standard Deviation				0%		
cl-mem - Write				182.37		
Standard Deviation				0.2%		
clpeak - Kernel Latency (us)					37.43	
Standard Deviation					1.6%	
clpeak - I.C.I (GIOPS)					1225	
Standard Deviation					0.4%	
clpeak - S.P.F (GFLOPS)					6059	
Standard Deviation					0%	
clpeak - D.P.D (GFLOPS)					384.40	
Standard Deviation					0%	
clpeak - G.M.B (GBPS)					206.92	
Standard Deviation					0%	
clpeak - T.B.e					6.62	
Standard Deviation					1.5%	

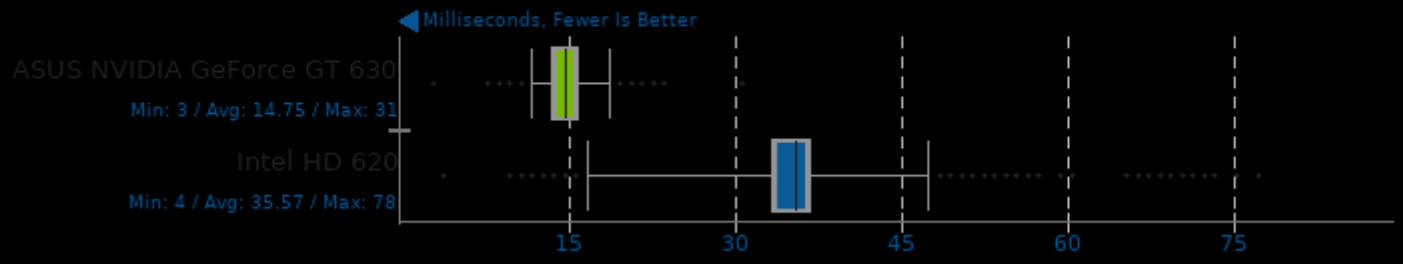
gg

clpeak - T.B.e	15.92
Standard Deviation	0.4%


Unigine Heaven 4.0
Resolution: 1920 x 1080 - Mode: Fullscreen - Renderer: OpenGL
Frames Per Second, More Is Better
ASUS NVIDIA GeForce GT 630
SE +/- 0.01, N = 3
6.44
Gigabyte AMD Radeon RX 470
79.94
7.35
SE +/- 0.01, N = 3
20
40
60
80
100
Xonotic 0.8.2
Resolution: 1920 x 1080 - Effects Quality: Ultimate
Frames Per Second, More Is Better
ASUS NVIDIA GeForce GT 630
SE +/- 0.02, N = 3
MIN: 21 / MAX: 79
43.01
ASUS NVIDIA NVC1
SE +/- 0.01, N = 3
MIN: 7 / MAX: 29
15.13
Intel HD 620
SE +/- 0.01, N = 3
MIN: 18 / MAX: 67
42.58
SE +/- 0.07, N = 3
MIN: 37 / MAX: 135
70.23
16
32
48
64
80
GLmark2 276
Resolution: 1920 x 1080
Score, More Is Better
ASUS NVIDIA GeForce GT 630
690
Intel HD 620
248
150
300
450
600
750
OpenArena 0.8.8
Resolution: 1920 x 1080
Frames Per Second, More Is Better
ASUS NVIDIA GeForce GT 630
SE +/- 0.03, N = 3
MIN: 8
67.67
Intel HD 620
SE +/- 0.03, N = 3
MIN: 10 / MAX: 80
27.93
15
30
45
60
75

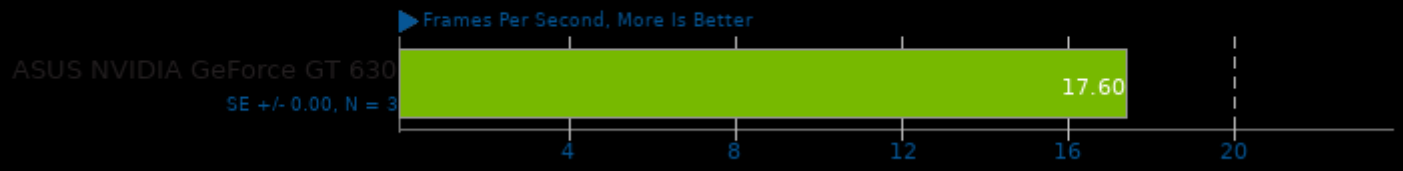
OpenArena 0.8.8

Resolution: 1920 x 1080 - Total Frame Time



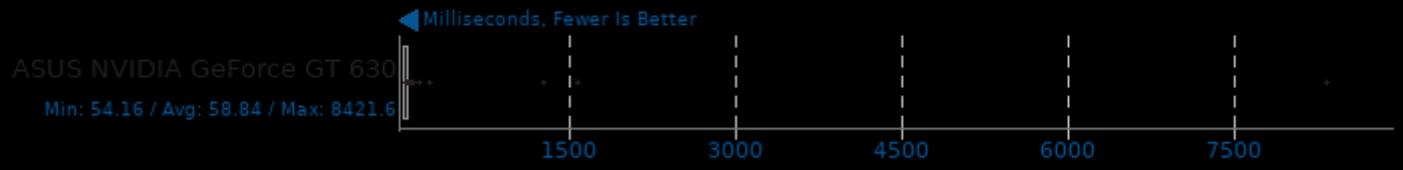
Counter-Strike: Global Offensive

Resolution: 1920 x 1080



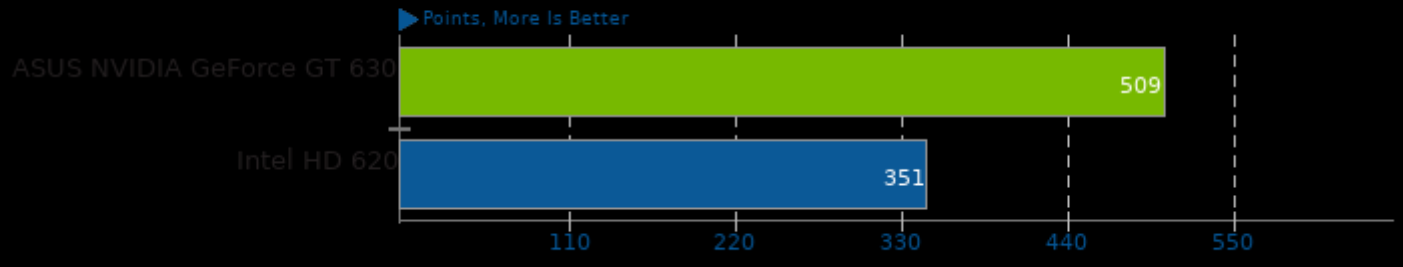
Counter-Strike: Global Offensive

Resolution: 1920 x 1080 - Total Frame Time



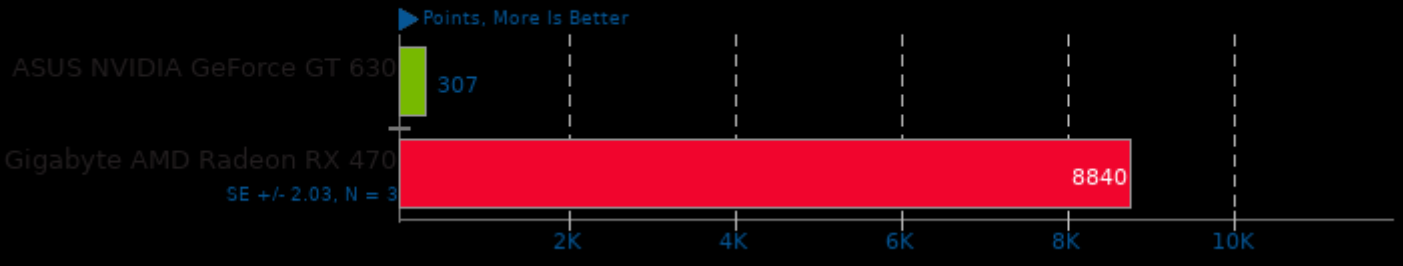
GpuTest 0.7.0

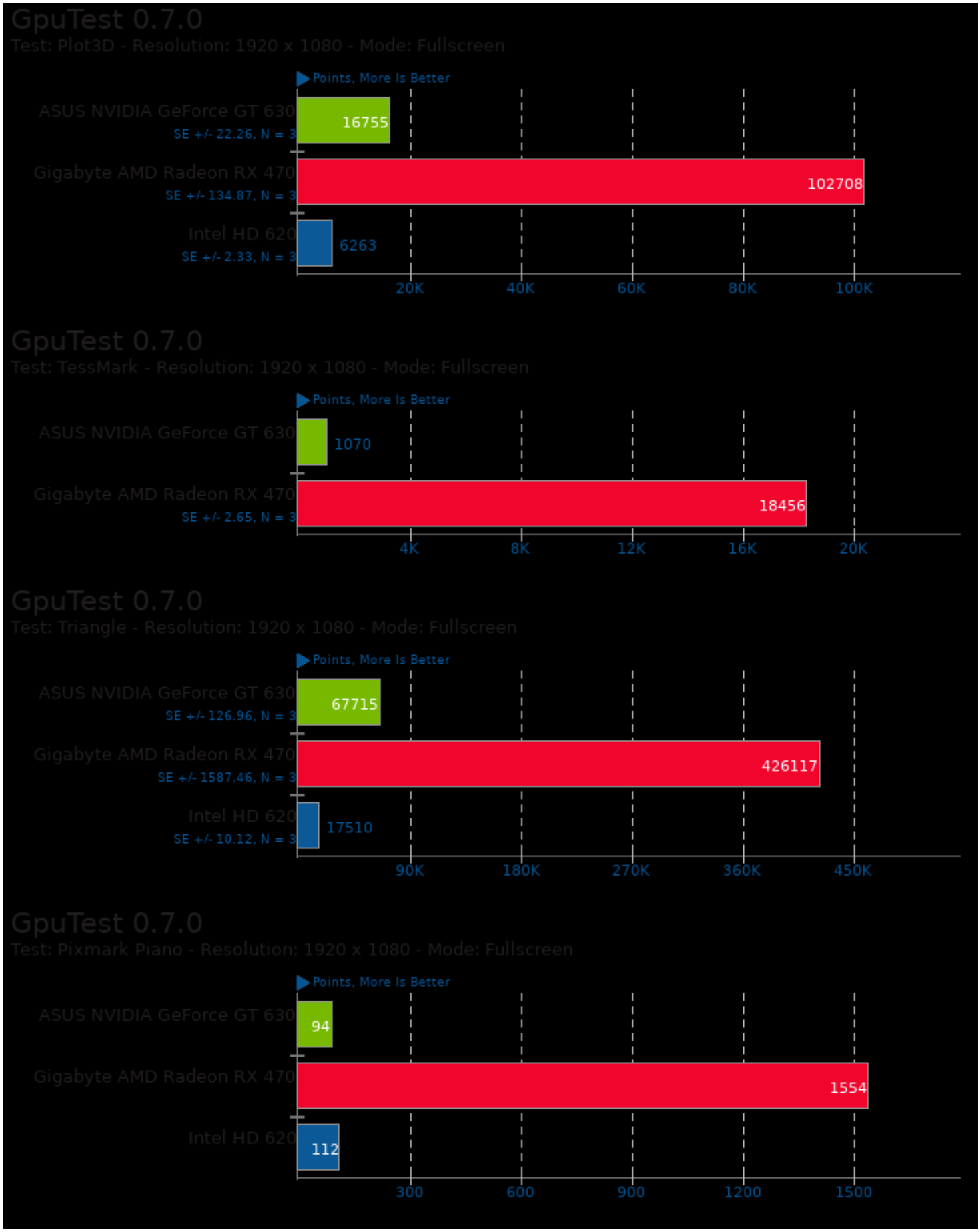
Test: Furmark - Resolution: 1920 x 1080 - Mode: Fullscreen



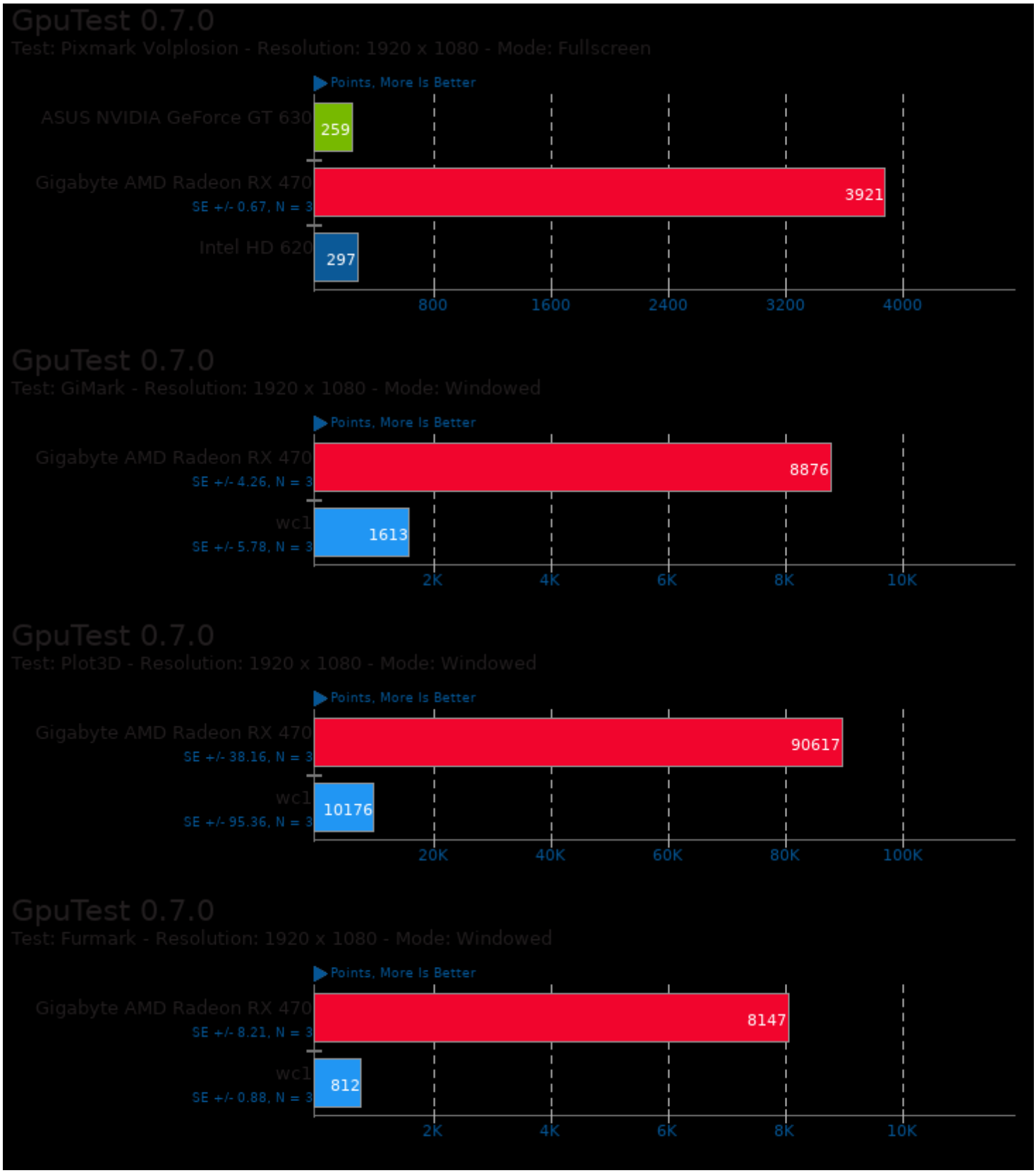
GpuTest 0.7.0

Test: GiMark - Resolution: 1920 x 1080 - Mode: Fullscreen



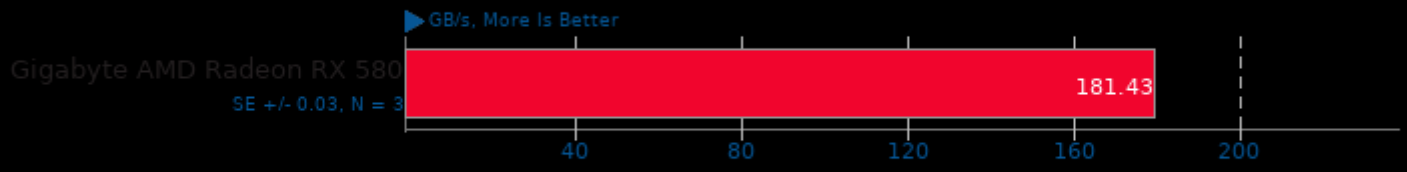

GpuTest 0.7.0
Test: Plot3D - Resolution: 1920 x 1080 - Mode: Fullscreen
Points, More Is Better
ASUS NVIDIA GeForce GT 630
SE +/- 22.26, N = 3
16755
Gigabyte AMD Radeon RX 470
SE +/- 134.87, N = 3
102708
Intel HD 620
SE +/- 2.33, N = 3
6263
20K
40K
60K
80K
100K
GpuTest 0.7.0
Test: TessMark - Resolution: 1920 x 1080 - Mode: Fullscreen
Points, More Is Better
ASUS NVIDIA GeForce GT 630
1070
Gigabyte AMD Radeon RX 470
SE +/- 2.65, N = 3
18456
4K
8K
12K
16K
20K
GpuTest 0.7.0
Test: Triangle - Resolution: 1920 x 1080 - Mode: Fullscreen
Points, More Is Better
ASUS NVIDIA GeForce GT 630
SE +/- 126.96, N = 3
67715
Gigabyte AMD Radeon RX 470
SE +/- 1587.46, N = 3
426117
Intel HD 620
SE +/- 10.12, N = 3
17510
90K
180K
270K
360K
450K
GpuTest 0.7.0
Test: Pixmark Piano - Resolution: 1920 x 1080 - Mode: Fullscreen
Points, More Is Better
ASUS NVIDIA GeForce GT 630
94
Gigabyte AMD Radeon RX 470
1554
Intel HD 620
112
300
600
900
1200
1500

gg


GpuTest 0.7.0
Test: Pixmark Volplosion - Resolution: 1920 x 1080 - Mode: Fullscreen
Points, More Is Better
ASUS NVIDIA GeForce GT 630
259
Gigabyte AMD Radeon RX 470
SE +/- 0.67, N = 3
3921
Intel HD 620
297
800
1600
2400
3200
4000
GpuTest 0.7.0
Test: GiMark - Resolution: 1920 x 1080 - Mode: Windowed
Points, More Is Better
Gigabyte AMD Radeon RX 470
SE +/- 4.26, N = 3
8876
wcl
SE +/- 5.78, N = 3
1613
2K
4K
6K
8K
10K
GpuTest 0.7.0
Test: Plot3D - Resolution: 1920 x 1080 - Mode: Windowed
Points, More Is Better
Gigabyte AMD Radeon RX 470
SE +/- 38.16, N = 3
90617
wcl
SE +/- 95.36, N = 3
10176
20K
40K
60K
80K
100K
GpuTest 0.7.0
Test: Furmark - Resolution: 1920 x 1080 - Mode: Windowed
Points, More Is Better
Gigabyte AMD Radeon RX 470
SE +/- 8.21, N = 3
8147
wcl
SE +/- 0.88, N = 3
812
2K
4K
6K
8K
10K

cl-mem 2017-01-13

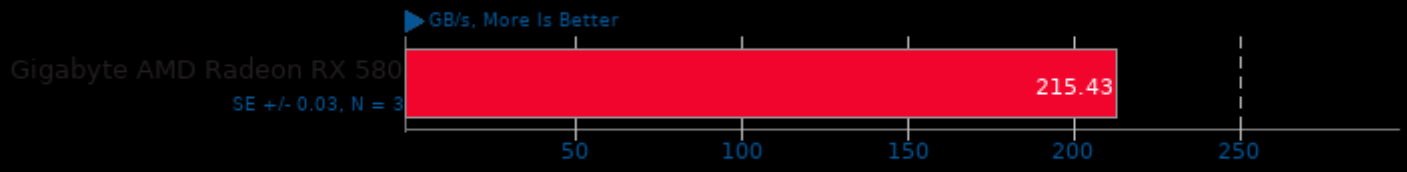
Benchmark: Copy



1. (CC) gcc options: -O2 -flto -lOpenCL

cl-mem 2017-01-13

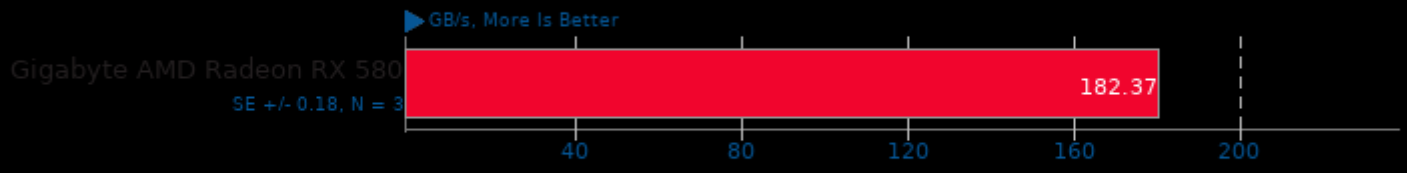
Benchmark: Read



1. (CC) gcc options: -O2 -flto -lOpenCL

cl-mem 2017-01-13

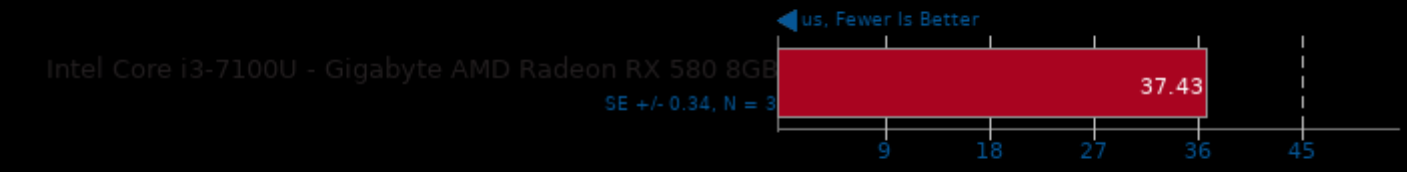
Benchmark: Write



1. (CC) gcc options: -O2 -flto -lOpenCL

clpeak

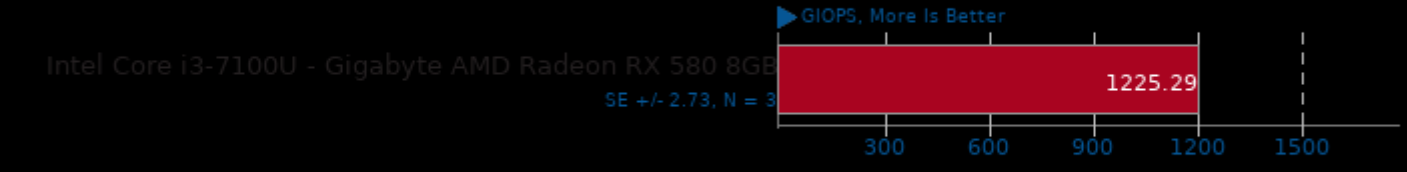
OpenCL Test: Kernel Latency



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

clpeak

OpenCL Test: Integer Compute INT



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

clpeak

OpenCL Test: Single-Precision Float



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

clpeak

OpenCL Test: Double-Precision Double



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

clpeak

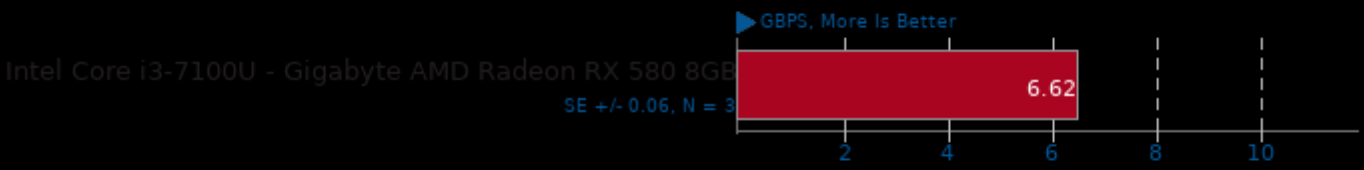
OpenCL Test: Global Memory Bandwidth



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

clpeak

OpenCL Test: Transfer Bandwidth enqueueReadBuffer



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

clpeak

OpenCL Test: Transfer Bandwidth enqueueWriteBuffer



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

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

18:07.