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AMD A8 Fusion APU Linux Catalyst Gallium3D, Intel Ivy Bridge 2.5GHz Quad Graphic

Benchmarks of the AMD Fusion A8-3870K (Llano APU) with its Radeon HD 6550D graphics on Ubuntu 12.04 LTS. Comparing the Catalyst Linux driver found in the Ubuntu Precise repository with the latest Git of Mesa 8.1-devel, Linux 3.4 kernel, xf86-video-ati / libdrm Git. Swap buffers wait was disabled. Running a variety of OpenGL benchmarks on the AMD Fusion APU under Linux.

Intel Ivy Bridge 2.5GHz Quad Graphics: Benchmarking the Intel Core i5 2400S, i5 2500K, and Core i7 3770K with Intel HD 2000, HD 3000, and HD 4000 graphics respectively. In looking at the Linux OpenGL graphics performance, all three Intel Sandy/Ivy Bridge processors were clocked to 2.50GHz and only four cores enabled and no SpeedStep / TurboBoost to better just compare the graphics differences between Intel HD 2000/3000/4000 graphics cores than CPU differences. Benchmarking by Michael Larabel for a future article on Phoronix.com.

Automated Executive Summary

AMD A8-3870K - Catalyst had the most wins, coming in first place for 44% of the tests.

Based on the geometric mean of all complete results, the fastest (Intel HD 4000) was 3.917x the speed of the slowest (AMD A8-3870K - Gallium3D). AMD A8-3870K - Catalyst was 0.85x the speed of Intel HD 4000, Intel HD 3000 was 0.902x the speed of AMD A8-3870K - Catalyst, Intel HD 2000 was 0.82x the speed of Intel HD 3000, Test was 0.535x the speed of Intel HD 2000, AMD A8-3870K - Gallium3D was 0.759x the speed of Test.

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

VDrift (Resolution: 1920 x 1080) at 15.448x
Lightsmark (Resolution: 1920 x 1080) at 9.325x
Reaction Quake 3 (Resolution: 1600 x 900) at 8.784x
Reaction Quake 3 (Resolution: 800 x 600) at 8.781x
Reaction Quake 3 (Resolution: 1280 x 1024) at 8.776x
Reaction Quake 3 (Resolution: 1680 x 1050) at 8.773x
Reaction Quake 3 (Resolution: 1920 x 1080) at 8.643x
Doom 3 (Resolution: 1920 x 1080 - Quality: Low) at 7.728x
Doom 3 (Resolution: 1680 x 1050 - Quality: Low) at 7.527x
Doom 3 (Resolution: 1400 x 1050 - Quality: Low) at 7.257x.

Test Systems:

AMD A8-3870K - Catalyst

Processor: AMD A8-3870 APU @ 3.00GHz (4 Cores), Motherboard: Gigabyte GA-A75M-UD2H, Chipset: AMD Family 12h Root Complex, Memory: 15360MB, Disk: 240GB OCZ VERTEX3, Graphics: AMD Radeon HD 6550D 1024MB (600/667MHz), Audio: ATI R6xx HDMI, Monitor: DELL P2210H, Network: Realtek RTL8111/8168B

OS: Ubuntu 12.04, Kernel: 3.2.0-23-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: fglrx 8.96.4, OpenGL: 4.2.11627, Compiler: GCC 4.7.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --enable-checking=release --enable-languages=c,c++,fortran --enable-lto
System Notes: Compiz was running on this system.

AMD A8-3870K - Gallium3D

Processor: AMD A8-3870 APU @ 3.00GHz (4 Cores), Motherboard: Gigabyte GA-A75M-UD2H, Chipset: AMD Family 12h Root Complex, Memory: 15360MB, Disk: 240GB OCZ VERTEX3, Graphics: AMD Radeon HD 6550D 1024MB, Audio: ATI R6xx HDMI, Monitor: DELL P2210H, Network: Realtek RTL8111/8168B

OS: Ubuntu 12.04, Kernel: 3.4.0-999-generic (x86_64), Desktop: Unity 5.8.0, Display Server: X Server 1.11.3, Display Driver: radeon 6.14.99, OpenGL: 2.1 Mesa 8.1-devel (git-e44089b) Gallium 0.4, Compiler: GCC 4.7.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --enable-checking=release --enable-languages=c,c++,fortran --enable-lto
Graphics Notes: EXA
System Notes: Compiz was running on this system.

Intel HD 2000

Processor: Intel Core i5-2400S @ 2.50GHz (4 Cores), Motherboard: ECS Z77H2-A2X v1.0, Chipset: Intel 2nd Generation Core Family DRAM, Memory: 8192MB, Disk: 240GB OCZ VERTEX3, Graphics: Intel 2nd Generation Core Family IGP, Audio: Realtek ALC892, Monitor: DELL P2210H, Network: Realtek RTL8111/8168B + Intel Centrino Advanced-N 6205

OS: Ubuntu 12.10, Kernel: 3.5.0-8-generic (x86_64), Desktop: Unity 2D 6.0.0, Display Server: X Server 1.12.1.902 (1.12.2 RC 2), Display Driver: intel 2.20.3, OpenGL: 2.1 Mesa 8.1-devel (git-7d65356), Compiler: GCC 4.7 + LLVM 3.1 + Intel IOC SDK 2012 v1.0.2, File-System: ext4, Screen Resolution: 1920x1080

Intel HD 3000

Processor: Intel Core i5-2500K @ 3.30GHz (4 Cores), Motherboard: ECS Z77H2-A2X v1.0, Chipset: Intel 2nd Generation Core Family DRAM, Memory: 8192MB, Disk: 240GB OCZ VERTEX3, Graphics: Intel 2nd Generation Core Family IGP, Audio: Realtek ALC892, Monitor: DELL P2210H, Network: Realtek RTL8111/8168B + Intel Centrino Advanced-N 6205

OS: Ubuntu 12.10, Kernel: 3.5.0-8-generic (x86_64), Desktop: Unity 2D 6.0.0, Display Server: X Server 1.12.1.902 (1.12.2 RC 2), Display Driver: intel 2.20.3, OpenGL: 2.1 Mesa 8.1-devel (git-7d65356), Compiler: GCC 4.7 + LLVM 3.1 + Intel IOC SDK 2012 v1.0.2, File-System: ext4, Screen Resolution: 1920x1080

Intel HD 4000

Processor: Intel Core i7-3770K @ 3.50GHz (4 Cores), Motherboard: ECS Z77H2-A2X v1.0, Chipset: Intel Xeon E3-1200 v2/3rd, Memory: 8192MB, Disk: 240GB OCZ VERTEX3, Graphics: Intel Xeon E3-1200 v2/3rd Gen Core, Audio: Realtek ALC892, Monitor: DELL P2210H, Network: Realtek RTL8111/8168B + Intel Centrino Advanced-N 6205

OS: Ubuntu 12.10, Kernel: 3.5.0-8-generic (x86_64), Desktop: Unity 2D 6.0.0, Display Server: X Server 1.12.1.902 (1.12.2 RC 2), Display Driver: intel 2.20.3, OpenGL: 2.1 Mesa 8.1-devel (git-7d65356), Compiler: GCC 4.7 + LLVM 3.1 + Intel IOC SDK 2012 v1.0.2, File-System: ext4, Screen Resolution: 1920x1080

Test

Processor: Intel Core i5-2500K @ 3.30GHz (4 Cores), Motherboard: MSI P67A-GD65 (MS-7681) v2.0, Chipset: Intel 2nd Generation Core Family DRAM, Memory: 8192MB, Disk: 64GB M4-CT064M4SSD2 + 2 x 500GB Seagate ST9500325AS, Graphics: ATI Mobility Radeon HD 5000 512MB (650/667MHz), Audio: Realtek ALC892, Monitor: PLE2472HD, Network: Realtek RTL8111/8168B

OS: Ubuntu 12.04, Kernel: 3.2.0-29-generic (x86_64), Desktop: Unity 5.14.0, Display Server: X Server 1.11.3, Display Driver: fglrx 8.96.4, OpenGL: 4.2.11627, Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 1920x1080

System Notes: Compiz was running on this system.

AMD A8 Fusion APU Linux Catalyst Gallium3D, Intel Ivy Bridge 2.5GHz Quad Graphics

	AMD A8-3870K - Catalyst	AMD A8-3870K - Gallium3D	Intel HD 2000	Intel HD 3000	Intel HD 4000	Test
cairo-perf-trace - Poppler	**3.56**	**18.45**				
Normalized	100%	19.3%				
Standard Deviation	0.1%	0.7%				
cairo-perf-trace - Firefox Canvas (sec)	**103.60**	**535.74**				
Normalized	100%	19.34%				
Standard Deviation	0.4%	0.2%				
cairo-perf-trace - GNOME Terminal Vim (sec)	**9.87**	**49.87**				
Normalized	100%	19.79%				
Standard Deviation	0.1%	0%				
ETXreaL - 1920 x 1080 (FPS)	**152.03**	**13.20**				
Normalized	100%	8.68%				
Standard Deviation	0.6%	73%				
Lightsmark - 1920 x 1080 (FPS)	**184.45**	**19.78**	32.18	40.72	78.02	52.83
Normalized	100%	10.72%	17.45%	22.08%	42.3%	28.64%
Standard Deviation	0.1%	0.3%	0.3%	0%	3.4%	1.4%
Nexuiz - 800 x 600 - Yes - Off (FPS)	**70.45**	**35.66**				
Normalized	100%	50.62%				
Standard Deviation	1.2%	0.2%				
Nexuiz - 1024 x 768 - Yes - Off (FPS)	**62.65**	**29.05**				
Normalized	100%	46.37%				
Standard Deviation	0.6%	0.2%				
Nexuiz - 1600 x 900 - Yes - Off (FPS)	**51.89**	**16.15**				
Normalized	100%	31.12%				
Standard Deviation	0.4%	3.3%				
Nexuiz - 1280 x 1024 - Yes - Off (FPS)	**52.95**	**21.73**				
Normalized	100%	41.04%				
Standard Deviation	0.3%	0%				
Nexuiz - 1680 x 1050 - Yes - Off (FPS)	**47.55**	**16.15**				
Normalized	100%	33.96%				
Standard Deviation	0.4%	3.2%				
Nexuiz - 1920 x 1080 - Yes - Off (FPS)	**44.93**	**16.45**				
Normalized	100%	36.61%				
Standard Deviation	0.3%	0.1%				
OpenArena - 800 x 600 (FPS)	**214.73**	**79.97**				
Normalized	100%	37.24%				
Standard Deviation	13.8%	0.4%				
OpenArena - 1024 x 768	**212.20**	**80.50**				
Normalized	100%	37.94%				
Standard Deviation	1.7%	1.1%				
OpenArena - 1600 x 900	**180.60**	**46.60**				
Normalized	100%	25.8%				

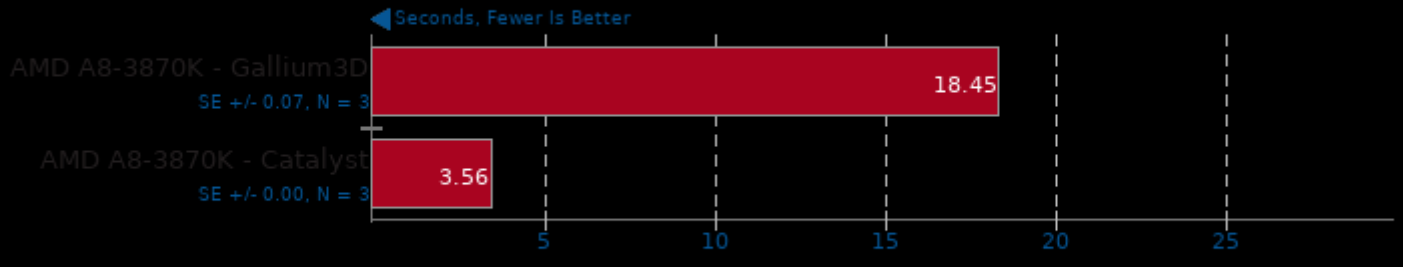
Standard Deviation	0.4%	0.4%				
OpenArena - 1280 x 1024 (FPS)	187.33	80.73				
Normalized	100%	43.1%				
Standard Deviation	1.4%	1%				
OpenArena - 1680 x 1050 (FPS)	231.20	40.80				
Normalized	100%	17.65%				
Standard Deviation	2.2%	0.2%				
OpenArena - 1920 x 1080 (FPS)	145.33	38.37				
Normalized	100%	26.4%				
Standard Deviation	0.4%	0.2%				
OpenArena - 800 x 600 (FPS)	76.90	41.50				
Normalized	100%	53.97%				
Standard Deviation	0.5%	0%				
OpenArena - 1024 x 768	65.87	28.30				
Normalized	100%	42.96%				
Standard Deviation	0.3%	0%				
OpenArena - 1600 x 900	45.37	15.10				
Normalized	100%	33.28%				
Standard Deviation	0.1%	0%				
OpenArena - 1280 x 1024 (FPS)	48.50	18.20				
Normalized	100%	37.53%				
Standard Deviation	0%	0%				
OpenArena - 1680 x 1050 (FPS)	31.77	12.70				
Normalized	100%	39.97%				
Standard Deviation	0.2%	0%				
OpenArena - 1920 x 1080 (FPS)	33.70	11	23.43	27.90	31.07	18.80
Normalized	100%	32.64%	69.53%	82.79%	92.2%	55.79%
Standard Deviation	0%	0%	0.7%	0.9%	0.2%	0%
Reaction Quake 3 - 800 x 600 (FPS)	107.13	12.20				
Normalized	100%	11.39%				
Standard Deviation	0.3%	0%				
Reaction Quake 3 - 1024 x 768 (FPS)	107.20	11.87				
Normalized	100%	11.07%				
Standard Deviation	0.2%	6.6%				
Reaction Quake 3 - 1600 x 900 (FPS)	107.17	12.20				
Normalized	100%	11.38%				
Standard Deviation	0.3%	0%				
Reaction Quake 3 - 1280 x 1024 (FPS)	107.07	12.20				
Normalized	100%	11.39%				
Standard Deviation	0.6%	0%				
Reaction Quake 3 - 1680 x 1050 (FPS)	107.03	12.20				
Normalized	100%	11.4%				
Standard Deviation	0.2%	0%				

Reaction Quake 3 - 1920 x 1080 (FPS)	**107.17**	**12.40**				
Normalized	100%	11.57%				
Standard Deviation	0.2%	2.8%				
Smokin Guns - 800 x 600 (FPS)	**157.07**	**71.97**				
Normalized	100%	45.82%				
Standard Deviation	0.6%	0.4%				
Smokin Guns - 1024 x 768 (FPS)	**156.10**	**70.37**				
Normalized	100%	45.08%				
Standard Deviation	0.1%	0.2%				
Smokin Guns - 1600 x 900 (FPS)	**150.93**	**55.47**				
Normalized	100%	36.75%				
Standard Deviation	0.3%	0.1%				
Smokin Guns - 1280 x 1024 (FPS)	**151.27**	**63.13**				
Normalized	100%	41.73%				
Standard Deviation	0.6%	0.1%				
Smokin Guns - 1680 x 1050 (FPS)	**83.23**	**48.33**				
Normalized	100%	58.07%				
Standard Deviation	0.4%	0.2%				
Smokin Guns - 1920 x 1080 (FPS)	**145.67**	**43.30**				
Normalized	100%	29.72%				
Standard Deviation	1%	0.2%				
Urban Terror - 1920 x 1080 (FPS)	**95.63**	**41**				
Normalized	100%	42.87%				
Standard Deviation	0.5%	0%				
VDrift - 1920 x 1080 (FPS)	17.37	12.95	61.38	75.66	**87.28**	**5.65**
Normalized	19.9%	14.84%	70.33%	86.69%	100%	6.47%
Standard Deviation	0.1%	29.8%	0.1%	0%	1%	0.1%
Warsow - 1920 x 1080 (FPS)	**81.67**	**16.77**				
Normalized	100%	20.53%				
Standard Deviation	0.1%	0.3%				
Doom 3 - 800 x 600 - Low (FPS)	**127.57**	**35.07**				
Normalized	100%	27.49%				
Standard Deviation	0.6%	0.3%				
Doom 3 - 1024 x 768 - Low (FPS)	**121.63**	**24.07**				
Normalized	100%	19.79%				
Standard Deviation	0.5%	0.2%				
Doom 3 - 1280 x 1024 - Low (FPS)	**104.07**	**15.40**				
Normalized	100%	14.8%				
Standard Deviation	0.1%	0%				
Doom 3 - 1400 x 1050 - Low (FPS)	**97.97**	**13.50**				
Normalized	100%	13.78%				

Standard Deviation	0.2%	0%				
Doom 3 - 1680 x 1050 - Low (FPS)	88.07	11.70				
Normalized	100%	13.28%				
Standard Deviation	0.1%	0%				
Doom 3 - 1920 x 1080 - Low (FPS)	78.83	10.20	19.77	24.40	37.37	
Normalized	100%	12.94%	25.08%	30.95%	47.41%	
Standard Deviation	0.1%	0%	0.3%	0.7%	0.2%	
Xonotic - 800 x 600 - Low (FPS)	146.54	83.61				
Normalized	100%	57.06%				
Standard Deviation	0.2%	0.3%				
Xonotic - 1024 x 768 - Low (FPS)	142.02	76.46				
Normalized	100%	53.84%				
Standard Deviation	0.5%	0.2%				
Xonotic - 1280 x 1024 - Low (FPS)	136.86	56.35				
Normalized	100%	41.17%				
Standard Deviation	0.2%	0.2%				
Xonotic - 1400 x 1050 - Low (FPS)	133.47	39.45				
Normalized	100%	29.56%				
Standard Deviation	0.2%	0.1%				
Xonotic - 1680 x 1050 - Low (FPS)	129.86	39.43				
Normalized	100%	30.36%				
Standard Deviation	0.1%	0.1%				
Xonotic - 1920 x 1080 - Low (FPS)	126.26	39.44	88.09	104.97	123.69	59.70
Normalized	100%	31.24%	69.77%	83.14%	97.96%	47.28%
Standard Deviation	0.2%	0.2%	0.1%	0.3%	0.2%	0%
Prey - 1920 x 1080 (FPS)			16.60	21.60	29.80	30
Normalized			55.33%	72%	99.33%	100%
Standard Deviation			0%	0%	0%	0%
Warsow - 1920 x 1080 (FPS)			24.33	28.73	42.77	20.77
Normalized			56.89%	67.17%	100%	48.56%
Standard Deviation			0.2%	0.2%	0.6%	1.2%
Xonotic - 1920 x 1080 - High (FPS)			29.42	42.90	60.67	34.46
Normalized			48.49%	70.71%	100%	56.8%
Standard Deviation			0%	0.1%	0.1%	0.4%
Xonotic - 1920 x 1080 - Ultra (FPS)			15.66	23.83	38.40	23.70
Normalized			40.78%	62.06%	100%	61.72%
Standard Deviation			0.1%	0.1%	0.1%	0.1%

cairo-perf-trace 1.10.2

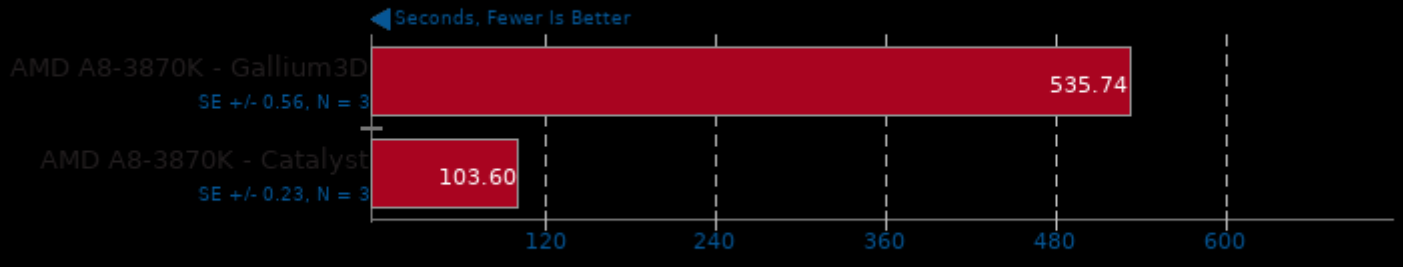
Cairo Trace: Poppler



1. (CC) gcc options: -O2 -lpthread -lpixman-1 -lfontconfig -lfreetype -lpng12 -lXrender -lX11 -lz -ldl -lrt -lm

cairo-perf-trace 1.10.2

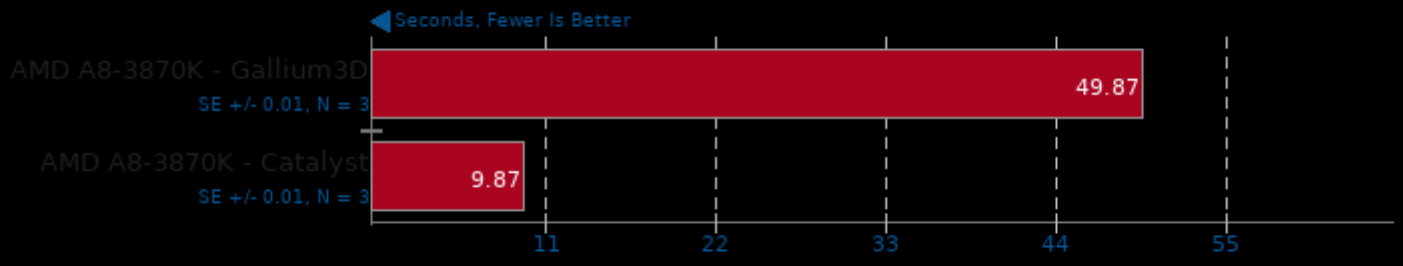
Cairo Trace: Firefox Canvas



1. (CC) gcc options: -O2 -lpthread -lpixman-1 -lfontconfig -lfreetype -lpng12 -lXrender -lX11 -lz -ldl -lrt -lm

cairo-perf-trace 1.10.2

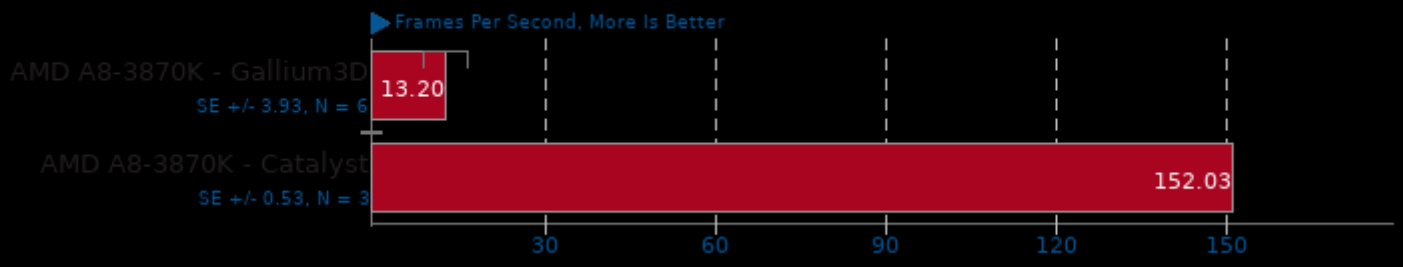
Cairo Trace: GNOME Terminal Vim

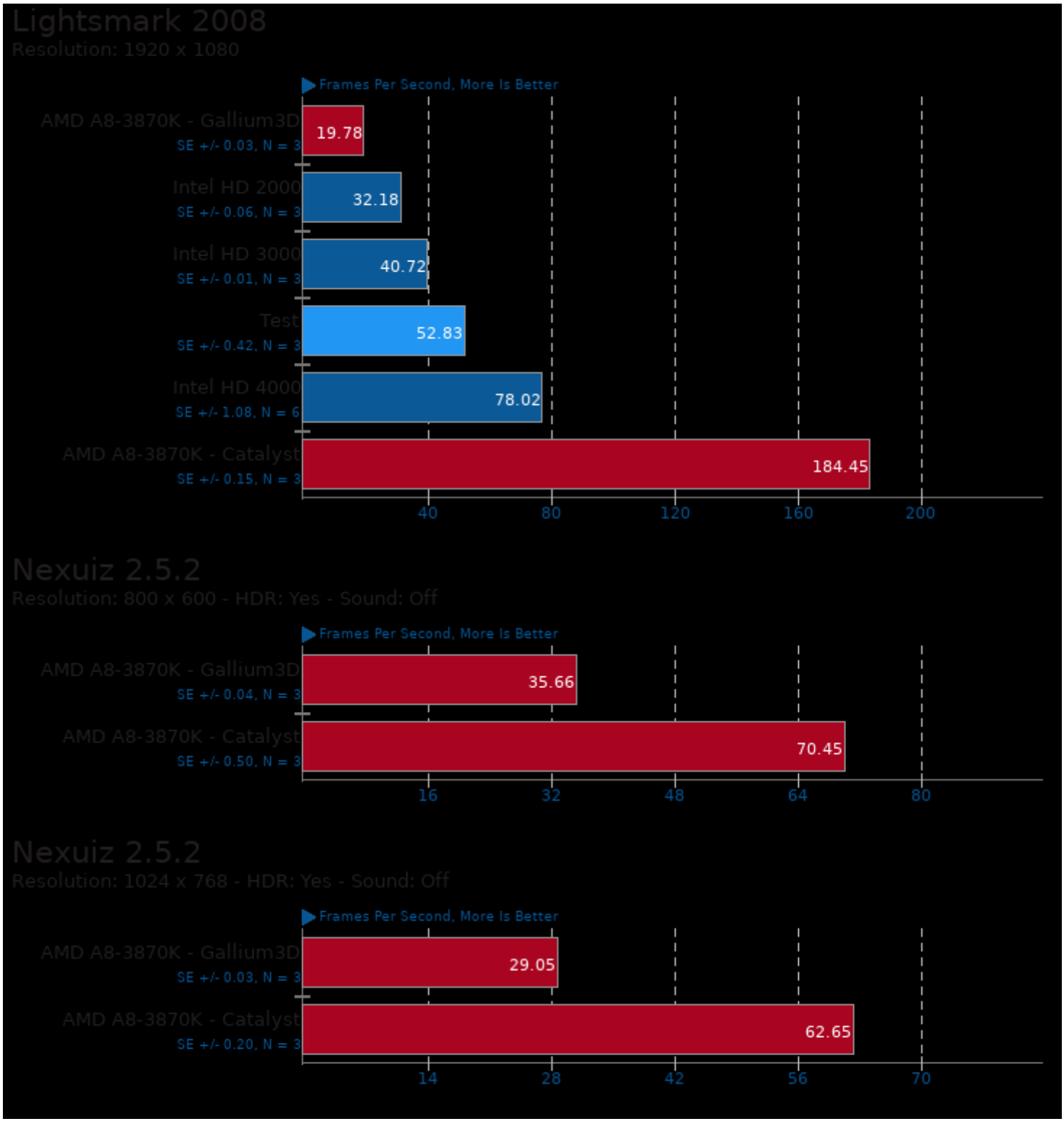


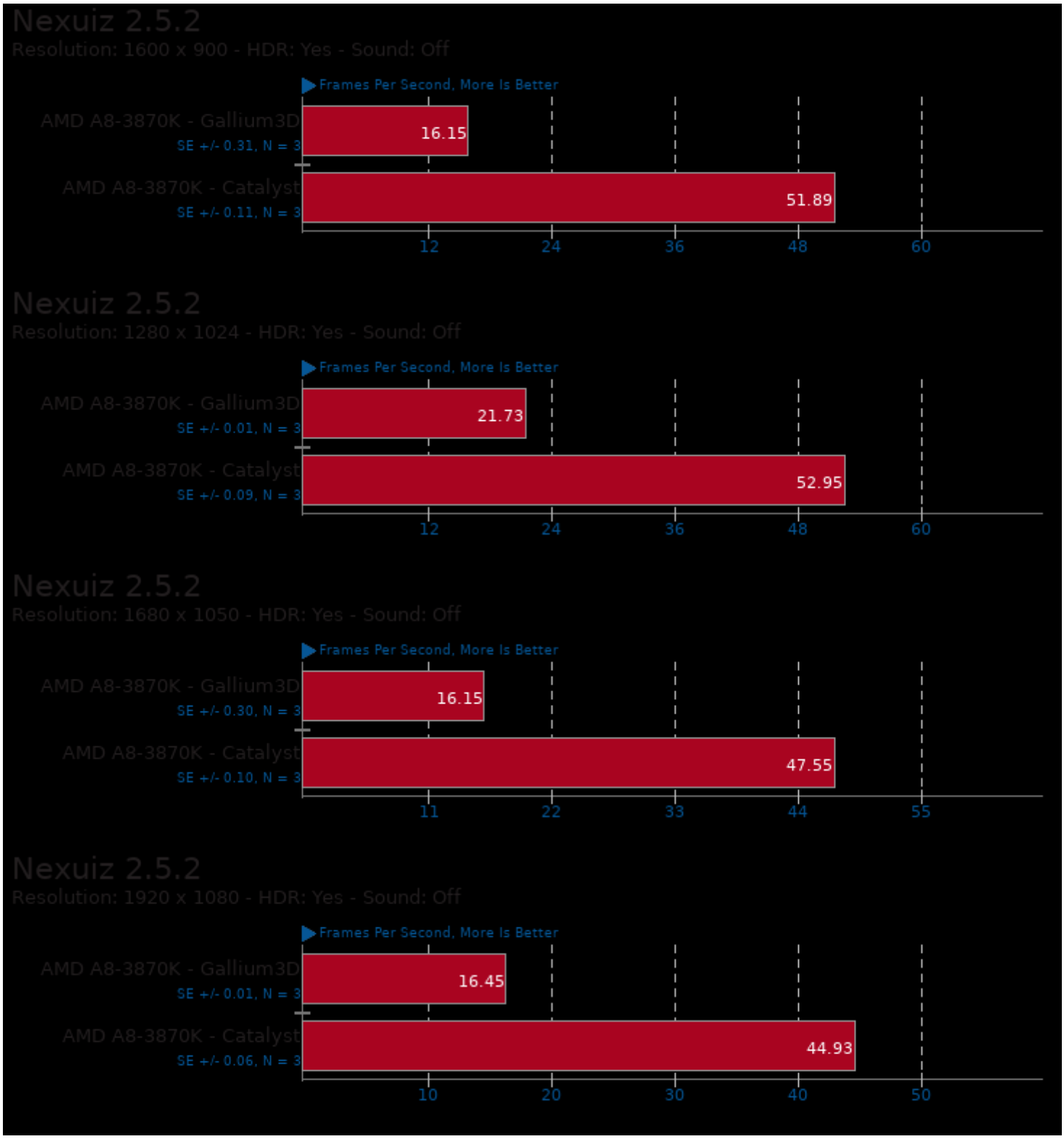
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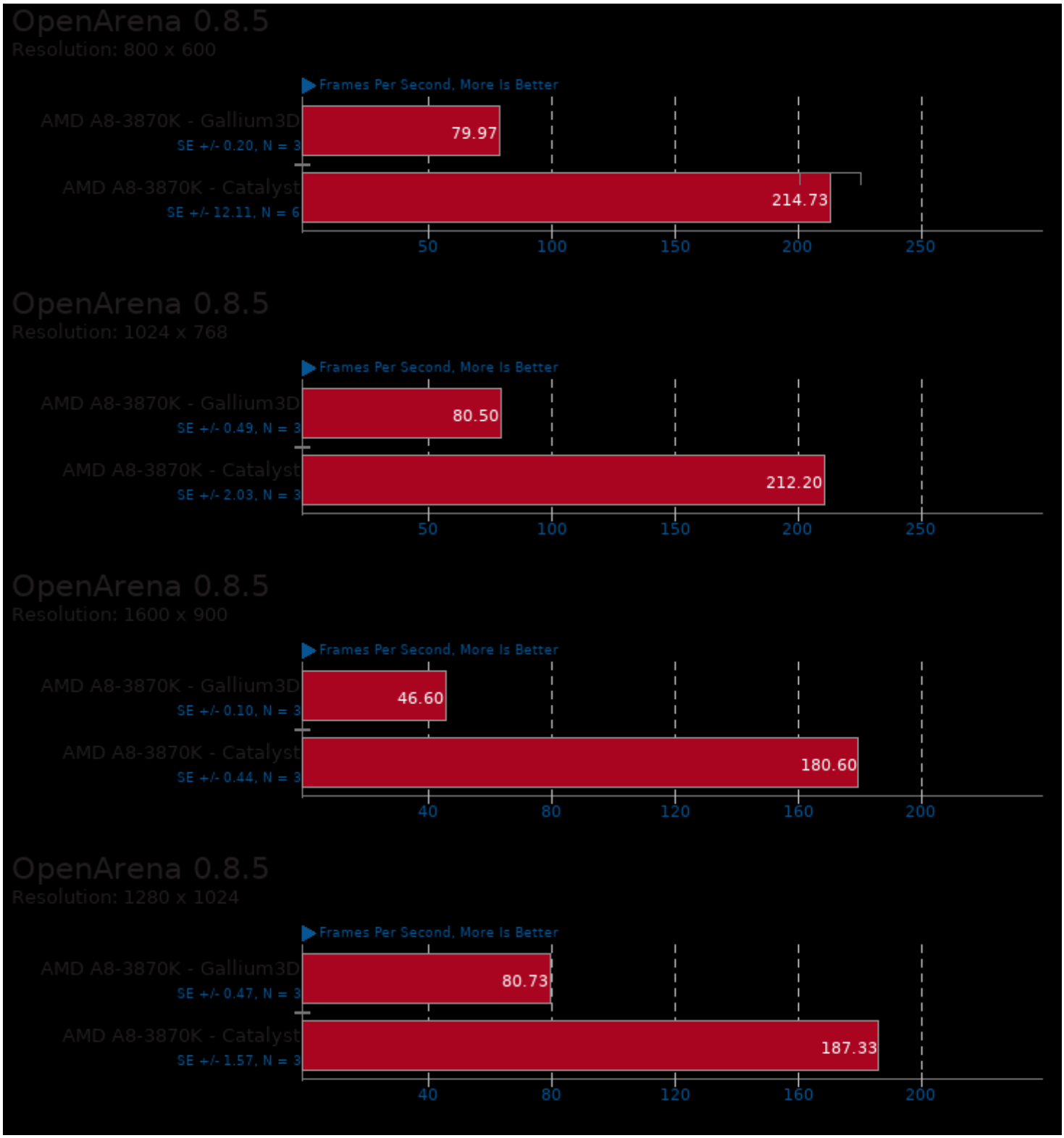
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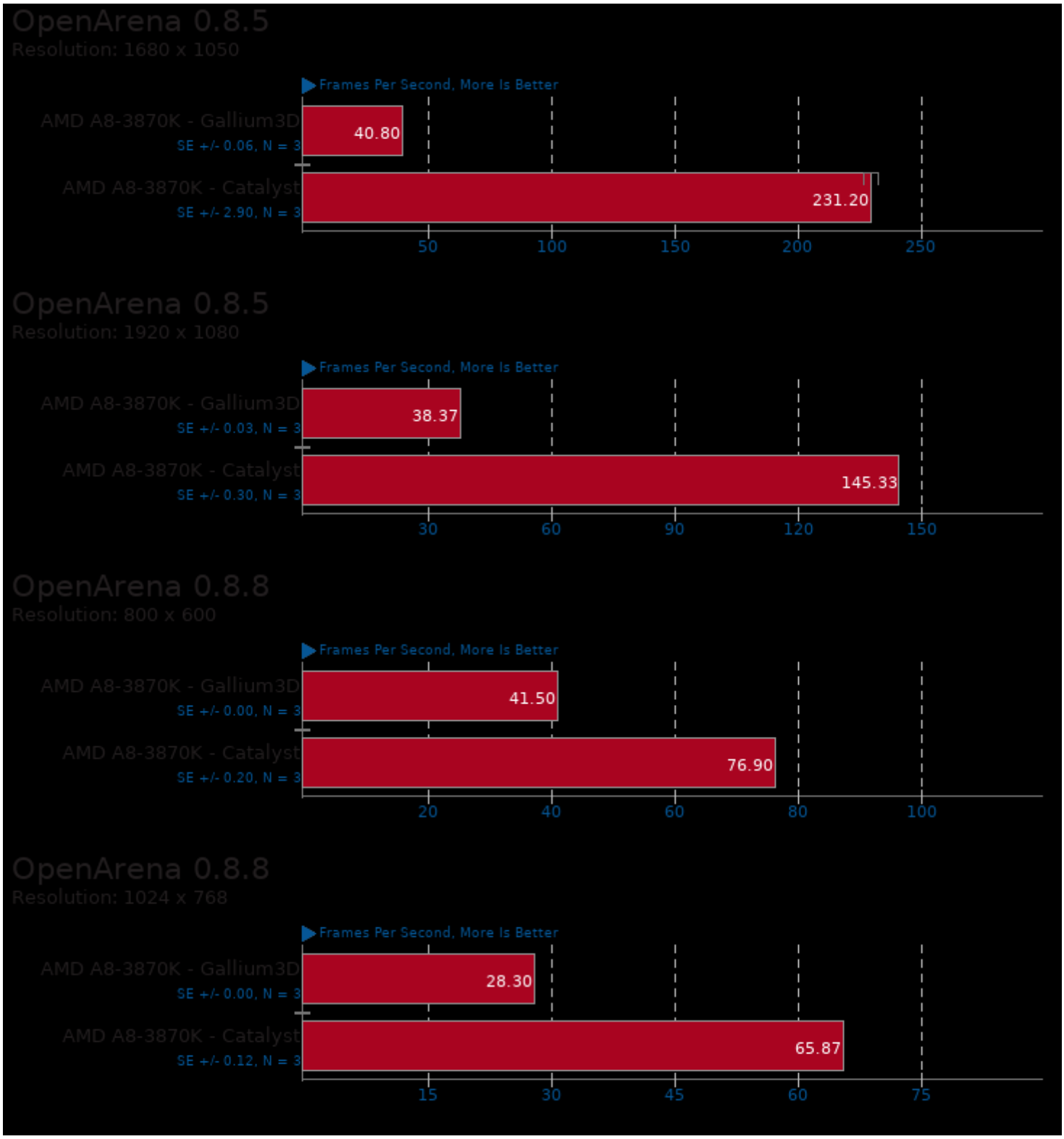
Resolution: 1920 x 1080

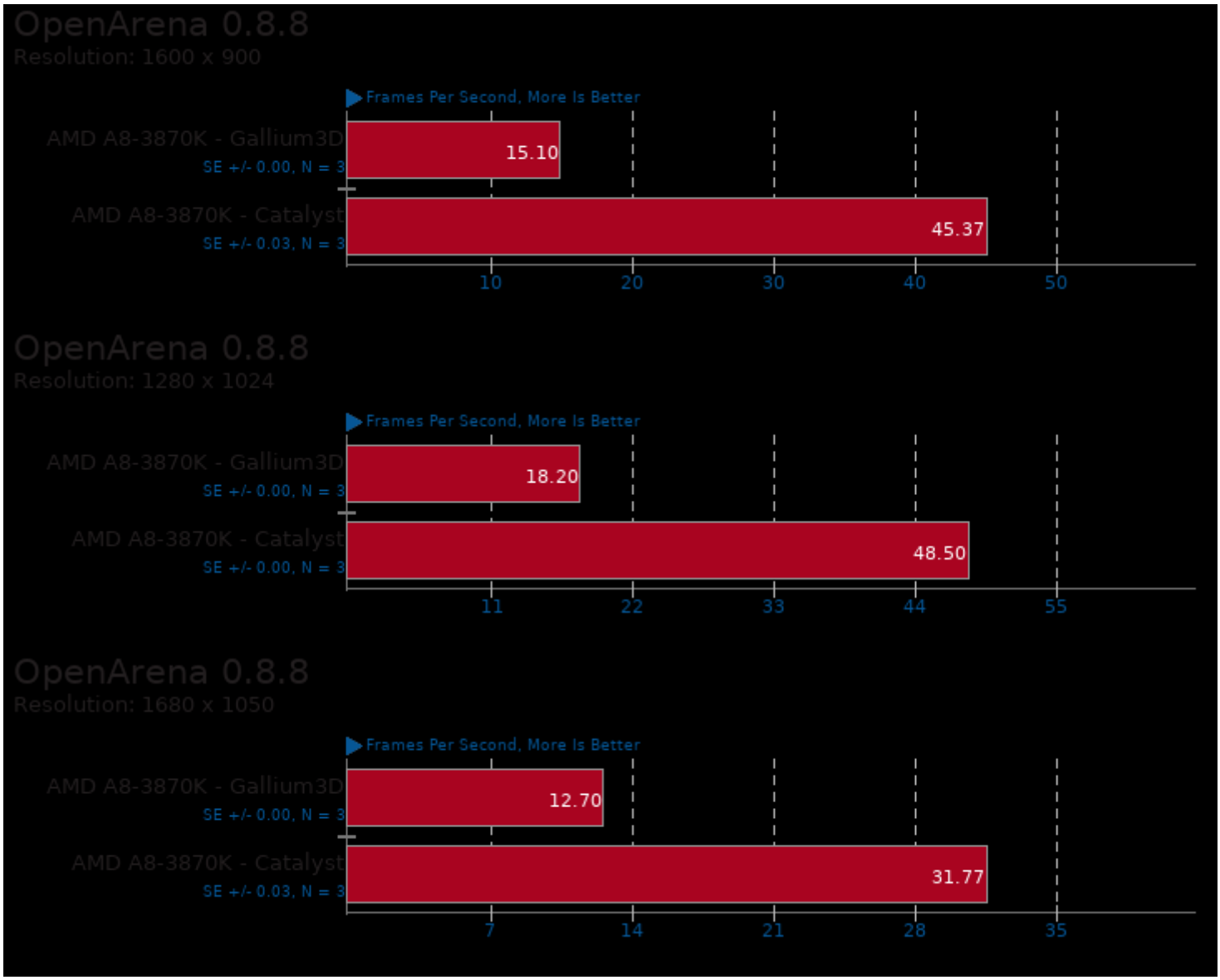


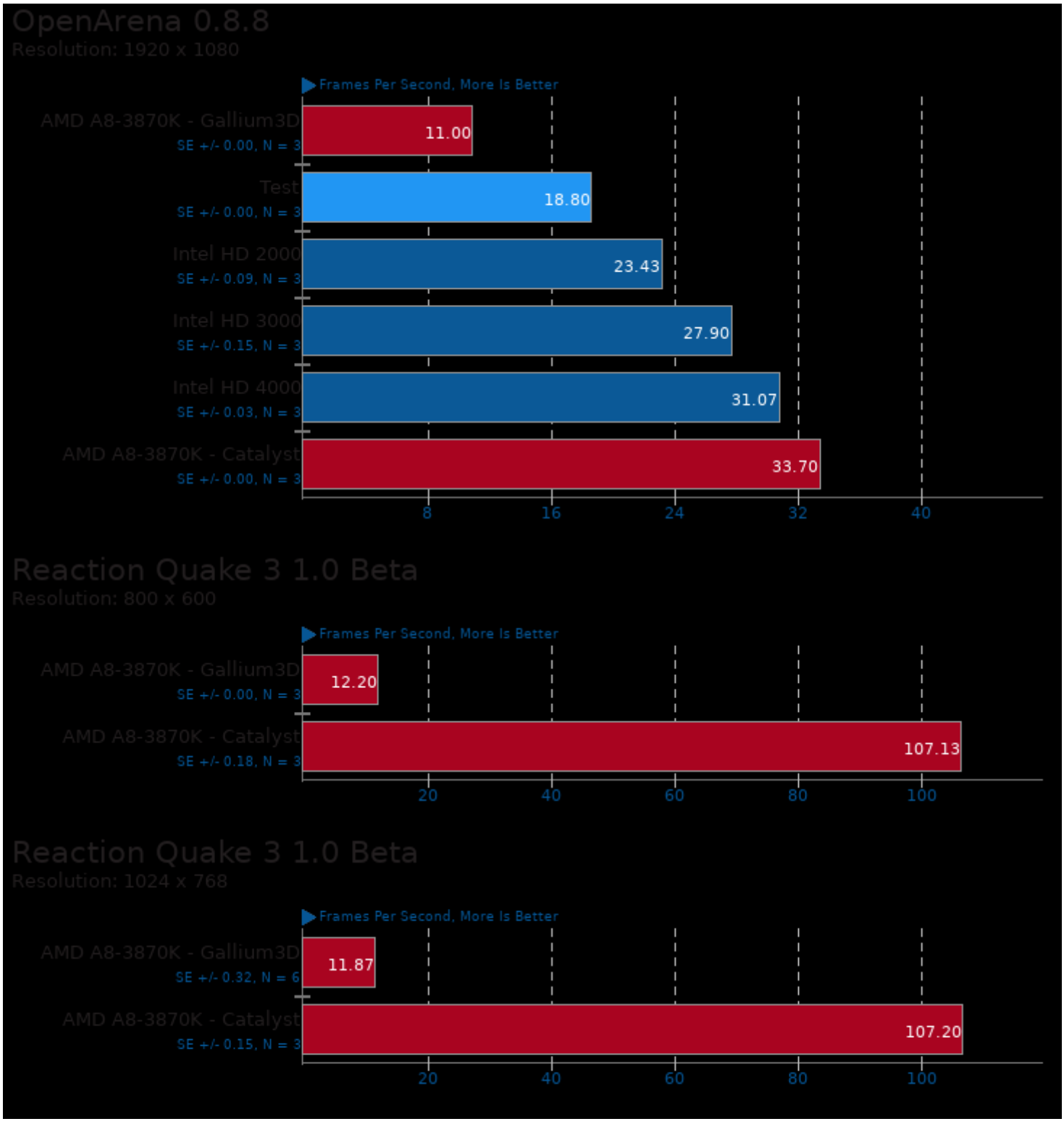

Lightsmark 2008
Resolution: 1920 x 1080
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.03, N = 3
19.78
Intel HD 2000
SE +/- 0.06, N = 3
32.18
Intel HD 3000
SE +/- 0.01, N = 3
40.72
Test
SE +/- 0.42, N = 3
52.83
Intel HD 4000
SE +/- 1.08, N = 6
78.02
AMD A8-3870K - Catalyst
SE +/- 0.15, N = 3
184.45
40
80
120
160
200
Nexuiz 2.5.2
Resolution: 800 x 600 - HDR: Yes - Sound: Off
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.04, N = 3
35.66
AMD A8-3870K - Catalyst
SE +/- 0.50, N = 3
70.45
16
32
48
64
80
Nexuiz 2.5.2
Resolution: 1024 x 768 - HDR: Yes - Sound: Off
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.03, N = 3
29.05
AMD A8-3870K - Catalyst
SE +/- 0.20, N = 3
62.65
14
28
42
56
70

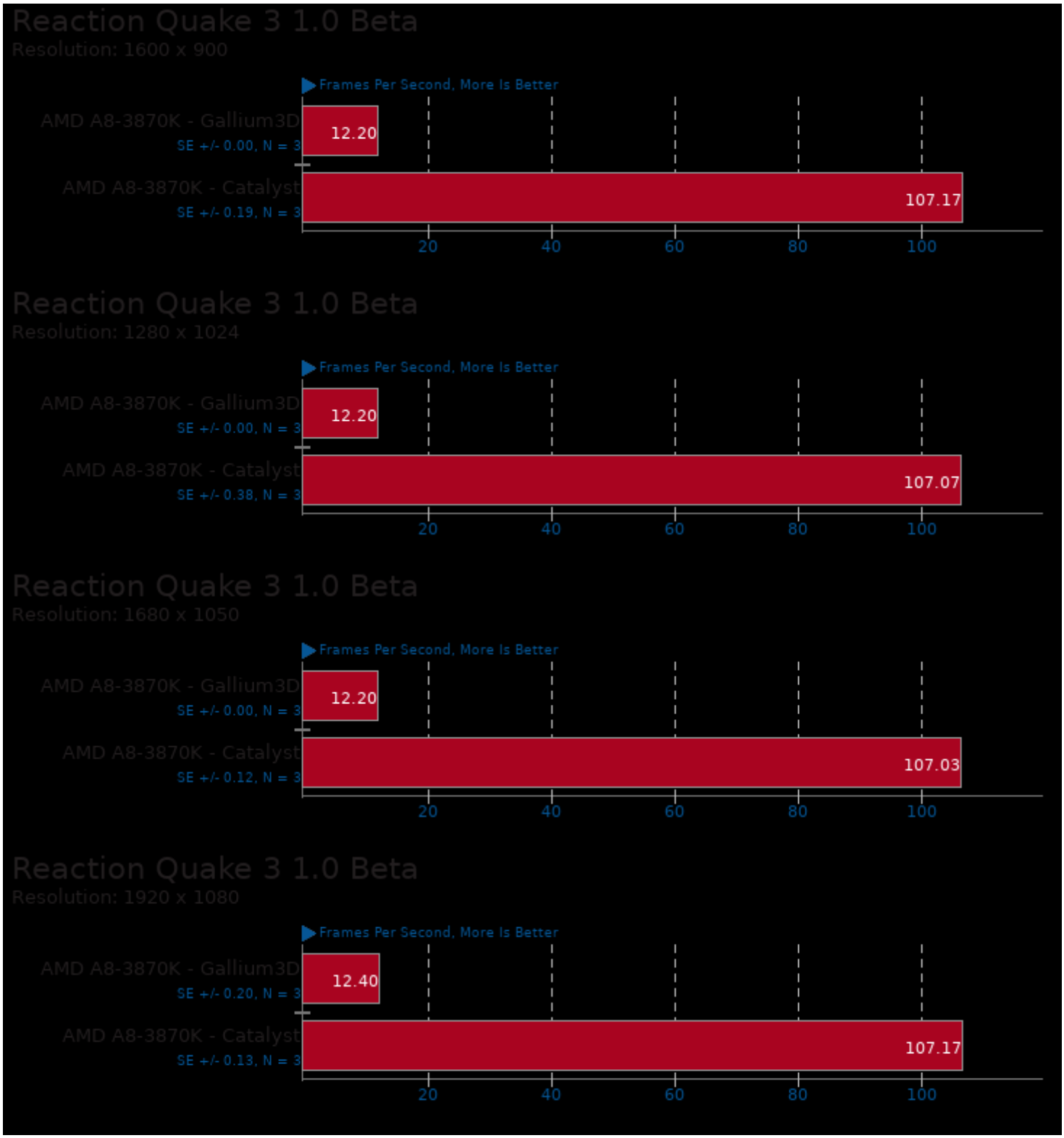

Nexuiz 2.5.2
Resolution: 1600 x 900 - HDR: Yes - Sound: Off
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.31, N = 3
16.15
AMD A8-3870K - Catalyst
SE +/- 0.11, N = 3
51.89
12
24
36
48
60
Nexuiz 2.5.2
Resolution: 1280 x 1024 - HDR: Yes - Sound: Off
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.01, N = 3
21.73
AMD A8-3870K - Catalyst
SE +/- 0.09, N = 3
52.95
12
24
36
48
60
Nexuiz 2.5.2
Resolution: 1680 x 1050 - HDR: Yes - Sound: Off
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.30, N = 3
16.15
AMD A8-3870K - Catalyst
SE +/- 0.10, N = 3
47.55
11
22
33
44
55
Nexuiz 2.5.2
Resolution: 1920 x 1080 - HDR: Yes - Sound: Off
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.01, N = 3
16.45
AMD A8-3870K - Catalyst
SE +/- 0.06, N = 3
44.93
10
20
30
40
50

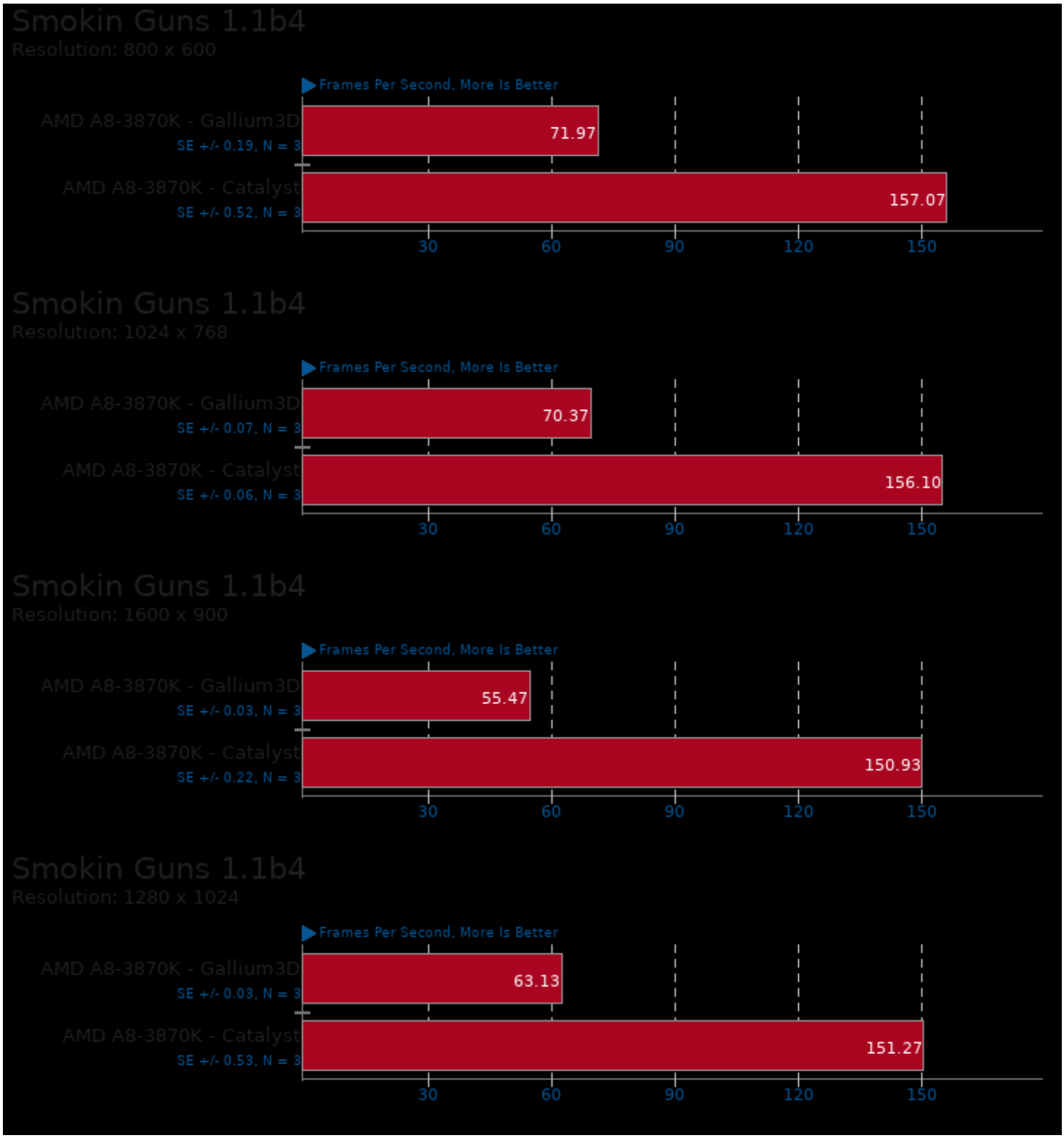

OpenArena 0.8.5
Resolution: 800 x 600
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.20, N = 3
79.97
AMD A8-3870K - Catalyst
SE +/- 12.11, N = 6
214.73
50
100
150
200
250
OpenArena 0.8.5
Resolution: 1024 x 768
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.49, N = 3
80.50
AMD A8-3870K - Catalyst
SE +/- 2.03, N = 3
212.20
50
100
150
200
250
OpenArena 0.8.5
Resolution: 1600 x 900
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.10, N = 3
46.60
AMD A8-3870K - Catalyst
SE +/- 0.44, N = 3
180.60
40
80
120
160
200
OpenArena 0.8.5
Resolution: 1280 x 1024
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.47, N = 3
80.73
AMD A8-3870K - Catalyst
SE +/- 1.57, N = 3
187.33
40
80
120
160
200

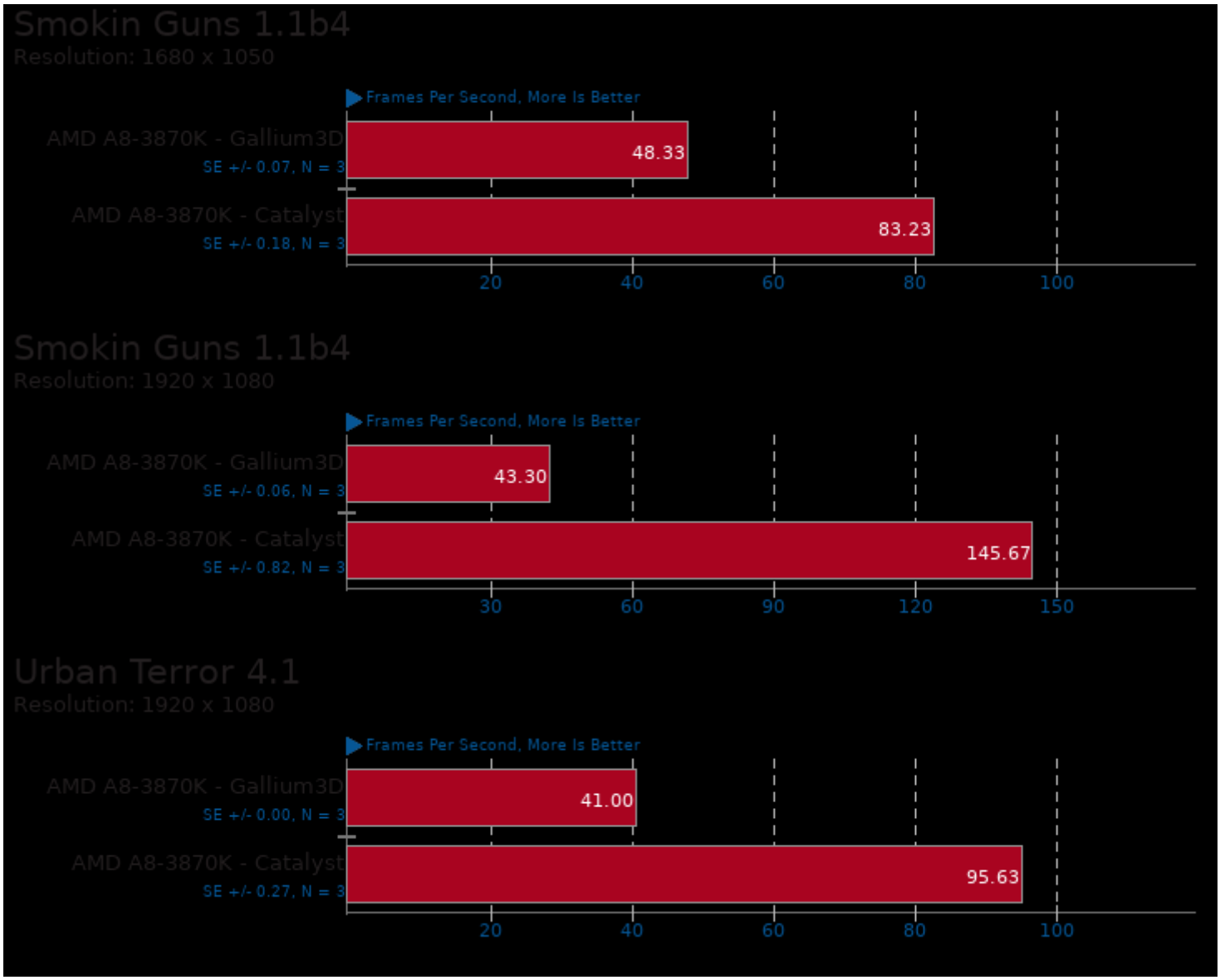

OpenArena 0.8.5
Resolution: 1680 x 1050
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.06, N = 3
40.80
AMD A8-3870K - Catalyst
SE +/- 2.90, N = 3
231.20
50
100
150
200
250
OpenArena 0.8.5
Resolution: 1920 x 1080
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.03, N = 3
38.37
AMD A8-3870K - Catalyst
SE +/- 0.30, N = 3
145.33
30
60
90
120
150
OpenArena 0.8.8
Resolution: 800 x 600
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
41.50
AMD A8-3870K - Catalyst
SE +/- 0.20, N = 3
76.90
20
40
60
80
100
OpenArena 0.8.8
Resolution: 1024 x 768
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
28.30
AMD A8-3870K - Catalyst
SE +/- 0.12, N = 3
65.87
15
30
45
60
75

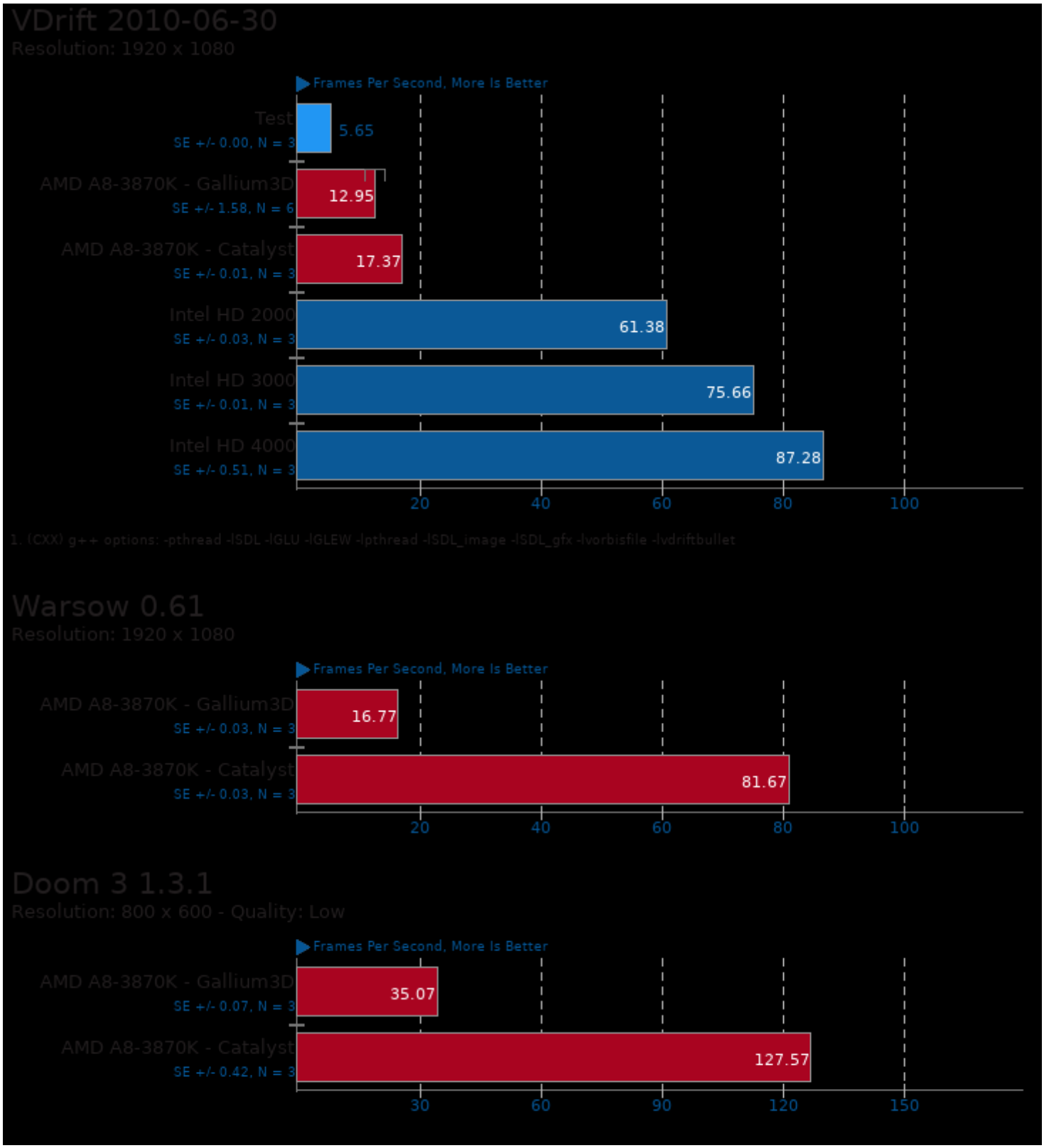

OpenArena 0.8.8
Resolution: 1600 x 900
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
15.10
AMD A8-3870K - Catalyst
SE +/- 0.03, N = 3
45.37
10
20
30
40
50
OpenArena 0.8.8
Resolution: 1280 x 1024
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
18.20
AMD A8-3870K - Catalyst
SE +/- 0.00, N = 3
48.50
11
22
33
44
55
OpenArena 0.8.8
Resolution: 1680 x 1050
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
12.70
AMD A8-3870K - Catalyst
SE +/- 0.03, N = 3
31.77
7
14
21
28
35

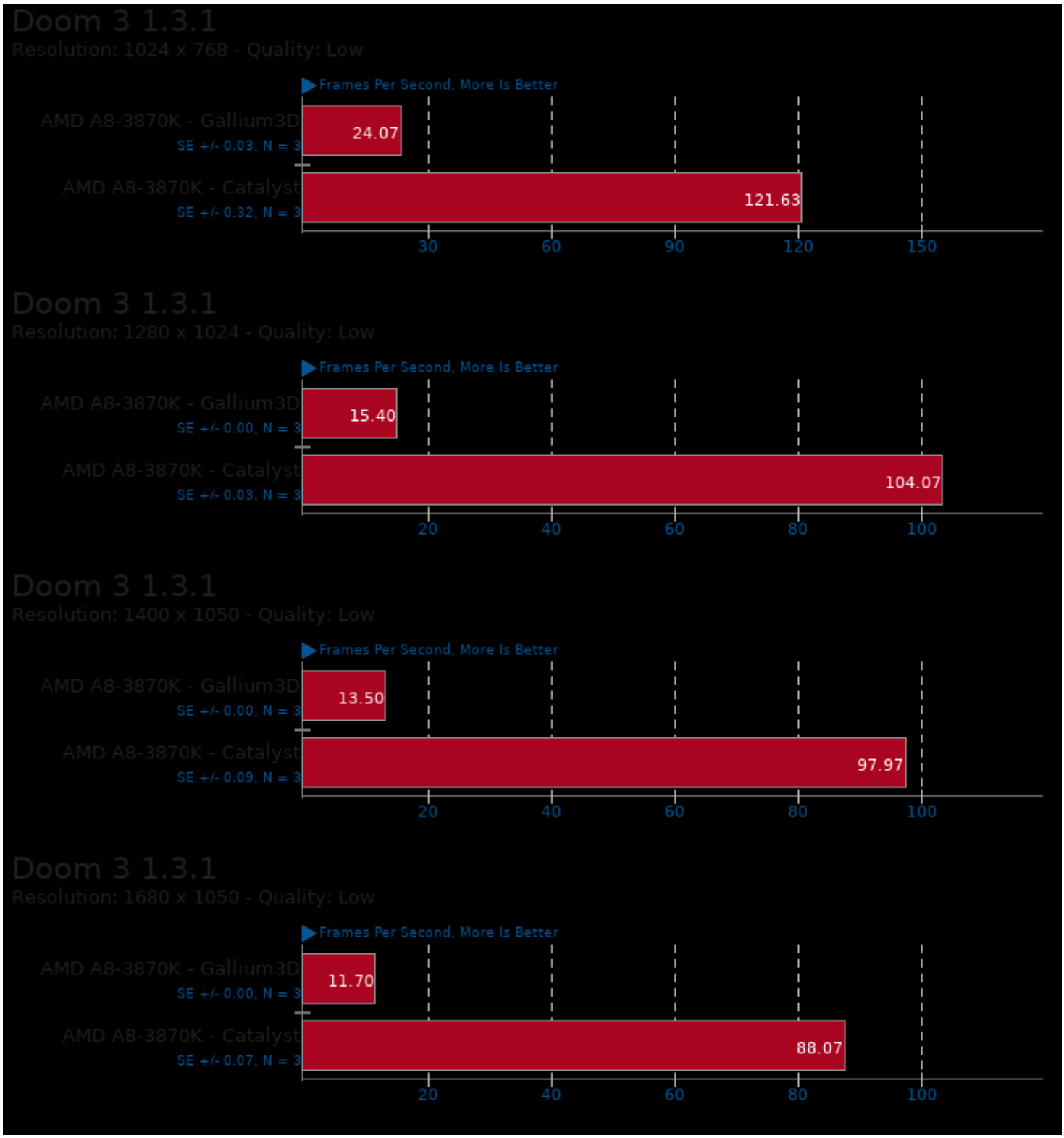

OpenArena 0.8.8
Resolution: 1920 x 1080
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
11.00
Test
SE +/- 0.00, N = 3
18.80
Intel HD 2000
SE +/- 0.09, N = 3
23.43
Intel HD 3000
SE +/- 0.15, N = 3
27.90
Intel HD 4000
SE +/- 0.03, N = 3
31.07
AMD A8-3870K - Catalyst
SE +/- 0.00, N = 3
33.70
8
16
24
32
40
Reaction Quake 3 1.0 Beta
Resolution: 800 x 600
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
12.20
AMD A8-3870K - Catalyst
SE +/- 0.18, N = 3
107.13
20
40
60
80
100
Reaction Quake 3 1.0 Beta
Resolution: 1024 x 768
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.32, N = 6
11.87
AMD A8-3870K - Catalyst
SE +/- 0.15, N = 3
107.20
20
40
60
80
100

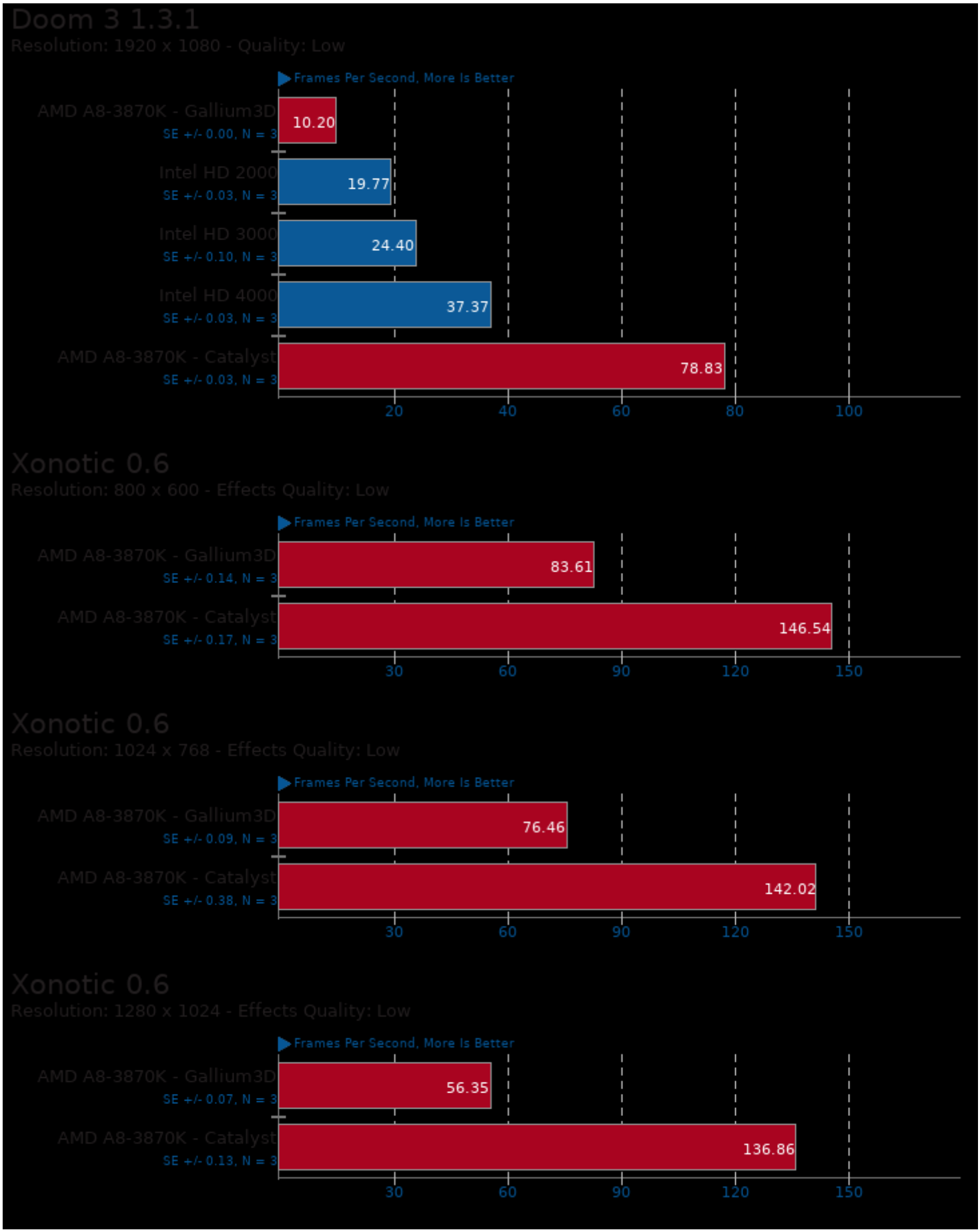

Reaction Quake 3 1.0 Beta
Resolution: 1600 x 900
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
12.20
AMD A8-3870K - Catalyst
SE +/- 0.19, N = 3
107.17
20
40
60
80
100
Reaction Quake 3 1.0 Beta
Resolution: 1280 x 1024
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
12.20
AMD A8-3870K - Catalyst
SE +/- 0.38, N = 3
107.07
20
40
60
80
100
Reaction Quake 3 1.0 Beta
Resolution: 1680 x 1050
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
12.20
AMD A8-3870K - Catalyst
SE +/- 0.12, N = 3
107.03
20
40
60
80
100
Reaction Quake 3 1.0 Beta
Resolution: 1920 x 1080
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.20, N = 3
12.40
AMD A8-3870K - Catalyst
SE +/- 0.13, N = 3
107.17
20
40
60
80
100

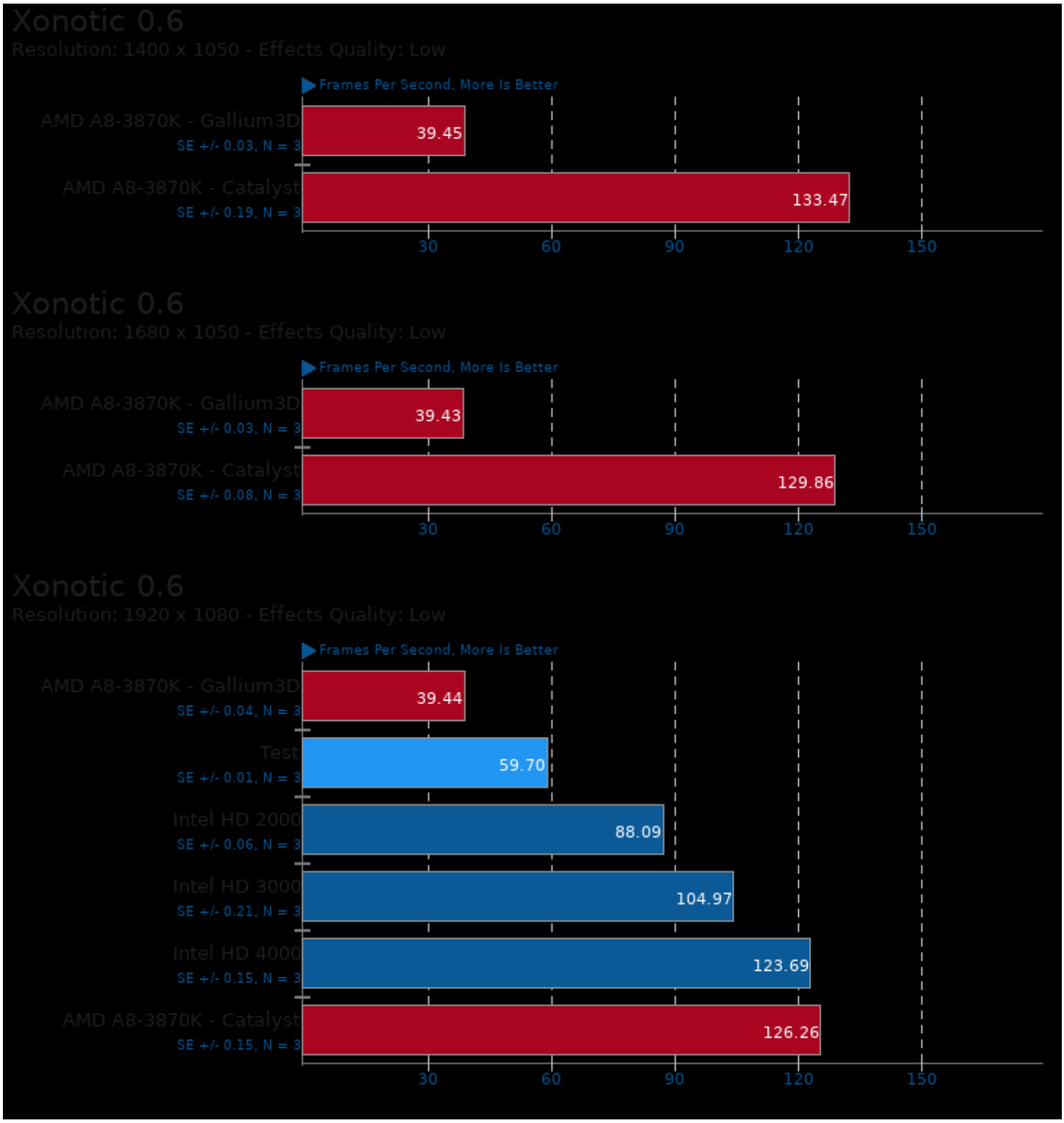

Smokin Guns 1.1b4
Resolution: 800 x 600
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.19, N = 3
71.97
AMD A8-3870K - Catalyst
SE +/- 0.52, N = 3
157.07
30
60
90
120
150
Smokin Guns 1.1b4
Resolution: 1024 x 768
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.07, N = 3
70.37
AMD A8-3870K - Catalyst
SE +/- 0.06, N = 3
156.10
30
60
90
120
150
Smokin Guns 1.1b4
Resolution: 1600 x 900
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.03, N = 3
55.47
AMD A8-3870K - Catalyst
SE +/- 0.22, N = 3
150.93
30
60
90
120
150
Smokin Guns 1.1b4
Resolution: 1280 x 1024
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.03, N = 3
63.13
AMD A8-3870K - Catalyst
SE +/- 0.53, N = 3
151.27
30
60
90
120
150

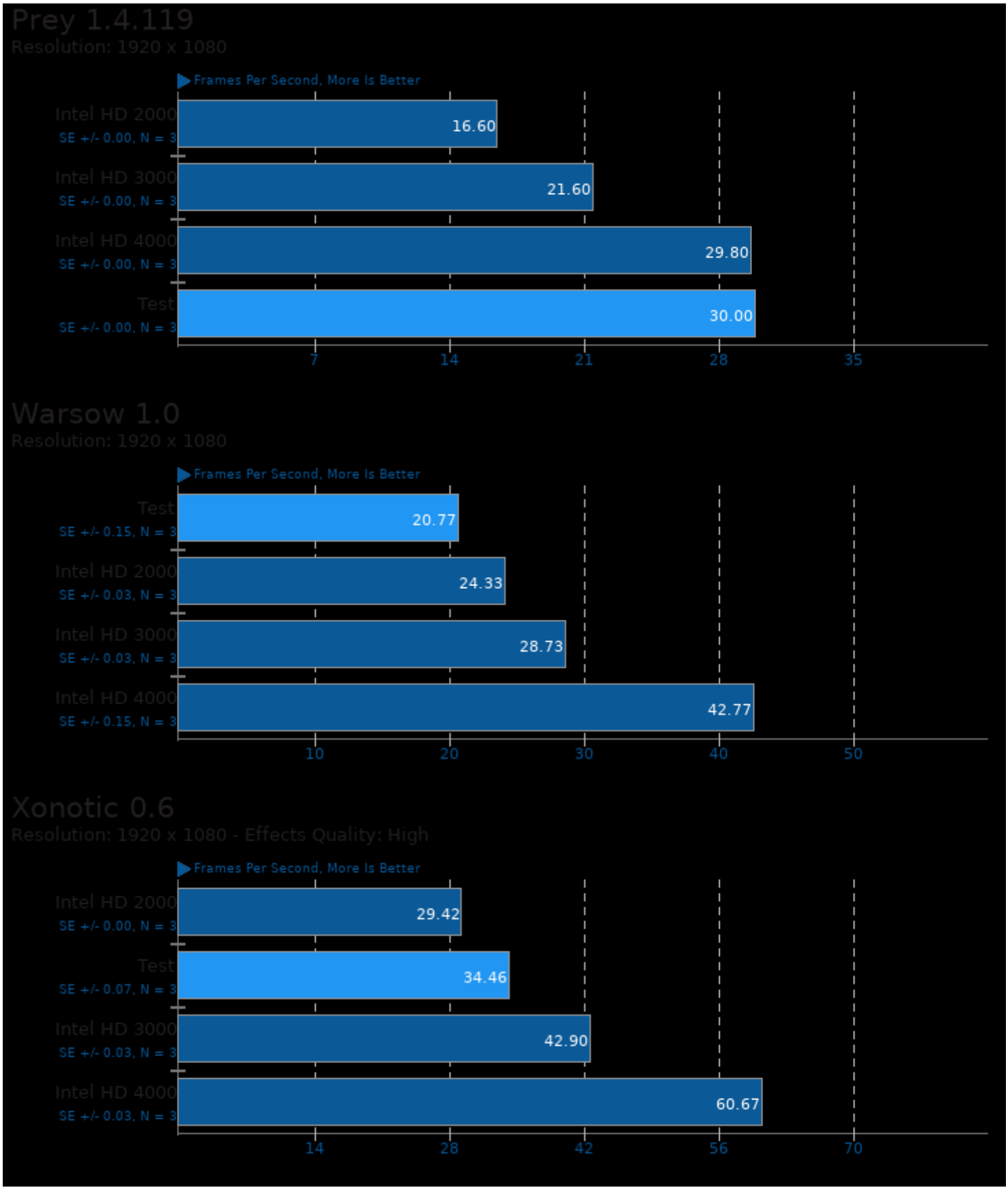

Smokin Guns 1.1b4
Resolution: 1680 x 1050
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.07, N = 3
48.33
AMD A8-3870K - Catalyst
SE +/- 0.18, N = 3
83.23
20
40
60
80
100
Smokin Guns 1.1b4
Resolution: 1920 x 1080
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.06, N = 3
43.30
AMD A8-3870K - Catalyst
SE +/- 0.82, N = 3
145.67
30
60
90
120
150
Urban Terror 4.1
Resolution: 1920 x 1080
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
41.00
AMD A8-3870K - Catalyst
SE +/- 0.27, N = 3
95.63
20
40
60
80
100

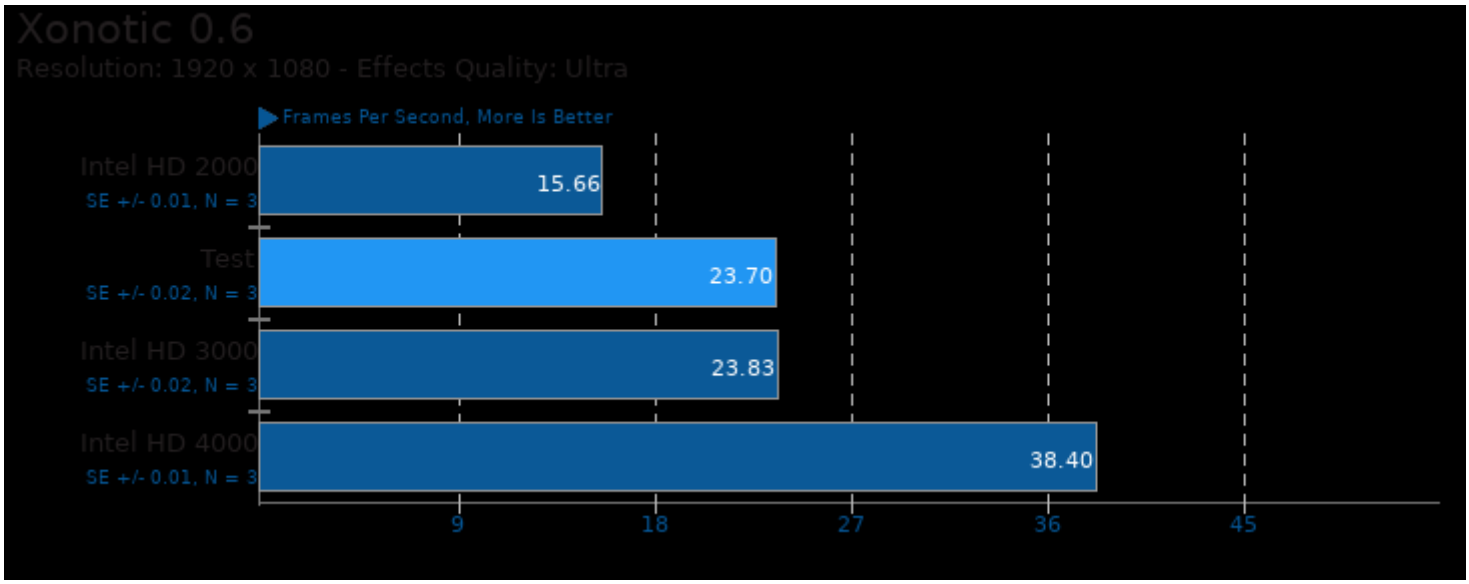

VDrift 2010-06-30
Resolution: 1920 x 1080
Frames Per Second, More Is Better
Test
SE +/- 0.00, N = 3
5.65
AMD A8-3870K - Gallium3D
SE +/- 1.58, N = 6
12.95
AMD A8-3870K - Catalyst
SE +/- 0.01, N = 3
17.37
Intel HD 2000
SE +/- 0.03, N = 3
61.38
Intel HD 3000
SE +/- 0.01, N = 3
75.66
Intel HD 4000
SE +/- 0.51, N = 3
87.28
20
40
60
80
100
1. (CXX) g++ options: -pthread -lSDL -lGLU -lGLEW -lpthread -lSDL_image -lSDL_gfx -lvorbisfile -lvdriftbullet
Warsow 0.61
Resolution: 1920 x 1080
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.03, N = 3
16.77
AMD A8-3870K - Catalyst
SE +/- 0.03, N = 3
81.67
20
40
60
80
100
Doom 3 1.3.1
Resolution: 800 x 600 - Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.07, N = 3
35.07
AMD A8-3870K - Catalyst
SE +/- 0.42, N = 3
127.57
30
60
90
120
150


Doom 3 1.3.1
Resolution: 1024 x 768 - Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.03, N = 3
24.07
AMD A8-3870K - Catalyst
SE +/- 0.32, N = 3
121.63
30
60
90
120
150
Doom 3 1.3.1
Resolution: 1280 x 1024 - Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
15.40
AMD A8-3870K - Catalyst
SE +/- 0.03, N = 3
104.07
20
40
60
80
100
Doom 3 1.3.1
Resolution: 1400 x 1050 - Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
13.50
AMD A8-3870K - Catalyst
SE +/- 0.09, N = 3
97.97
20
40
60
80
100
Doom 3 1.3.1
Resolution: 1680 x 1050 - Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
11.70
AMD A8-3870K - Catalyst
SE +/- 0.07, N = 3
88.07
20
40
60
80
100

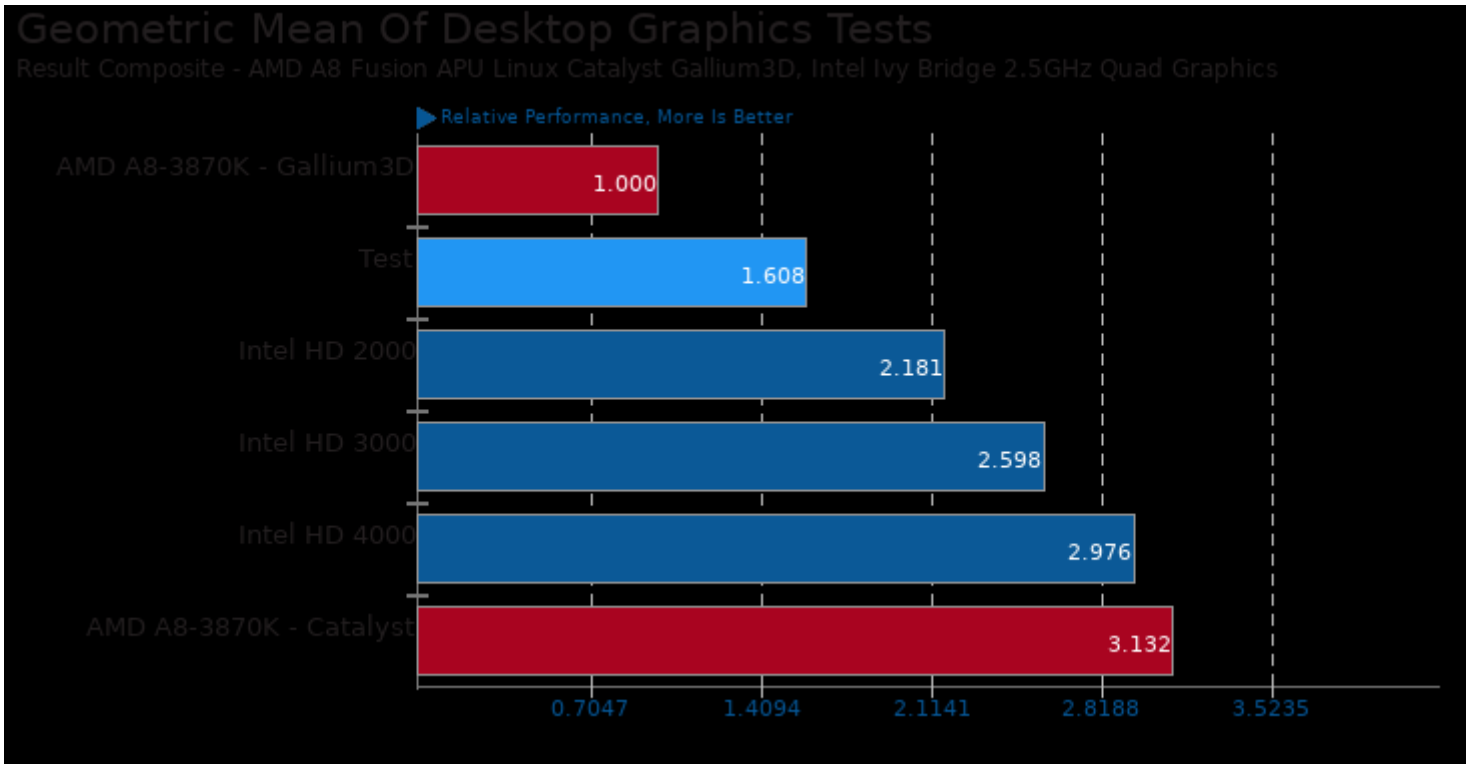

Doom 3 1.3.1
Resolution: 1920 x 1080 - Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.00, N = 3
10.20
Intel HD 2000
SE +/- 0.03, N = 3
19.77
Intel HD 3000
SE +/- 0.10, N = 3
24.40
Intel HD 4000
SE +/- 0.03, N = 3
37.37
AMD A8-3870K - Catalyst
SE +/- 0.03, N = 3
78.83
20
40
60
80
100
Xonotic 0.6
Resolution: 800 x 600 - Effects Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.14, N = 3
83.61
AMD A8-3870K - Catalyst
SE +/- 0.17, N = 3
146.54
30
60
90
120
150
Xonotic 0.6
Resolution: 1024 x 768 - Effects Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.09, N = 3
76.46
AMD A8-3870K - Catalyst
SE +/- 0.38, N = 3
142.02
30
60
90
120
150
Xonotic 0.6
Resolution: 1280 x 1024 - Effects Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.07, N = 3
56.35
AMD A8-3870K - Catalyst
SE +/- 0.13, N = 3
136.86
30
60
90
120
150


Xonotic 0.6
Resolution: 1400 x 1050 - Effects Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.03, N = 3
39.45
AMD A8-3870K - Catalyst
SE +/- 0.19, N = 3
133.47
30
60
90
120
150
Xonotic 0.6
Resolution: 1680 x 1050 - Effects Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.03, N = 3
39.43
AMD A8-3870K - Catalyst
SE +/- 0.08, N = 3
129.86
30
60
90
120
150
Xonotic 0.6
Resolution: 1920 x 1080 - Effects Quality: Low
Frames Per Second, More Is Better
AMD A8-3870K - Gallium3D
SE +/- 0.04, N = 3
39.44
Test
SE +/- 0.01, N = 3
59.70
Intel HD 2000
SE +/- 0.06, N = 3
88.09
Intel HD 3000
SE +/- 0.21, N = 3
104.97
Intel HD 4000
SE +/- 0.15, N = 3
123.69
AMD A8-3870K - Catalyst
SE +/- 0.15, N = 3
126.26
30
60
90
120
150


Prey 1.4.119
Resolution: 1920 x 1080
Frames Per Second, More Is Better
Intel HD 2000
SE +/- 0.00, N = 3
16.60
Intel HD 3000
SE +/- 0.00, N = 3
21.60
Intel HD 4000
SE +/- 0.00, N = 3
29.80
Test
SE +/- 0.00, N = 3
30.00
7
14
21
28
35
Warsow 1.0
Resolution: 1920 x 1080
Frames Per Second, More Is Better
Test
SE +/- 0.15, N = 3
20.77
Intel HD 2000
SE +/- 0.03, N = 3
24.33
Intel HD 3000
SE +/- 0.03, N = 3
28.73
Intel HD 4000
SE +/- 0.15, N = 3
42.77
10
20
30
40
50
Xonotic 0.6
Resolution: 1920 x 1080 - Effects Quality: High
Frames Per Second, More Is Better
Intel HD 2000
SE +/- 0.00, N = 3
29.42
Test
SE +/- 0.07, N = 3
34.46
Intel HD 3000
SE +/- 0.03, N = 3
42.90
Intel HD 4000
SE +/- 0.03, N = 3
60.67
14
28
42
56
70


Xonotic 0.6
Resolution: 1920 x 1080 - Effects Quality: Ultra
Frames Per Second, More Is Better
Intel HD 2000
SE +/- 0.01, N = 3
15.66
Test
SE +/- 0.02, N = 3
23.70
Intel HD 3000
SE +/- 0.02, N = 3
23.83
Intel HD 4000
SE +/- 0.01, N = 3
38.40
9
18
27
36
45

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



Geometric mean based upon tests: pts/xonotic and pts/openarena

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 12:07.