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AMD Fusion A8-3850 APU On Linux

Phoronix benchmarking of the AMD Fusion A8-3850 Llano APU under Ubuntu Linux compared to AMD Fusion E-350, Intel Sandy Bridge, etc.

Automated Executive Summary

Intel Core i5 2500K had the most wins, coming in first place for 75% of the tests.

Based on the geometric mean of all complete results, the fastest (Intel Core i5 2500K) was 3.004x the speed of the slowest (Intel Core 2 Duo P7350). Intel Core i3 2100 was 0.688x the speed of Intel Core i5 2500K, AMD Fusion A8-3850 was 0.886x the speed of Intel Core i3 2100, AMD Fusion E-350 was 0.618x the speed of AMD Fusion A8-3850, test2 was 0.995x the speed of AMD Fusion E-350, Intel Core 2 Duo P7350 was 0.888x the speed of test2.

Test Systems:

AMD Fusion E-350

Processor: AMD E-350 @ 1.60GHz (2 Cores), Motherboard: ASUS E35M1-M PRO, Chipset: AMD Pavilion DM1Z-3000,

Memory: 3584MB, Disk: 64GB OCZ VERTEX, Graphics: AMD Radeon HD 6300 384MB, Audio: ATI R6xx HDMI, Monitor: DELL P2210H

OS: Ubuntu 11.04, Kernel: 2.6.38-8-generic (x86_64), Desktop: Unity 3.8.10, Display Server: X Server 1.10.1, Display Driver: fglrx 8.84.60, Compiler: GCC 4.5.2, File-System: ext4, Screen Resolution: 1920x1080

System Notes: Compiz was running on this system. AMD CnQ was enabled.

AMD Fusion A8-3850

Processor: AMD A8-3850 APU with Radeon HD @ 2.90GHz (4 Cores), Motherboard: Gigabyte GA-A75M-UD2H, Chipset: AMD Device 1705, Memory: 3328MB, Disk: 60GB OCZ VERTEX2, Graphics: AMD Radeon HD 6550D 512MB (600/667MHz), Audio: ATI R6xx HDMI, Monitor: DELL P2210H

OS: Ubuntu 11.04, Kernel: 2.6.38-8-generic (x86_64), Desktop: Unity 3.8.10, Display Server: X Server 1.10.1, Display Driver: fglrx 8.86.5 Catalyst 11.6, OpenGL: 4.1.10834, Compiler: GCC 4.5.2 + llvm 2.8 (Ubuntu 2.8-0ubuntu1), File-System: ext4, Screen Resolution: 1920x1080

System Notes: Compiz was running on this system. AMD CnQ was enabled.

Intel Core 2 Duo P7350

Processor: Intel Core 2 Duo P7350 @ 2.00GHz (2 Cores), Motherboard: Apple Mac-F22C86C8 v1.0, Chipset: NVIDIA MCP79, Memory: 843MB, Disk: 120GB FUJITSU MHZ2120B, Graphics: NVIDIA GeForce 9400 512MB (450/1064MHz), Audio: Realtek ALC889A

OS: Ubuntu 11.04, Kernel: 2.6.38-8-generic (x86_64), Desktop: Unity 3.8.10, Display Server: X Server 1.10.1, Display Driver: NVIDIA 270.41.06, OpenGL: 3.3.0 NVIDIA 270.41.06, Compiler: GCC 4.5.2, File-System: ext4, Screen Resolution: 1920x1080

System Notes: Compiz was running on this system. Intel SpeedStep was enabled.

Intel Core i3 2100

Processor: Intel Core i3-2100 @ 3.10GHz (4 Cores), Motherboard: ASRock Z68 Pro3, Chipset: Intel 2nd Generation Core Family, Memory: 3584MB, Disk: 60GB OCZ VERTEX2, Graphics: Intel 2nd Generation Core Family IGP, Audio: Realtek ALC892, Monitor: DELL P2210H

OS: Ubuntu 11.04, Kernel: 3.0.0-0300-generic (x86_64), Desktop: Unity 3.8.10, Display Server: X Server 1.10.1, Display Driver: intel 2.15.0, OpenGL: 2.1 Mesa 7.12-devel (git-99fba50), Compiler: GCC 4.5.2 + llvm 2.8 (Ubuntu 2.8-0ubuntu1), File-System: ext4, Screen Resolution: 1920x1080

System Notes: Compiz was running on this system. Intel SpeedStep was enabled.

Intel Core i5 2500K

Processor: Intel Core i5-2500K @ 3.30GHz (4 Cores), Motherboard: ASRock Z68 Pro3, Chipset: Intel 2nd Generation Core Family, Memory: 3584MB, Disk: 60GB OCZ VERTEX2, Graphics: Intel 2nd Generation Core Family IGP, Audio: Realtek ALC892, Monitor: DELL P2210H

OS: Ubuntu 11.04, Kernel: 3.0.0-0300-generic (x86_64), Desktop: Unity 3.8.10, Display Server: X Server 1.10.1, Display Driver: intel 2.15.0, OpenGL: 2.1 Mesa 7.12-devel (git-99fba50), Compiler: GCC 4.5.2 + llvm 2.8 (Ubuntu 2.8-0ubuntu1),

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File-System: ext4, Screen Resolution: 1920x1080

System Notes: Compiz was running on this system. Intel SpeedStep was enabled.

test2

Processor: AMD Athlon II X3 435 @ 2.90GHz (3 Cores), Motherboard: ASUS M4A785-M, Chipset: AMD RS880 + SB7x0/SB8x0/SB9x0, Memory: 3 x 1024 MB DDR2-1066MHz, Disk: 500GB Western Digital WDC WD5000AAKS-2 + 120GB FUJITSU MHV2120B + 320GB Seagate ST3320833AS, Graphics: ATI Radeon HD 4600 512MB (600/400MHz), Audio: VIA VT1708S, Monitor: Acer E211H

OS: LinuxMint 11, Kernel: 2.6.38-10-generic (i686), Desktop: GNOME 2.32.1, Display Server: X Server 1.10.1, Display Driver: fglrx 8.87.5 Catalyst 11.7, OpenGL: 3.3.10907, Compiler: GCC 4.5.2, File-System: ext4, Screen Resolution: 1920x1080

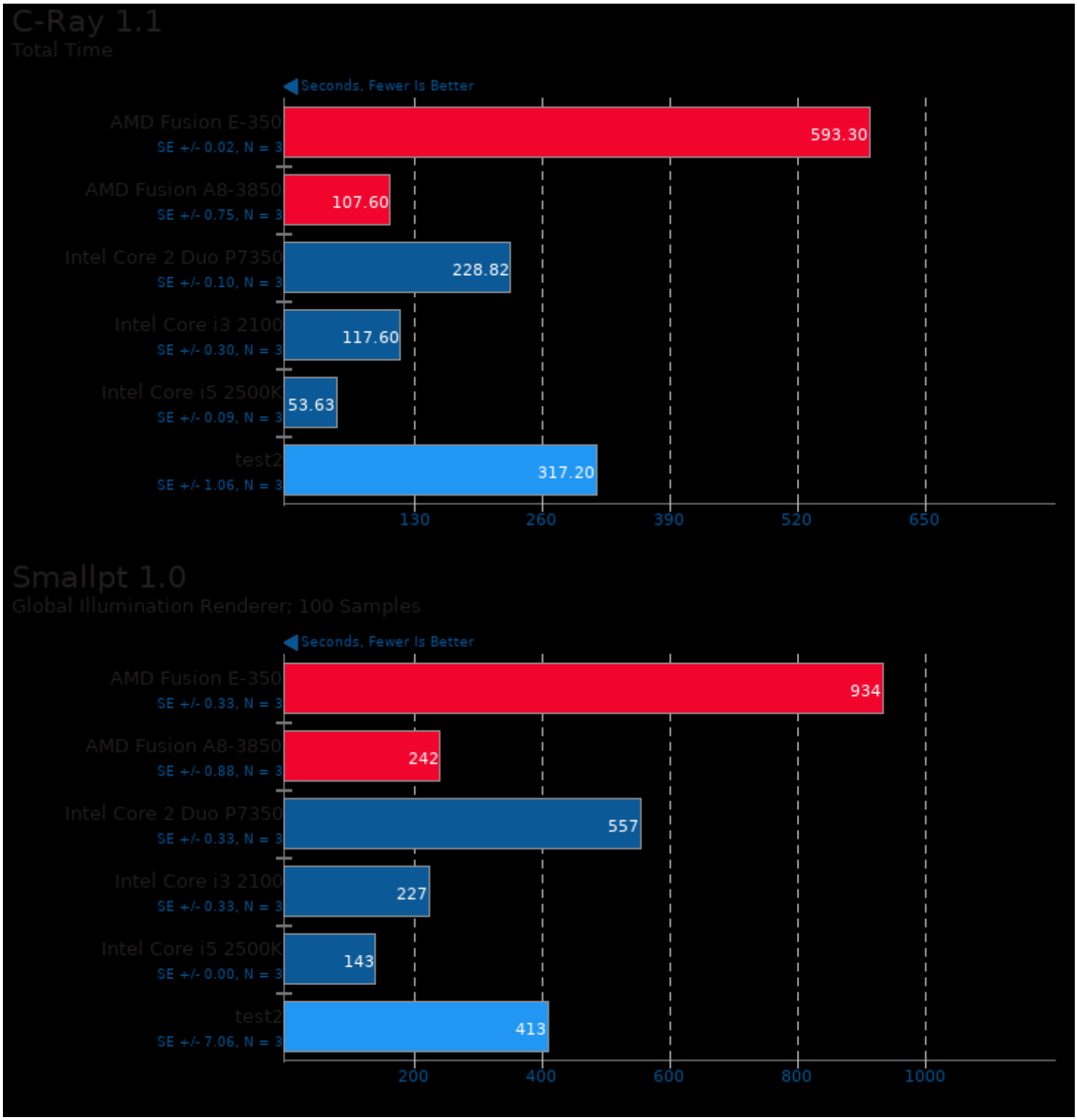
System Notes: Compiz was running on this system. AMD CnQ was enabled.

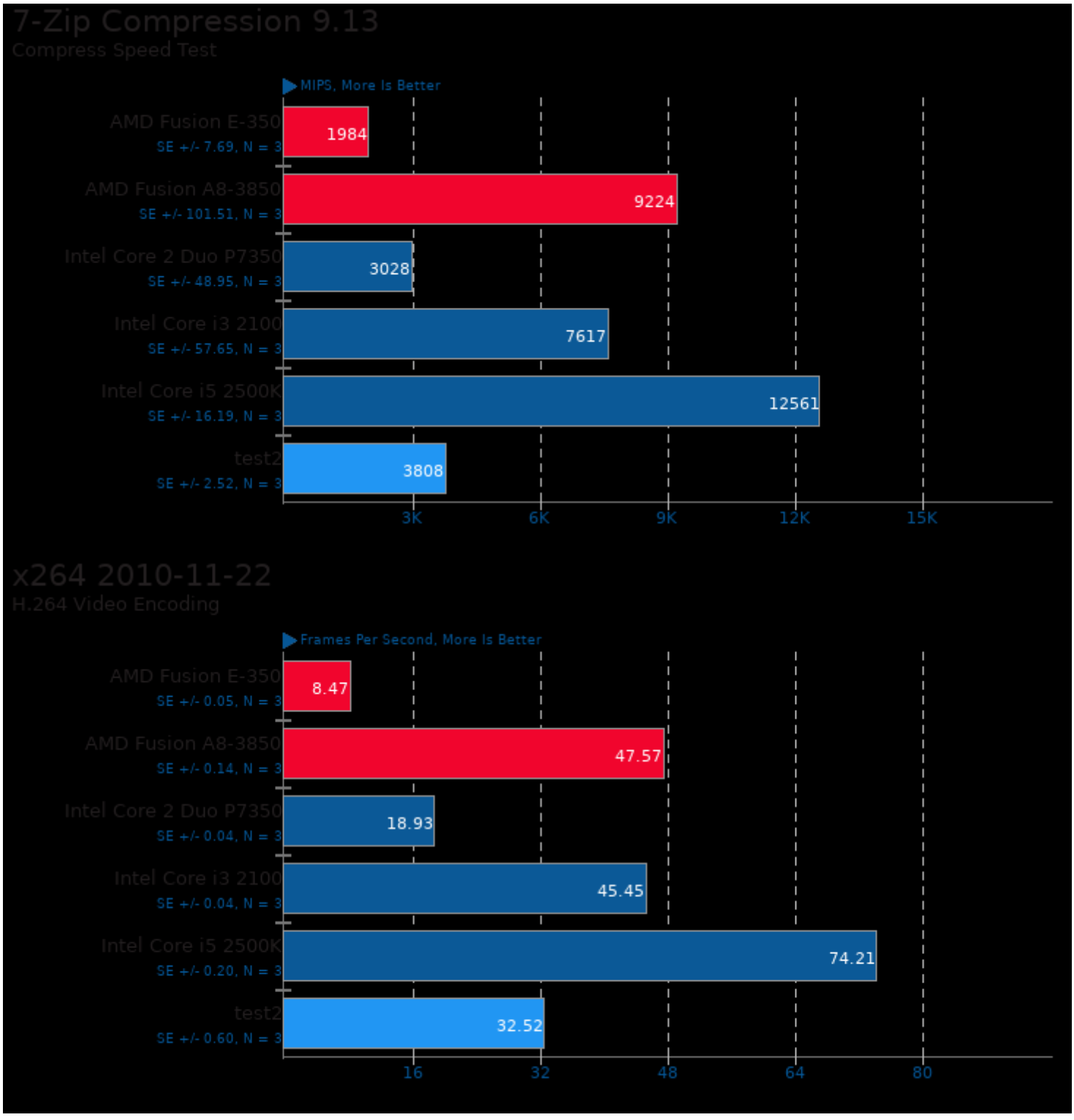
	AMD Fusion E-350	AMD Fusion A8-3850	Intel Core 2 Duo P7350	Intel Core i3 2100	Intel Core i5 2500K	test2
Nexuiz - 1920 x 1080 - No - Off (FPS)	18.91	**58.18**		**17.20**	19.96	31.50
Normalized	32.5%	100%		29.56%	34.31%	54.14%
Standard Deviation	3.2%	0.4%		1%	0.1%	0.3%
Unigine Heaven - 1920 x 1080 (FPS)	**1.90**	**6.74**				
Normalized	28.19%	100%				
Standard Deviation	1.3%	0.1%				
Apache Benchmark - S.W.P.S (Reqs/sec)	**4613**	12243	7850	18391	**34352**	12947
Normalized	13.43%	35.64%	22.85%	53.54%	100%	37.69%
Standard Deviation	0.9%	1.3%	0.4%	3.4%	1.8%	2.4%
C-Ray - Total Time (sec)	**593.30**	107.60	228.82	117.60	**53.63**	317.20
Normalized	9.04%	49.84%	23.44%	45.6%	100%	16.91%
Standard Deviation	0%	1.2%	0.1%	0.4%	0.3%	0.6%
Smallpt - G.I.R.1.S (sec)	**934**	242	557	227	**143**	413
Normalized	15.31%	59.09%	25.67%	63%	100%	34.62%
Standard Deviation	0.1%	0.6%	0.1%	0.3%	0%	3%
7-Zip Compression - C.S.T (MIPS)	**1984**	9224	3028	7617	**12561**	3808
Normalized	15.79%	73.43%	24.11%	60.64%	100%	30.32%
Standard Deviation	0.7%	1.9%	2.8%	1.3%	0.2%	0.1%
x264 - H.2.V.E (FPS)	**8.47**	47.57	18.93	45.45	**74.21**	32.52
Normalized	11.41%	64.1%	25.51%	61.25%	100%	43.82%
Standard Deviation	1.1%	0.5%	0.4%	0.1%	0.5%	3.2%
TSCP - A.C.P (Nodes/s)	**140626**	245619	196064	443179	**528780**	262976
Normalized	26.59%	46.45%	37.08%	83.81%	100%	49.73%
Standard Deviation	0.1%	0.1%	0.4%	0.3%	0.1%	0.1%
OpenSSL - R.4.b.P	24.60	52.48	29.05	73.25	**86.83**	**17.75**
Normalized	28.33%	60.44%	33.46%	84.36%	100%	20.44%

AMD Fusion A8-3850 APU On Linux

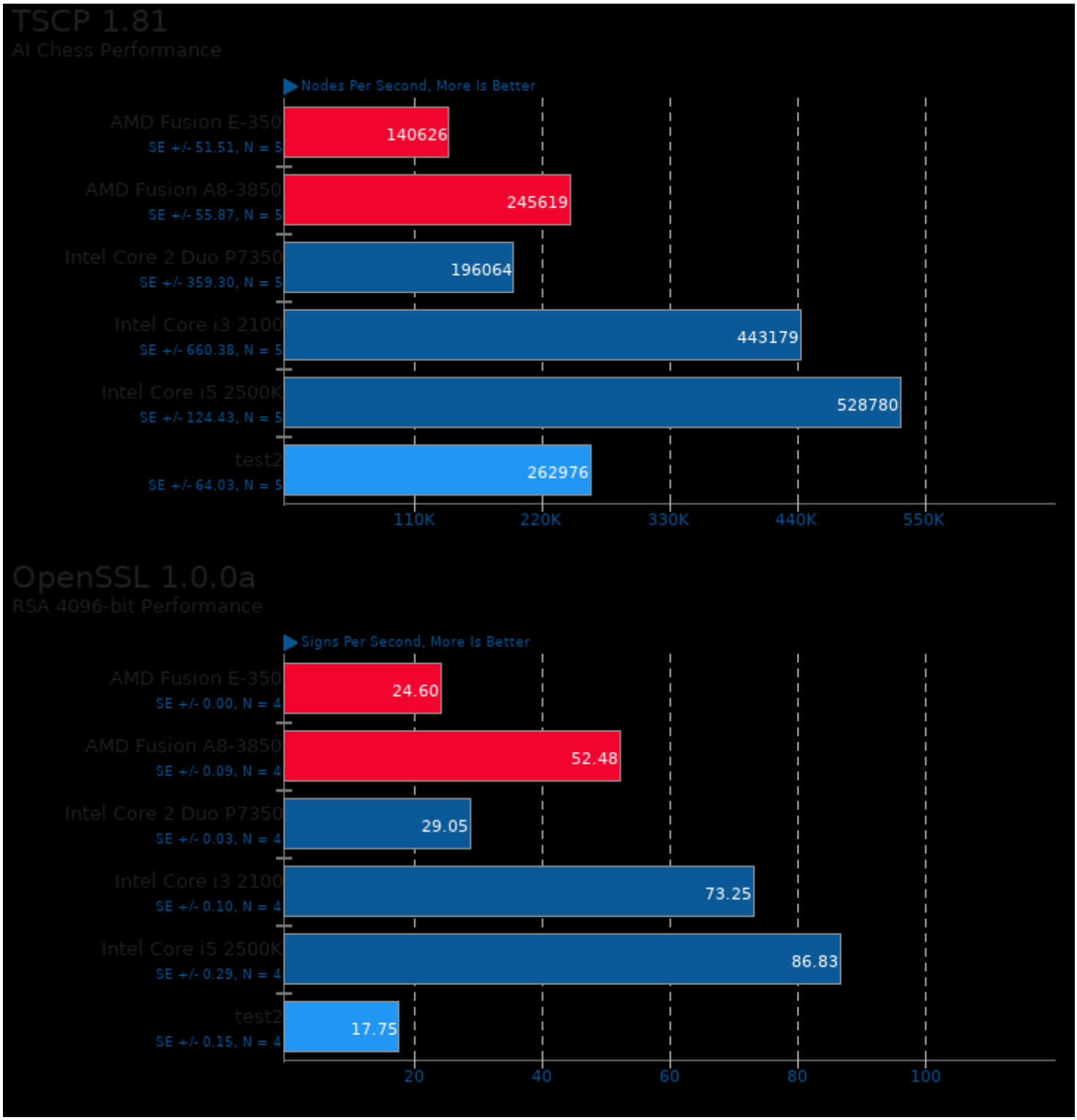
Standard Deviation	0%	0.3%	0.2%	0.3%	0.7%	1.7%
John The Ripper - Traditional DES (Real C/S)	**567090667**	2440667	**1892333**	3521667	4187667	2123333
Normalized	100%	0.43%	0.33%	0.62%	0.74%	0.37%
Standard Deviation	0.1%	0.1%	0.3%	0%	0.2%	0.1%
John The Ripper - MD5 (Real C/S)	**5476**	13336	8615	11950	**14266**	8745
Normalized	38.38%	93.48%	60.39%	83.77%	100%	61.3%
Standard Deviation	0%	0.1%	0.7%	0.3%	0.1%	0%
John The Ripper - Blowfish (Real C/S)	**392**	842	521	748	**892**	527
Normalized	43.95%	94.39%	58.41%	83.86%	100%	59.08%
Standard Deviation	0%	0%	0.4%	0.4%	0%	0.1%
CLOMP - Static OMP Speedup (Speedup)	1.78	2.96	**1.77**	**3.24**	3.20	
Normalized	54.94%	91.36%	54.63%	100%	98.77%	
Standard Deviation	1.1%	2.4%	0.3%	1%	0.6%	

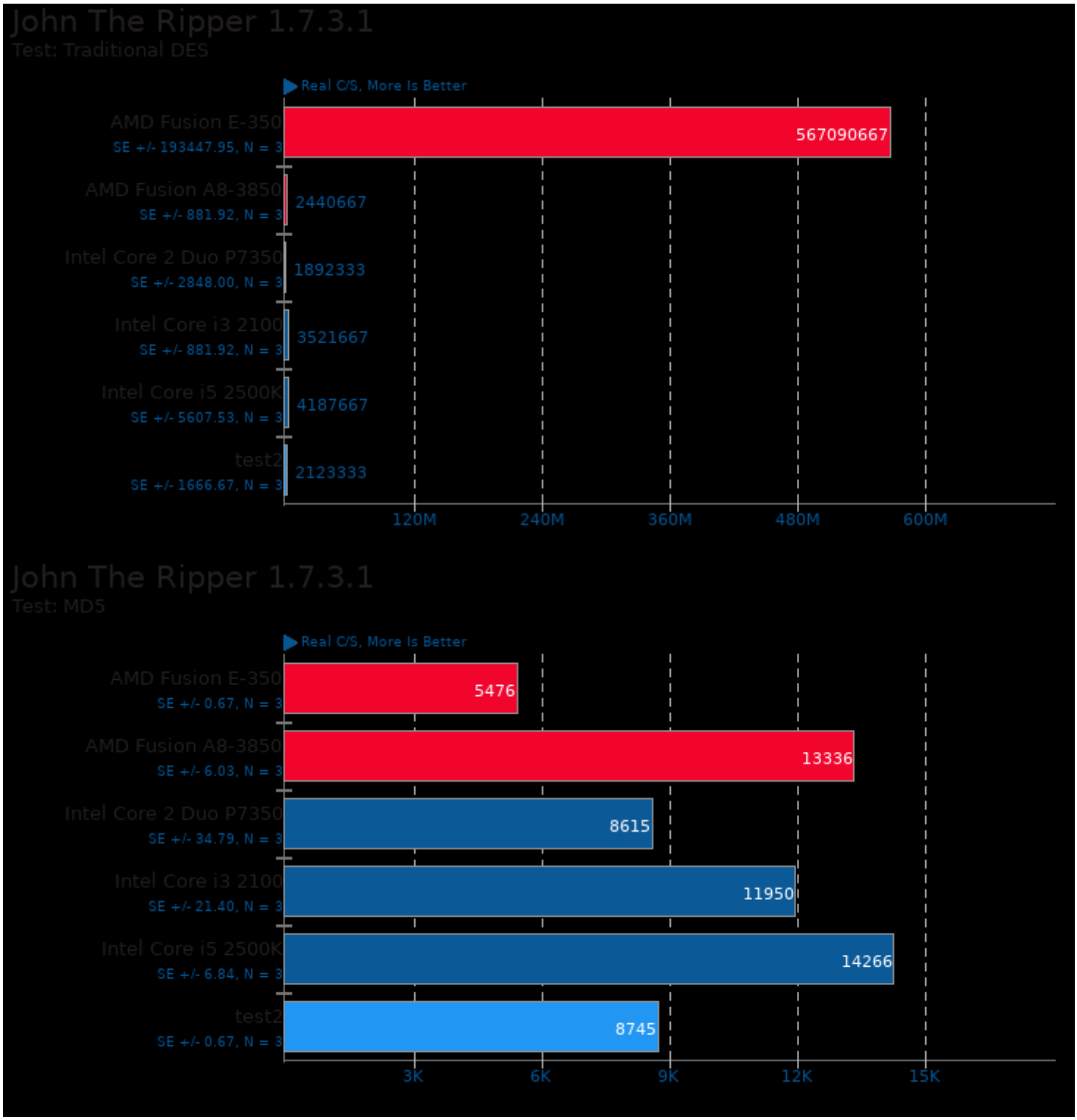

Nexuiz 2.5.2
Resolution: 1920 x 1080 - HDR: No - Sound: Off
Frames Per Second, More Is Better
AMD Fusion E-350
SE +/- 0.30, N = 4
18.91
AMD Fusion A8-3850
SE +/- 0.15, N = 3
58.18
Intel Core i3 2100
SE +/- 0.10, N = 3
17.20
Intel Core i5 2500K
SE +/- 0.01, N = 3
19.96
test2
SE +/- 0.05, N = 3
31.50
13
26
39
52
65
Unigine Heaven 2.1
Resolution: 1920 x 1080
Frames Per Second, More Is Better
AMD Fusion E-350
SE +/- 0.01, N = 3
1.90
AMD Fusion A8-3850
SE +/- 0.00, N = 3
6.74
2
4
6
8
10
Apache Benchmark 2.2.17
Static Web Page Serving
Requests Per Second, More Is Better
AMD Fusion E-350
SE +/- 22.86, N = 3
4613.26
AMD Fusion A8-3850
SE +/- 88.99, N = 3
12242.70
Intel Core 2 Duo P7350
SE +/- 17.08, N = 3
7850.28
Intel Core i3 2100
SE +/- 365.61, N = 3
18390.99
Intel Core i5 2500K
SE +/- 360.17, N = 3
34352.42
test2
SE +/- 180.14, N = 3
12946.79
7K
14K
21K
28K
35K

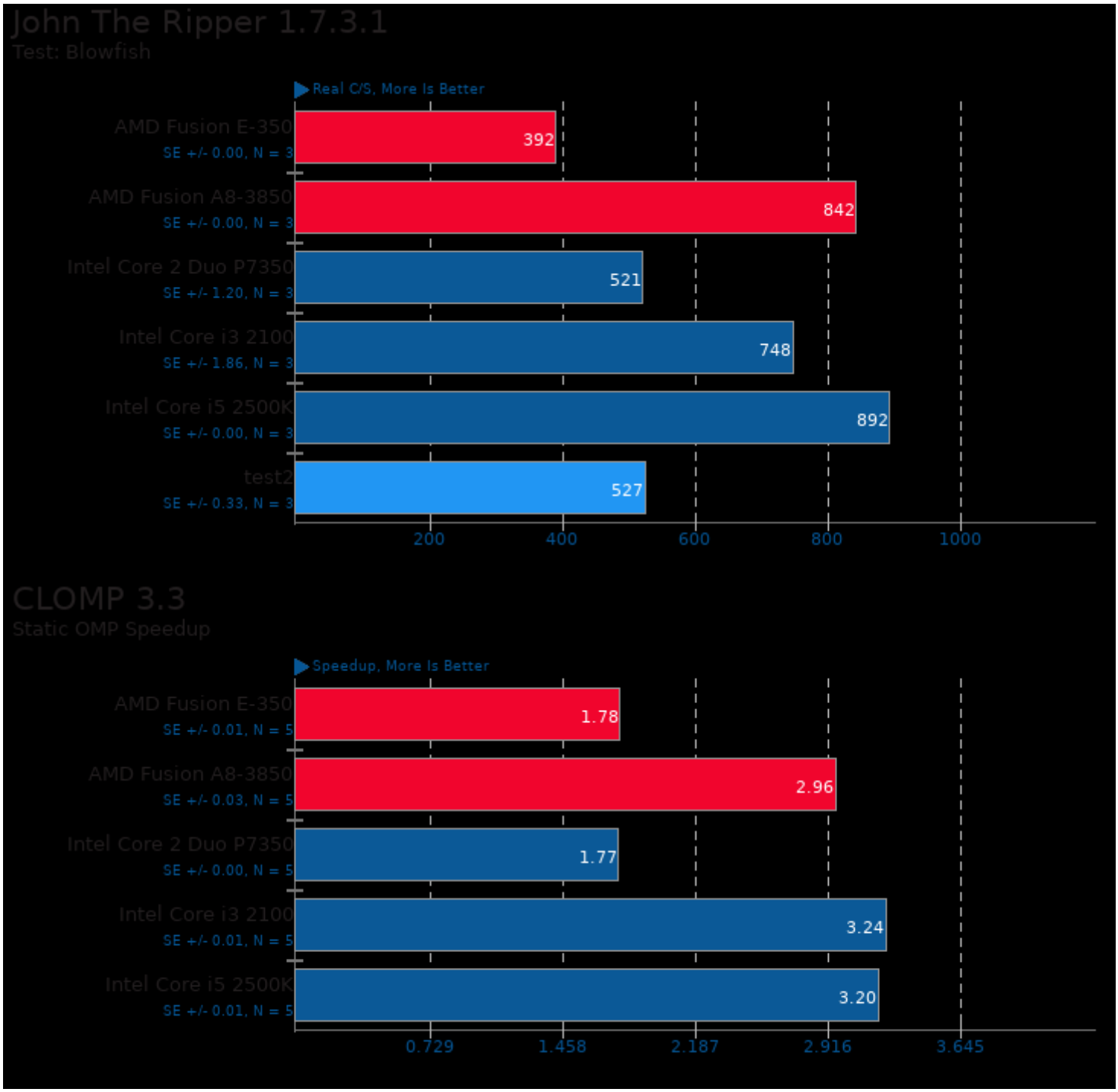

C-Ray 1.1
Total Time
Seconds, Fewer Is Better
AMD Fusion E-350
SE +/- 0.02, N = 3
593.30
AMD Fusion A8-3850
SE +/- 0.75, N = 3
107.60
Intel Core 2 Duo P7350
SE +/- 0.10, N = 3
228.82
Intel Core i3 2100
SE +/- 0.30, N = 3
117.60
Intel Core i5 2500K
SE +/- 0.09, N = 3
53.63
test2
SE +/- 1.06, N = 3
317.20
130
260
390
520
650
Smallpt 1.0
Global Illumination Renderer; 100 Samples
Seconds, Fewer Is Better
AMD Fusion E-350
SE +/- 0.33, N = 3
934
AMD Fusion A8-3850
SE +/- 0.88, N = 3
242
Intel Core 2 Duo P7350
SE +/- 0.33, N = 3
557
Intel Core i3 2100
SE +/- 0.33, N = 3
227
Intel Core i5 2500K
SE +/- 0.00, N = 3
143
test2
SE +/- 7.06, N = 3
413
200
400
600
800
1000


7-Zip Compression 9.13
Compress Speed Test
MIPS, More Is Better
AMD Fusion E-350
SE +/- 7.69, N = 3
1984
AMD Fusion A8-3850
SE +/- 101.51, N = 3
9224
Intel Core 2 Duo P7350
SE +/- 48.95, N = 3
3028
Intel Core i3 2100
SE +/- 57.65, N = 3
7617
Intel Core i5 2500K
SE +/- 16.19, N = 3
12561
test2
SE +/- 2.52, N = 3
3808
3K
6K
9K
12K
15K
x264 2010-11-22
H.264 Video Encoding
Frames Per Second, More Is Better
AMD Fusion E-350
SE +/- 0.05, N = 3
8.47
AMD Fusion A8-3850
SE +/- 0.14, N = 3
47.57
Intel Core 2 Duo P7350
SE +/- 0.04, N = 3
18.93
Intel Core i3 2100
SE +/- 0.04, N = 3
45.45
Intel Core i5 2500K
SE +/- 0.20, N = 3
74.21
test2
SE +/- 0.60, N = 3
32.52
16
32
48
64
80

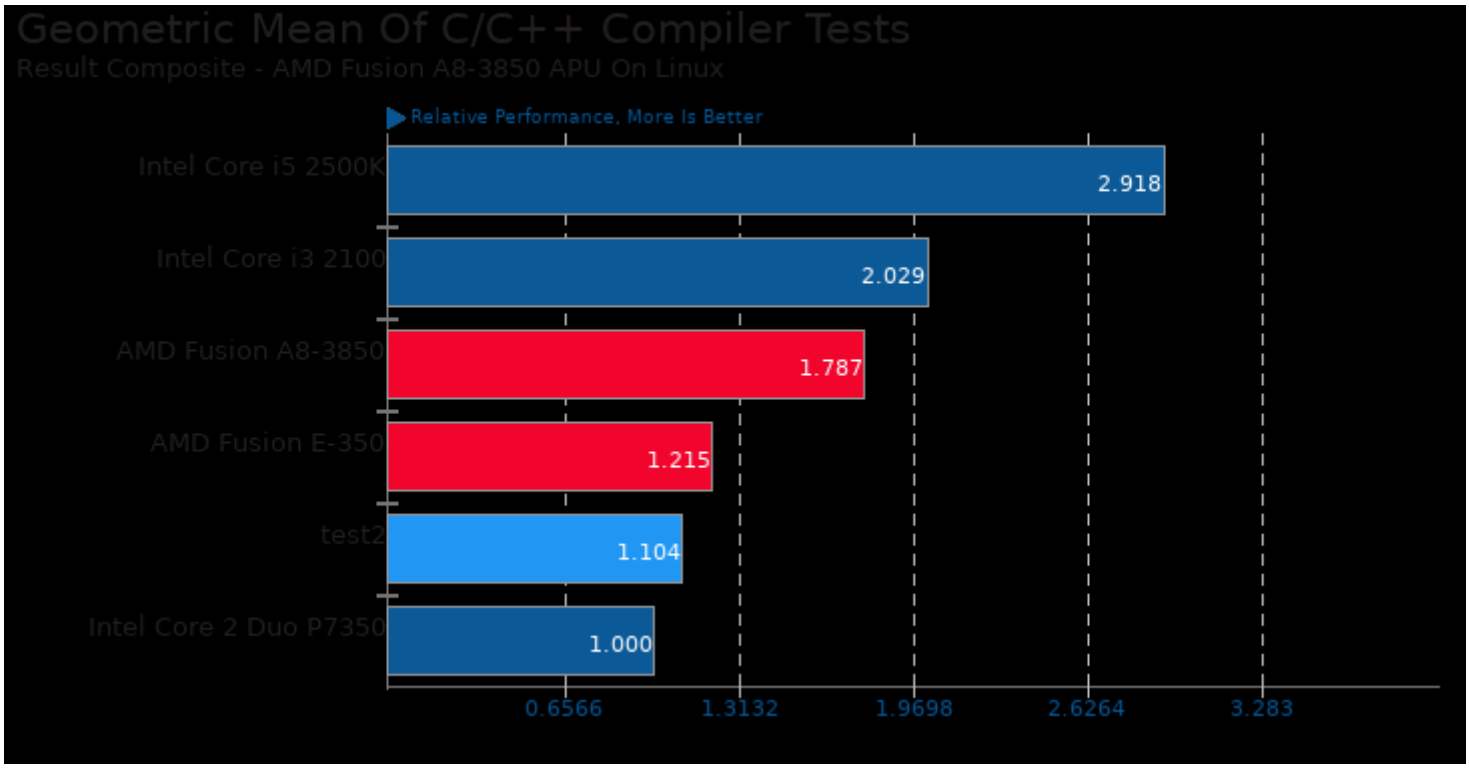
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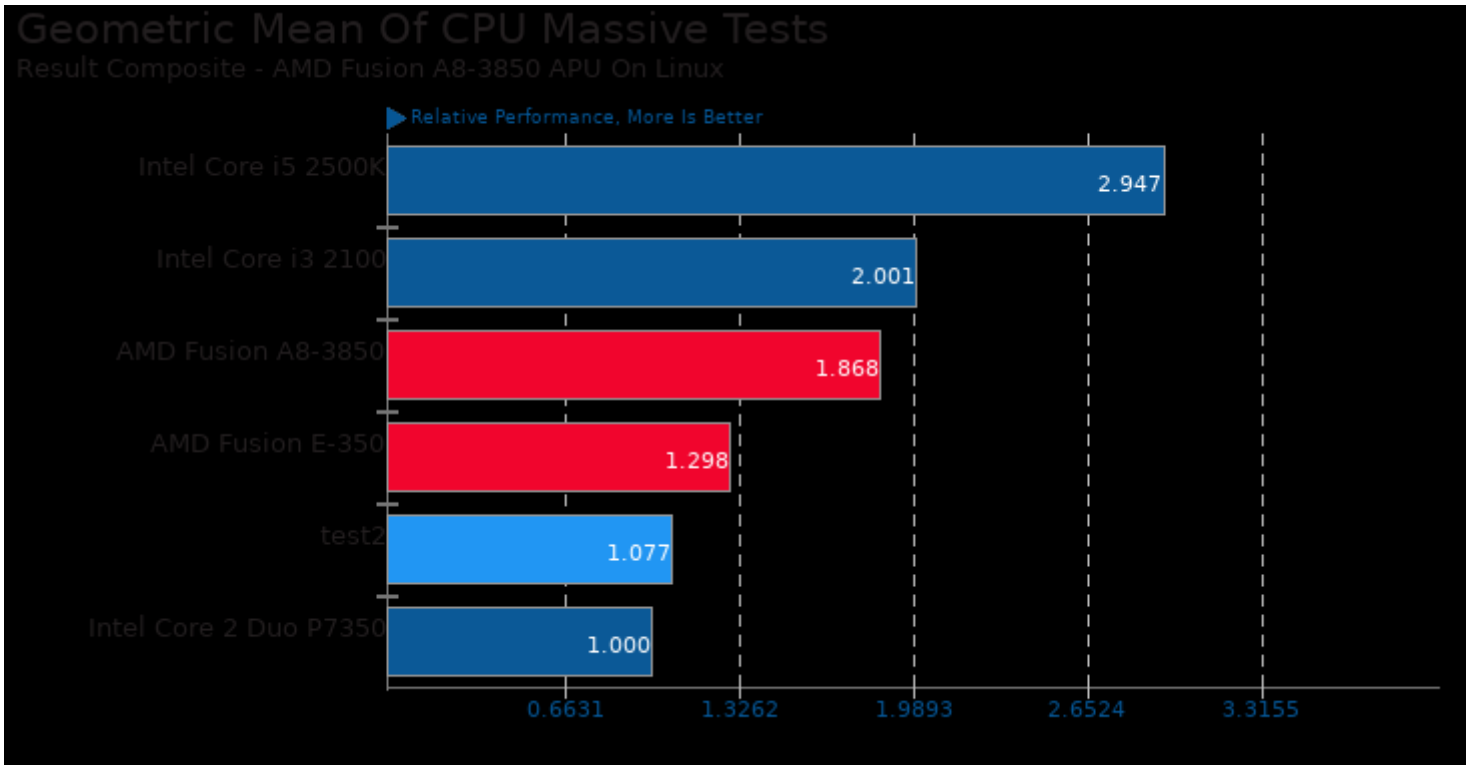

John The Ripper 1.7.3.1
Test: Traditional DES
Real C/S, More Is Better
AMD Fusion E-350
SE +/- 193447.95, N = 3
567090667
AMD Fusion A8-3850
SE +/- 881.92, N = 3
2440667
Intel Core 2 Duo P7350
SE +/- 2848.00, N = 3
1892333
Intel Core i3 2100
SE +/- 881.92, N = 3
3521667
Intel Core i5 2500K
SE +/- 5607.53, N = 3
4187667
test2
SE +/- 1666.67, N = 3
2123333
120M
240M
360M
480M
600M
John The Ripper 1.7.3.1
Test: MD5
Real C/S, More Is Better
AMD Fusion E-350
SE +/- 0.67, N = 3
5476
AMD Fusion A8-3850
SE +/- 6.03, N = 3
13336
Intel Core 2 Duo P7350
SE +/- 34.79, N = 3
8615
Intel Core i3 2100
SE +/- 21.40, N = 3
11950
Intel Core i5 2500K
SE +/- 6.84, N = 3
14266
test2
SE +/- 0.67, N = 3
8745
3K
6K
9K
12K
15K


John The Ripper 1.7.3.1
Test: Blowfish
Real C/S, More Is Better
AMD Fusion E-350
SE +/- 0.00, N = 3
392
AMD Fusion A8-3850
SE +/- 0.00, N = 3
842
Intel Core 2 Duo P7350
SE +/- 1.20, N = 3
521
Intel Core i3 2100
SE +/- 1.86, N = 3
748
Intel Core i5 2500K
SE +/- 0.00, N = 3
892
test2
SE +/- 0.33, N = 3
527
200
400
600
800
1000
CLOMP 3.3
Static OMP Speedup
Speedup, More Is Better
AMD Fusion E-350
SE +/- 0.01, N = 5
1.78
AMD Fusion A8-3850
SE +/- 0.03, N = 5
2.96
Intel Core 2 Duo P7350
SE +/- 0.00, N = 5
1.77
Intel Core i3 2100
SE +/- 0.01, N = 5
3.24
Intel Core i5 2500K
SE +/- 0.01, N = 5
3.20
0.729
1.458
2.187
2.916
3.645

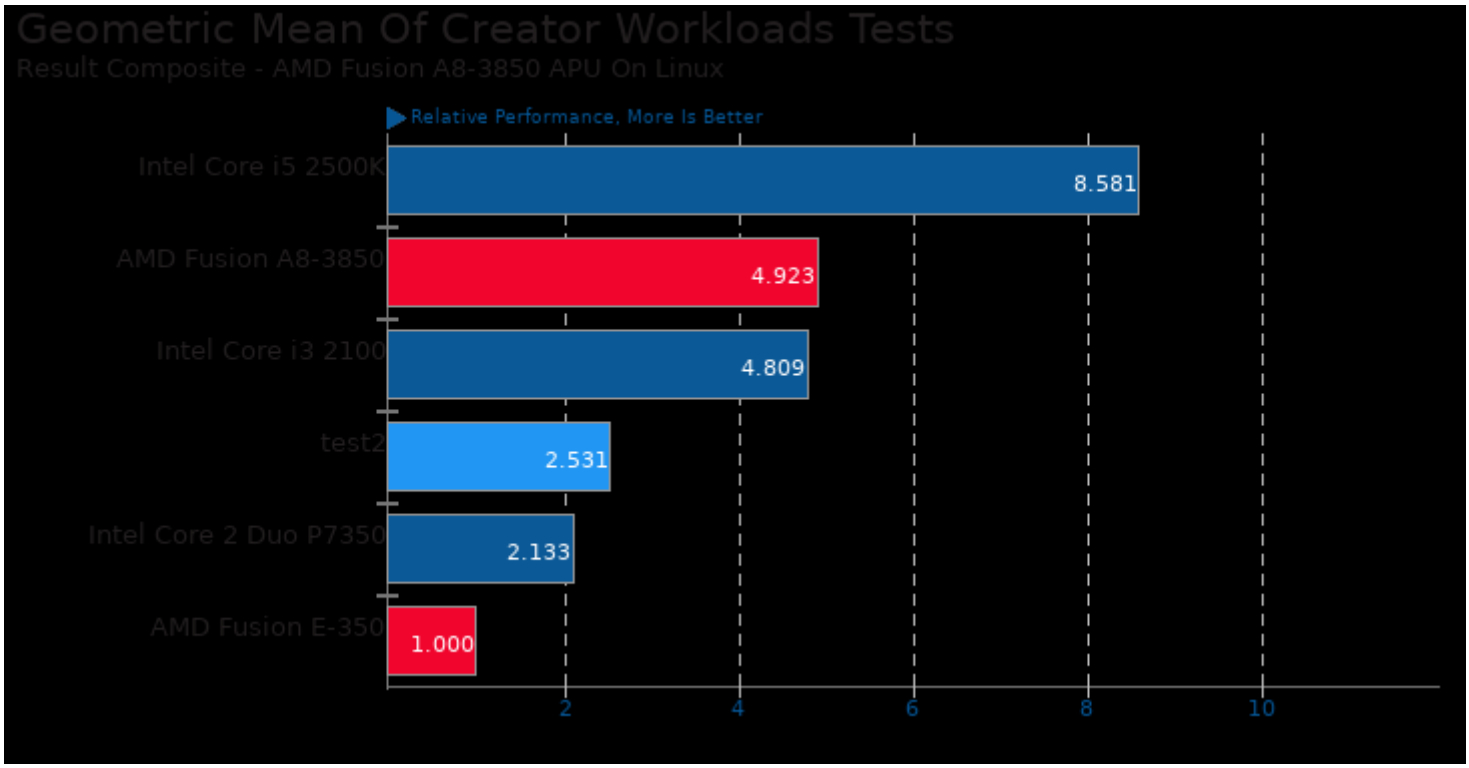
These geometric means are based upon test groupings / test suites for this result file.



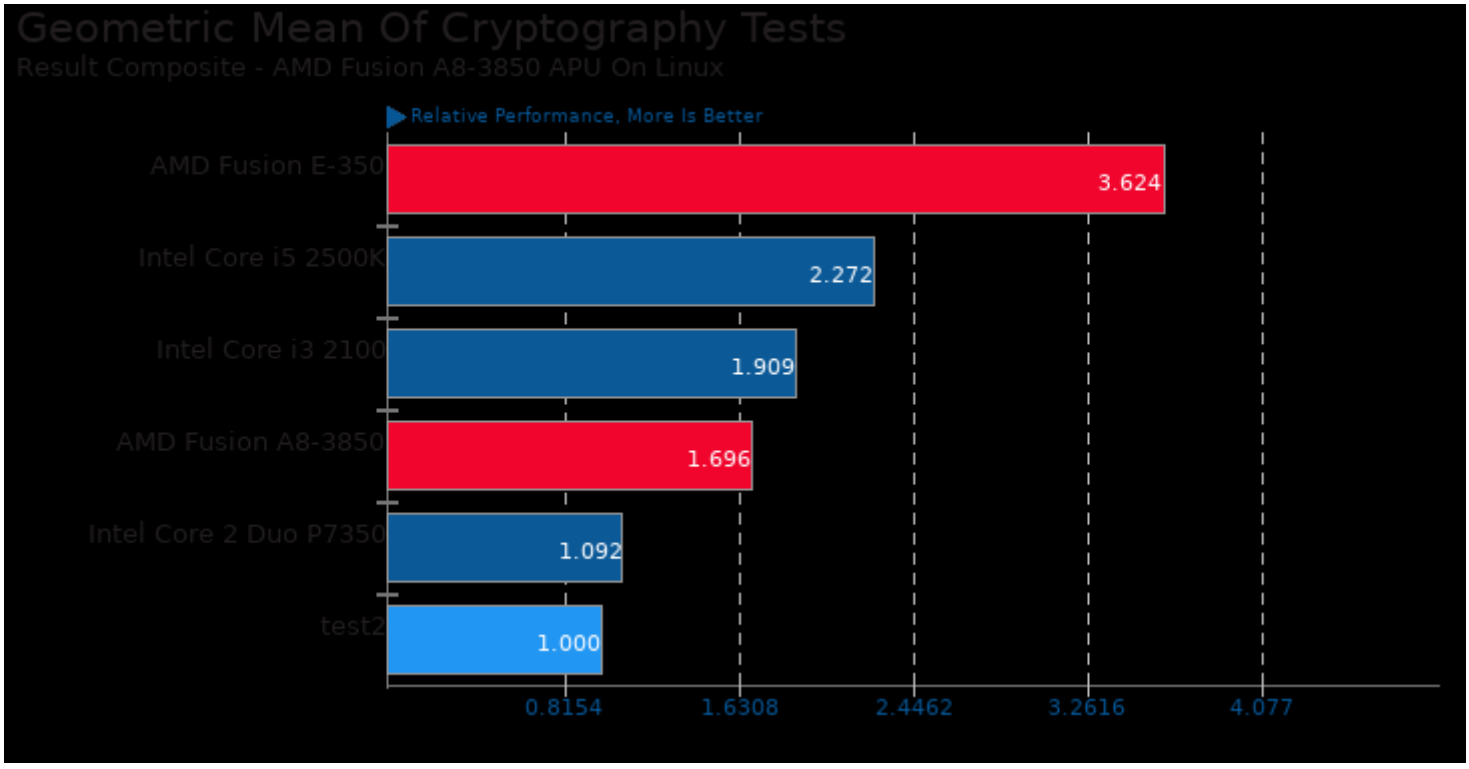
Geometric mean based upon tests: pts/tscp, pts/c-ray, pts/compress-7zip, pts/apache, pts/john-the-ripper, pts/x264, pts/clomp and pts/openssl



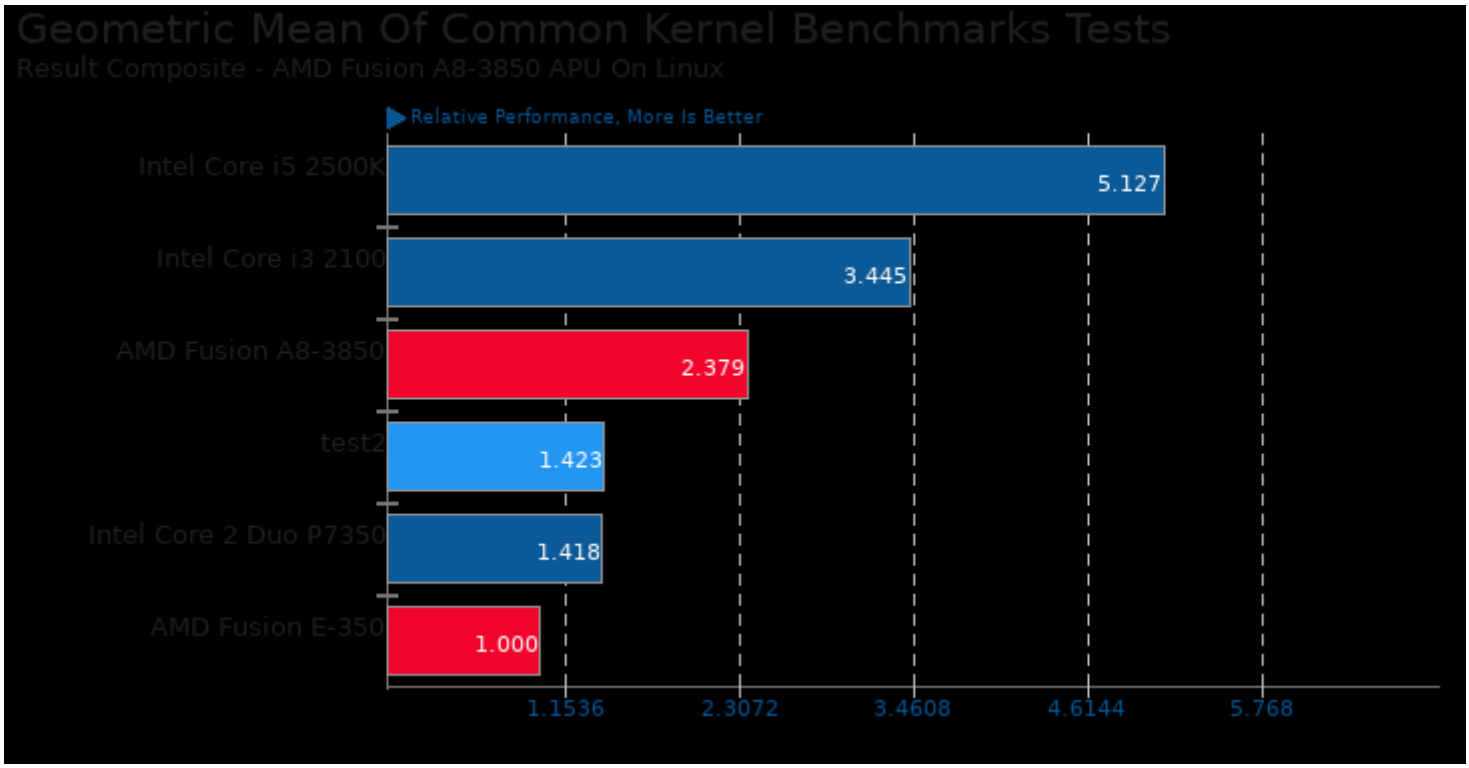
Geometric mean based upon tests: pts/apache, pts/c-ray, pts/compress-7zip, pts/x264, pts/john-the-ripper, pts/openssl and pts/clomp



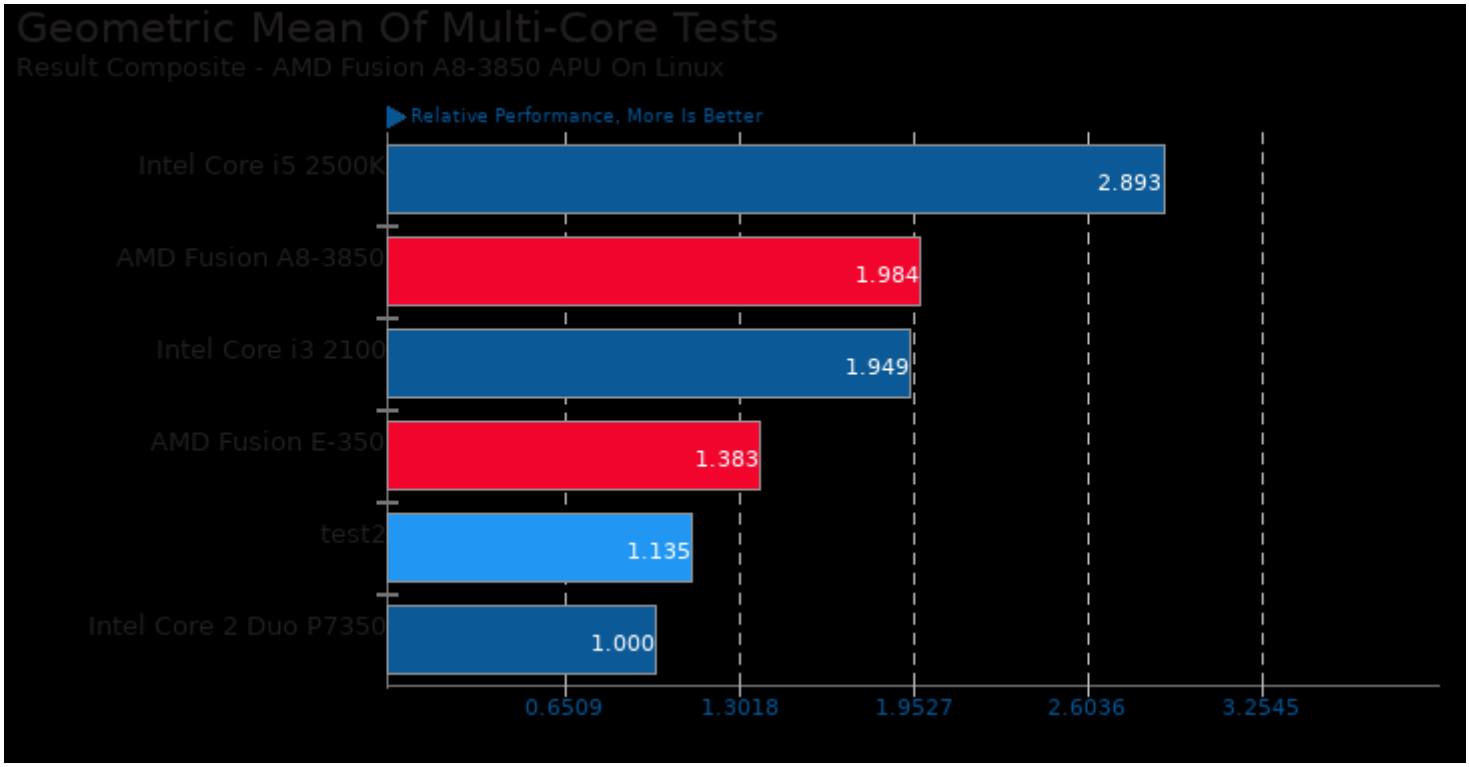
Geometric mean based upon tests: pts/c-ray, pts/smallpt and pts/x264



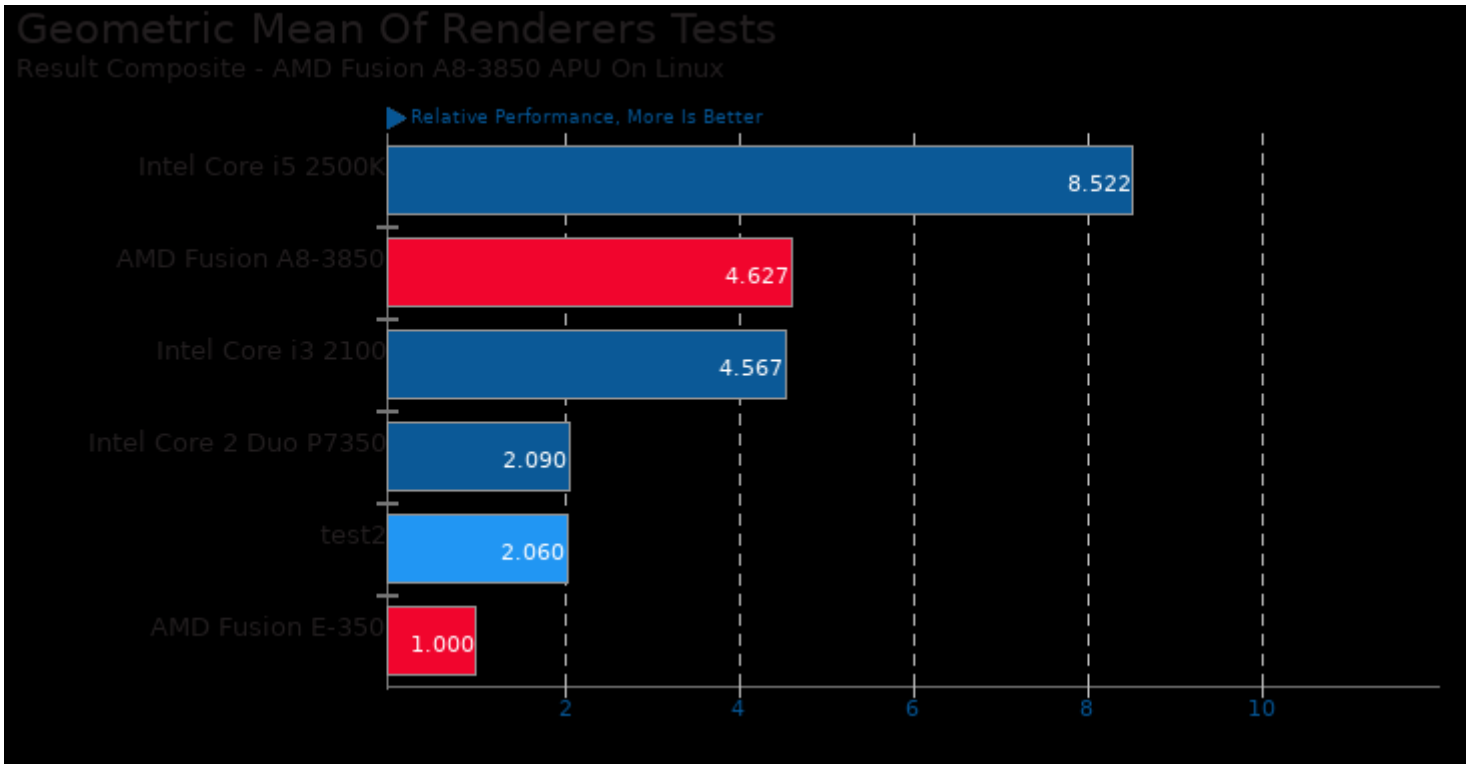
Geometric mean based upon tests: pts/openssl and pts/john-the-ripper



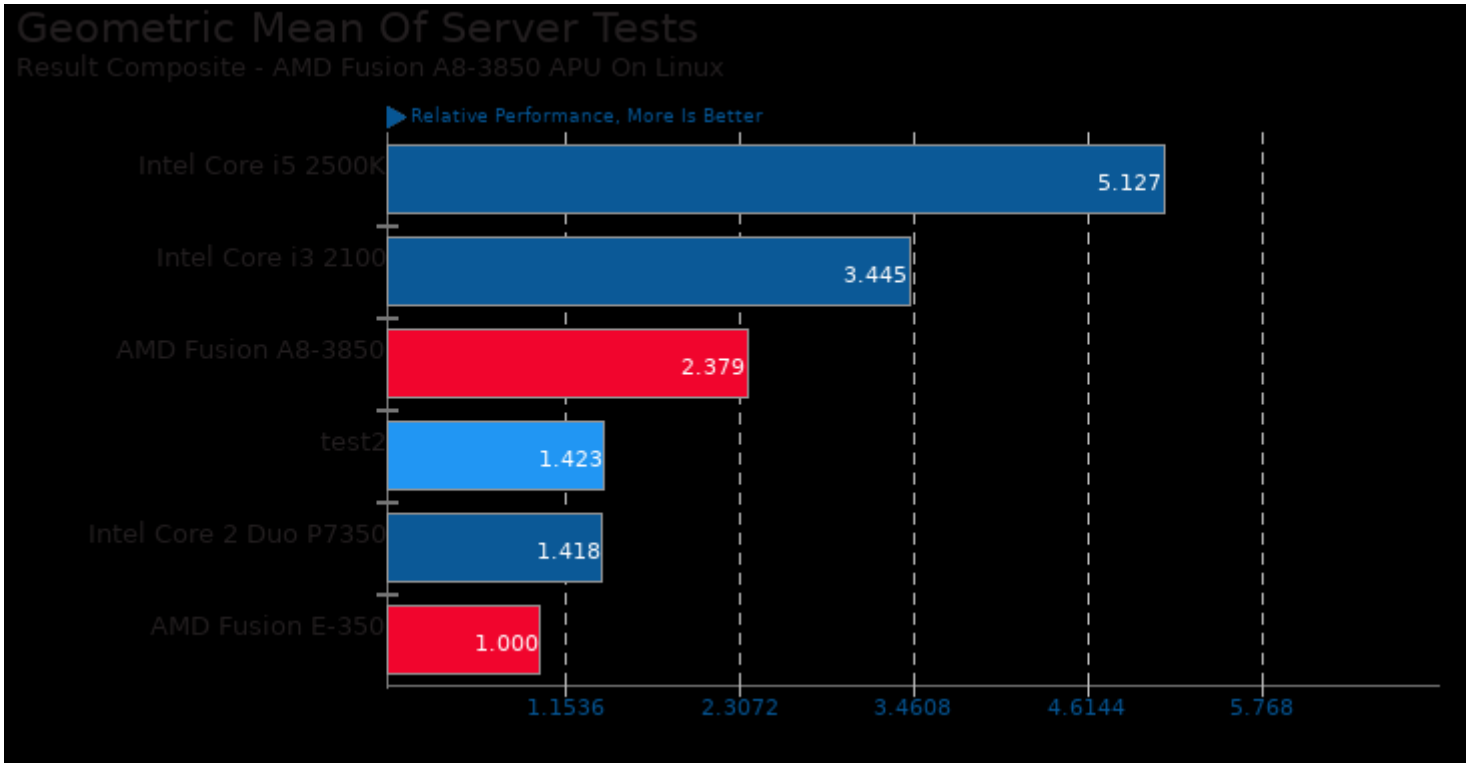
Geometric mean based upon tests: pts/apache and pts/openssl



Geometric mean based upon tests: pts/c-ray, pts/x264, pts/john-the-ripper, pts/smallpt and pts/compress-7zip

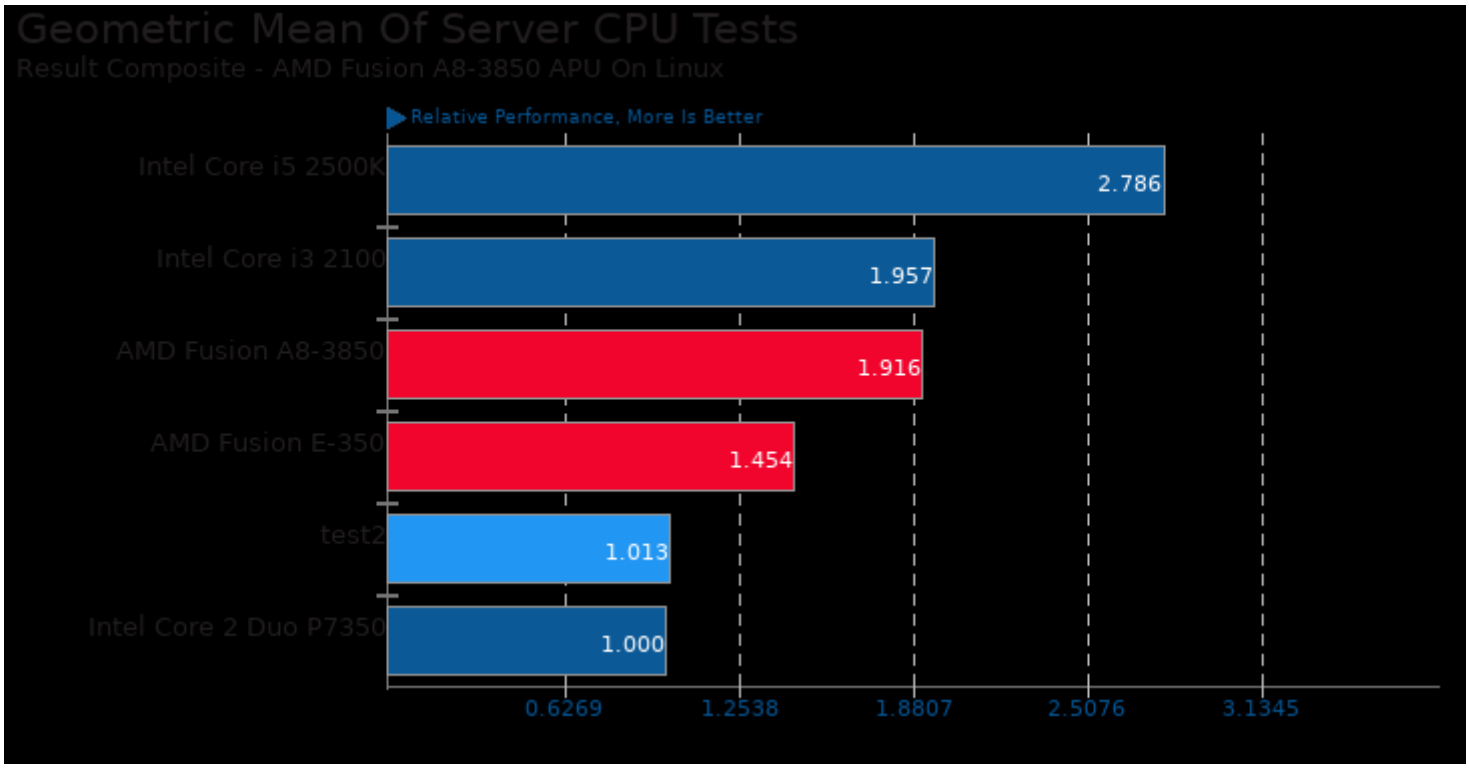


Geometric mean based upon tests: pts/c-ray and pts/smallpt



Geometric mean based upon tests: pts/apache and pts/openssl

AMD Fusion A8-3850 APU On Linux



Geometric mean based upon tests: pts/john-the-ripper, pts/x264, pts/compress-7zip, pts/c-ray and pts/openssl

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 09:06.