www.phoronix-test-suite.com

Processor Tests

Intel Core 2 Duo P8700 testing with a Apple Mac-F2268AC8 v1.0 and NVIDIA GeForce 9400M/ /SSE2 256MB on LinuxMint 18.3 via the Phoronix Test Suite.

Automated Executive Summary

FX8320 had the most wins, coming in first place for 78% of the tests.

Based on the geometric mean of all complete results, the fastest (FX8320) was 2.123x the speed of the slowest (Mac-ocessor_test01). A10-7800-cpufreq-performance was 0.713x the speed of FX8320, A10-7800 was 0.996x the speed of A10-7800-cpufreq-performance, Mac-ocessor_test01 was 0.664x the speed of A10-7800.

Test Systems:

FX8320

Processor: AMD FX-8320 Eight-Core @ 3.50GHz (8 Cores), Motherboard: ASUS SABERTOOTH 990FX, Memory: 8192MB, Disk: 240GB INTEL SSDSC2BP24 + 3000GB VD10-0, Graphics: Gallium 0.4 on AMD BARTS (DRM 2.41.0

LLVM 3.5.0) 1024MB, Monitor: BenQ BL2201

OS: Gentoo/Linux, Kernel: 4.0.9-gentoo-test-release (x86_64), Desktop: KDE Frameworks 5, Display Server: X Server 1.16.4, Display Driver: radeon 7.5.0, OpenGL: 3.3 Mesa 11.0.3 Gallium 0.4, Compiler: GCC 4.9.3 + LLVM 3.5.0, File-System: ext4, Screen Resolution: 5040x1050

Environment Notes: LIBGL_DRIVERS_PATH=/usr/lib64/dri:/usr/lib32/dri
Compiler Notes: --bindir=/usr/x86_64-pc-linux-gnu/gcc-bin/4.9.3 --build=x86_64-pc-linux-gnu --datadir=/usr/share/gcc-data/x86_64-pc-linux-gnu/4.9.3 --disable-altivec --disable-fixed-point --disable-libcilkrts --disable-libgcj --disable-libmudflap --disable-libssp --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-languages=c,c++,fortran --enable-libgomp --enable-libsanitizer --enable-libstdcxx-time --enable-lto --enable-multilib --enable-nls --enable-obsolete --enable-secureplt --enable-shared --enable-targets=all --enable-threads=posix --host=x86_64-pc-linux-gnu --includedir=/usr/lib/gcc/x86_64-pc-linux-gnu/4.9.3/include --mandir=/usr/share/gcc-data/x86_64-pc-linux-gnu/4.9.3/man --with-multilib-list=m32,m64 --with-python-dir=/share/gcc-data/x86_64-pc-linux-gnu/4.9.3/python --without-cloog
Processor Notes: Scaling Governor: acpi-cpufreq conservative

A10-7800

A10-7800-cpufreq-performance

Processor: AMD A10-7800 Radeon R7 12 Compute Cores 4C+8G @ 3.50GHz (4 Cores), Motherboard: Gigabyte F2A88XN-WIFI, Memory: 7168MB, Disk: 60GB KINGSTON SV300S3, Graphics: 1024MB, Monitor: SONY TV

OS: Gentoo/Linux, Kernel: 4.1.12-gentoo-test (x86_64), Compiler: GCC 4.9.3 + LLVM 3.5.0, File-System: ext4, Screen Resolution: 1280x720

Compiler Notes: --bindir=/usr/x86_64-pc-linux-gnu/gcc-bin/4.9.3 --build=x86_64-pc-linux-gnu --datadir=/usr/share/gcc-data/x86_64-pc-linux-gnu/4.9.3 --disable-altivec --disable-fixed-point --disable-libcilkrts --disable-libgcj --disable-libmudflap --disable-libssp --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-languages=c,c++,fortran --enable-libgomp --enable-libsanitizer --enable-libstdcxx-time --enable-lto --enable-multilib --enable-nls --enable-obsolete --enable-secureplt --enable-shared --enable-targets=all --enable-threads=posix --host=x86_64-pc-linux-gnu --includedir=/usr/lib/gcc/x86_64-pc-linux-gnu/4.9.3/include --mandir=/usr/share/gcc-data/x86_64-pc-linux-gnu/4.9.3/man --with-multilib-list=m32,m64 --with-python-dir=/share/gcc-data/x86_64-pc-linux-gnu/4.9.3/python --without-cloog
Processor Notes: Scaling Governor: acpi-cpufreq performance

Mac-ocessor_test01

Processor: Intel Core 2 Duo P8700 @ 2.53GHz (2 Cores), Motherboard: Apple Mac-F2268AC8 v1.0, Chipset: NVIDIA MCP79, Memory: 4096MB, Disk: 750GB Seagate ST9750420AS + 250GB Seagate ST3250823A, Graphics: NVIDIA GeForce 9400M/ /SSE2 256MB (100/1064MHz), Audio: Cirrus Logic CS4206, Monitor: Apple Color LCD, Network: NVIDIA MCP79 + Broadcom BCM4322 802.11a/b/g/n

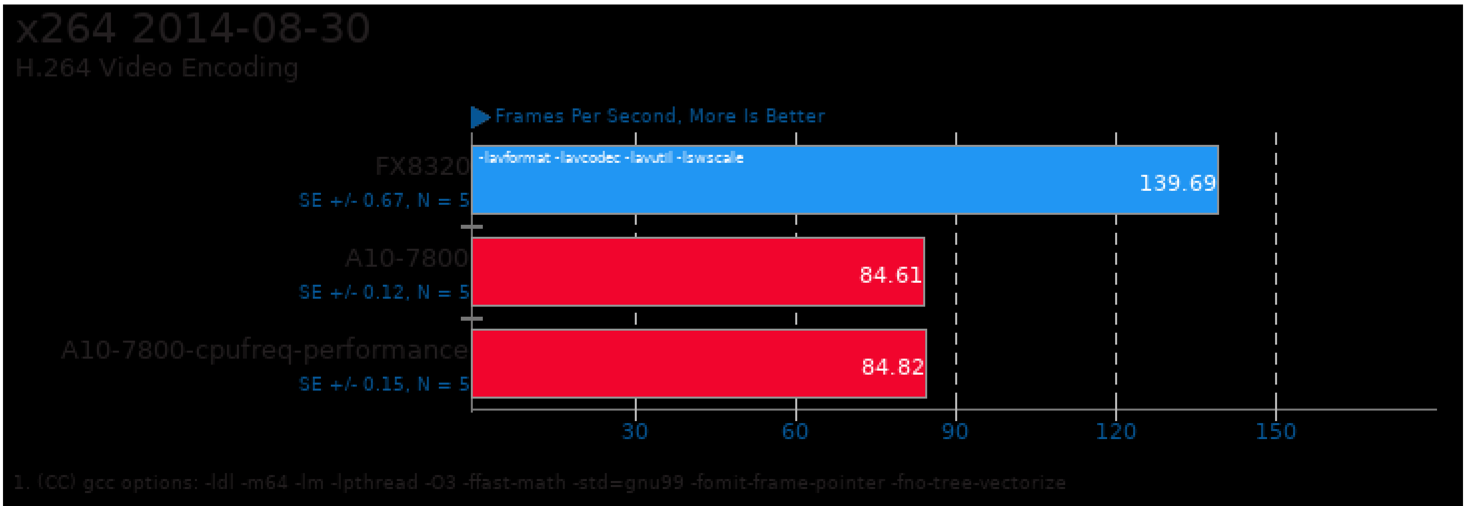
OS: LinuxMint 18.3, Kernel: 4.10.0-38-generic (x86_64), Desktop: Cinnamon 3.6.7, Display Driver: NVIDIA 340.104, OpenGL: 3.3.0, Compiler: GCC 5.4.0 20160609, File-System: ext4, Screen Resolution: 1280x800

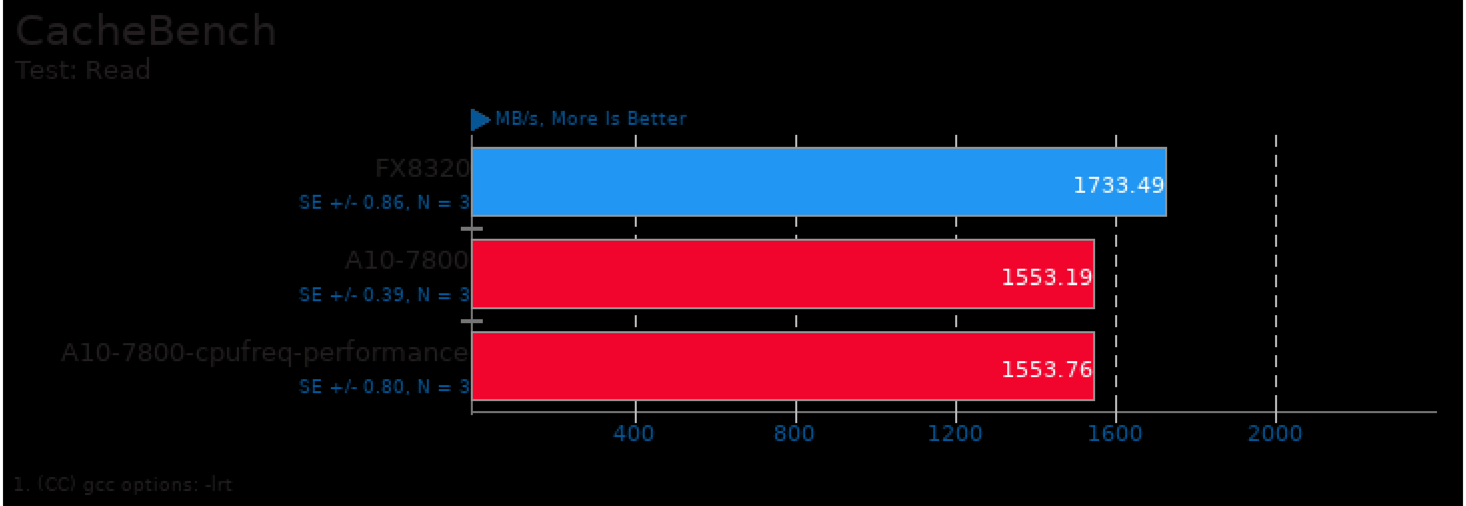
Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
Compiler Notes: --build=x86_64-linux-gnu --disable-browser-plugin --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-gtk-cairo --enable-java-awt=gtk --enable-java-home --enable-languages=c,ada,c++,java,go,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-arch-directory=amd64 --with-default-libstdcxx-abi=new --with-multilib-list=m32,m64,mx32 --with-tune=generic -v
Processor Notes: Scaling Governor: acpi-cpufreq ondemand

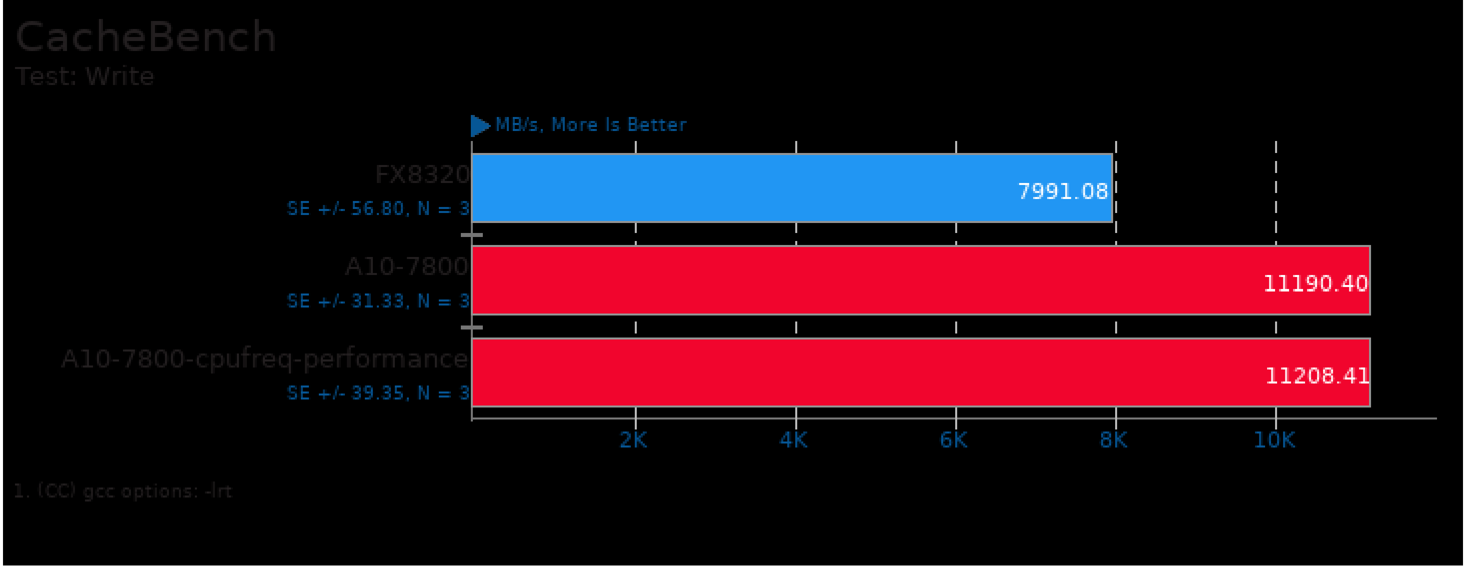
	FX8320	A10-7800	A10-7800-cpufreq-performance	Mac-ocessor_test01
x264 - H.2.V.E (FPS)	139.69	84.61	84.82	

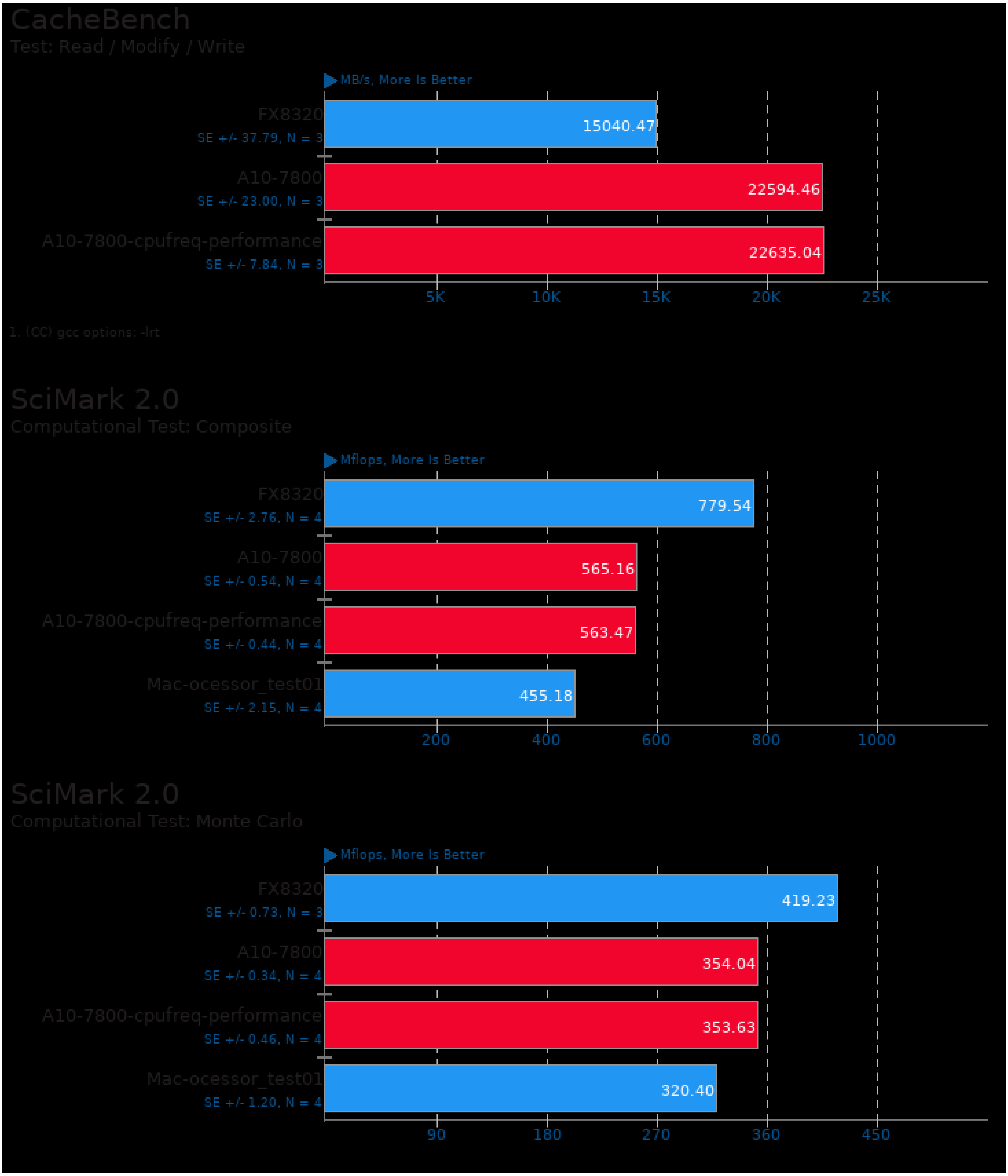
Processor Tests

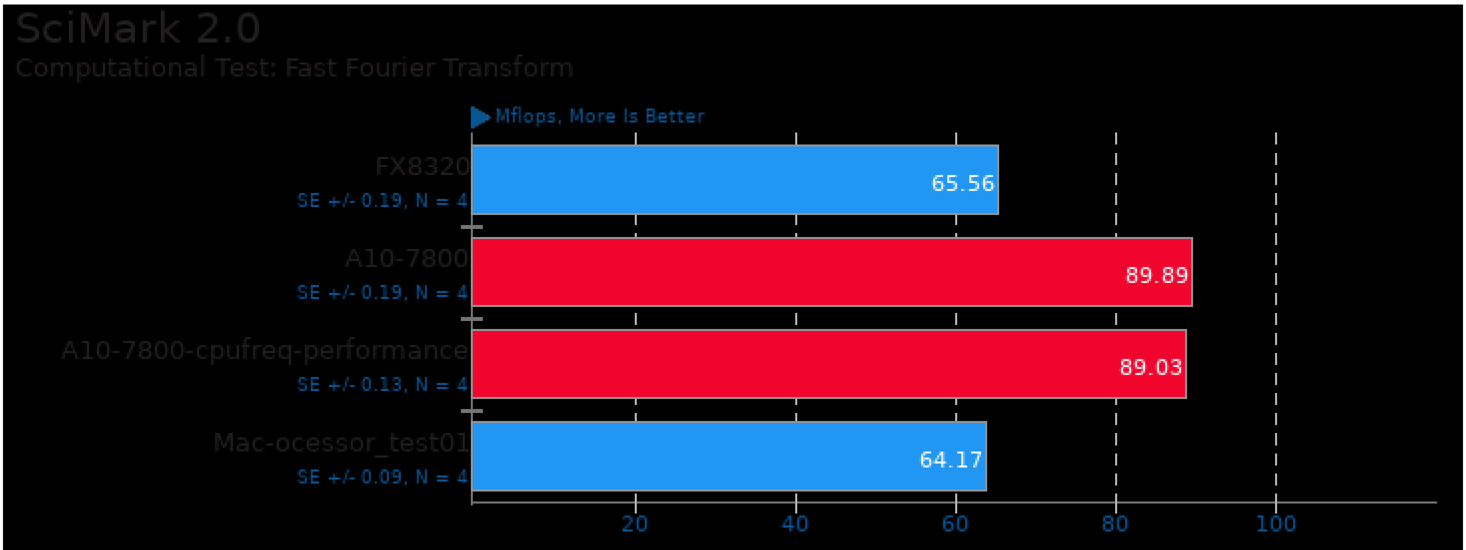
Normalized	100%	60.57%	60.72%	
Standard Deviation	1.1%	0.3%	0.4%	
CacheBench - Read (MB/s)	1733	1553	1554	
Normalized	100%	89.6%	89.63%	
Standard Deviation	0.1%	0%	0.1%	
CacheBench - Write (MB/s)	7991	11190	11208	
Normalized	71.3%	99.84%	100%	
Standard Deviation	1.2%	0.5%	0.6%	
CacheBench - R.M.W (MB/s)	15040	22594	22635	
Normalized	66.45%	99.82%	100%	
Standard Deviation	0.4%	0.2%	0.1%	
SciMark - Composite (Mflops)	779.54	565.16	563.47	455.18
Normalized	100%	72.5%	72.28%	58.39%
Standard Deviation	0.7%	0.2%	0.2%	0.9%
SciMark - Monte Carlo (Mflops)	419.23	354.04	353.63	320.40
Normalized	100%	84.45%	84.35%	76.43%
Standard Deviation	0.3%	0.2%	0.3%	0.8%
SciMark - F.F.T (Mflops)	65.56	89.89	89.03	64.17
Normalized	72.93%	100%	99.04%	71.39%
Standard Deviation	0.6%	0.4%	0.3%	0.3%
SciMark - S.M.M (Mflops)	982.14	771.47	771.10	617.92
Normalized	100%	78.55%	78.51%	62.92%
Standard Deviation	0.1%	0.2%	0.4%	1.3%
SciMark - D.L.M.F (Mflops)	1685	959.32	952.76	543.77
Normalized	100%	56.95%	56.56%	32.28%
Standard Deviation	1.6%	0.3%	0.4%	2.7%
SciMark - J.S.O.R (Mflops)	745.96	651.07	651.10	729.65
Normalized	100%	87.28%	87.28%	97.81%
Standard Deviation	0%	0%	0%	0.2%
7-Zip Compression - C.S.T (MIPS)	18500	9331	9376	3781
Normalized	100%	50.44%	50.68%	20.44%
Standard Deviation	0.8%	0.5%	0.4%	3.4%
C-Ray - Total Time (sec)	28.43	56.00	56.11	101.42
Normalized	100%	50.77%	50.67%	28.03%
Standard Deviation	0%	0%	0.2%	0.5%
Parallel BZIP2 Compression - 2.F.C (sec)	7.50	18.27	17.48	33.06
Normalized	100%	41.05%	42.91%	22.69%
Standard Deviation	0.7%	1.2%	3.2%	2.4%
Gzip Compression - 2.F.C (sec)	14.59	15.54	15.27	30.67
Normalized	100%	93.89%	95.55%	47.57%
Standard Deviation	1.1%	0.6%	0.4%	3.7%

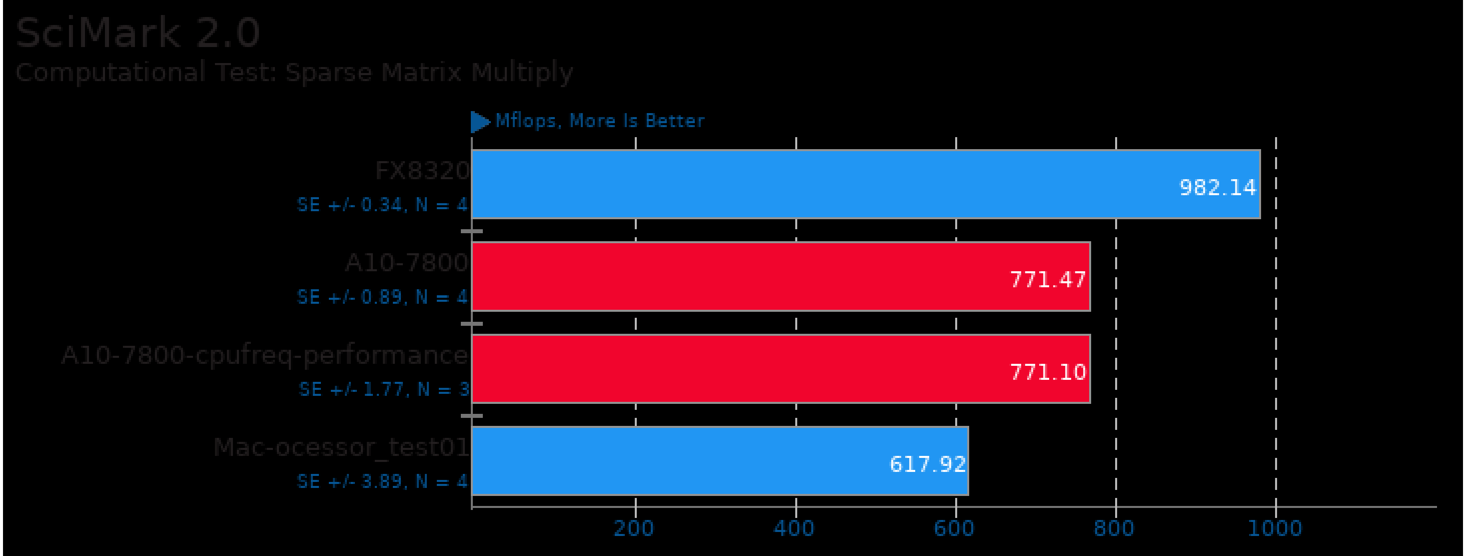

x264 2014-08-30
H.264 Video Encoding
Frames Per Second, More Is Better
FX8320
SE +/- 0.67, N = 5
-lavformat -lavcodec -lavutil -lswscale
139.69
A10-7800
SE +/- 0.12, N = 5
84.61
A10-7800-cpufreq-performance
SE +/- 0.15, N = 5
84.82
30
60
90
120
150
1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fomit-frame-pointer -fno-tree-vectorize

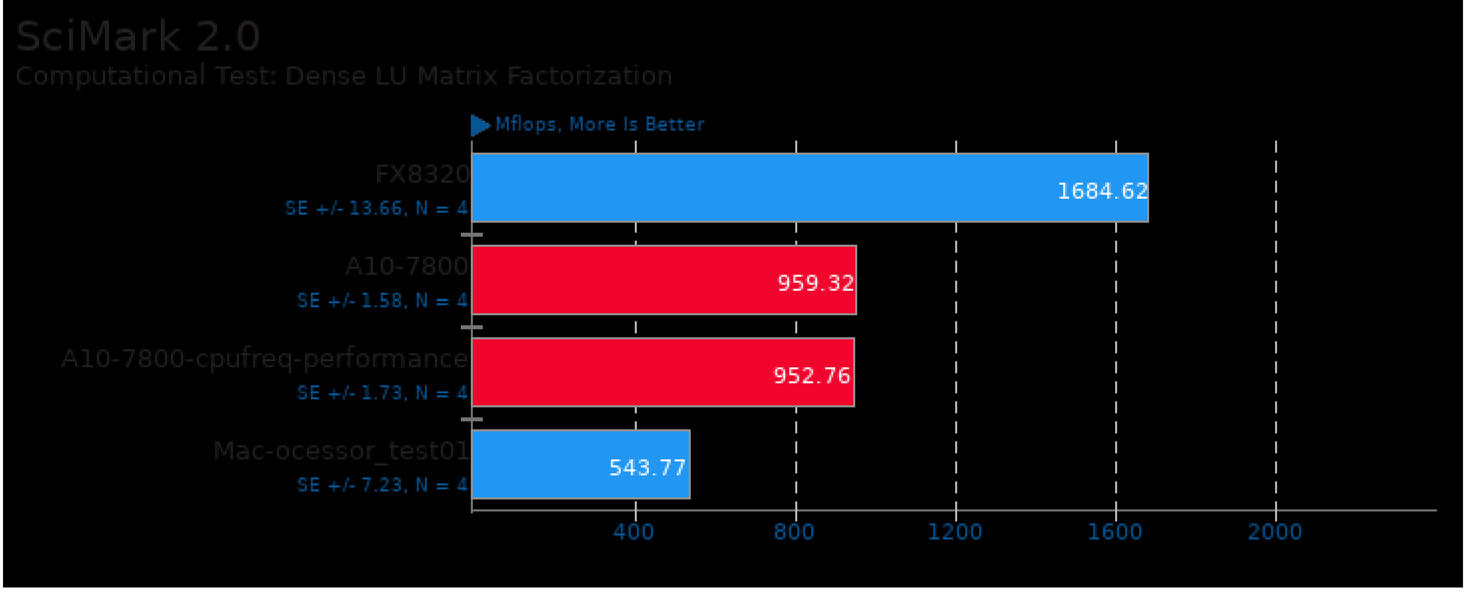

CacheBench
Test: Read
MB/s, More Is Better
FX8320
SE +/- 0.86, N = 3
1733.49
A10-7800
SE +/- 0.39, N = 3
1553.19
A10-7800-cpufreq-performance
SE +/- 0.80, N = 3
1553.76
400
800
1200
1600
2000
1. (CC) gcc options: -lrt

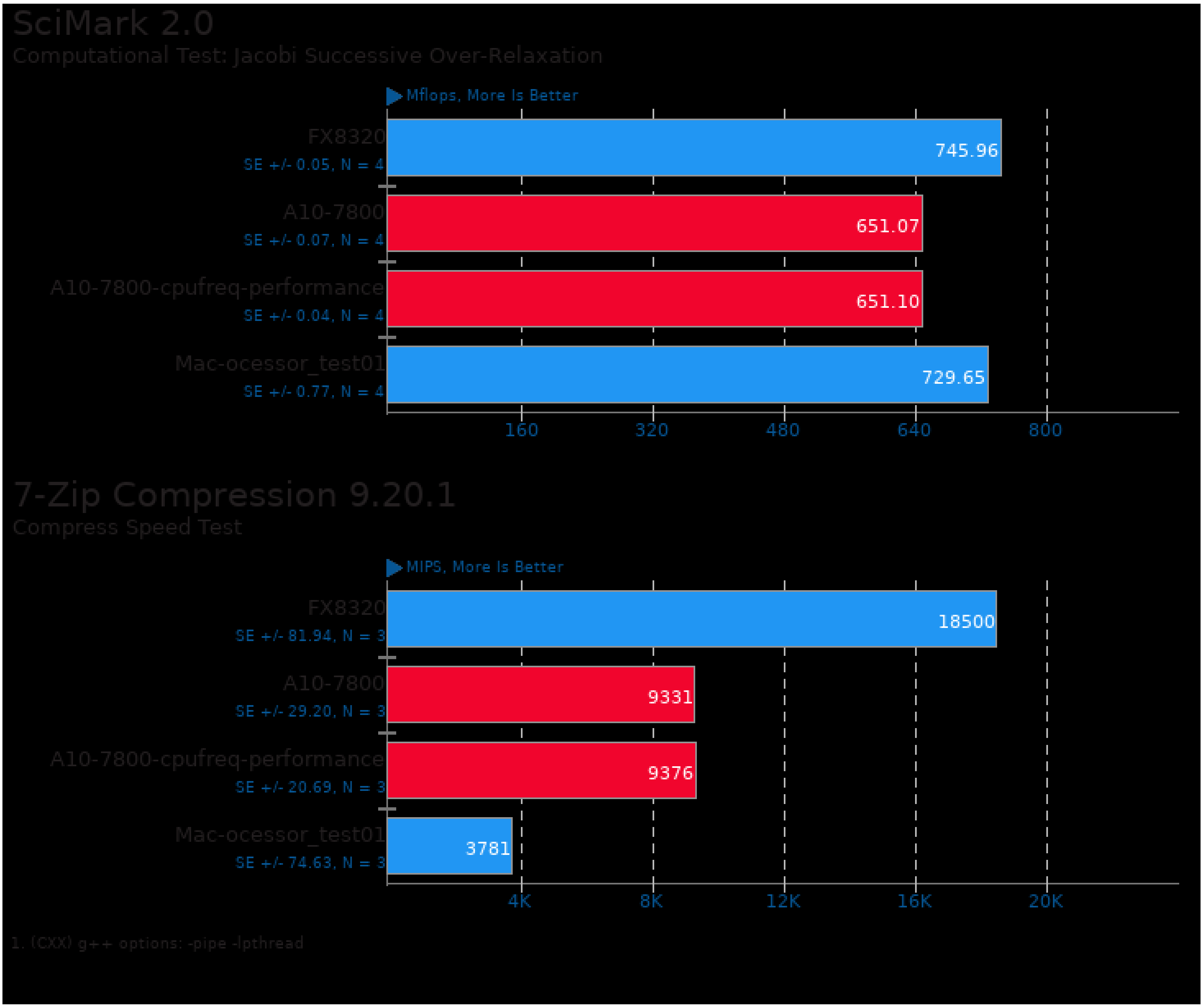

CacheBench
Test: Write
MB/s, More Is Better
FX8320
SE +/- 56.80, N = 3
7991.08
A10-7800
SE +/- 31.33, N = 3
11190.40
A10-7800-cpufreq-performance
SE +/- 39.35, N = 3
11208.41
2K
4K
6K
8K
10K
1. (CC) gcc options: -lrt

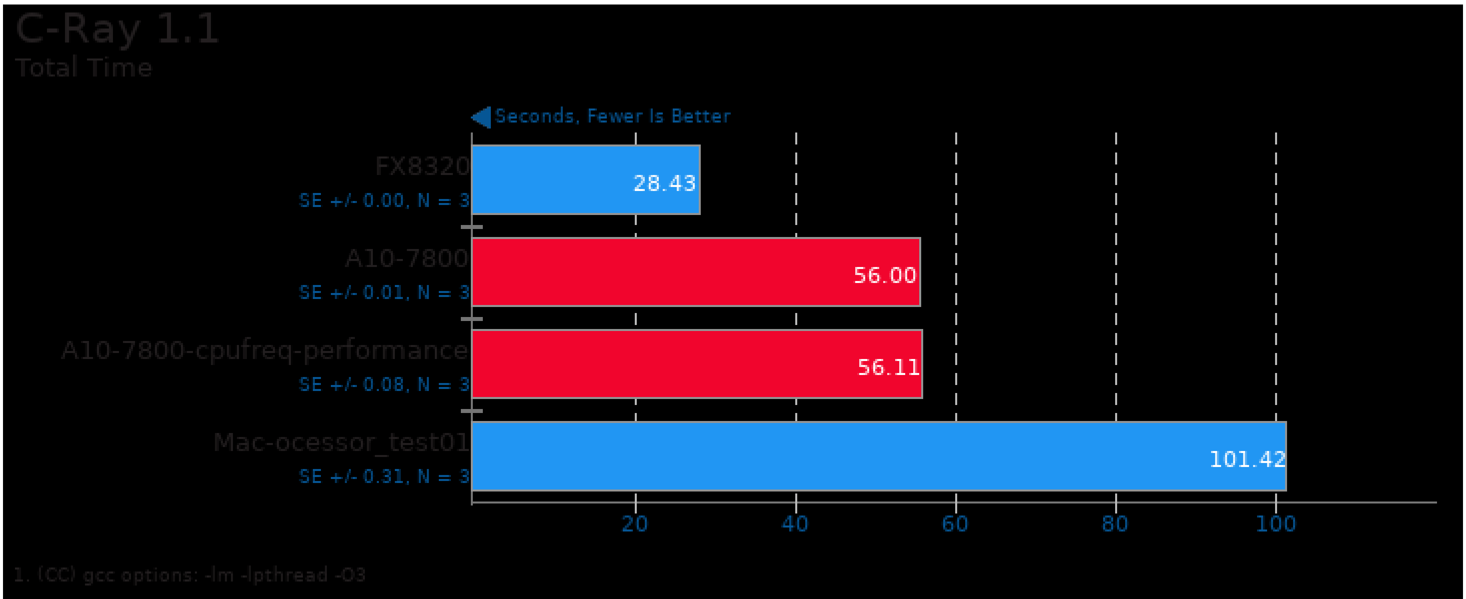

CacheBench
Test: Read / Modify / Write
MB/s, More Is Better
FX8320
SE +/- 37.79, N = 3
15040.47
A10-7800
SE +/- 23.00, N = 3
22594.46
A10-7800-cpufreq-performance
SE +/- 7.84, N = 3
22635.04
5K
10K
15K
20K
25K
1. (CC) gcc options: -lrt
SciMark 2.0
Computational Test: Composite
Mflops, More Is Better
FX8320
SE +/- 2.76, N = 4
779.54
A10-7800
SE +/- 0.54, N = 4
565.16
A10-7800-cpufreq-performance
SE +/- 0.44, N = 4
563.47
Mac-ocessor_test01
SE +/- 2.15, N = 4
455.18
200
400
600
800
1000
SciMark 2.0
Computational Test: Monte Carlo
Mflops, More Is Better
FX8320
SE +/- 0.73, N = 3
419.23
A10-7800
SE +/- 0.34, N = 4
354.04
A10-7800-cpufreq-performance
SE +/- 0.46, N = 4
353.63
Mac-ocessor_test01
SE +/- 1.20, N = 4
320.40
90
180
270
360
450

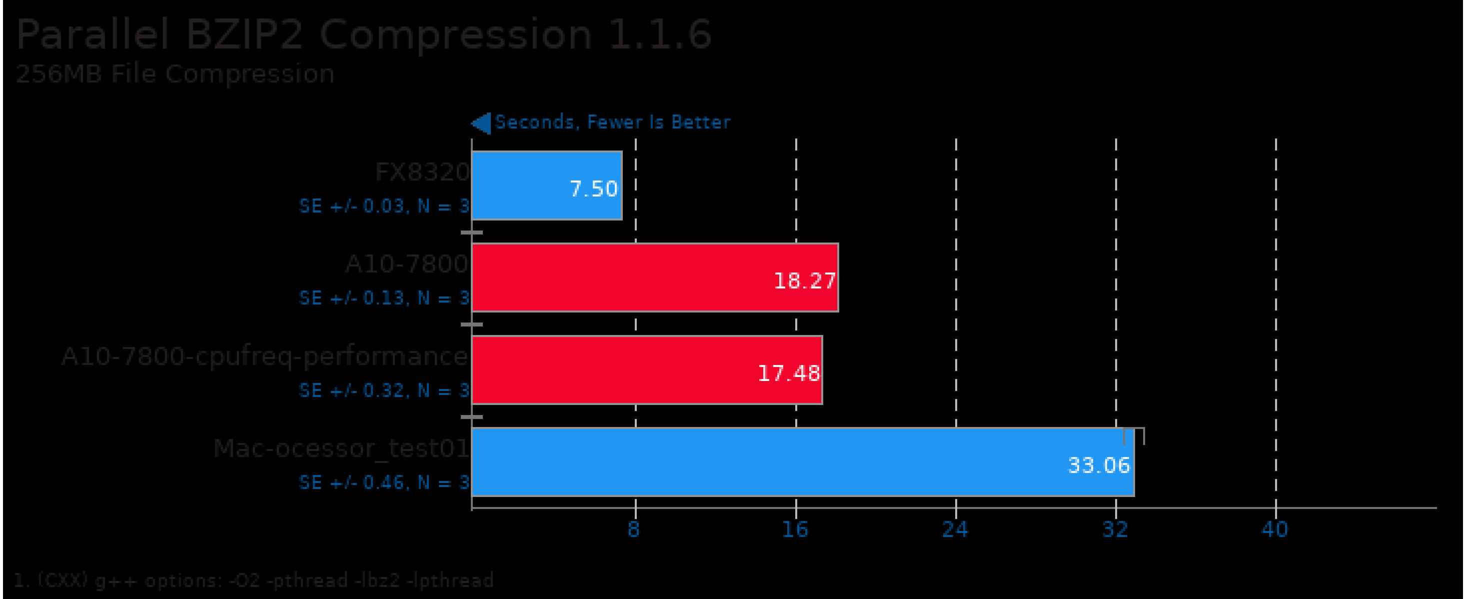

SciMark 2.0
Computational Test: Fast Fourier Transform
Mflops, More Is Better
FX8320
SE +/- 0.19, N = 4
65.56
A10-7800
SE +/- 0.19, N = 4
89.89
A10-7800-cpufreq-performance
SE +/- 0.13, N = 4
89.03
Mac-ocessor_test01
SE +/- 0.09, N = 4
64.17
20
40
60
80
100

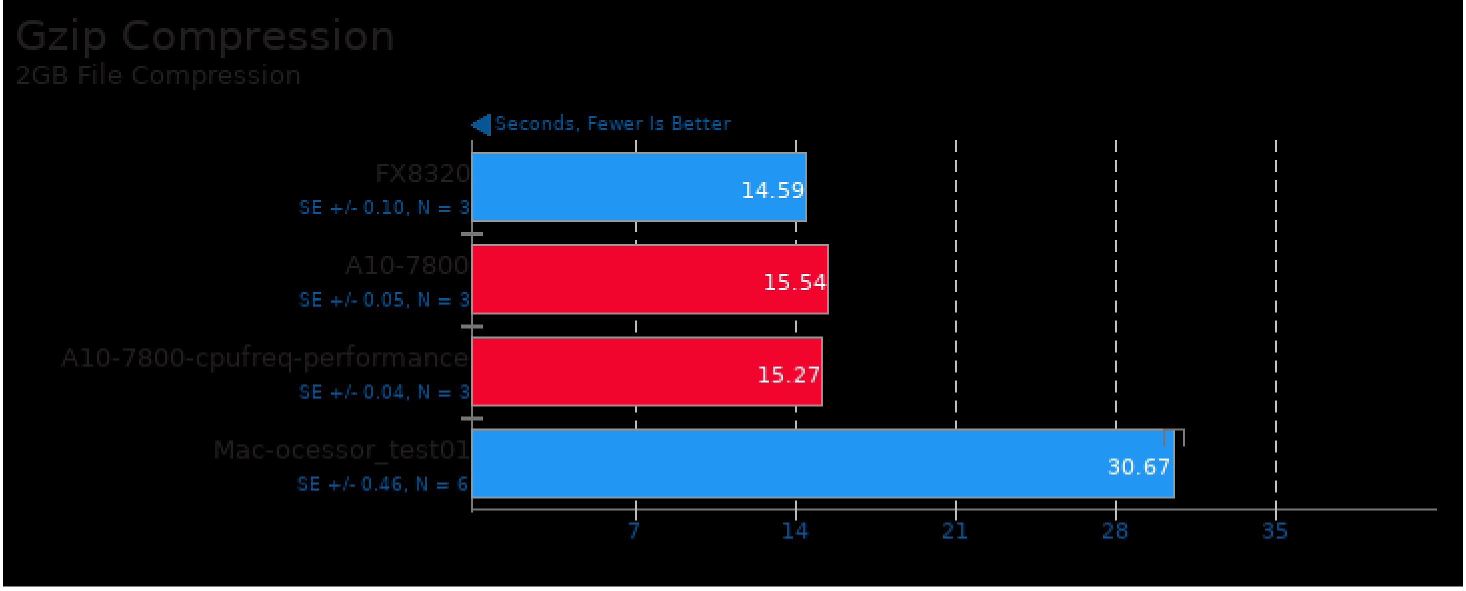

SciMark 2.0
Computational Test: Sparse Matrix Multiply
Mflops, More Is Better
FX8320
SE +/- 0.34, N = 4
982.14
A10-7800
SE +/- 0.89, N = 4
771.47
A10-7800-cpufreq-performance
SE +/- 1.77, N = 3
771.10
Mac-ocessor_test01
SE +/- 3.89, N = 4
617.92
200
400
600
800
1000


SciMark 2.0
Computational Test: Dense LU Matrix Factorization
Mflops, More Is Better
FX8320
SE +/- 13.66, N = 4
1684.62
A10-7800
SE +/- 1.58, N = 4
959.32
A10-7800-cpufreq-performance
SE +/- 1.73, N = 4
952.76
Mac-ocessor_test01
SE +/- 7.23, N = 4
543.77
400
800
1200
1600
2000

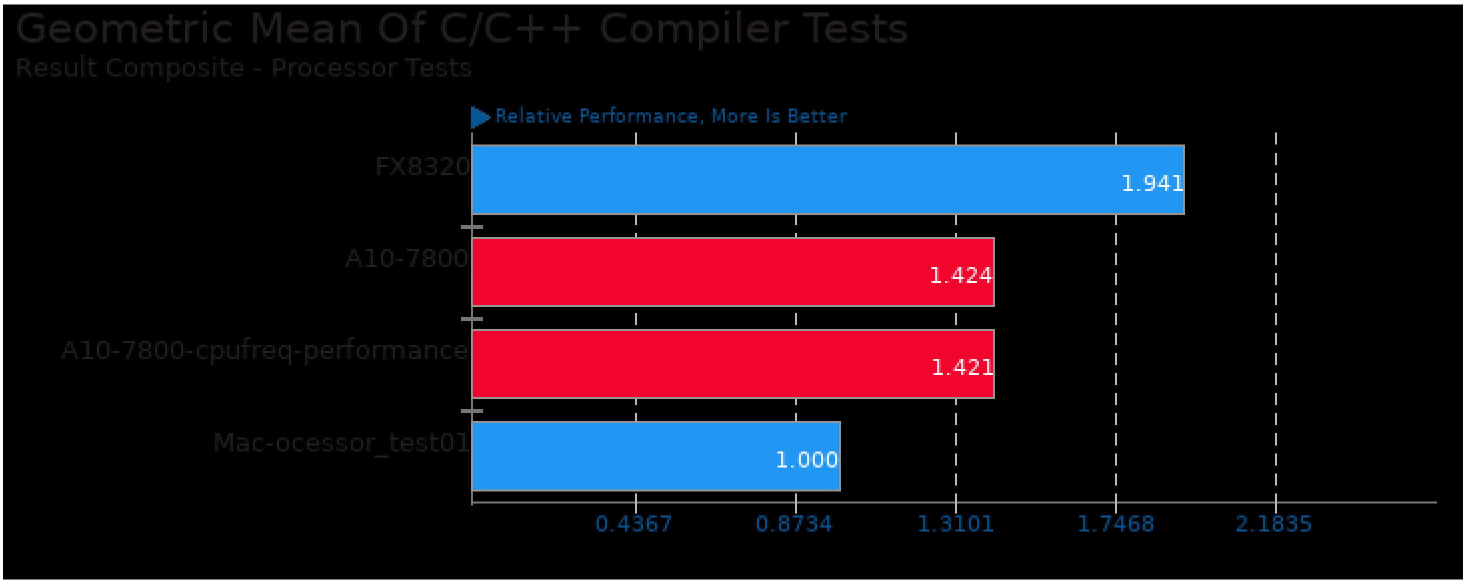

SciMark 2.0
Computational Test: Jacobi Successive Over-Relaxation
Mflops, More Is Better
FX8320
SE +/- 0.05, N = 4
745.96
A10-7800
SE +/- 0.07, N = 4
651.07
A10-7800-cpufreq-performance
SE +/- 0.04, N = 4
651.10
Mac-ocessor_test01
SE +/- 0.77, N = 4
729.65
160
320
480
640
800
7-Zip Compression 9.20.1
Compress Speed Test
MIPS, More Is Better
FX8320
SE +/- 81.94, N = 3
18500
A10-7800
SE +/- 29.20, N = 3
9331
A10-7800-cpufreq-performance
SE +/- 20.69, N = 3
9376
Mac-ocessor_test01
SE +/- 74.63, N = 3
3781
4K
8K
12K
16K
20K
1. (CXX) g++ options: -pipe -lpthread


C-Ray 1.1
Total Time
Seconds, Fewer Is Better
FX8320
SE +/- 0.00, N = 3
28.43
A10-7800
SE +/- 0.01, N = 3
56.00
A10-7800-cpufreq-performance
SE +/- 0.08, N = 3
56.11
Mac-ocessor_test01
SE +/- 0.31, N = 3
101.42
20
40
60
80
100
1. (CC) gcc options: -lm -lpthread -O3

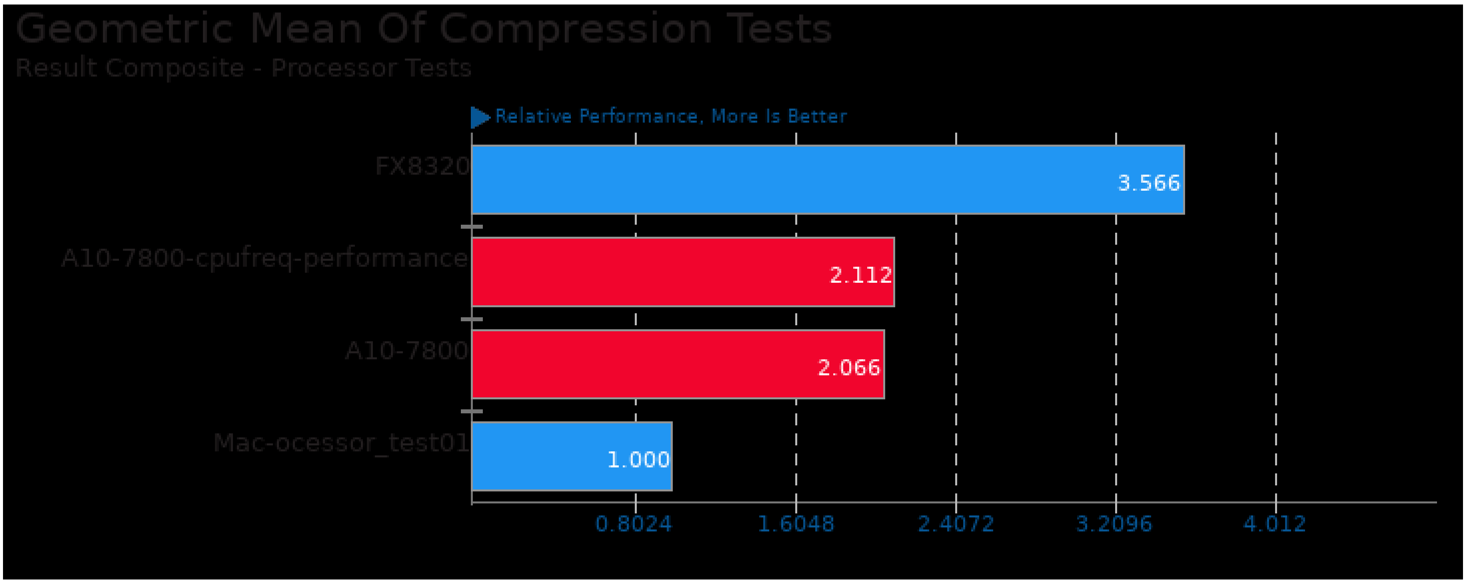

Parallel BZIP2 Compression 1.1.6
256MB File Compression
Seconds, Fewer Is Better
FX8320
SE +/- 0.03, N = 3
7.50
A10-7800
SE +/- 0.13, N = 3
18.27
A10-7800-cpufreq-performance
SE +/- 0.32, N = 3
17.48
Mac-ocessor_test01
SE +/- 0.46, N = 3
33.06
8
16
24
32
40
1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread


Gzip Compression
2GB File Compression
Seconds, Fewer Is Better
FX8320
SE +/- 0.10, N = 3
14.59
A10-7800
SE +/- 0.05, N = 3
15.54
A10-7800-cpufreq-performance
SE +/- 0.04, N = 3
15.27
Mac-ocessor_test01
SE +/- 0.46, N = 6
30.67
7
14
21
28
35

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

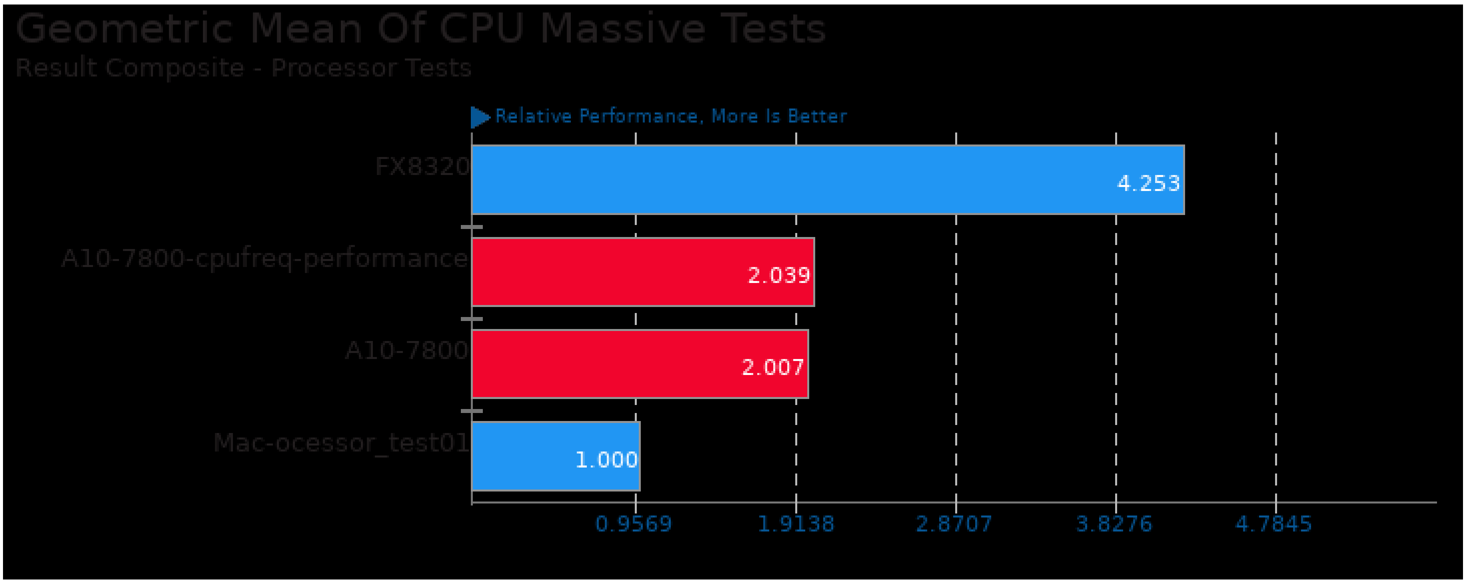


Geometric mean based upon tests: pts/scimark2, pts/c-ray, pts/compress-7zip and pts/x264

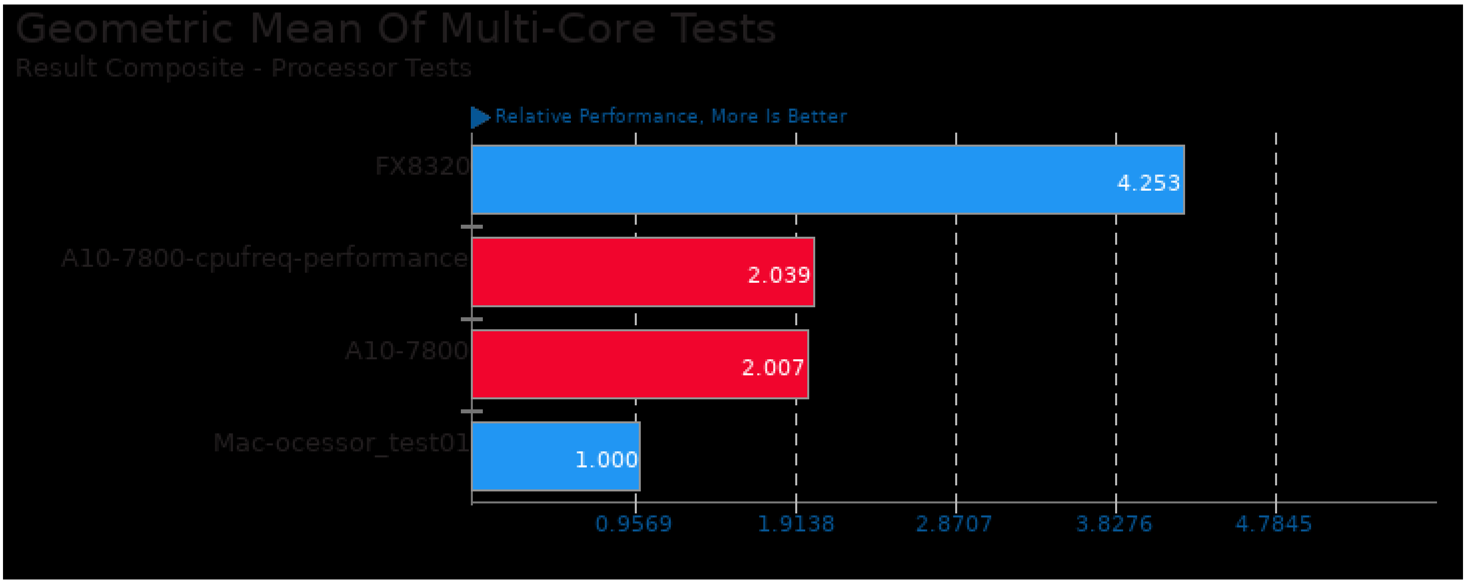


Geometric mean based upon tests: pts/compress-7zip, pts/compress-gzip and pts/compress-pbzip2

Processor Tests

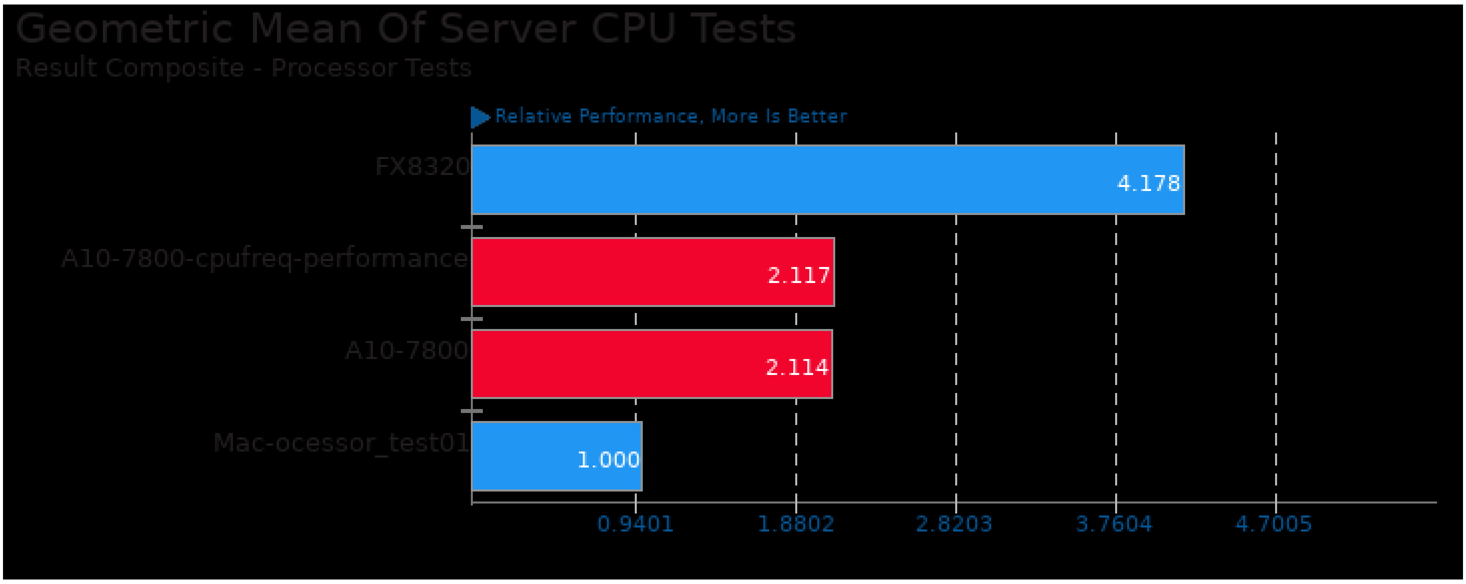


Geometric mean based upon tests: pts/c-ray, pts/cachebench, pts/compress-7zip, pts/compress-pbzip2 and pts/x264

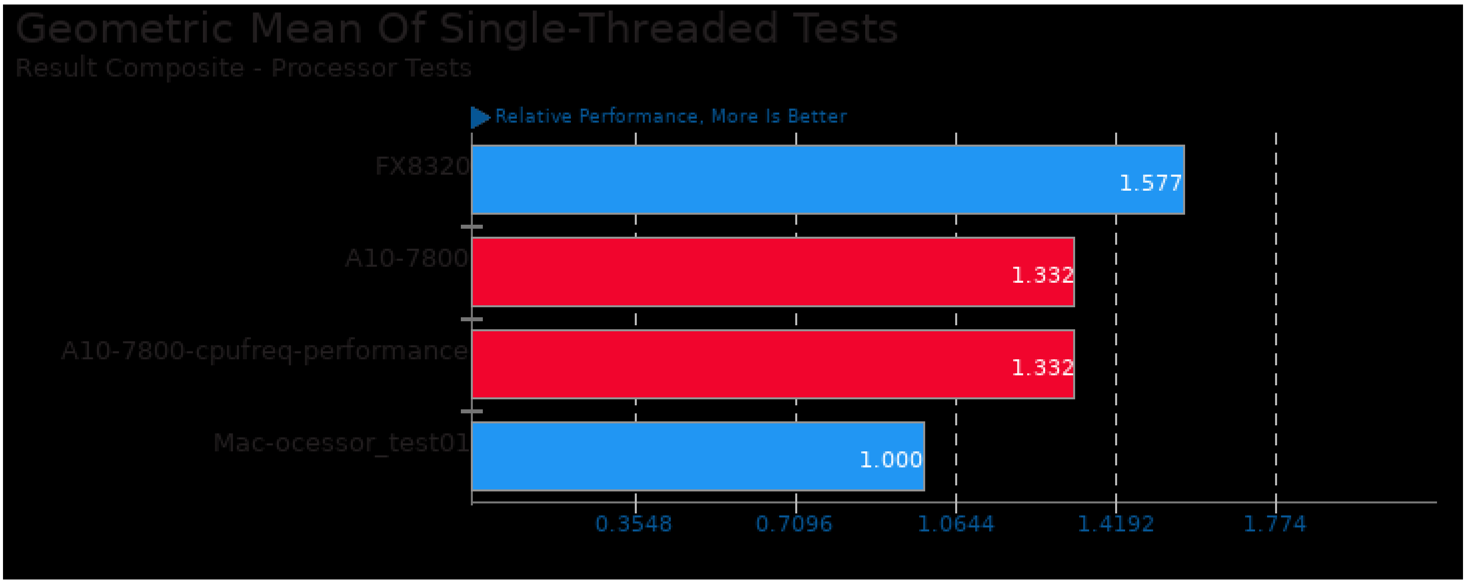


Geometric mean based upon tests: pts/c-ray, pts/x264, pts/compress-7zip and pts/compress-pbzip2

Processor Tests



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



Geometric mean based upon tests: pts/cachebench, pts/scimark2 and pts/compress-gzip

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 05:39.