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# ARM-SBC-Benchmarks-RPI-B-Plus

Running pts/nginx-1.1.0, pts/phpbench-1.1.0, pts/pybench-1.0.0, pts/compress-pbzip2-1.4.0, pts/compress-7zip-1.6.0, pts/openssl-1.9.0, pts/scimark2-1.2.0, pts/encode-mp3-1.4.0 via the Phoronix Test Suite.

## Test Systems:

### Raspberry Pi B+

### Raspberry Pi B

Processor: ARMv6-compatible rev 7 @ 0.90GHz (1 Core), Motherboard: BCM2708, Memory: 469MB, Disk: 8GB SL08G

OS: Debian Linux 7.5, Kernel: 3.12.22+ (armv6l), Compiler: GCC 4.6, File-System: ext4, Screen Resolution: 656x416

Compiler Notes: --build=arm-linux-gnueabihf --disable-sjlj-exceptions --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-nls --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=arm-linux-gnueabihf --target=arm-linux-gnueabihf --with-arch=armv6 --with-float=hard --with-fpu=vfp -v
System Notes: Python 2.7.3.

# ARM-SBC-Benchmarks-RPI-B-Plus

## Raspberry Pi 2

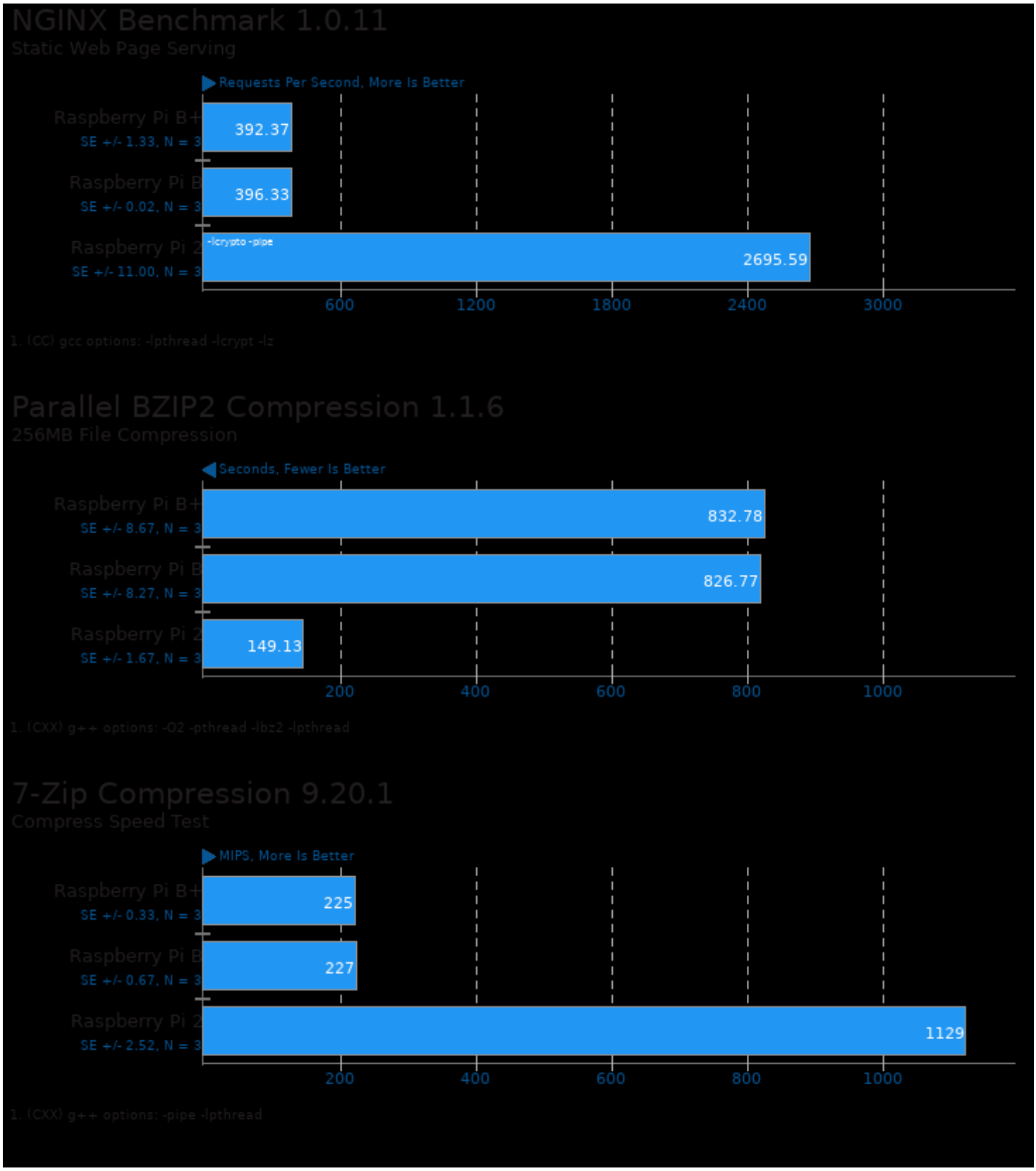
Processor: ARMv7 rev 5 @ 0.90GHz (4 Cores), Motherboard: BCM2709, Memory: 741MB, Disk: 8GB SL08G

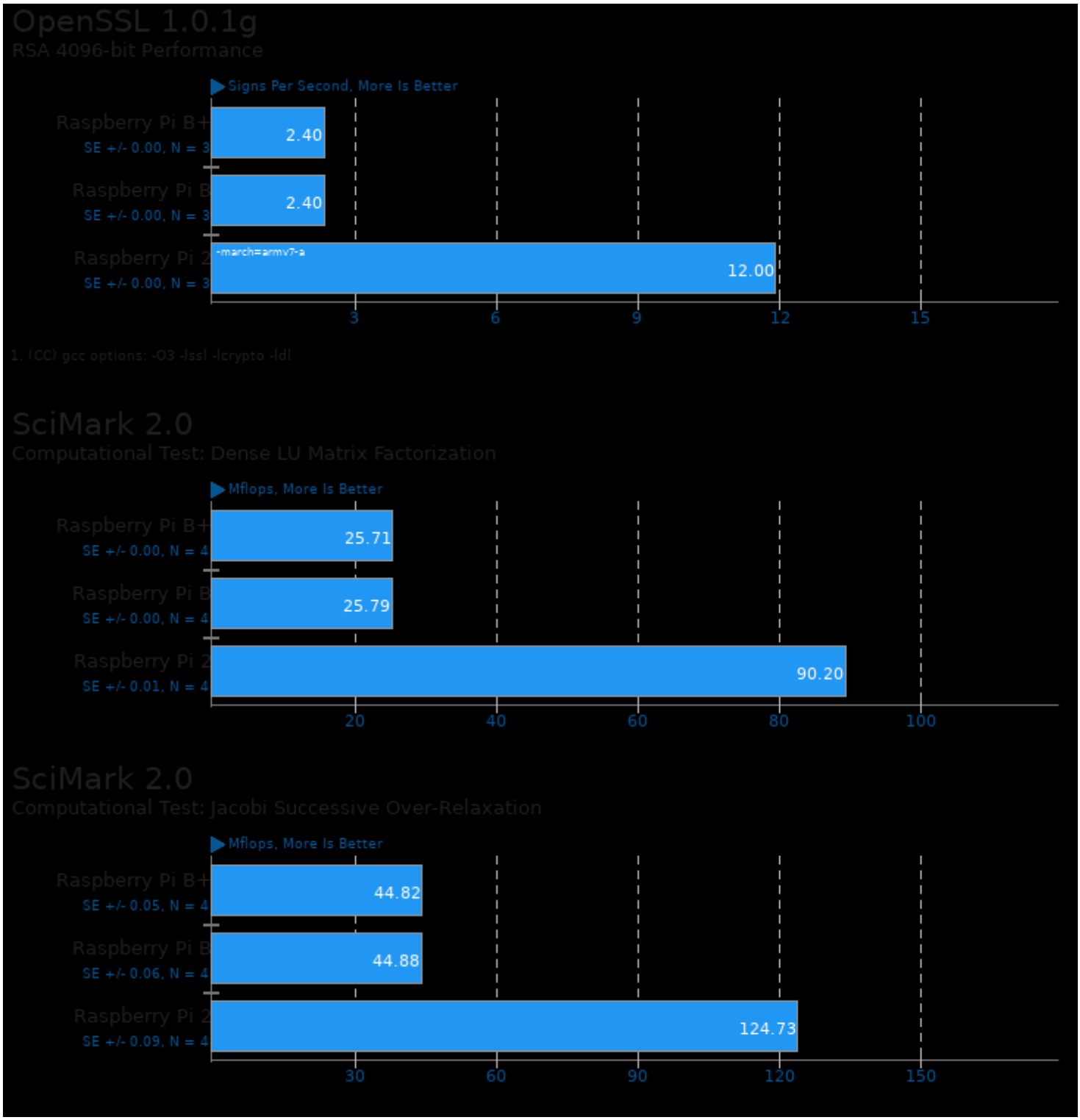
OS: Arch Linux ARM, Kernel: 3.18.6-2-ARCH (armv7l), Compiler: GCC 4.9.2 20141224, File-System: ext4, Screen Resolution: 1920x1080

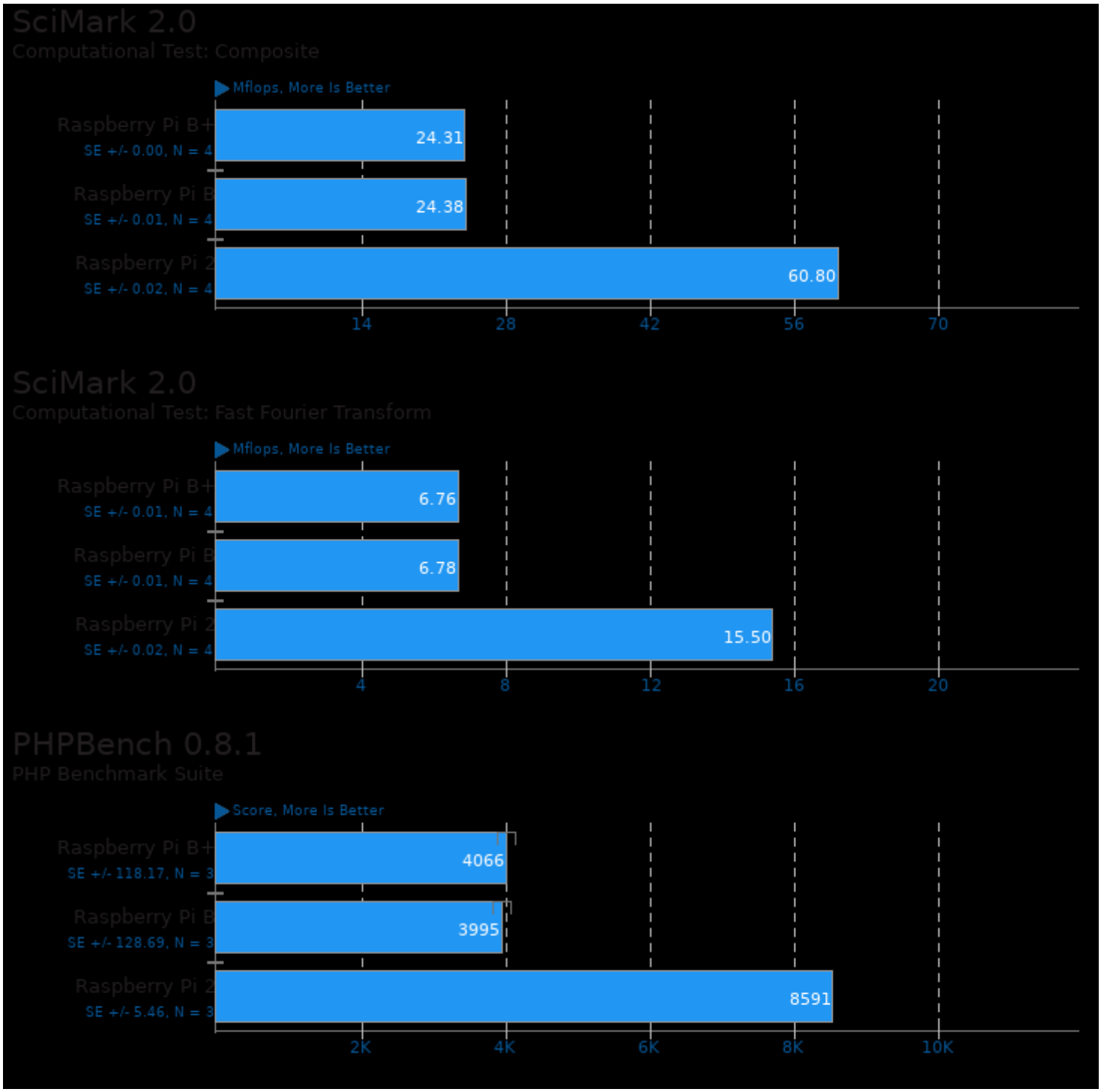
Compiler Notes: --build=armv7l-unknown-linux-gnueabihf --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-multilib --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-cloog-backend=isl --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,fortran,go,lto,objc,obj-c++ --enable-lto --enable-plugin --enable-shared --enable-threads=posix --host=armv7l-unknown-linux-gnueabihf --mandir=/usr/share/man --with-arch=armv7-a --with-float=hard --with-fpu=vfpv3-d16 --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: BCM2835 Freq ondemand
System Notes: Python 2.7.9.

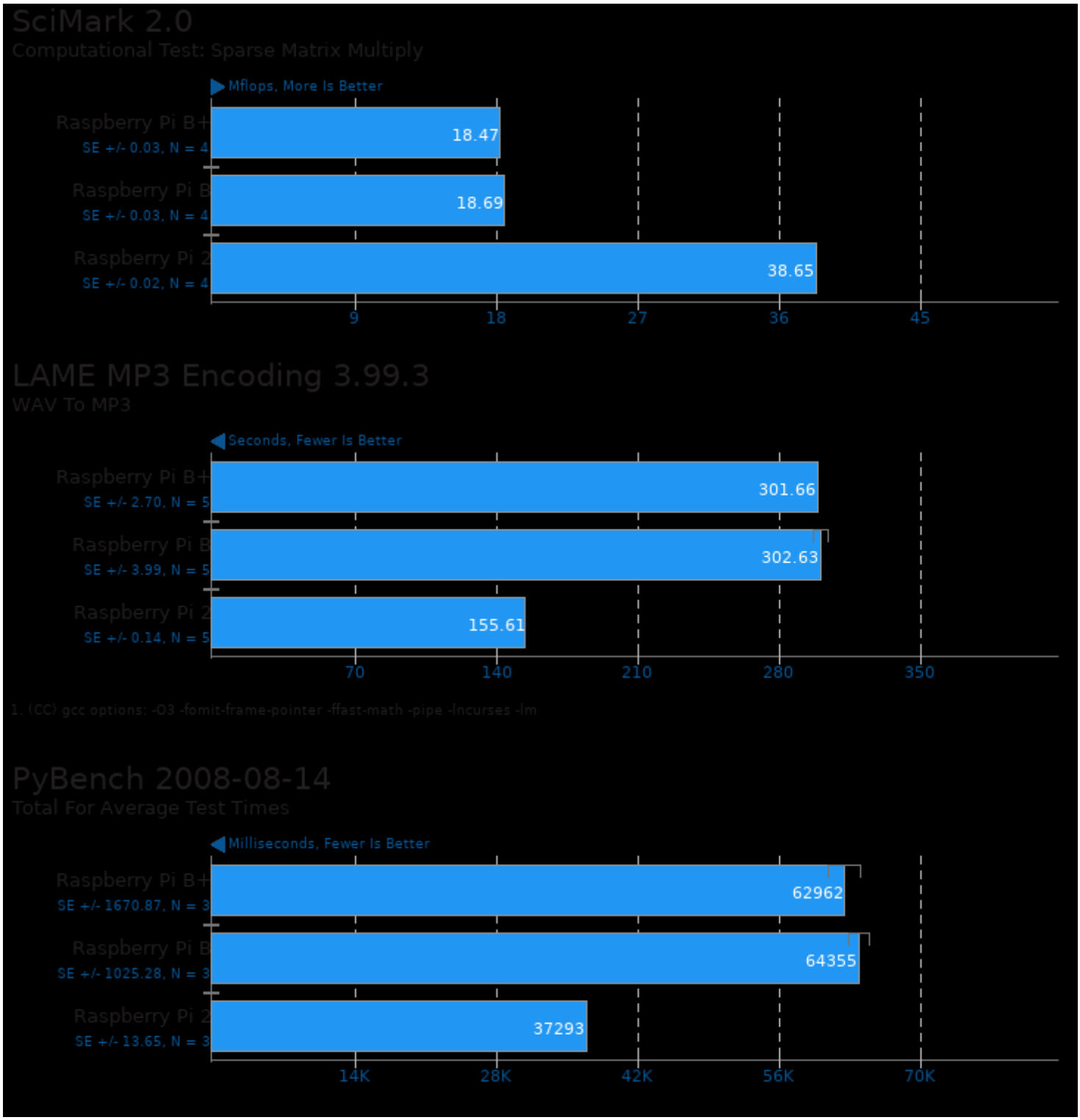
| | Raspberry Pi B+ | Raspberry Pi B | Raspberry Pi 2 |
|---|---|---|---|
| **NGINX Benchmark - S.W.P.S (Reqs/sec)** | **392.37** | 396.33 | **2696** |
| **Normalized** | 14.56% | 14.7% | 100% |
| **Standard Deviation** | 0.6% | 0% | 0.7% |
| **Parallel BZIP2 Compression - 2.F.C (sec)** | **832.78** | 826.77 | **149.13** |
| **Normalized** | 17.91% | 18.04% | 100% |
| **Standard Deviation** | 1.8% | 1.7% | 1.9% |
| **7-Zip Compression - C.S.T (MIPS)** | **225** | 227 | **1129** |
| **Normalized** | 19.93% | 20.11% | 100% |
| **Standard Deviation** | 0.3% | 0.5% | 0.4% |
| **OpenSSL - R.4.b.P (Signs/sec)** | **2.40** | **2.40** | **12** |
| **Normalized** | 20% | 20% | 100% |
| **Standard Deviation** | 0% | 0% | 0% |
| **SciMark - D.L.M.F (Mflops)** | **25.71** | 25.79 | **90.20** |
| **Normalized** | 28.5% | 28.59% | 100% |
| **Standard Deviation** | 0% | 0% | 0% |
| **SciMark - J.S.O.R (Mflops)** | **44.82** | 44.88 | **124.73** |
| **Normalized** | 35.93% | 35.98% | 100% |
| **Standard Deviation** | 0.2% | 0.3% | 0.1% |
| **SciMark - Composite (Mflops)** | **24.31** | 24.38 | **60.80** |
| **Normalized** | 39.98% | 40.1% | 100% |
| **Standard Deviation** | 0% | 0.1% | 0.1% |
| **SciMark - F.F.T (Mflops)** | **6.76** | 6.78 | **15.50** |
| **Normalized** | 43.61% | 43.74% | 100% |
| **Standard Deviation** | 0.2% | 0.2% | 0.3% |
| **PHPBench - P.B.S (Score)** | 4066 | **3995** | **8591** |
| **Normalized** | 47.33% | 46.5% | 100% |
| **Standard Deviation** | 5% | 5.6% | 0.1% |
| **SciMark - S.M.M (Mflops)** | **18.47** | 18.69 | **38.65** |
| **Normalized** | 47.79% | 48.36% | 100% |
| **Standard Deviation** | 0.4% | 0.3% | 0.1% |
| **LAME MP3 Encoding - WAV To MP3 (sec)** | 301.66 | **302.63** | **155.61** |
| **Normalized** | 51.58% | 51.42% | 100% |
| **Standard Deviation** | 2% | 2.9% | 0.2% |
| **PyBench - T.F.A.T.T (Milliseconds)** | 62962 | **64355** | **37293** |
| **Normalized** | 59.23% | 57.95% | 100% |
| **Standard Deviation** | 4.6% | 2.8% | 0.1% |
| **SciMark - Monte Carlo (Mflops)** | **25.79** | **25.79** | **34.90** |
| **Normalized** | 73.9% | 73.9% | 100% |

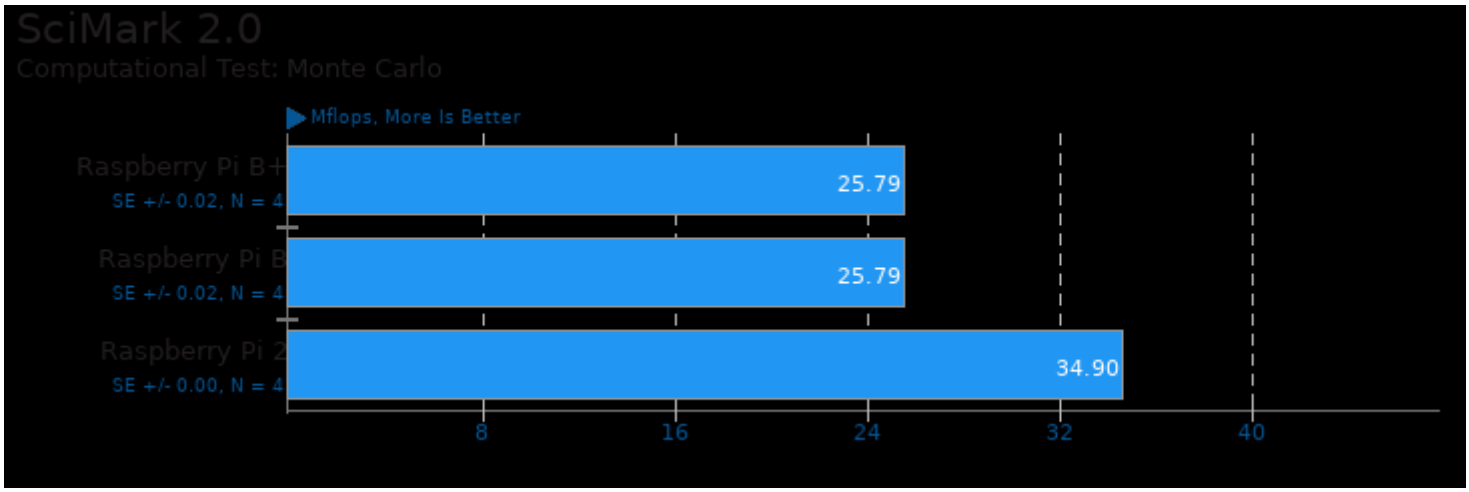
| | | | |
|---|---|---|---|
| **Standard Deviation** | 0.2% | 0.2% | 0% |


NGINX Benchmark 1.0.11
Static Web Page Serving
Requests Per Second, More Is Better
Raspberry Pi B+
SE +/- 1.33, N = 3
392.37
Raspberry Pi B
SE +/- 0.02, N = 3
396.33
Raspberry Pi 2
SE +/- 11.00, N = 3
-lcrypto -pipe
2695.59
600
1200
1800
2400
3000
1. (CC) gcc options: -lpthread -lcrypt -lz
Parallel BZIP2 Compression 1.1.6
256MB File Compression
Seconds, Fewer Is Better
Raspberry Pi B+
SE +/- 8.67, N = 3
832.78
Raspberry Pi B
SE +/- 8.27, N = 3
826.77
Raspberry Pi 2
SE +/- 1.67, N = 3
149.13
200
400
600
800
1000
1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread
7-Zip Compression 9.20.1
Compress Speed Test
MIPS, More Is Better
Raspberry Pi B+
SE +/- 0.33, N = 3
225
Raspberry Pi B
SE +/- 0.67, N = 3
227
Raspberry Pi 2
SE +/- 2.52, N = 3
1129
200
400
600
800
1000
1. (CXX) g++ options: -pipe -lpthread

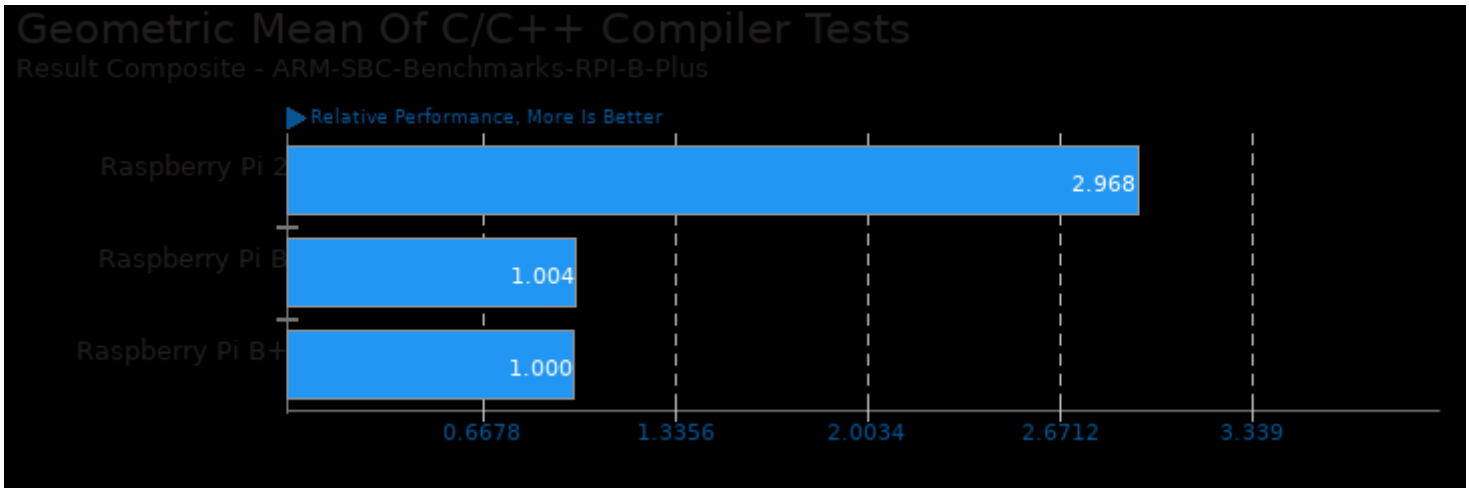

OpenSSL 1.0.1g
RSA 4096-bit Performance
Signs Per Second, More Is Better
Raspberry Pi B+
SE +/- 0.00, N = 3
2.40
Raspberry Pi B
SE +/- 0.00, N = 3
2.40
Raspberry Pi 2
SE +/- 0.00, N = 3
-march=armv7-a
12.00
3
6
9
12
15
1. (CC) gcc options: -O3 -lssl -lcrypto -ldl
SciMark 2.0
Computational Test: Dense LU Matrix Factorization
Mflops, More Is Better
Raspberry Pi B+
SE +/- 0.00, N = 4
25.71
Raspberry Pi B
SE +/- 0.00, N = 4
25.79
Raspberry Pi 2
SE +/- 0.01, N = 4
90.20
20
40
60
80
100
SciMark 2.0
Computational Test: Jacobi Successive Over-Relaxation
Mflops, More Is Better
Raspberry Pi B+
SE +/- 0.05, N = 4
44.82
Raspberry Pi B
SE +/- 0.06, N = 4
44.88
Raspberry Pi 2
SE +/- 0.09, N = 4
124.73
30
60
90
120
150


SciMark 2.0
Computational Test: Composite
Mflops, More Is Better
Raspberry Pi B+
SE +/- 0.00, N = 4
24.31
Raspberry Pi B
SE +/- 0.01, N = 4
24.38
Raspberry Pi 2
SE +/- 0.02, N = 4
60.80
14
28
42
56
70
SciMark 2.0
Computational Test: Fast Fourier Transform
Mflops, More Is Better
Raspberry Pi B+
SE +/- 0.01, N = 4
6.76
Raspberry Pi B
SE +/- 0.01, N = 4
6.78
Raspberry Pi 2
SE +/- 0.02, N = 4
15.50
4
8
12
16
20
PHPBench 0.8.1
PHP Benchmark Suite
Score, More Is Better
Raspberry Pi B+
SE +/- 118.17, N = 3
4066
Raspberry Pi B
SE +/- 128.69, N = 3
3995
Raspberry Pi 2
SE +/- 5.46, N = 3
8591
2K
4K
6K
8K
10K

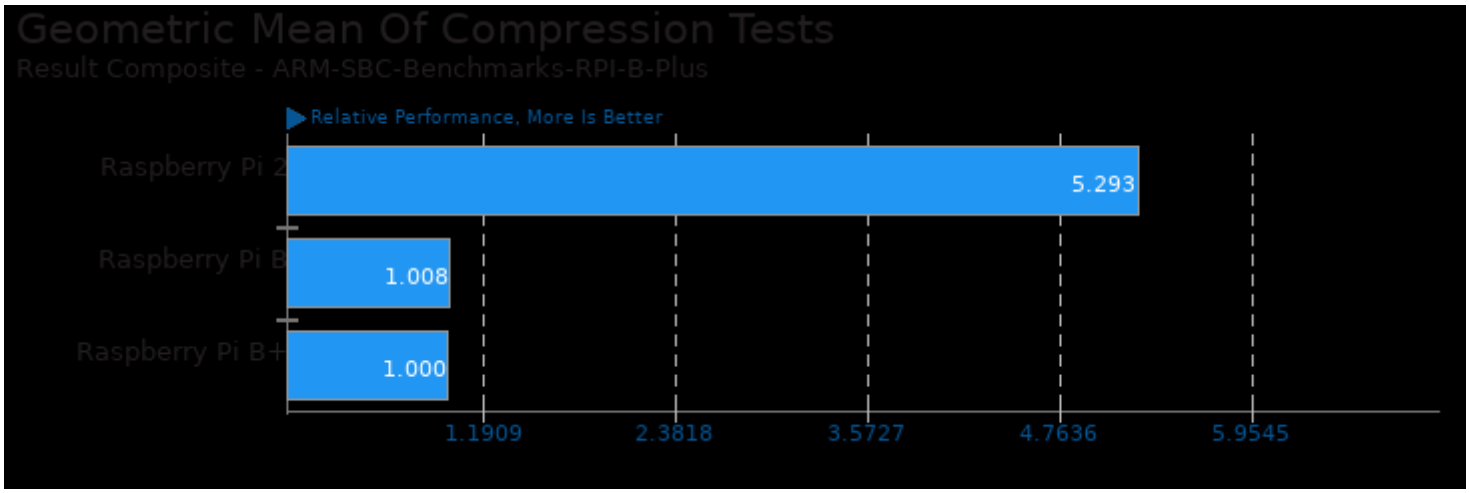

SciMark 2.0
Computational Test: Sparse Matrix Multiply
Mflops, More Is Better
Raspberry Pi B+
SE +/- 0.03, N = 4
18.47
Raspberry Pi B
SE +/- 0.03, N = 4
18.69
Raspberry Pi 2
SE +/- 0.02, N = 4
38.65
9
18
27
36
45
LAME MP3 Encoding 3.99.3
WAV To MP3
Seconds, Fewer Is Better
Raspberry Pi B+
SE +/- 2.70, N = 5
301.66
Raspberry Pi B
SE +/- 3.99, N = 5
302.63
Raspberry Pi 2
SE +/- 0.14, N = 5
155.61
70
140
210
280
350
1. (CC) gcc options: -O3 -fomit-frame-pointer -ffast-math -pipe -lncurses -lm
PyBench 2008-08-14
Total For Average Test Times
Milliseconds, Fewer Is Better
Raspberry Pi B+
SE +/- 1670.87, N = 3
62962
Raspberry Pi B
SE +/- 1025.28, N = 3
64355
Raspberry Pi 2
SE +/- 13.65, N = 3
37293
14K
28K
42K
56K
70K


SciMark 2.0
Computational Test: Monte Carlo
Mflops, More Is Better
Raspberry Pi B+
SE +/- 0.02, N = 4
25.79
Raspberry Pi B
SE +/- 0.02, N = 4
25.79
Raspberry Pi 2
SE +/- 0.00, N = 4
34.90
8
16
24
32
40

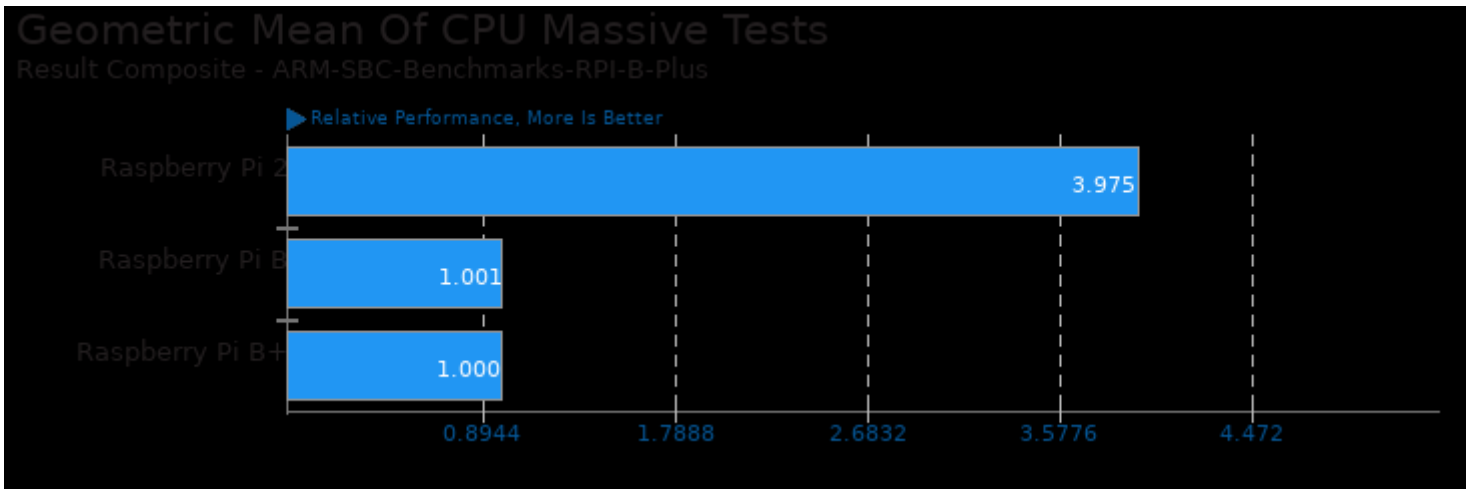
These geometric means are based upon test groupings / test suites for this result file.



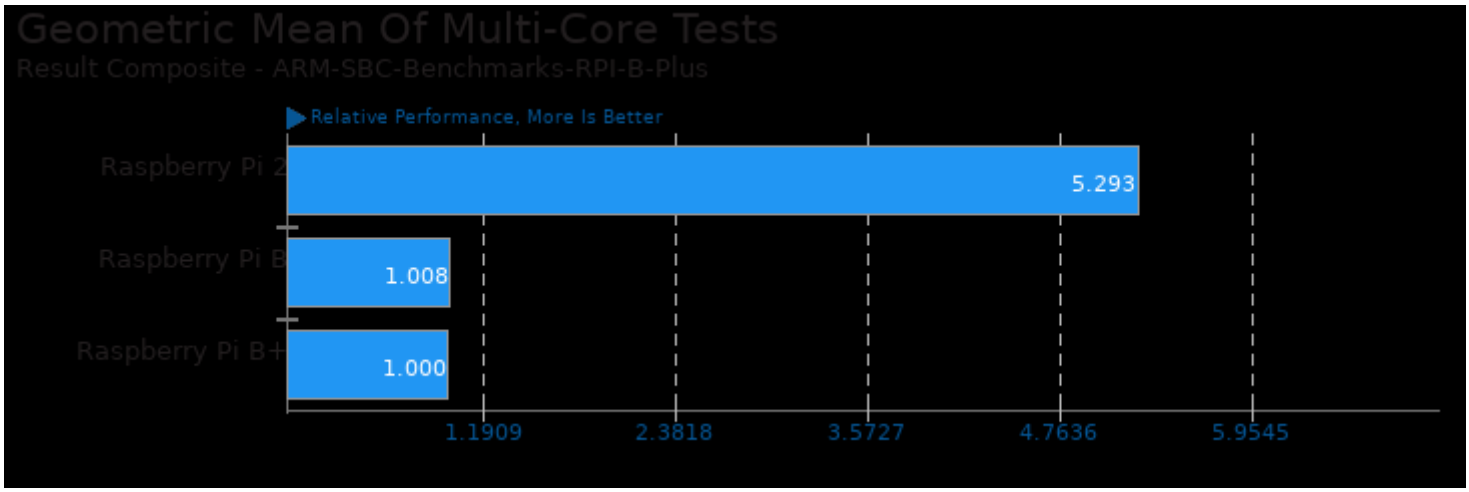

Geometric mean based upon tests: pts/scimark2, pts/compress-7zip, pts/encode-mp3, pts/openssl and pts/nginx



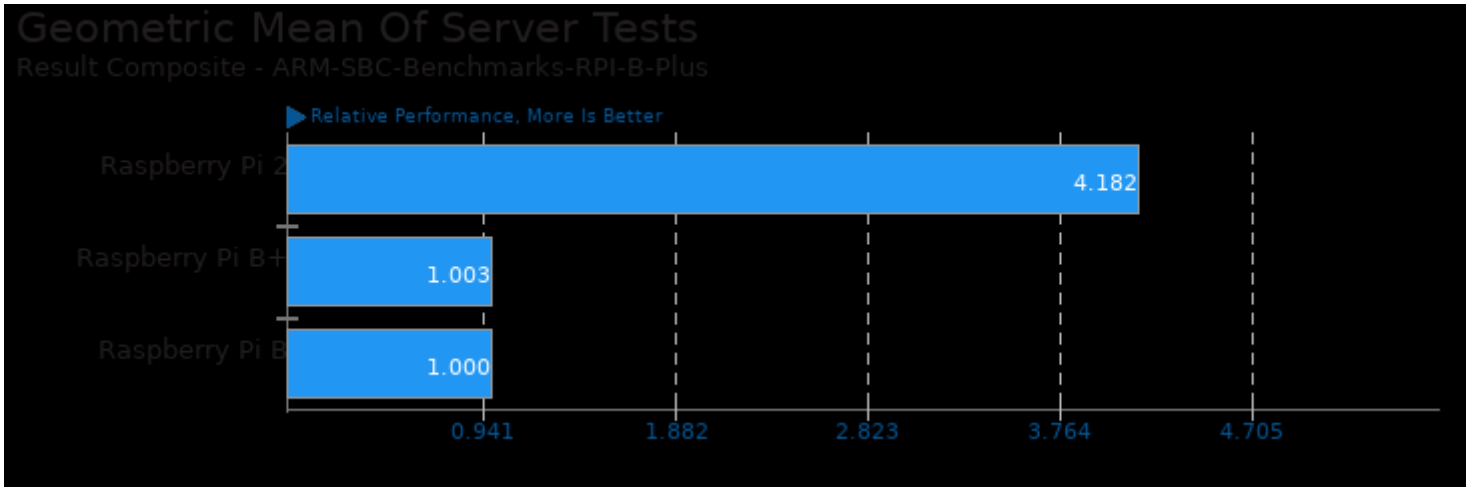

Geometric mean based upon tests: pts/compress-7zip and pts/compress-pbzip2



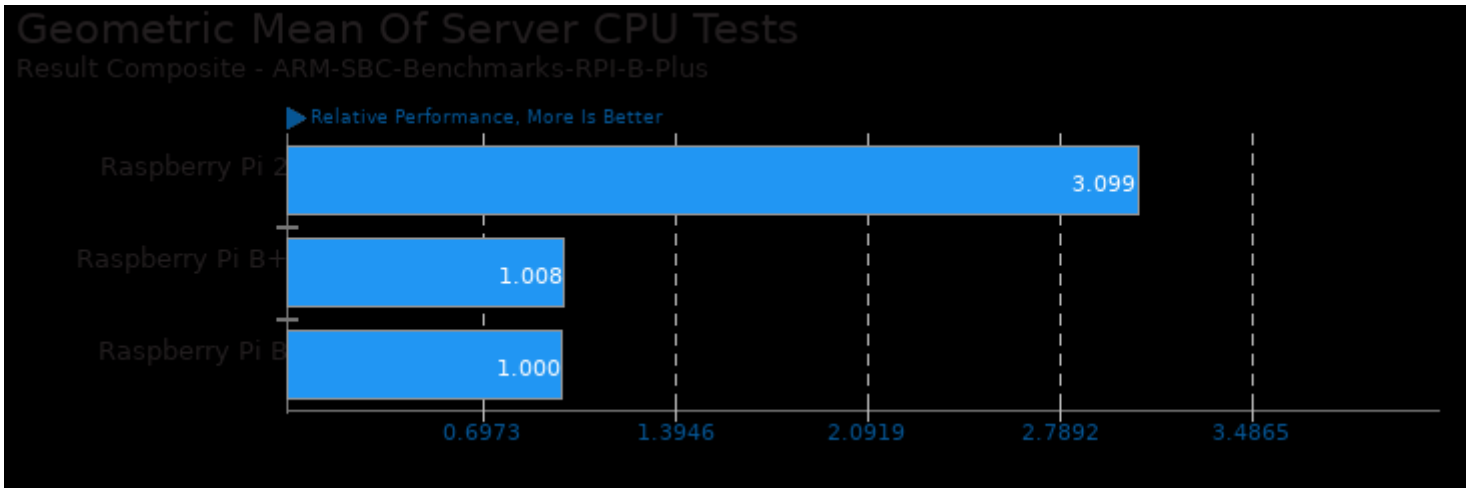

Geometric mean based upon tests: pts/compress-7zip, pts/compress-pbzip2, pts/encode-mp3, pts/openssl, pts/nginx and pts/phpbench



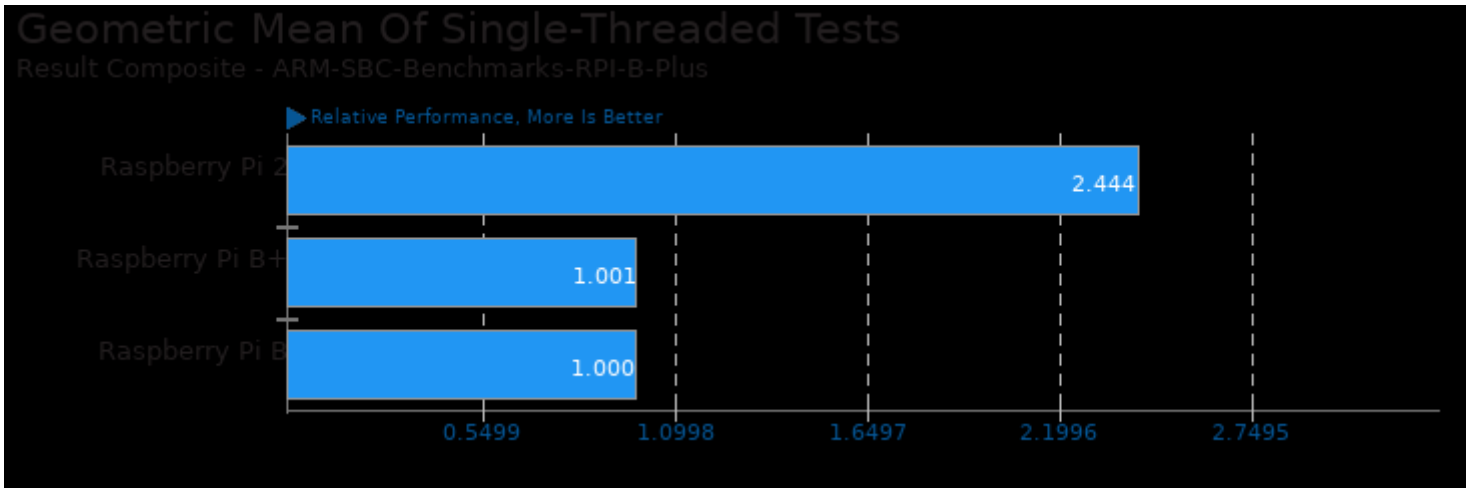

Geometric mean based upon tests: pts/compress-7zip and pts/compress-pbzip2




Geometric mean based upon tests: pts/nginx, pts/phpbench and pts/openssl




Geometric mean based upon tests: pts/compress-7zip, pts/openssl, pts/pybench and pts/phpbench




Geometric mean based upon tests: pts/scimark2, pts/encode-mp3, pts/pybench, pts/phpbench and pts/nginx

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 07:35.*