



## SBC SN Test

Raspberry Pi 4B vs. ROCK Pi 4A vs. Station P2 vs. ODROID-N2Plus on Ubuntu 20.04 via the Phoronix Test Suite (<https://servernews.ru/1062357/>)

### Automated Executive Summary

*Hardkernel ODROID-N2Plus (4GB, 2.2 GHz) had the most wins, coming in first place for 65% of the tests.*

*Based on the geometric mean of all complete results, the fastest (Hardkernel ODROID-N2Plus (4GB, 2.2 GHz)) was 1.889x the speed of the slowest (Radxa ROCK Pi 4A (4GB, 2.00 GHz)). Firefly Station P2 (4GB, 2.00 GHz) was 0.696x the speed of Hardkernel ODROID-N2Plus (4GB, 2.2 GHz), Raspberry Pi 4 Model B (4GB, 1.5 GHz) was 0.935x the speed of Firefly Station P2 (4GB, 2.00 GHz), Radxa ROCK Pi 4A (4GB, 2.00 GHz) was 0.813x the speed of Raspberry Pi 4 Model B (4GB, 1.5 GHz).*

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

*NCNN (Target: CPU - Model: blazeface) at 13.858x  
NCNN (Target: CPU - Model: shufflenet-v2) at 12.048x  
NCNN (Target: CPU-v3-v3 - Model: mobilenet-v3) at 10.521x  
NCNN (Target: CPU - Model: mnasnet) at 9.194x  
GraphicsMagick (Operation: Rotate) at 8.652x  
NCNN (Target: CPU-v2-v2 - Model: mobilenet-v2) at 8.238x*

NCNN (Target: CPU - Model: efficientnet-b0) at 7.797x  
OpenSSL (Algorithm: SHA256) at 6.89x  
NCNN (Target: CPU - Model: googlenet) at 5.184x  
NCNN (Target: CPU - Model: squeezenet\_ssd) at 4.247x.

## Test Systems:

### Radxa ROCK Pi 4A (4GB, 2.00 GHz)

Processor: Rockchip ARMv8 Cortex-A72 @ 1.51GHz (6 Cores), Motherboard: ROCK PI 4B, Memory: 4096MB, Disk: 124GB SD

OS: Ubuntu 20.04, Kernel: 4.4.154-113-rockchip-gdb9dfc2cdd25 (aarch64), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-target-system-zlib=auto -v  
Processor Notes: Scaling Governor: cpufreq-dt interactive  
Disk Mount Options Notes: data=ordered,relatime,rw  
Disk Details Notes: Block Size: 4096  
Python Notes: Python 3.8.10

### Firefly Station P2 (4GB, 2.00 GHz)

Processor: Rockchip ARMv8 Cortex-A55 @ 1.99GHz (4 Cores), Motherboard: Firefly RK3568-ROC-PC HDMI (Linux), Memory: 4096MB, Disk: 256GB Western Digital PC SN520 SDAPMUW-256G-1101 + 31GB Y2P032

OS: Ubuntu 20.04, Kernel: 4.19.193 (aarch64), Display Server: X Server 1.20.8, OpenCL: OpenCL 2.1 v1.g2p0-01eac0.327c41db9c110a33ae6f67b4cc0581c7, Compiler: GCC 9.3.0, File-System: overlayfs, Screen Resolution: 2560x1080

Environment Notes: QTWEBENGINE\_CHROMIUM\_FLAGS="--no-sandbox --disable-es3-gl-context --ignore-gpu-blacklist --ignore-gpu-blacklist --enable-accelerated-video-decode"  
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-target-system-zlib=auto -v  
Processor Notes: Scaling Governor: cpufreq-dt interactive  
Disk Scheduler Notes: NONE  
Python Notes: Python 3.8.10  
Security Notes: itlb\_multihit: Not affected + 11tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Not affected + spectre\_v1: Mitigation of \_\_user pointer sanitization + spectre\_v2: Not affected + srbds: Not affected + tsx\_async\_abort: Not affected

### Hardkernel ODROID-N2Plus (4GB, 2.2 GHz)

Processor: ARMv8 Cortex-A73 @ 1.91GHz (6 Cores), Motherboard: Hardkernel ODROID-N2Plus, Memory: 4096MB, Disk: 128GB ED2S5, Graphics: OSD

OS: Ubuntu 20.04, Kernel: 4.9.277-117 (aarch64), Vulkan: 1.1.182, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x2160

Kernel Notes: Transparent Huge Pages: always

Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-target-system-zlib=auto -v

Processor Notes: Scaling Governor: arm-big-little performance

Disk Mount Options Notes: data=ordered,errors=remount-ro,relatime,rw,stripe=32716

Disk Details Notes: Block Size: 4096

Python Notes: Python 2.7.18 + Python 3.8.10

## Raspberry Pi 4 Model B (4GB, 1.5 GHz)

Processor: ARMv8 Cortex-A72 @ 1.80GHz (4 Cores), Motherboard: BCM2835 Raspberry Pi 4 Model B Rev 1.4, Memory: 4096MB, Disk: 128GB ED2S5

OS: Ubuntu 20.04, Kernel: 5.4.0-1053-raspi (aarch64), Vulkan: 1.1.182, Compiler: GCC 9.4.0, File-System: ext4

Kernel Notes: snd\_bcm2835.enable\_compat\_alsa=0 snd\_bcm2835.enable\_hdmi=1 - Transparent Huge Pages: madvise

Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-target-system-zlib=auto -v

Processor Notes: Scaling Governor: cpufreq-dt ondemand

Disk Mount Options Notes: relatime,rw

Disk Details Notes: Block Size: 4096

Python Notes: Python 3.8.10

Security Notes: itlb\_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Vulnerable + spectre\_v1: Mitigation of \_\_user pointer sanitization + spectre\_v2: Vulnerable + srbds: Not affected + tsx\_async\_abort: Not affected

	Radxa ROCK Pi 4A (4GB, 2.00 GHz)	Firefly Station P2 (4GB, 2.00 GHz)	Hardkernel ODROID-N2Plus (4GB, 2.2 GHz)	Raspberry Pi 4 Model B (4GB, 1.5 GHz)
<b>PostMark - D.T.P (TPS)</b>	867	<b>642</b>	<b>2027</b>	821
Normalized	42.77%	31.67%	100%	40.5%
Standard Deviation	10.6%	1.8%	0.9%	0.4%
<b>Stream - Copy (MB/s)</b>	5366	<b>5613</b>	5548	<b>3750</b>
Normalized	95.59%	100%	98.83%	66.82%
Standard Deviation	0.5%	0.1%	0.1%	0.7%
<b>Stream - Scale (MB/s)</b>	5379	<b>5856</b>	5753	<b>4000</b>
Normalized	91.86%	100%	98.25%	68.31%
Standard Deviation	0.2%	0.2%	0.2%	0.9%
<b>Stream - Triad (MB/s)</b>	5207	5511	<b>5741</b>	<b>3746</b>
Normalized	90.71%	96.01%	100%	65.25%
Standard Deviation	0.1%	0.2%	0.2%	0.2%
<b>Stream - Add (MB/s)</b>	5198	5521	<b>5748</b>	<b>3731</b>
Normalized	90.42%	96.04%	100%	64.9%
Standard Deviation	0.1%	0.2%	0.1%	0.2%
<b>Zstd Compression - 8 - Compression Speed (MB/s)</b>	23.3	18.8	<b>24.8</b>	<b>14.4</b>
Normalized	93.95%	75.81%	100%	58.06%
Standard Deviation	0.2%	0%	2.2%	5.2%
<b>Zstd Compression - 8 - D.S (MB/s)</b>	984.8	<b>645.5</b>	<b>1147</b>	908.9
Normalized	85.84%	56.26%	100%	79.22%
Standard Deviation	3%	0.4%	0.6%	2.8%
<b>John The Ripper - Blowfish (Real C/S)</b>	<b>1360</b>	1521	<b>2190</b>	1400
Normalized	62.1%	69.45%	100%	63.93%

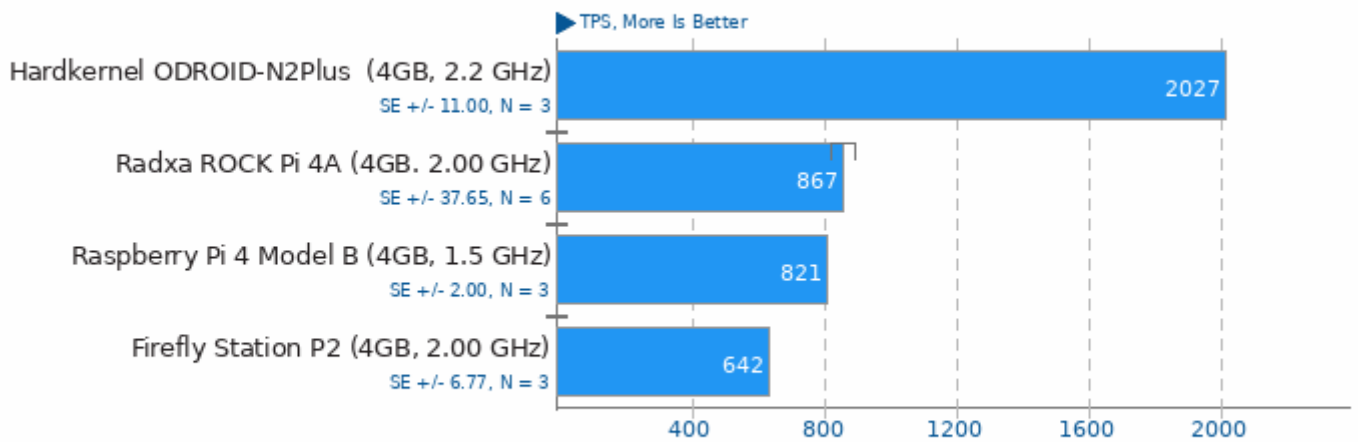
	Standard Deviation	0.3%	0.1%	0%	4.9%
<b>John The Ripper - MD5 (Real C/S)</b>		<b>28710</b>	34943	<b>48162</b>	29938
	Normalized	59.61%	72.55%	100%	62.16%
	Standard Deviation	0.4%	0%	0.1%	2.4%
<b>GraphicsMagick - Swirl</b>		45	<b>32</b>	<b>75</b>	43
	Normalized	60%	42.67%	100%	57.33%
	Standard Deviation	3.3%			
<b>GraphicsMagick - Rotate</b>		97	<b>23</b>	<b>199</b>	105
	Normalized	48.74%	11.56%	100%	52.76%
	Standard Deviation	1%		0.5%	3.4%
<b>GraphicsMagick - Sharpen</b>		18	<b>13</b>	<b>25</b>	17
	(Iterations/min)				
	Normalized	72%	52%	100%	68%
	Standard Deviation				6.8%
<b>GraphicsMagick - Enhanced</b>		17	<b>11</b>	<b>26</b>	19
	(Iterations/min)				
	Normalized	65.38%	42.31%	100%	73.08%
	Standard Deviation				2.3%
<b>GraphicsMagick - Resizing</b>		59	<b>36</b>	<b>93</b>	52
	(Iterations/min)				
	Normalized	63.44%	38.71%	100%	55.91%
	Standard Deviation				1.1%
<b>GraphicsMagick - Noise-Gaussian</b>		30	<b>22</b>	<b>43</b>	26
	(Iterations/min)				
	Normalized	69.77%	51.16%	100%	60.47%
	Standard Deviation			1.3%	
<b>GraphicsMagick - HWB Color Space</b>		142	<b>95</b>	<b>217</b>	146
	(Iterations/min)				
	Normalized	65.44%	43.78%	100%	67.28%
	Standard Deviation			0.3%	0.4%
<b>x264 - H.2.V.E (FPS)</b>		7.17	<b>3.73</b>	<b>12.88</b>	6.10
	Normalized	55.67%	28.96%	100%	47.36%
	Standard Deviation	17%	1.4%	2.9%	2.4%
<b>Coremark - CoreMark Size 666 - I.P.S</b>		35874	<b>29885</b>	<b>46897</b>	37476
	(Iterations/Sec)				
	Normalized	76.5%	63.73%	100%	79.91%
	Standard Deviation	0.1%	0%	0%	1%
<b>7-Zip Compression - Compression</b>		5570	<b>3710</b>	<b>7845</b>	4736
	Rating (MIPS)				
	Normalized	71%	47.29%	100%	60.37%
	Standard Deviation	0.7%	0.4%	0.2%	0.2%
<b>7-Zip Compression - D.R (MIPS)</b>		8845	7876	<b>11017</b>	<b>7209</b>
	Normalized	80.29%	71.49%	100%	65.44%
	Standard Deviation	0.1%	0.1%	0.4%	0.9%
<b>Timed Linux Kernel Compilation -</b>		3930	<b>6861</b>	<b>2717</b>	5044
	defconfig (sec)				
	Normalized	69.12%	39.6%	100%	53.86%
	Standard Deviation	0.7%	0.1%	0.4%	0.5%
<b>Node.js Octane Benchmark (Score)</b>		10436	<b>5425</b>	<b>11649</b>	9773
	Normalized	89.59%	46.57%	100%	83.9%
	Standard Deviation	0.4%	1.4%	0.5%	0.6%
<b>Gzip Compression - L.S.T.A.T.t.g (sec)</b>		129.208	<b>213.677</b>	<b>113.274</b>	131.800
	Normalized	87.67%	53.01%	100%	85.94%
	Standard Deviation	11.2%	1.5%	2.5%	1.3%

<b>LAME MP3 Encoding - WAV To MP3</b>	21.530	<b>36.043</b>	<b>21.181</b>	24.140
(sec)				
Normalized	98.38%	58.77%	100%	87.74%
Standard Deviation	2.9%	1.5%	2.4%	1.9%
<b>RNNoise (sec)</b>	<b>52.979</b>	<b>109.656</b>	53.592	55.446
Normalized	100%	48.31%	98.86%	95.55%
Standard Deviation	9.1%	1.1%	2.4%	2.2%
<b>SecureMark - SecureMark-TLS</b>	65942	<b>38692</b>	<b>67890</b>	59433
Normalized	97.13%	56.99%	100%	87.54%
Standard Deviation	0.5%	0.2%	0%	0.1%
<b>OpenSSL - SHA256 (byte/s)</b>	1463493567	1008888303	<b>2100644717</b>	<b>304896649</b>
Normalized	69.67%	48.03%	100%	14.51%
Standard Deviation	0.1%	0.2%	0.7%	5.7%
<b>OpenSSL - RSA4096 (sign/s)</b>	145.6	<b>109.4</b>	<b>190.3</b>	109.6
Normalized	76.51%	57.49%	100%	57.59%
Standard Deviation	0%	0.1%	0%	1%
<b>OpenSSL - RSA4096 (verify/s)</b>	9934	7410	<b>12994</b>	<b>6448</b>
Normalized	76.45%	57.03%	100%	49.62%
Standard Deviation	0%	0%	0%	1.6%
<b>SQLite Speedtest - Timed Time - Size</b>	549.363	<b>572.496</b>	<b>253.352</b>	492.494
1,000 (sec)				
Normalized	46.12%	44.25%	100%	51.44%
Standard Deviation	6.3%	0.6%	1.6%	3%
<b>NCNN - CPU - mobilenet (ms)</b>	<b>382.93</b>	<b>98.27</b>	133.20	193.08
Normalized	25.66%	100%	73.78%	50.9%
Standard Deviation	0.6%	0.4%	0.3%	0.4%
<b>NCNN - CPU-v2-v2 - mobilenet-v2 (ms)</b>	<b>247.38</b>	<b>30.03</b>	42.91	64.25
Normalized	12.14%	100%	69.98%	46.74%
Standard Deviation	4%	0%	0.4%	2.9%
<b>NCNN - CPU-v3-v3 - mobilenet-v3 (ms)</b>	<b>246.92</b>	<b>23.47</b>	35.03	51.36
Normalized	9.51%	100%	67%	45.7%
Standard Deviation	0.6%	0%	0.1%	4.1%
<b>NCNN - CPU - shufflenet-v2 (ms)</b>	<b>206.38</b>	<b>17.13</b>	22.28	27.65
Normalized	8.3%	100%	76.89%	61.95%
Standard Deviation	2.6%	1.5%	2.5%	4%
<b>NCNN - CPU - mnasnet (ms)</b>	<b>238.67</b>	<b>25.96</b>	35.76	55.25
Normalized	10.88%	100%	72.6%	46.99%
Standard Deviation	3.1%	0.3%	1.6%	5%
<b>NCNN - CPU - efficientnet-b0 (ms)</b>	<b>333.02</b>	<b>42.71</b>	63.02	83.44
Normalized	12.83%	100%	67.77%	51.19%
Standard Deviation	2.4%	0.5%	0.3%	3.3%
<b>NCNN - CPU - blazeface (ms)</b>	<b>110.45</b>	11.71	<b>7.97</b>	12.12
Normalized	7.22%	68.06%	100%	65.76%
Standard Deviation	0.9%	0.9%	3.5%	0.8%
<b>NCNN - CPU - googlenet (ms)</b>	<b>392.88</b>	<b>75.79</b>	98.53	130.12
Normalized	19.29%	100%	76.92%	58.25%
Standard Deviation	2.2%	0.1%	1.1%	1.8%
<b>NCNN - CPU - vgg16 (ms)</b>	<b>782.43</b>	<b>311.06</b>	488.41	747.28
Normalized	39.76%	100%	63.69%	41.63%
Standard Deviation	0.3%	0.1%	0.3%	0.7%
<b>NCNN - CPU - resnet18 (ms)</b>	<b>228.88</b>	<b>57.22</b>	91.76	147.51
Normalized	25%	100%	62.36%	38.79%
Standard Deviation	0.2%	0.1%	0.7%	1.8%
<b>NCNN - CPU - alexnet (ms)</b>	<b>188.81</b>	<b>67.41</b>	91.30	144.35
Normalized	35.7%	100%	73.83%	46.7%

	Standard Deviation	0.2%	0.2%	0.7%	1.2%
<b>NCNN - CPU - resnet50 (ms)</b>		<b>522.34</b>	<b>132.91</b>	212.30	300.17
	Normalized	25.45%	100%	62.6%	44.28%
	Standard Deviation	0.2%	0.8%	2.9%	0.4%
<b>NCNN - CPU - yolov4-tiny (ms)</b>		<b>331.30</b>	<b>133.06</b>	176.09	254.03
	Normalized	40.16%	100%	75.56%	52.38%
	Standard Deviation	0.1%	0.5%	0.1%	0.5%
<b>NCNN - CPU - squeezeNet_ssd (ms)</b>		<b>384.69</b>	<b>90.58</b>	99.44	157.86
	Normalized	23.55%	100%	91.09%	57.38%
	Standard Deviation	0.2%	0.3%	0.3%	1.5%
<b>NCNN - CPU - regnety_400m (ms)</b>		<b>110.43</b>	<b>38.61</b>	52.95	73.19
	Normalized	34.96%	100%	72.92%	52.75%
	Standard Deviation	58.4%	0.2%	4.4%	2.7%
<b>Sysbench - CPU (Events/sec)</b>		7014	<b>4056</b>	<b>10156</b>	6800
	Normalized	69.06%	39.93%	100%	66.96%
	Standard Deviation	0%	0%	0.1%	1%
<b>PyBench - T.F.A.T.T (Milliseconds)</b>		3875	<b>6580</b>	<b>3356</b>	3733
	Normalized	86.61%	51%	100%	89.9%
	Standard Deviation	0.1%	0.1%	0.1%	0.5%
<b>PHPBench - P.B.S (Score)</b>		187681	<b>120994</b>	<b>219085</b>	185435
	Normalized	85.67%	55.23%	100%	84.64%
	Standard Deviation	1.9%	0.5%	0.9%	0.5%
<b>Tesseract OCR - T.T.O.7.I (sec)</b>		<b>217.327</b>	158.084	<b>88.643</b>	101.089
	Normalized	40.79%	56.07%	100%	87.69%
	Standard Deviation	0.9%	0%	0.2%	0.3%
<b>Geometric Mean Of All Test Results - Result Composite - SBC SN Test (Geometric Mean)</b>		<b>38.431</b>	50.541	<b>72.603</b>	47.264
	Normalized	52.93%	69.61%	100%	65.1%

## PostMark 1.51

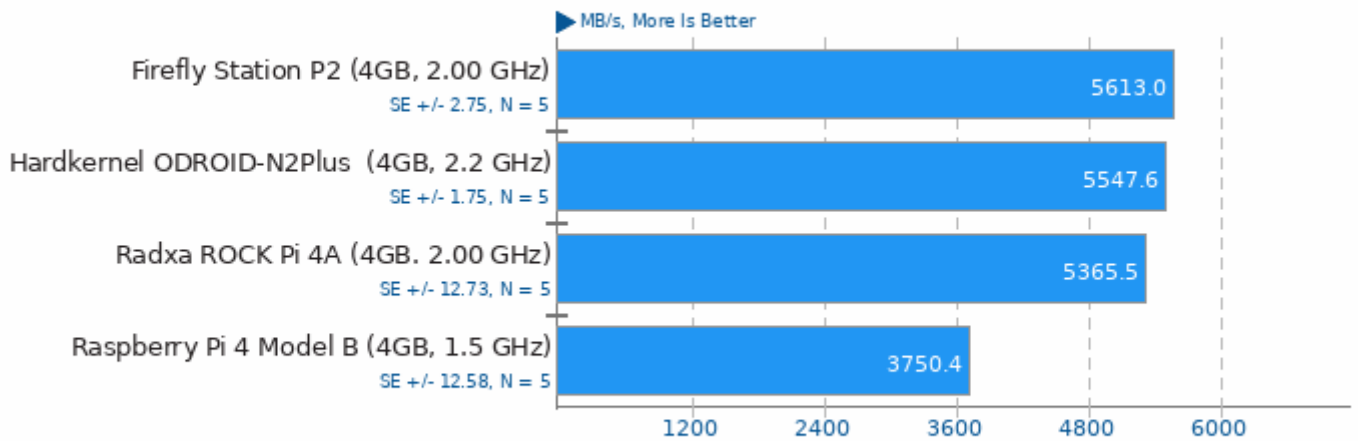
Disk Transaction Performance



1. (CC) gcc options: -O3

## Stream 2013-01-17

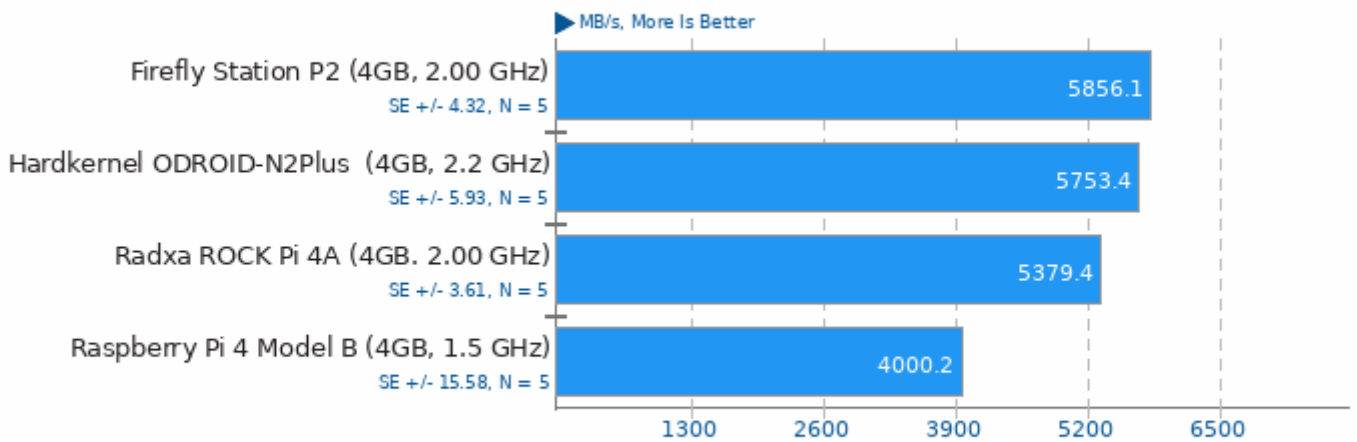
Type: Copy



1. (CC) gcc options: -O3 -march=native -fopenmp

## Stream 2013-01-17

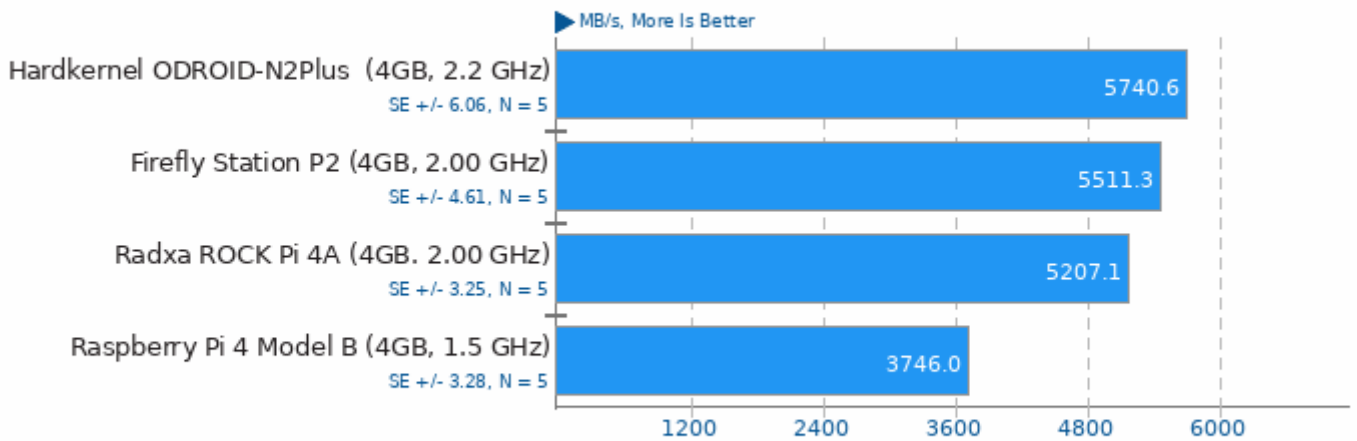
Type: Scale



1. (CC) gcc options: -O3 -march=native -fopenmp

## Stream 2013-01-17

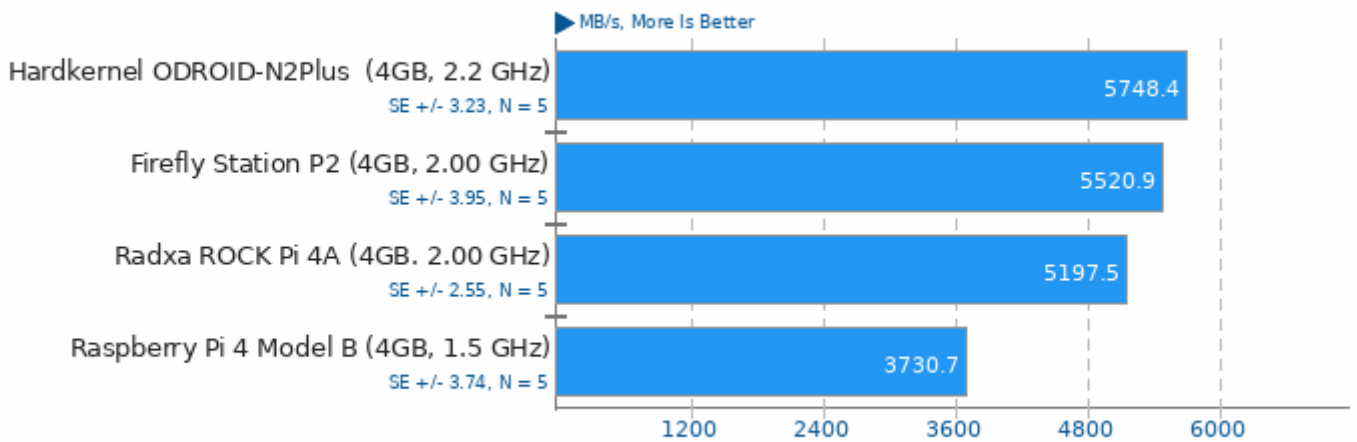
Type: Triad



1. (CC) gcc options: -O3 -march=native -fopenmp

## Stream 2013-01-17

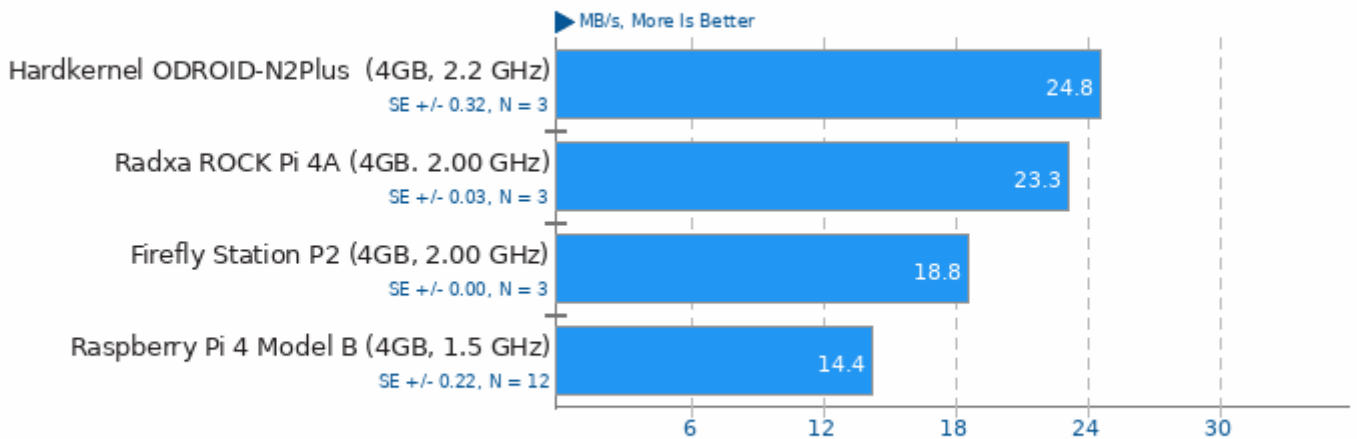
Type: Add



1. (CC) gcc options: -O3 -march=native -fopenmp

## Zstd Compression 1.5.0

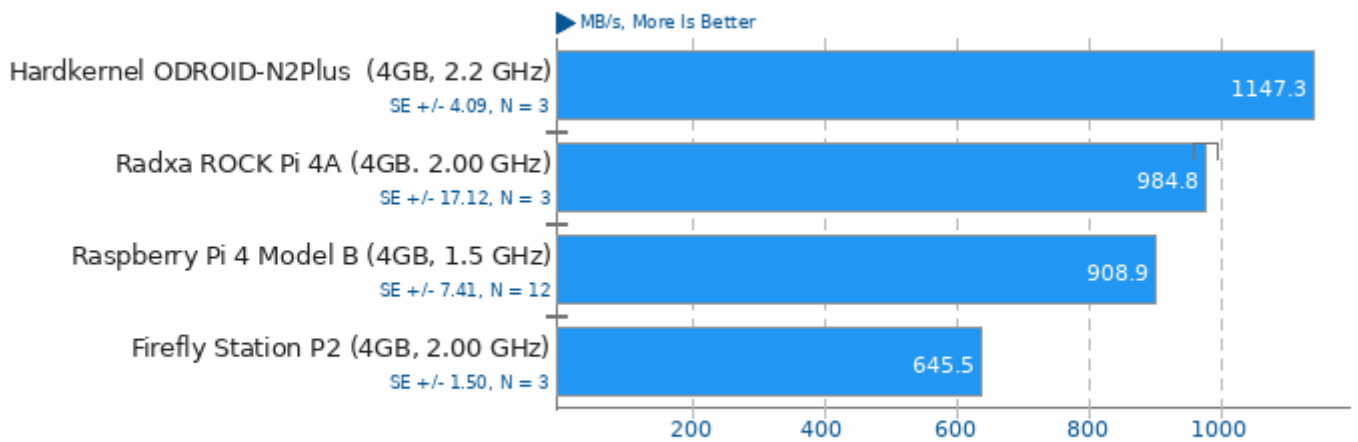
Compression Level: 8 - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz

## Zstd Compression 1.5.0

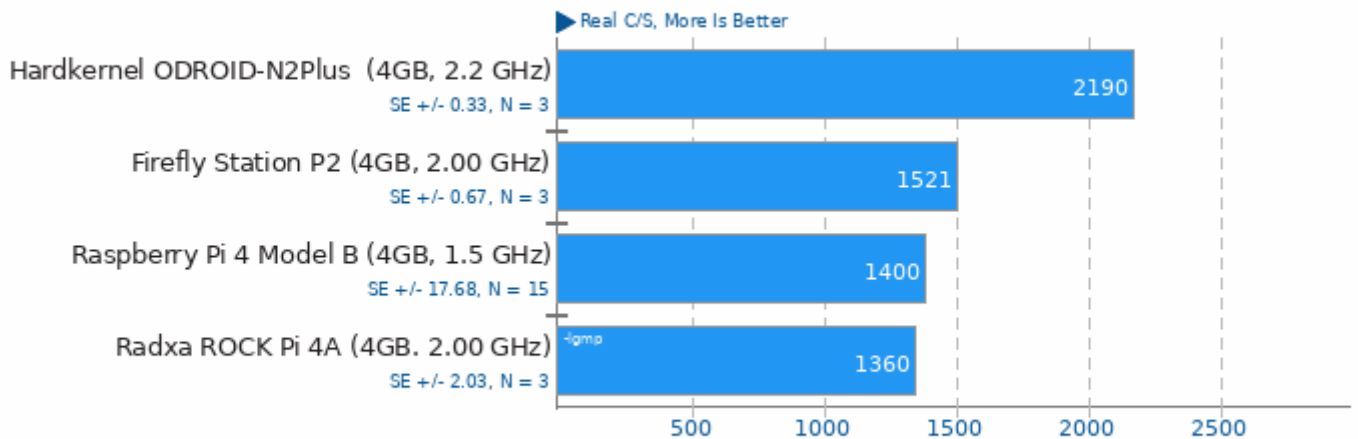
Compression Level: 8 - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz

## John The Ripper 1.9.0-jumbo-1

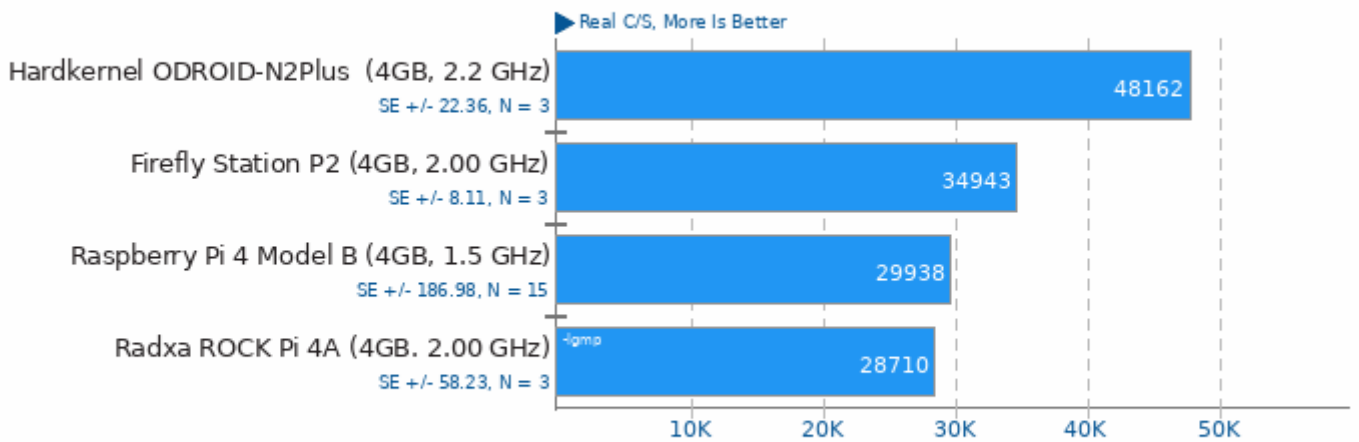
Test: Blowfish



1. (CC) gcc options: -lssl -lcrypto -fopenmp -pthread -lm -lz -ldl -lcrypt

## John The Ripper 1.9.0-jumbo-1

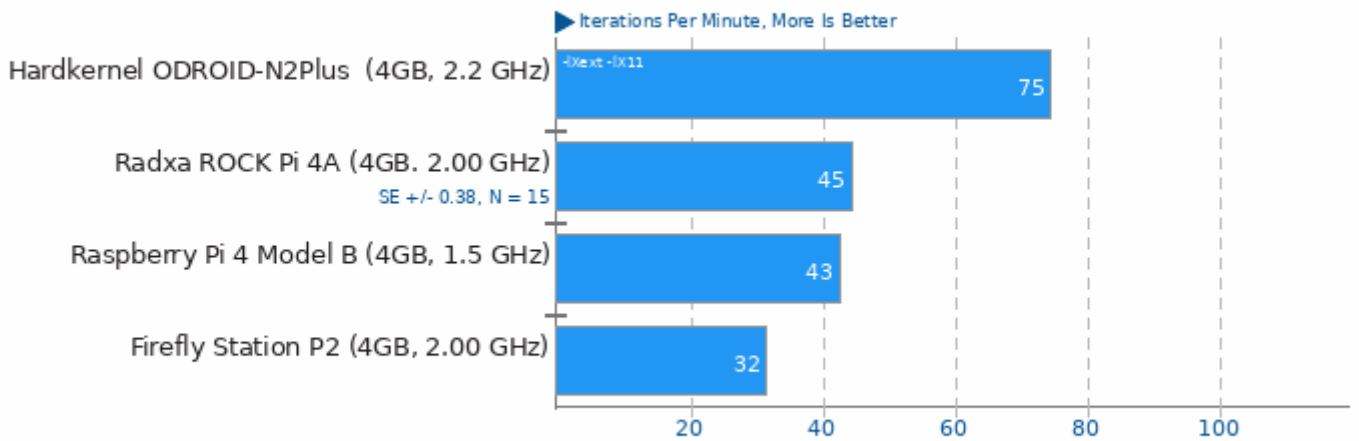
Test: MD5



1. (CC) gcc options: -lssl -lcrypto -fopenmp -pthread -lm -lz -ldl -lcrypt

## GraphicsMagick 1.3.33

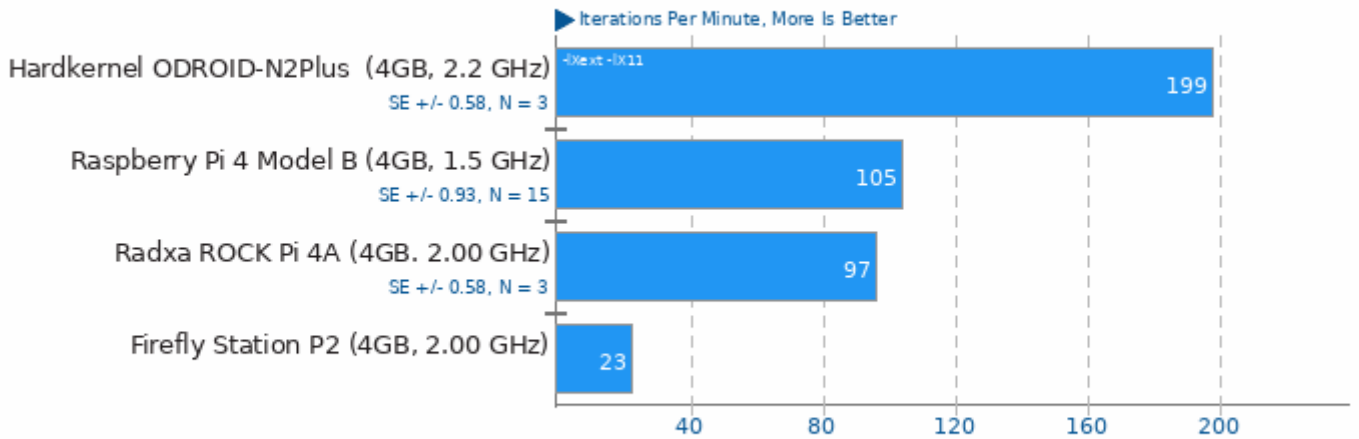
Operation: Swirl



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

## GraphicsMagick 1.3.33

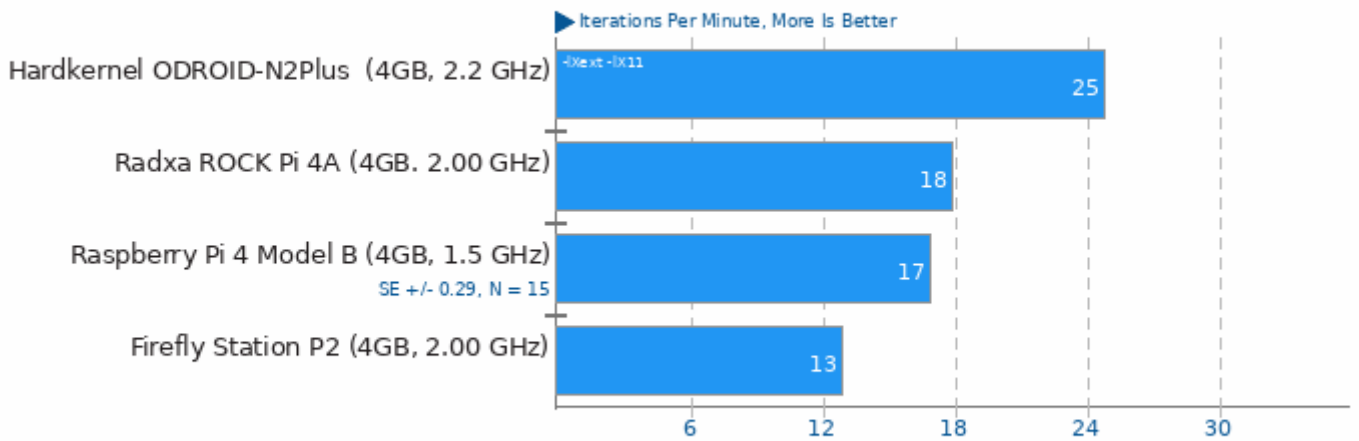
Operation: Rotate



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

## GraphicsMagick 1.3.33

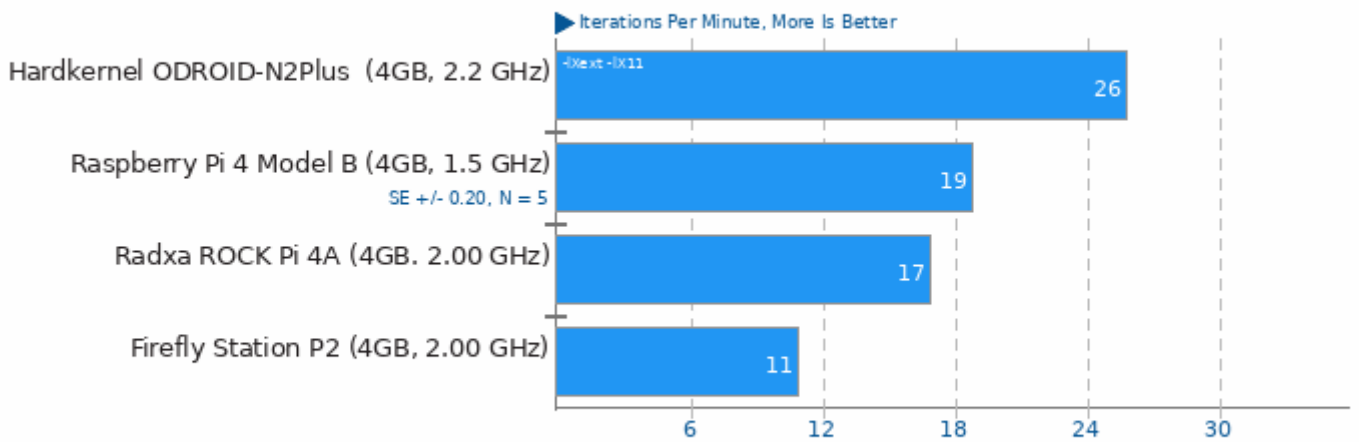
Operation: Sharpen



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

## GraphicsMagick 1.3.33

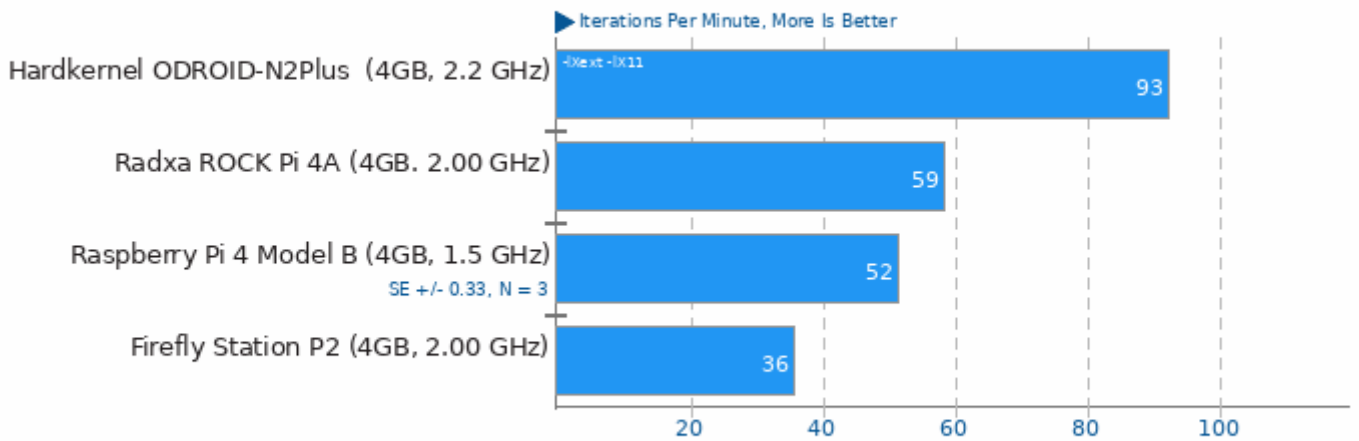
Operation: Enhanced



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

## GraphicsMagick 1.3.33

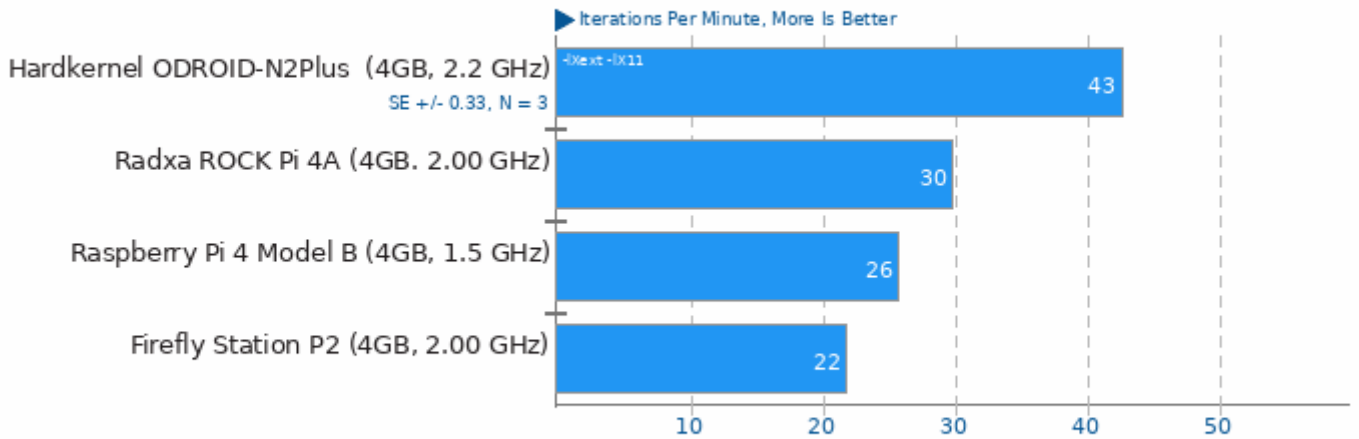
Operation: Resizing



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

## GraphicsMagick 1.3.33

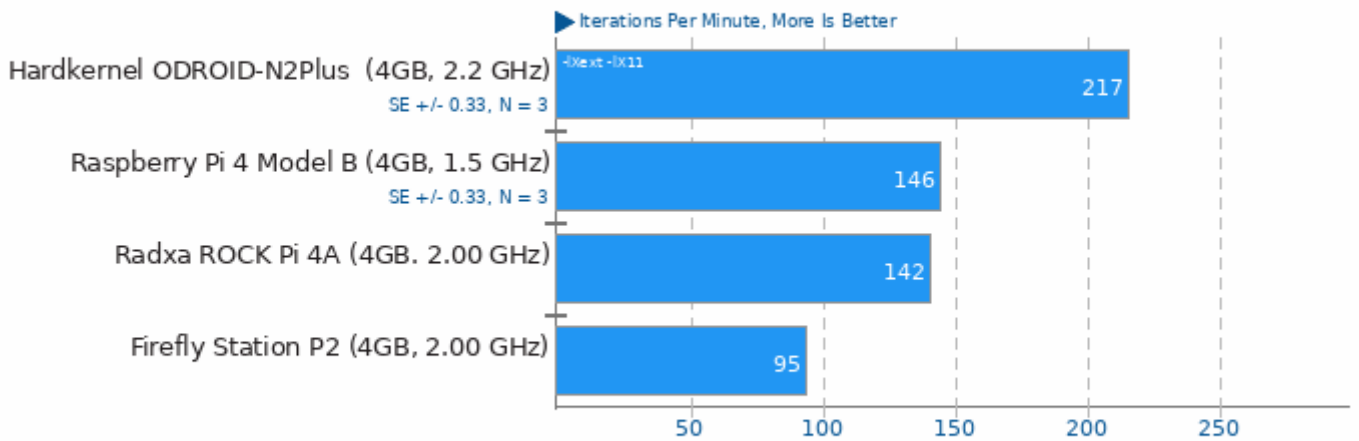
Operation: Noise-Gaussian



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

## GraphicsMagick 1.3.33

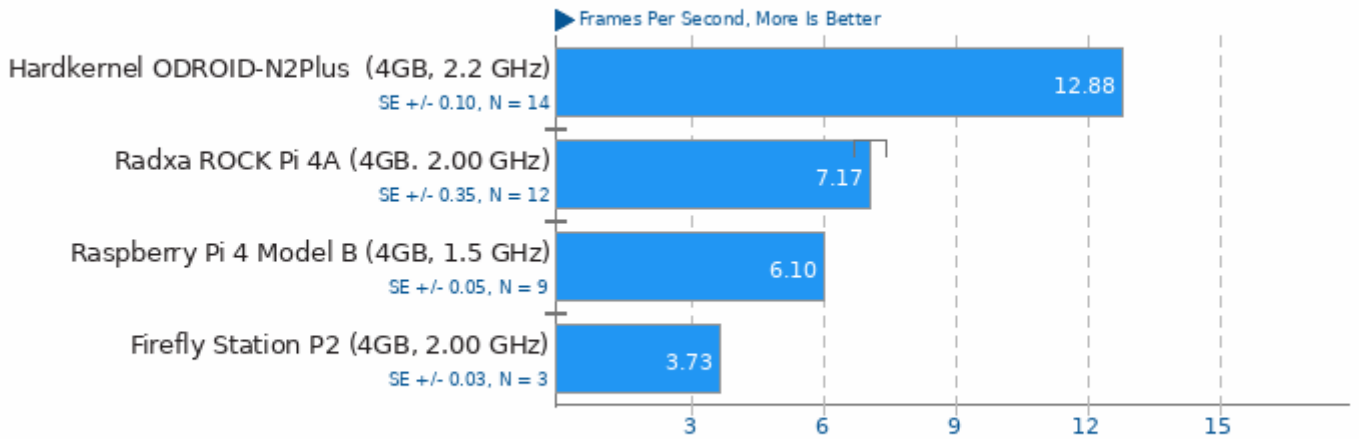
Operation: HWB Color Space



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lz -lm -lpthread

## x264 2019-12-17

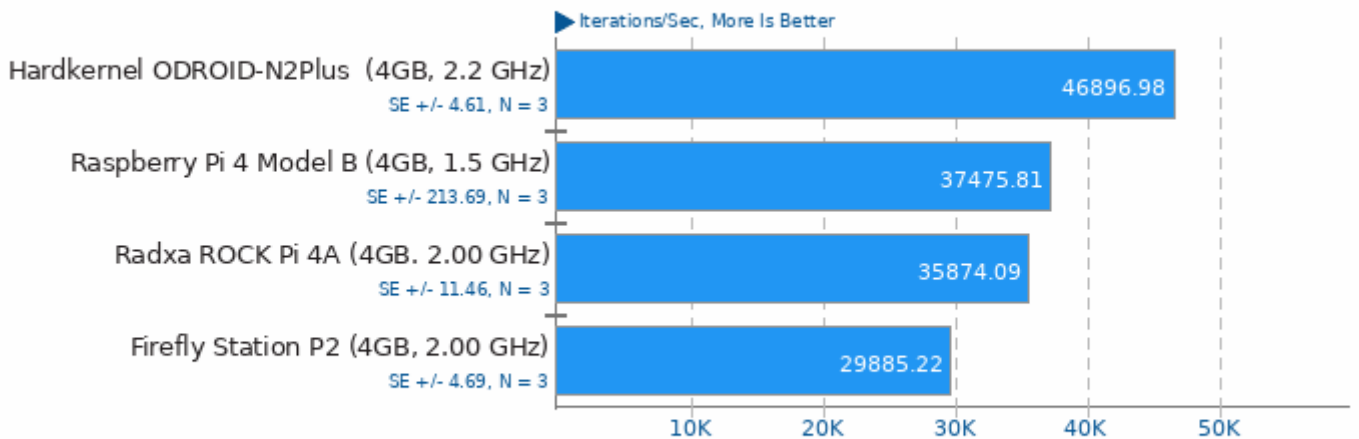
H.264 Video Encoding



1. (CC) gcc options: -ldl -lm -lpthread

## Coremark 1.0

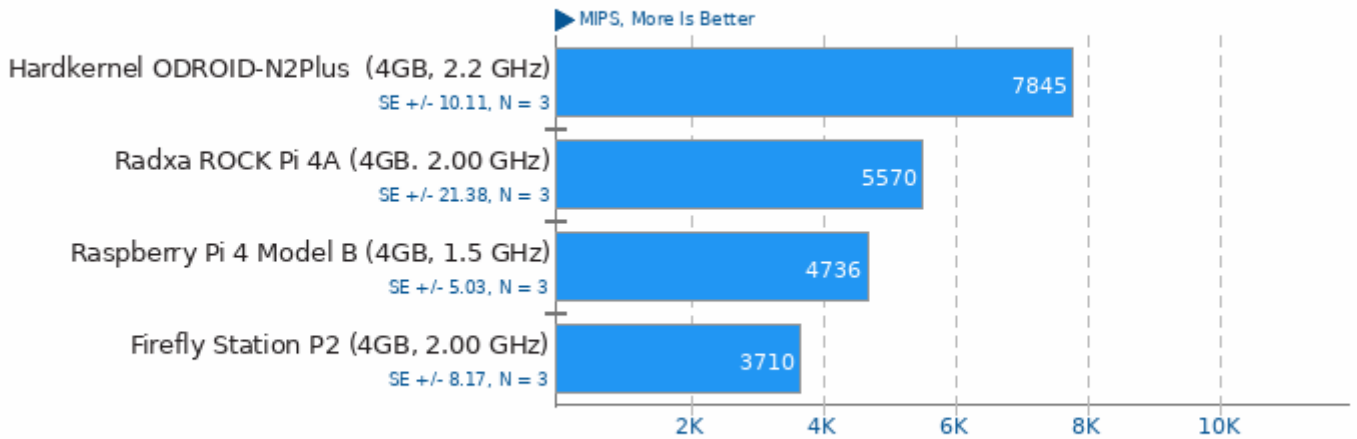
CoreMark Size 666 - Iterations Per Second



1. (CC) gcc options: -O2 -lrt -lrt

## 7-Zip Compression 21.06

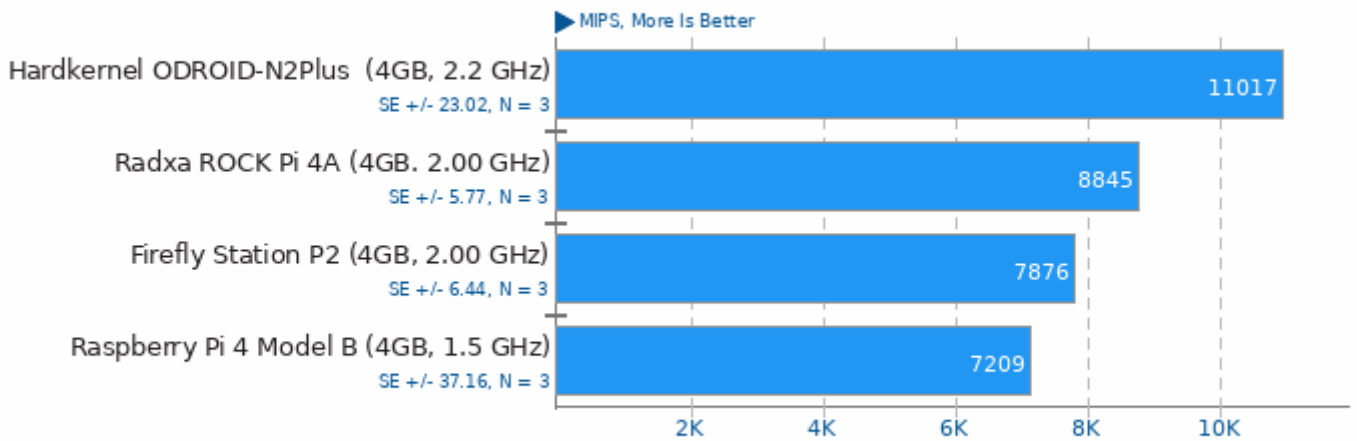
Test: Compression Rating



1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

## 7-Zip Compression 21.06

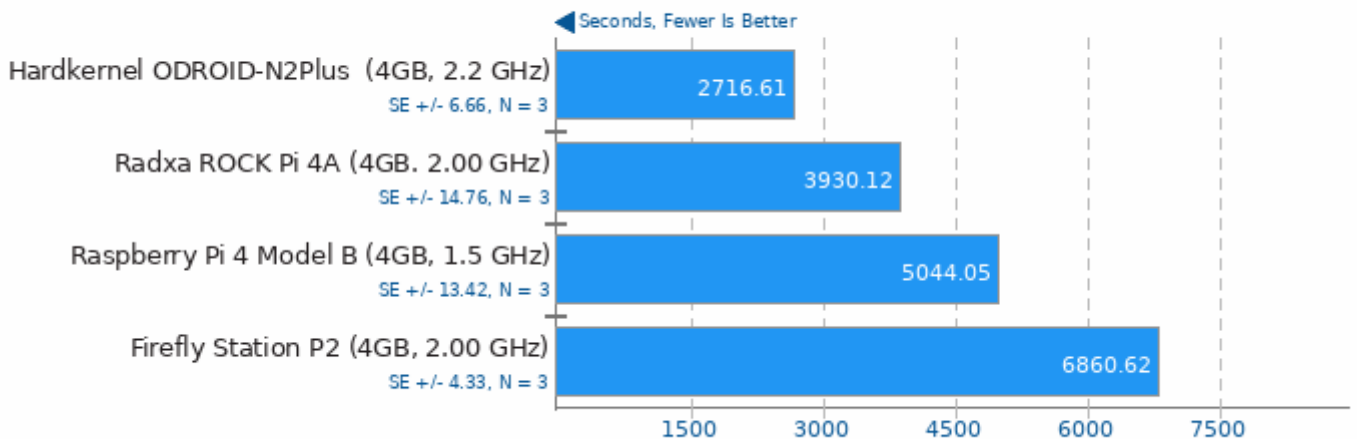
Test: Decompression Rating



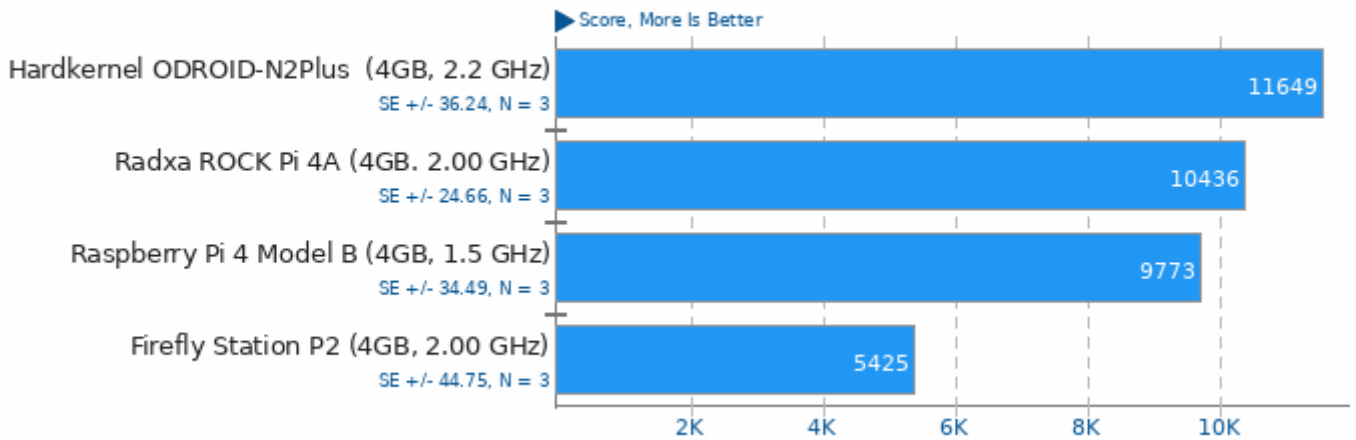
1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

## Timed Linux Kernel Compilation 5.16

Build: defconfig

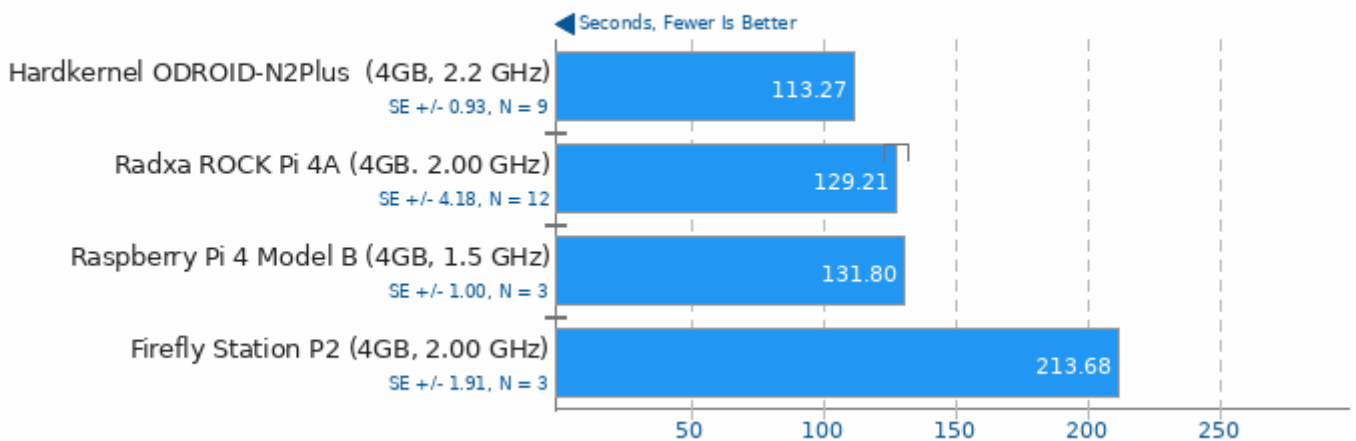


## Node.js Octane Benchmark



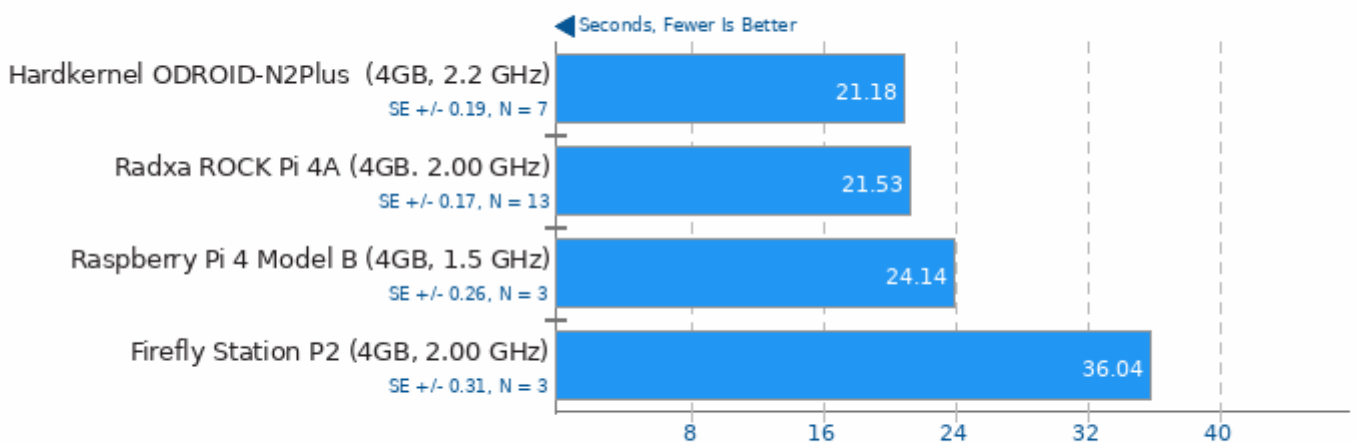
## Gzip Compression

Linux Source Tree Archiving To .tar.gz



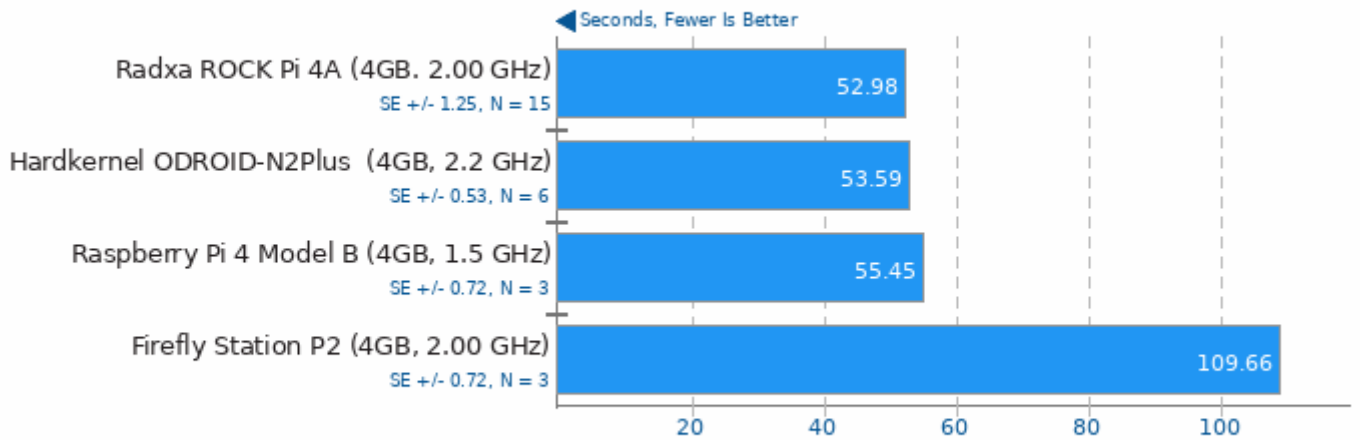
## LAME MP3 Encoding 3.100

WAV To MP3



1. (CC) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -lm

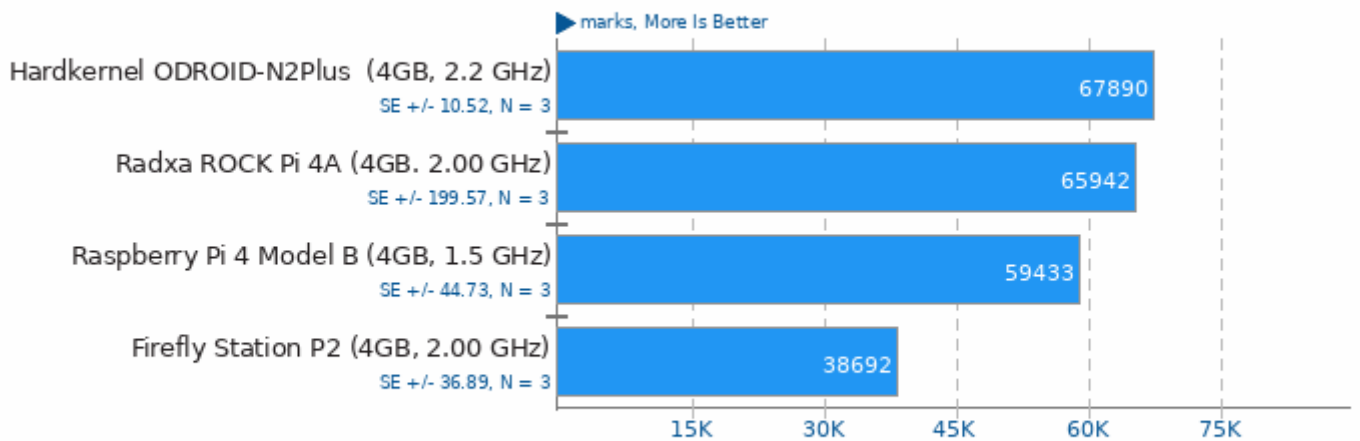
**RNNoise 2020-06-28**



1. (CC) gcc options: -O2 -pedantic -fvisibility=hidden

**SecureMark 1.0.4**

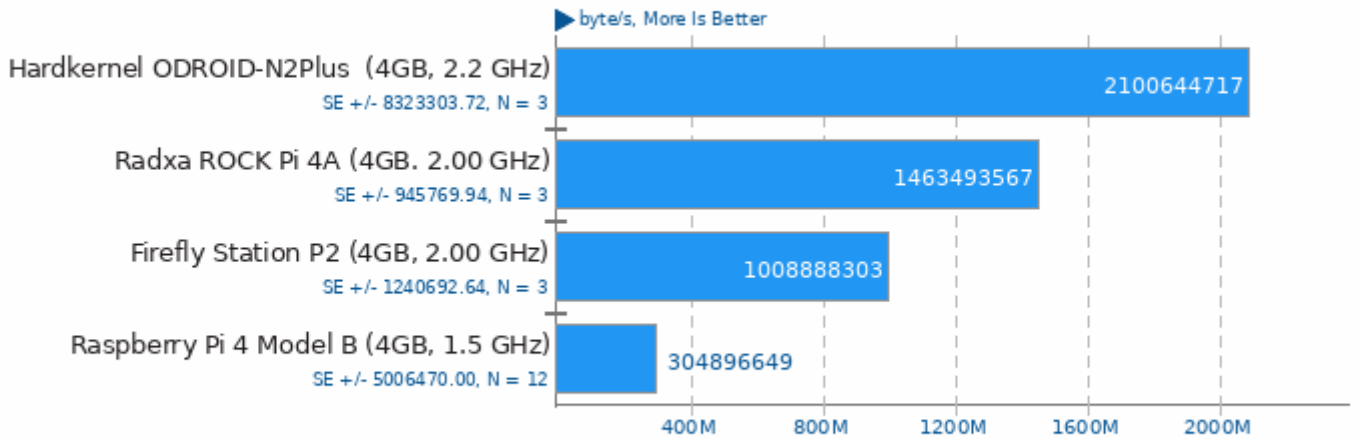
Benchmark: SecureMark-TLS



1. (CC) gcc options: -pedantic -O3

**OpenSSL 3.0**

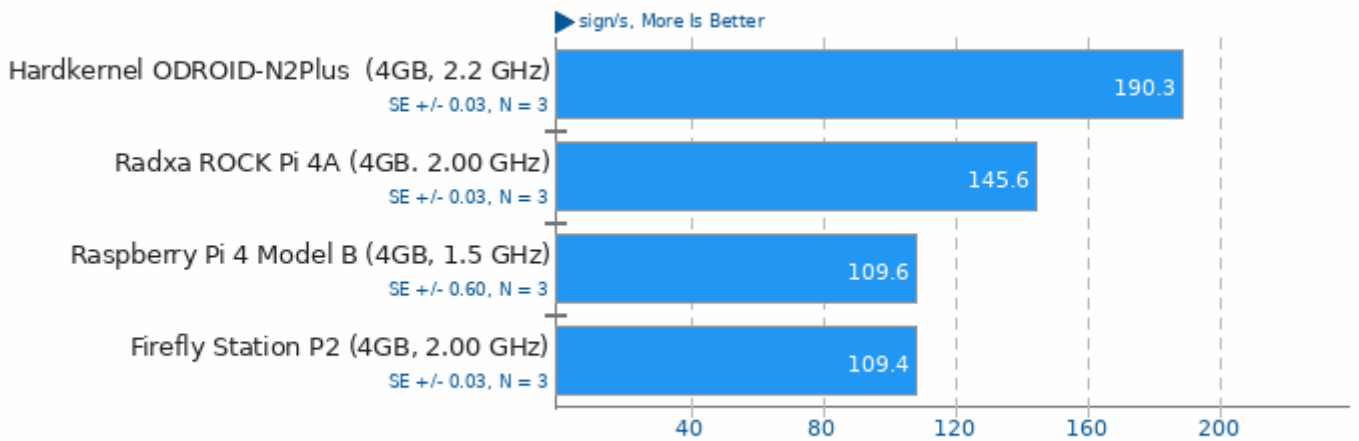
Algorithm: SHA256



1. (CC) gcc options: -pthread -O3 -lssl -lcrypto -ldl

**OpenSSL 3.0**

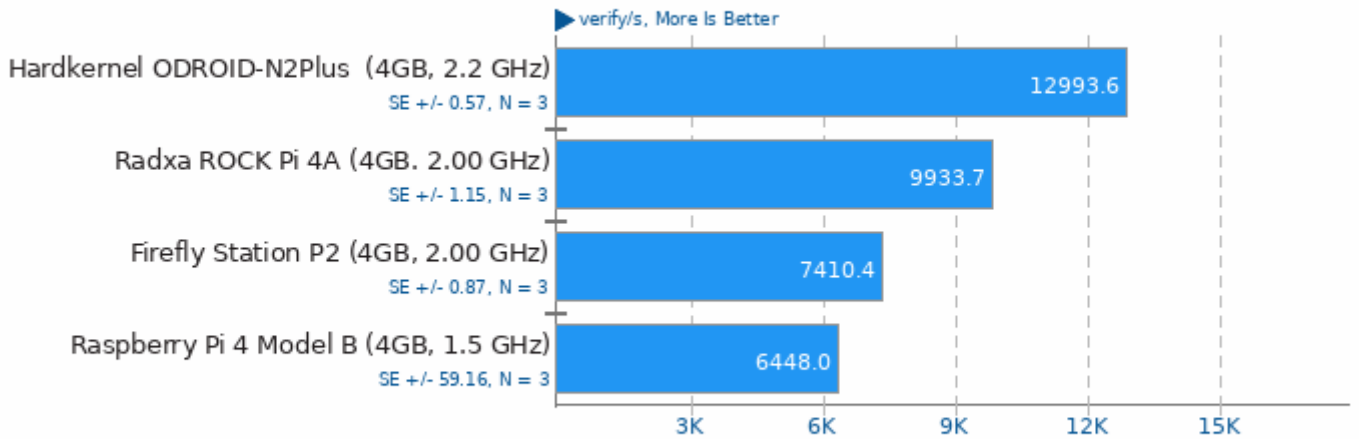
Algorithm: RSA4096



1. (CC) gcc options: -pthread -O3 -lssl -lcrypto -ldl

## OpenSSL 3.0

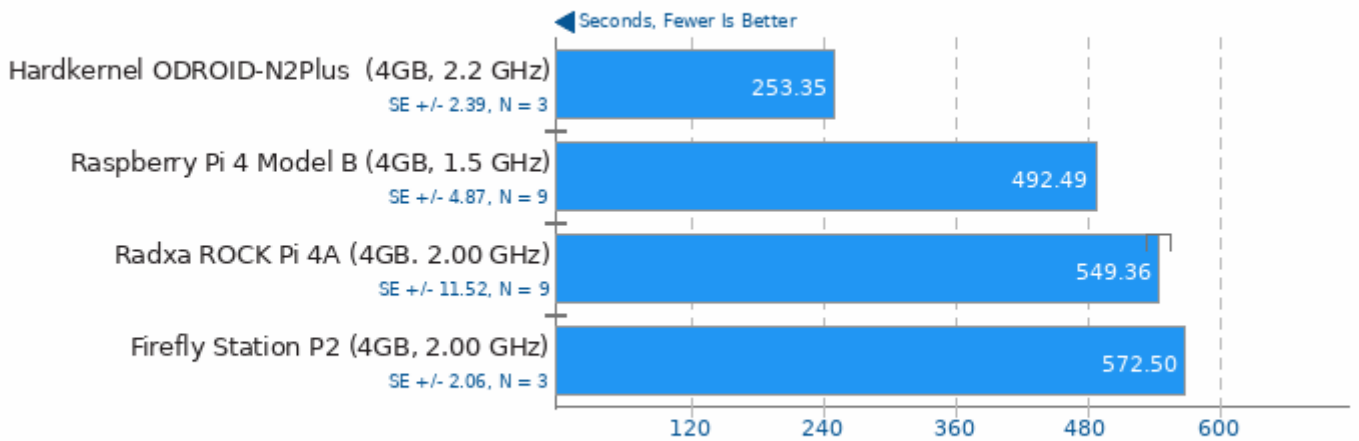
Algorithm: RSA4096



1. (CC) gcc options: -pthread -O3 -lssl -lcrypto -ldl

## SQLite Speedtest 3.30

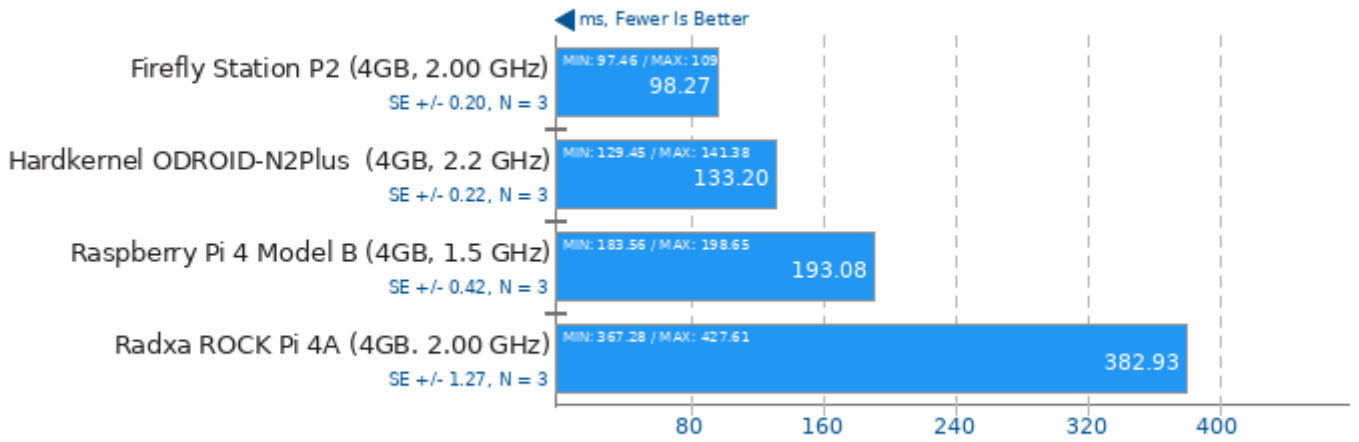
Timed Time - Size 1,000



1. (CC) gcc options: -O2 -ldl -lz -lpthread

**NCNN 20210720**

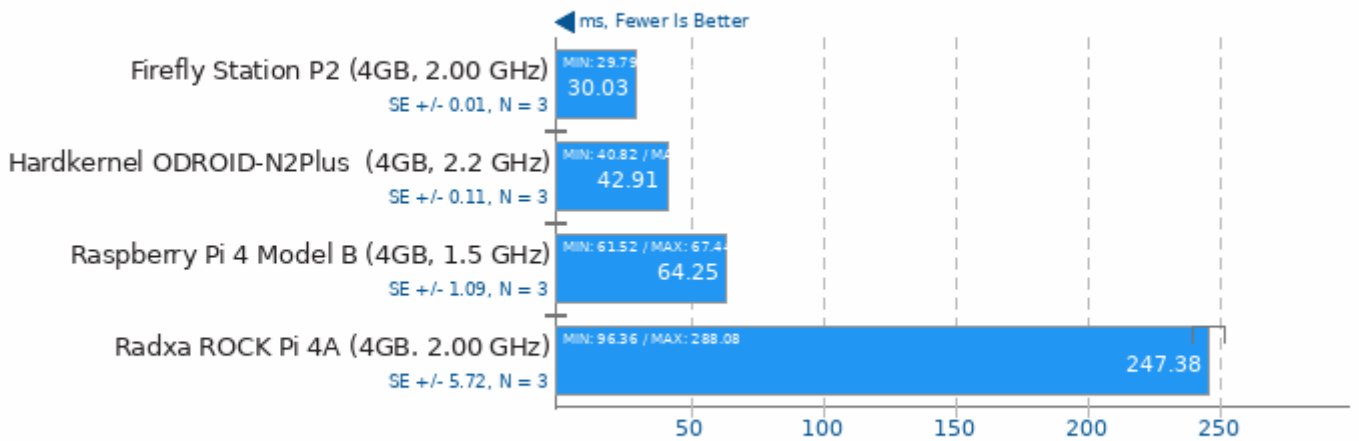
Target: CPU - Model: mobilenet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

**NCNN 20210720**

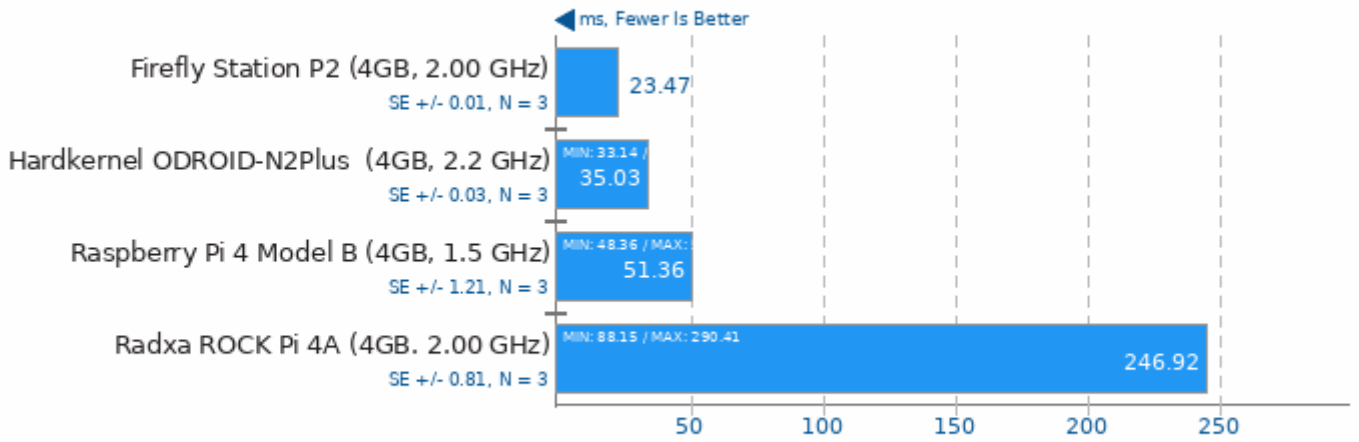
Target: CPU-v2-v2 - Model: mobilenet-v2



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

## NCNN 20210720

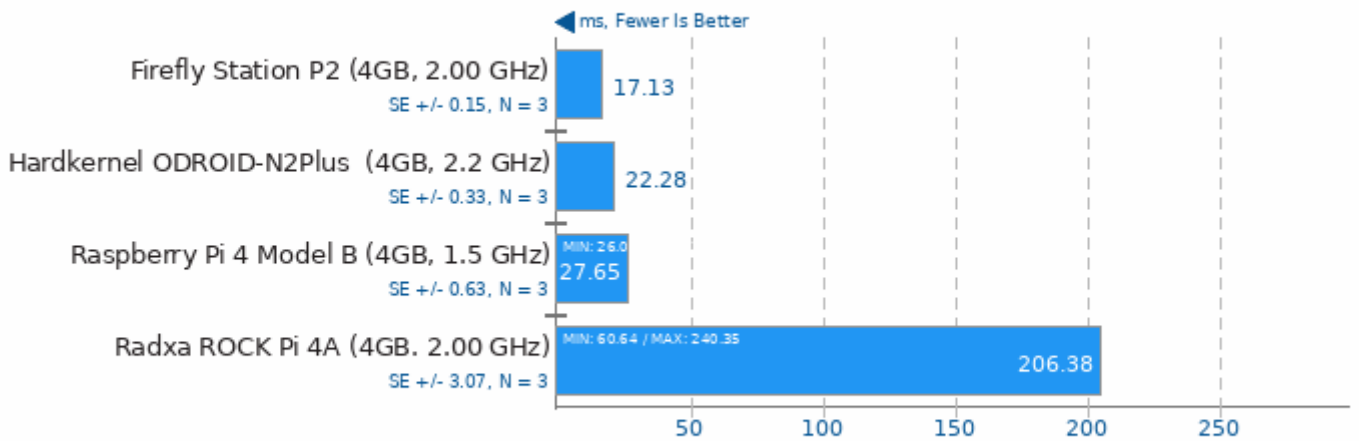
Target: CPU-v3-v3 - Model: mobilenet-v3



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

## NCNN 20210720

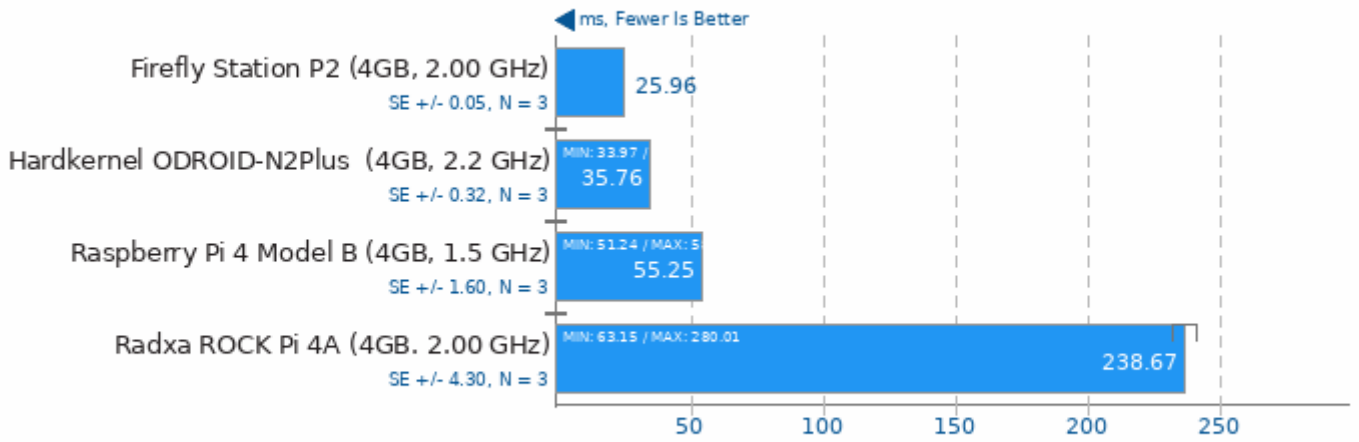
Target: CPU - Model: shufflenet-v2



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

**NCNN 20210720**

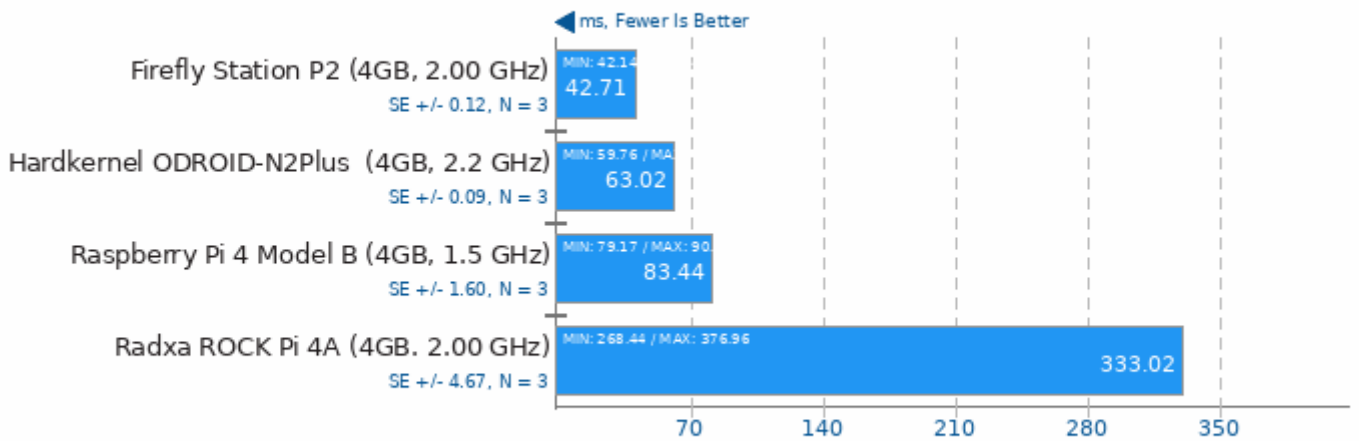
Target: CPU - Model: mnasnet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

**NCNN 20210720**

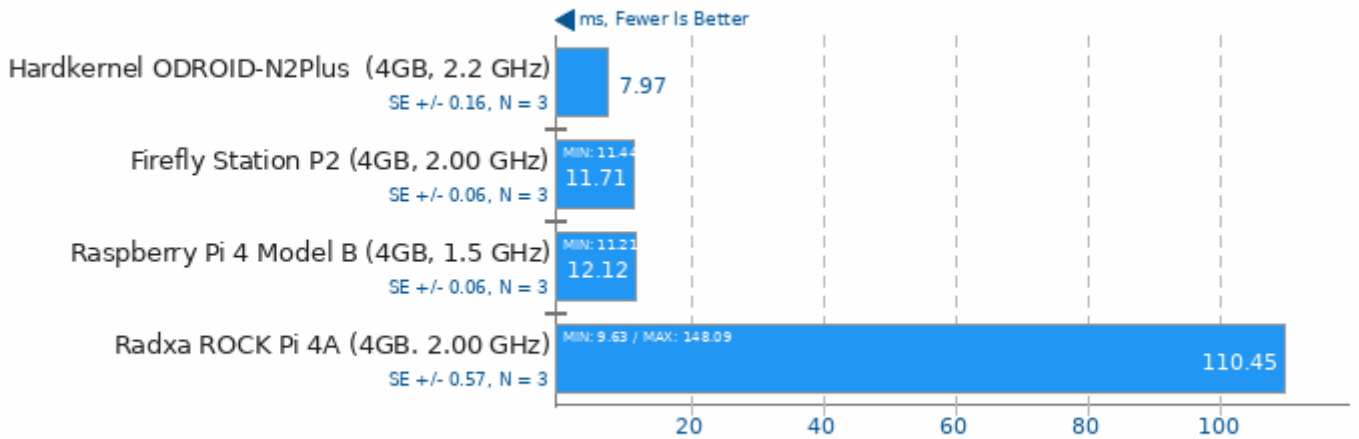
Target: CPU - Model: efficientnet-b0



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

**NCNN 20210720**

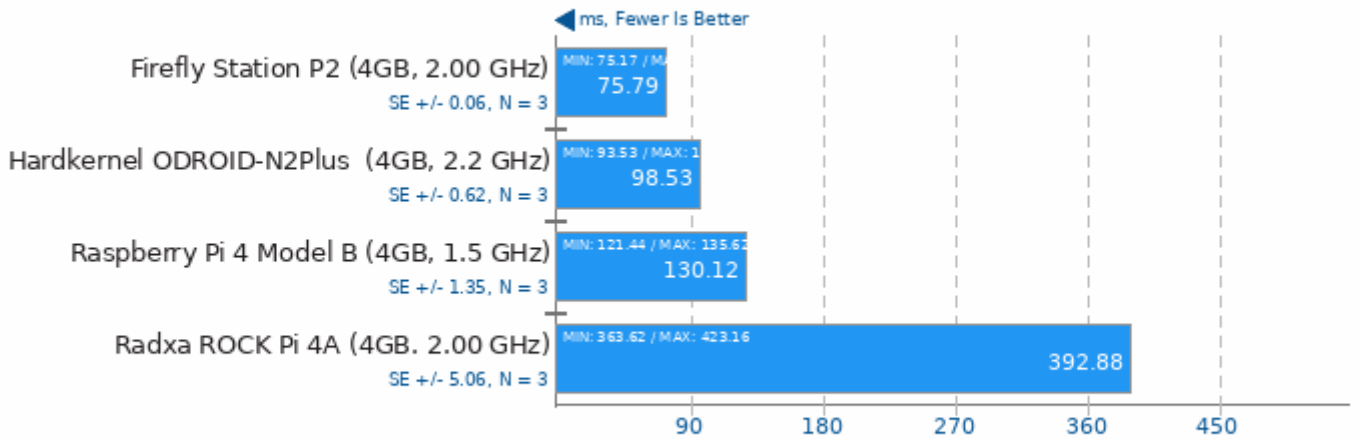
Target: CPU - Model: blazeiface



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

**NCNN 20210720**

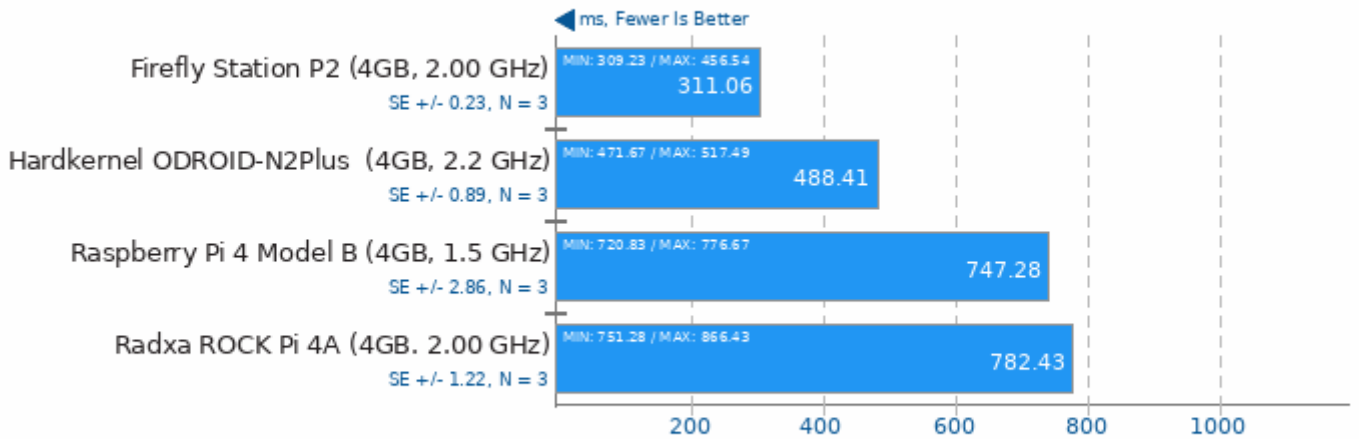
Target: CPU - Model: googlenet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

**NCNN 20210720**

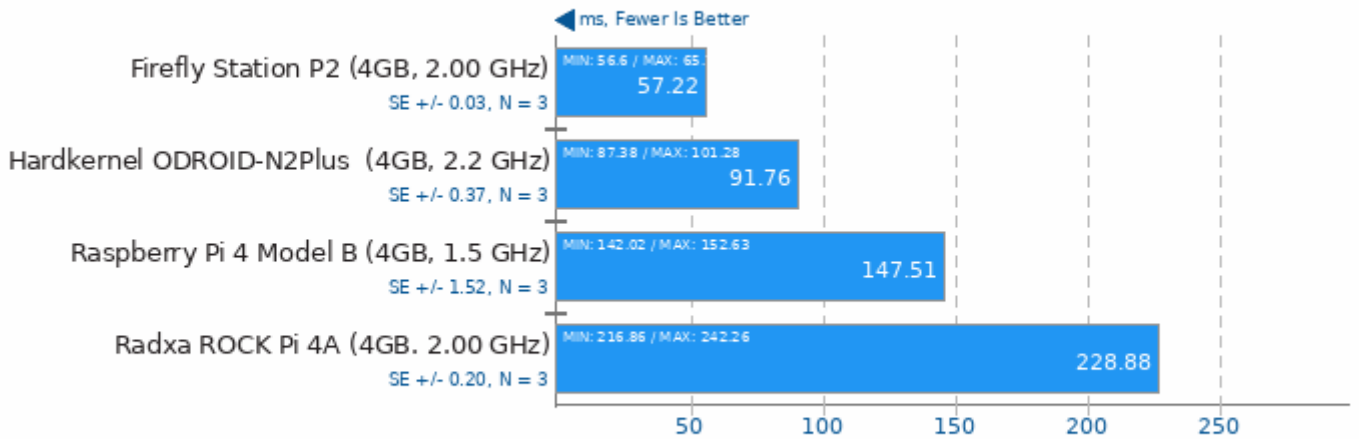
Target: CPU - Model: vgg16



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

**NCNN 20210720**

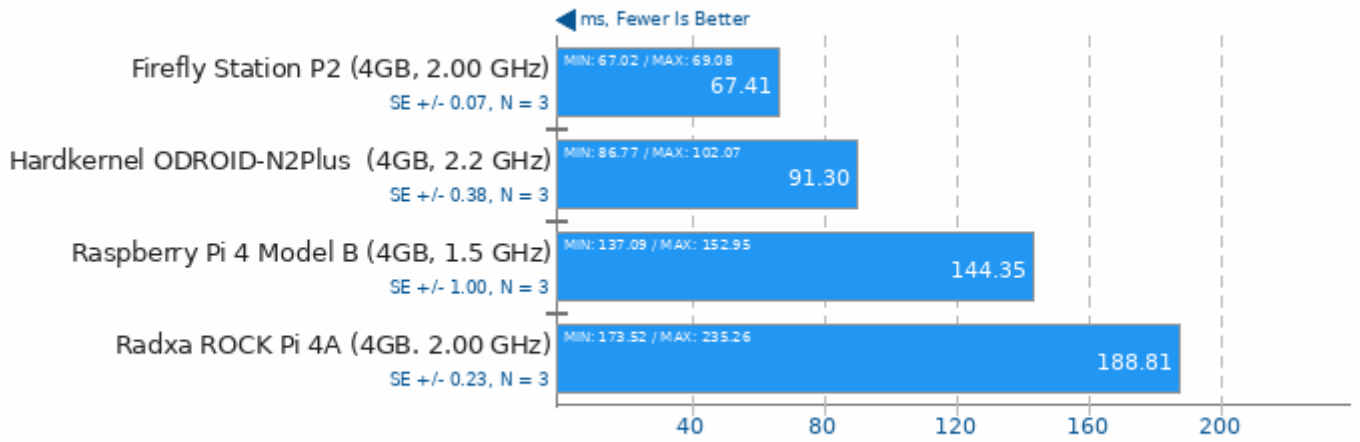
Target: CPU - Model: resnet18



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

**NCNN 20210720**

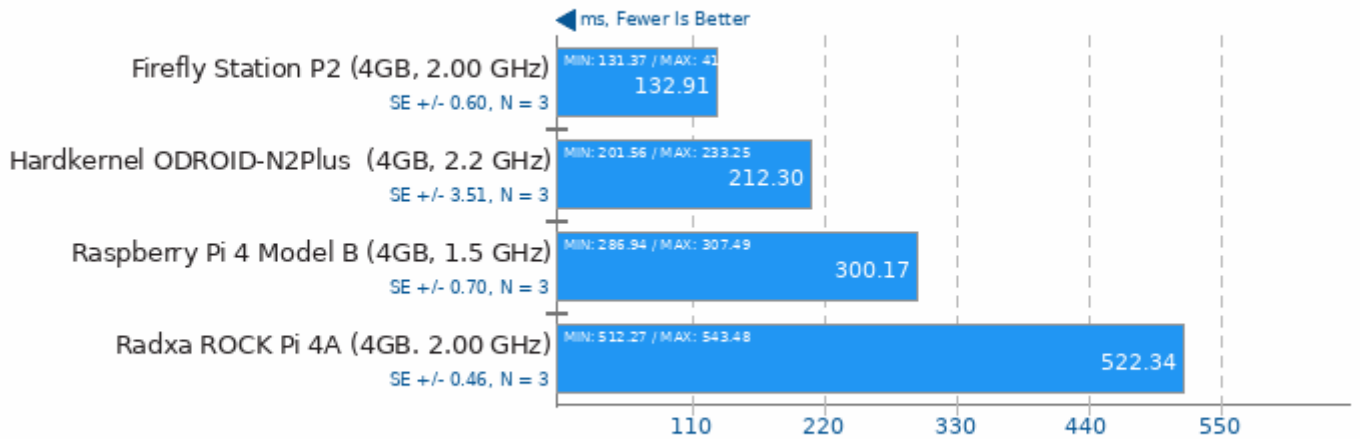
Target: CPU - Model: alexnet



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

**NCNN 20210720**

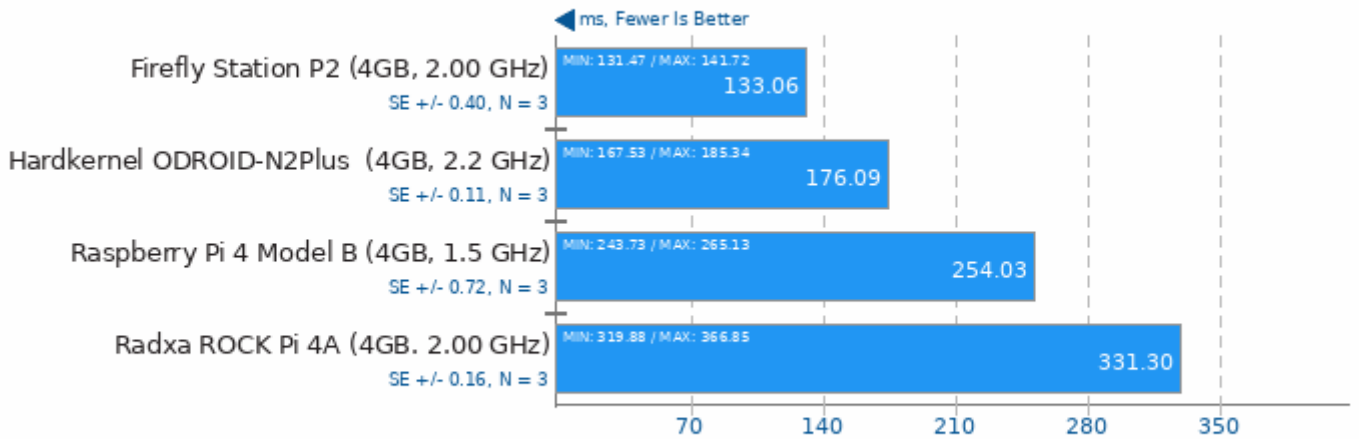
Target: CPU - Model: resnet50



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

## NCNN 20210720

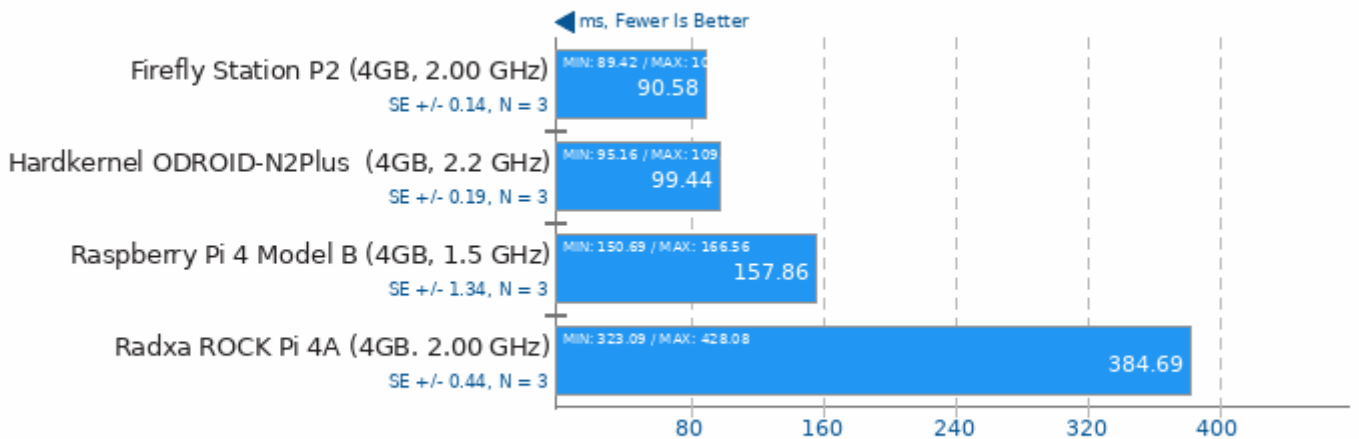
Target: CPU - Model: yolov4-tiny



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

## NCNN 20210720

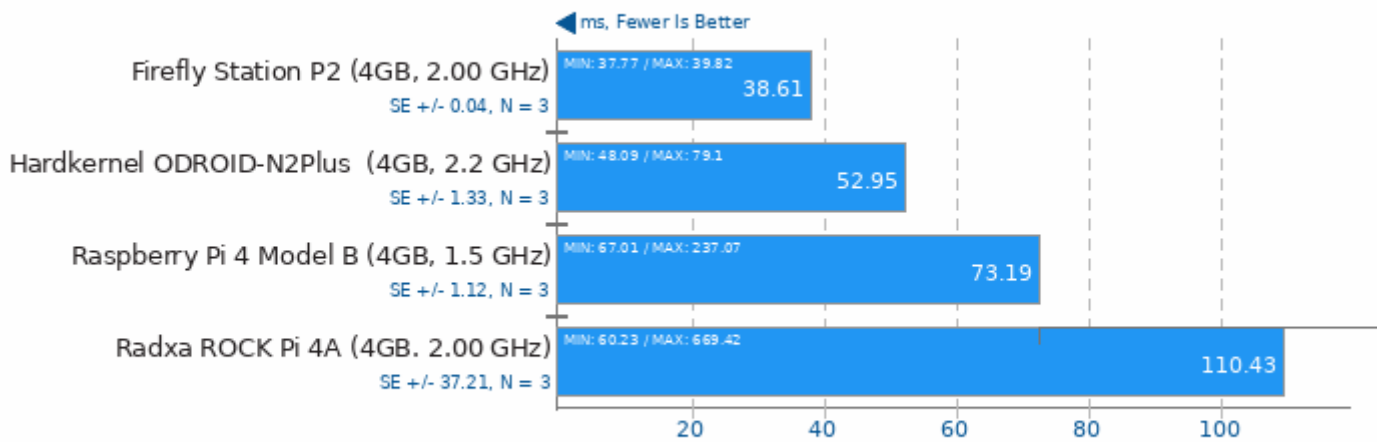
Target: CPU - Model: squeezenet\_ssd



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

## NCNN 20210720

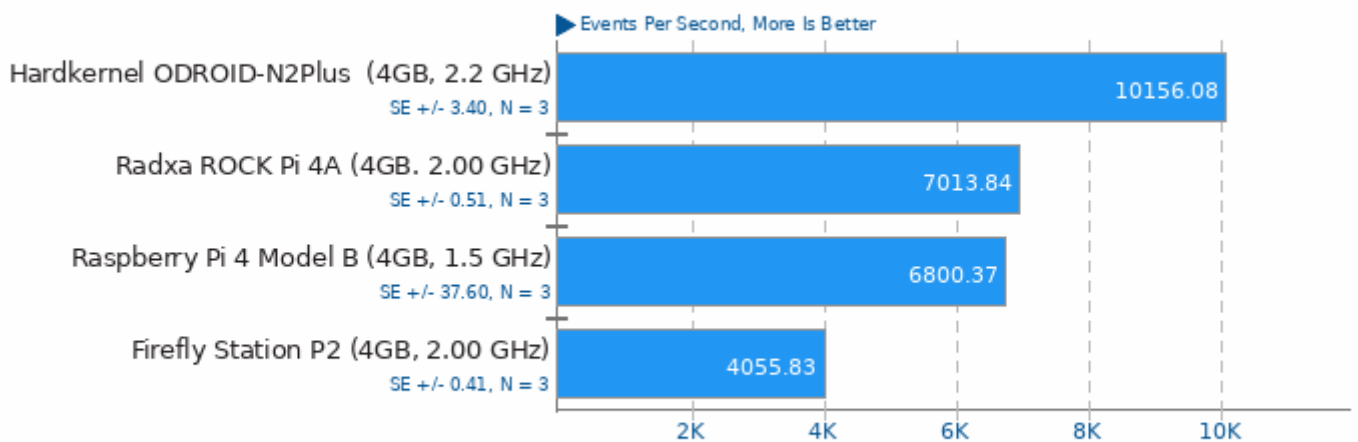
Target: CPU - Model: regnety\_400m



1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread -pthread

## Sysbench 1.0.20

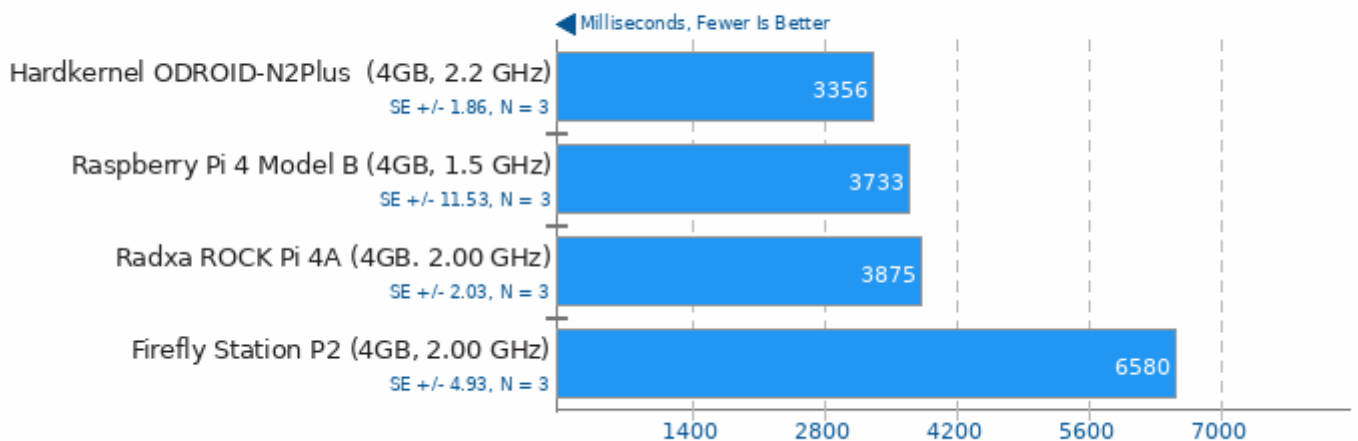
Test: CPU



1. (CC) gcc options: -pthread -O2 -funroll-loops -rdynamic -ldl -laio -lm

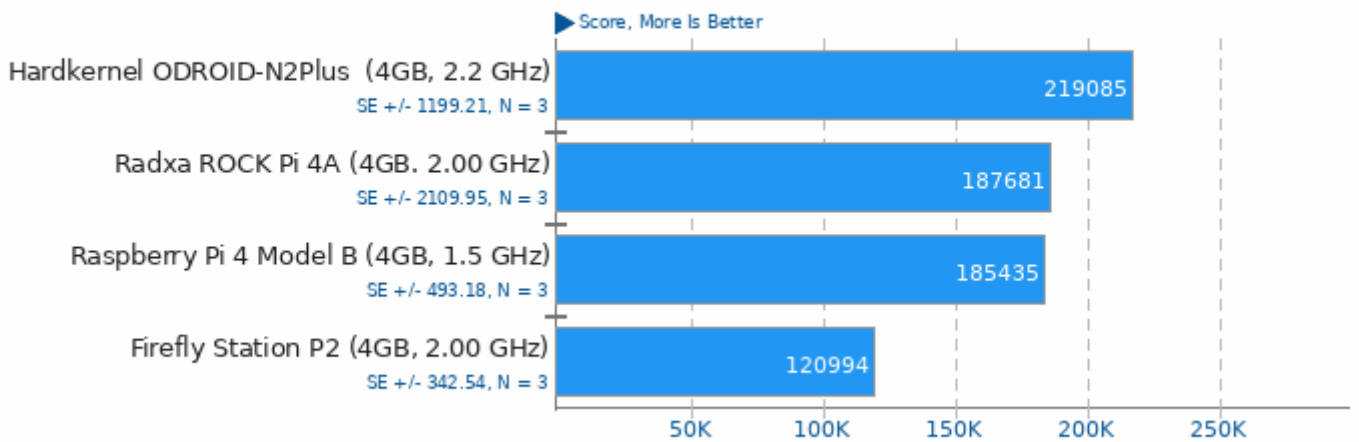
## PyBench 2018-02-16

Total For Average Test Times



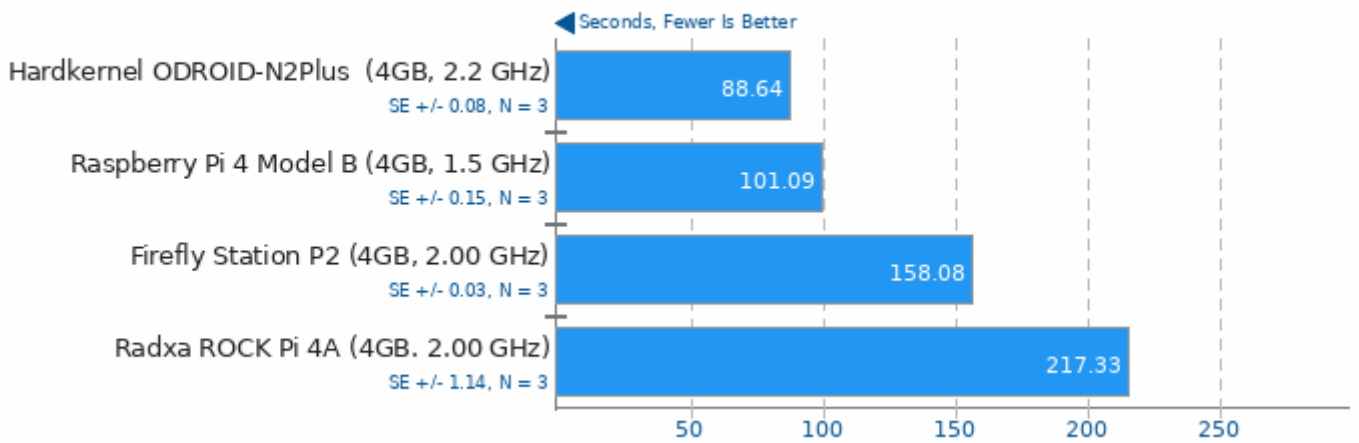
## PHPBench 0.8.1

PHP Benchmark Suite



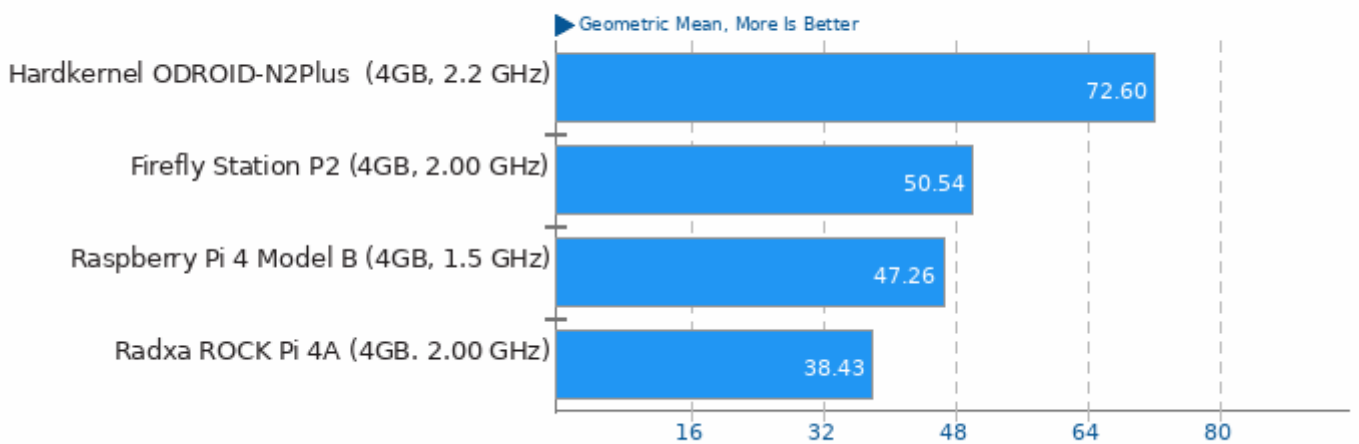
## Tesseract OCR 4.1.1

Time To OCR 7 Images



## Geometric Mean Of All Test Results

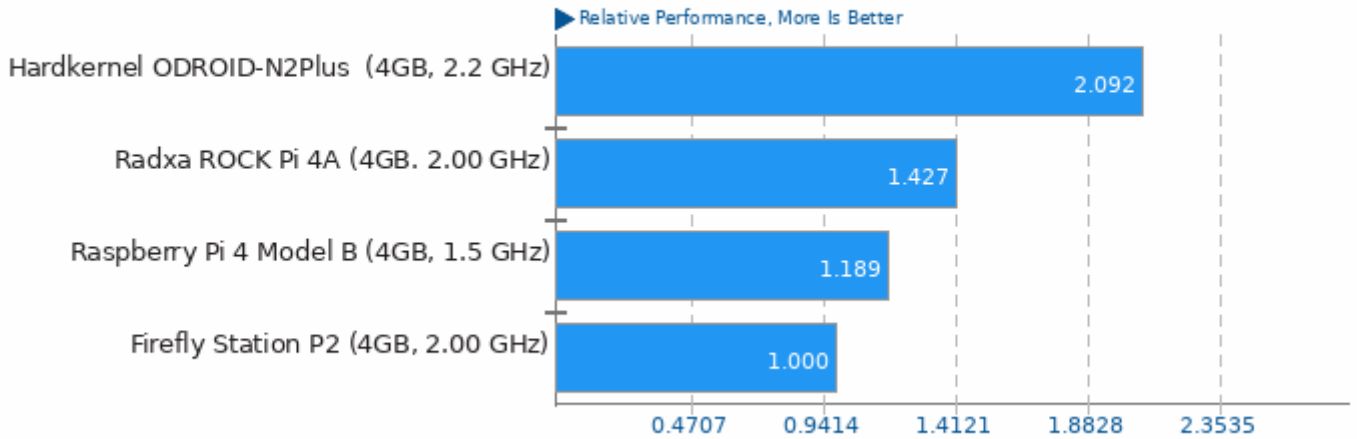
Result Composite - SBC SN Test



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

## Geometric Mean Of C/C++ Compiler Tests

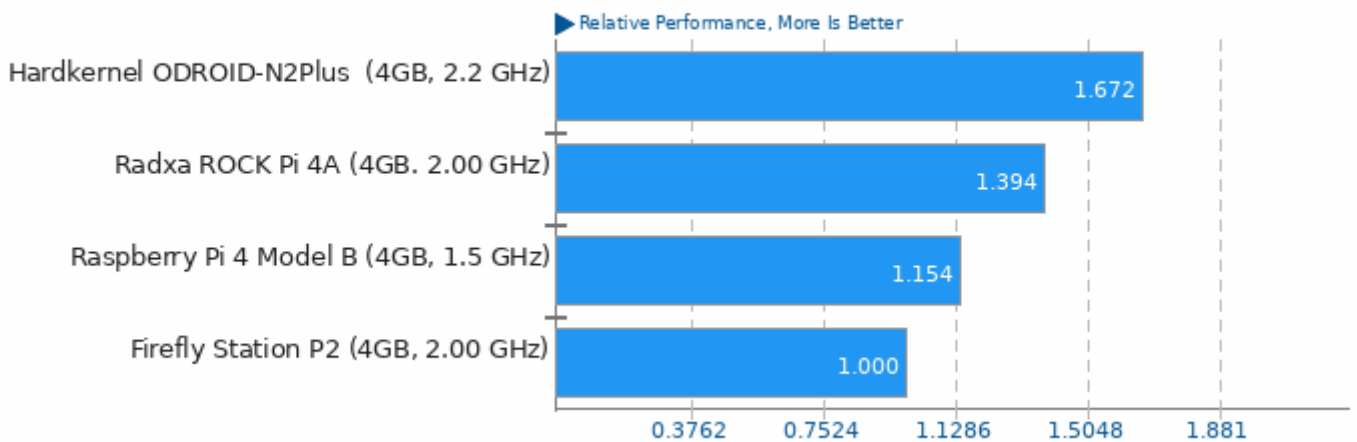
Result Composite - SBC SN Test



Geometric mean based upon tests: pts/graphics-magick, pts/compress-7zip, pts/encode-mp3, pts/sqlite-speedtest, pts/john-the-ripper, pts/x264, pts/compress-zstd and pts/openssl

## Geometric Mean Of Compression Tests

Result Composite - SBC SN Test



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

## Geometric Mean Of Creator Workloads Tests

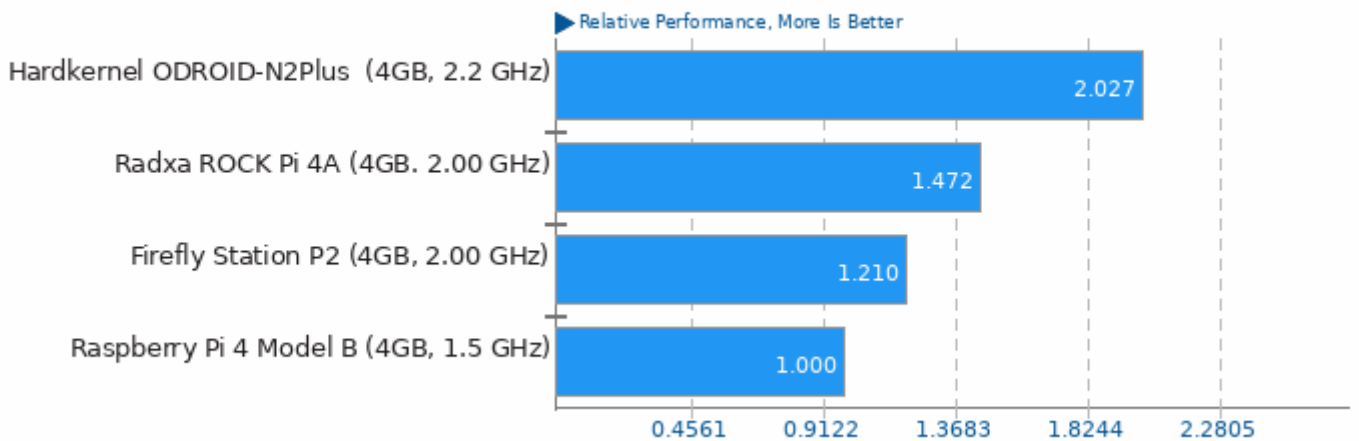
Result Composite - SBC SN Test



Geometric mean based upon tests: system/tesseract-ocr, pts/x264, pts/encode-mp3, pts/graphics-magick and pts/rnoise

## Geometric Mean Of Cryptography Tests

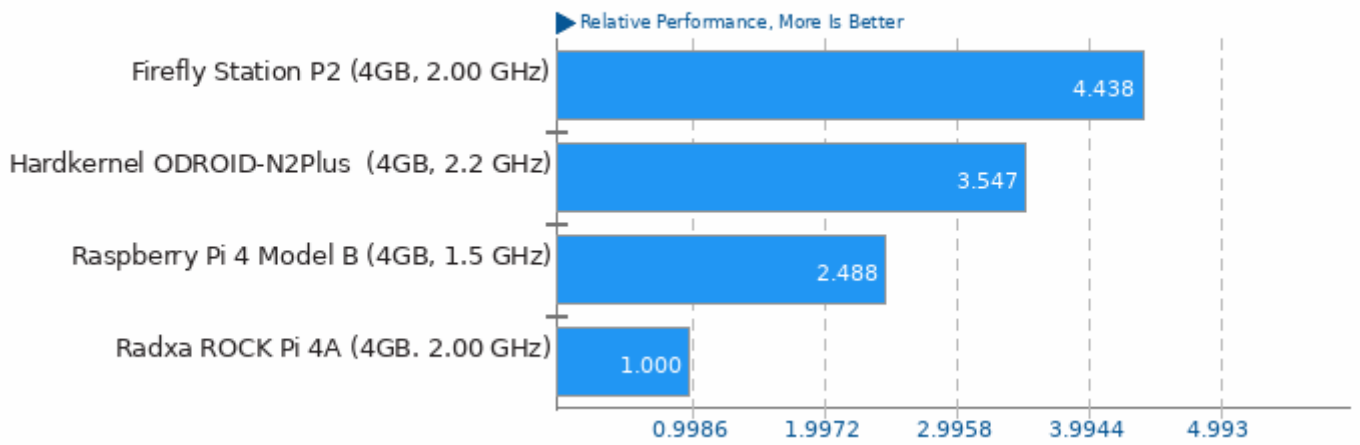
Result Composite - SBC SN Test



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

## Geometric Mean Of HPC - High Performance Computing Tests

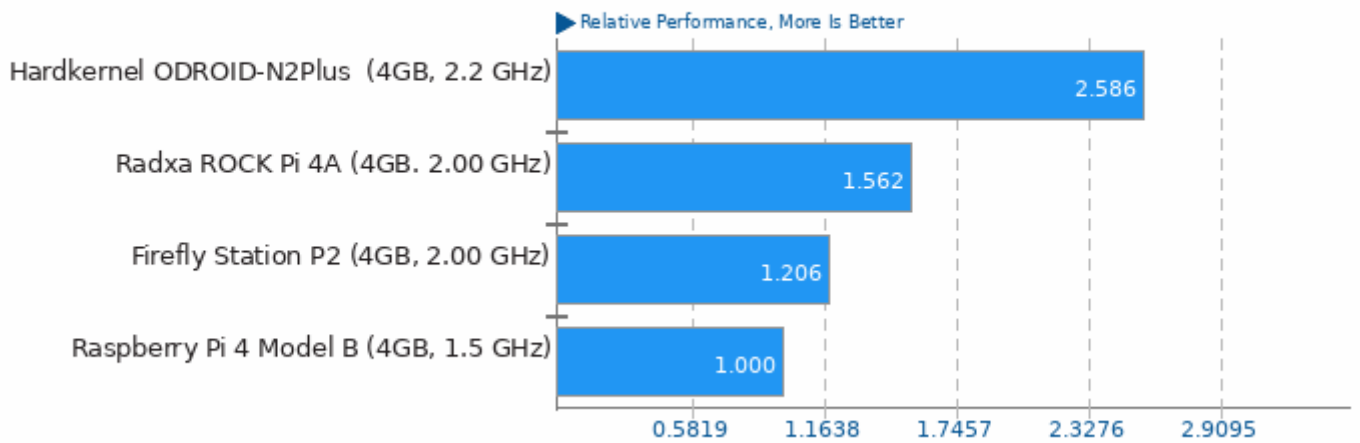
Result Composite - SBC SN Test



Geometric mean based upon tests: pts/ncnn and pts/rnoise

## Geometric Mean Of Common Kernel Benchmarks Tests

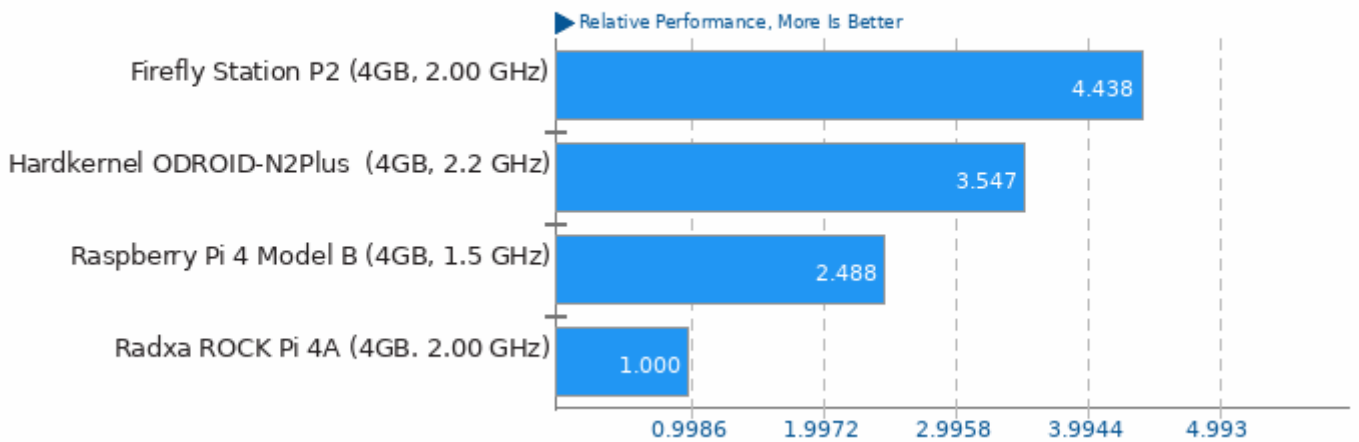
Result Composite - SBC SN Test



Geometric mean based upon tests: pts/postmark, pts/sqlite-speedtest and pts/opensl

## Geometric Mean Of Machine Learning Tests

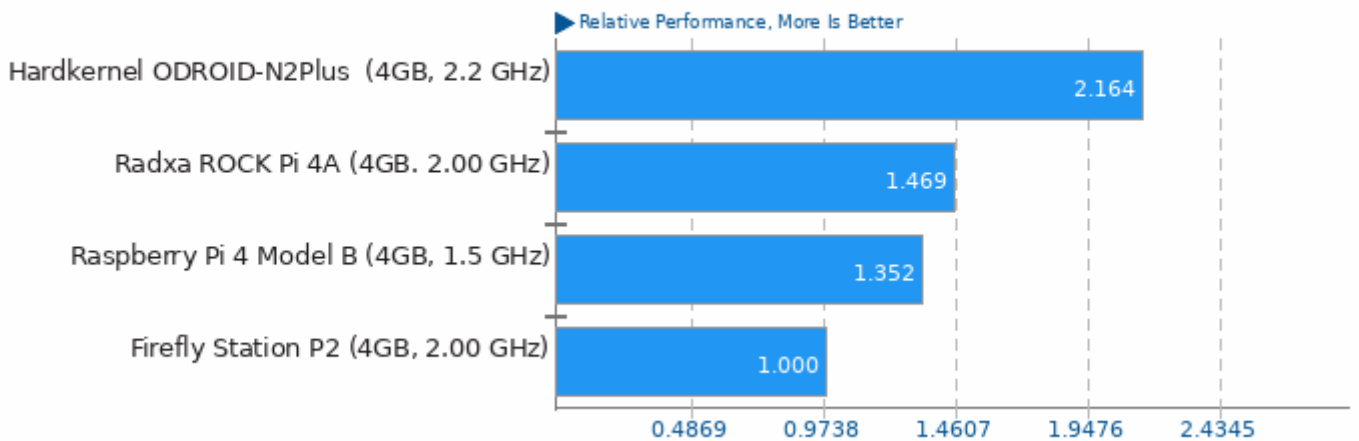
Result Composite - SBC SN Test



Geometric mean based upon tests: pts/ncnn and pts/rnoise

## Geometric Mean Of Multi-Core Tests

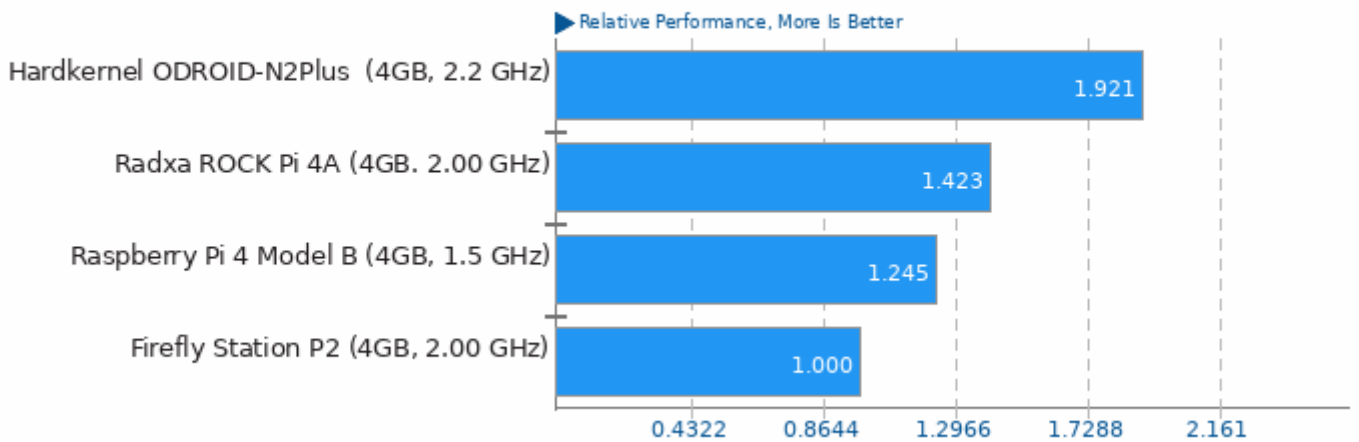
Result Composite - SBC SN Test



Geometric mean based upon tests: pts/sysbench, pts/coremark, pts/x264, pts/john-the-ripper, pts/graphics-magick, pts/compress-7zip, pts/compress-zstd and pts/build-linux-kernel

## Geometric Mean Of Programmer / Developer System Benchmarks Tests

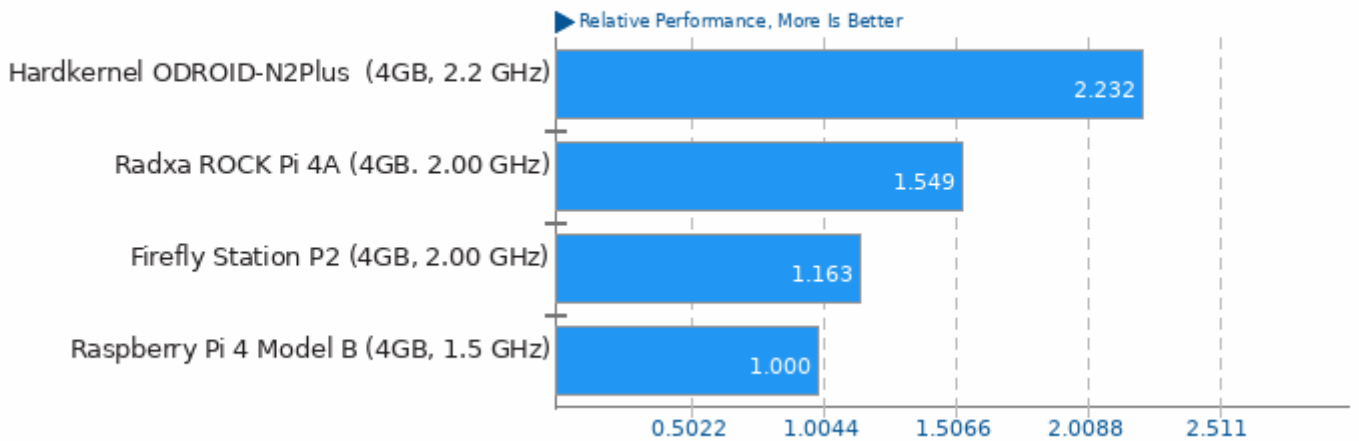
Result Composite - SBC SN Test



Geometric mean based upon tests: pts/sqlite-speedtest, pts/compress-zstd, pts/pybench and pts/build-linux-kernel

## Geometric Mean Of Server Tests

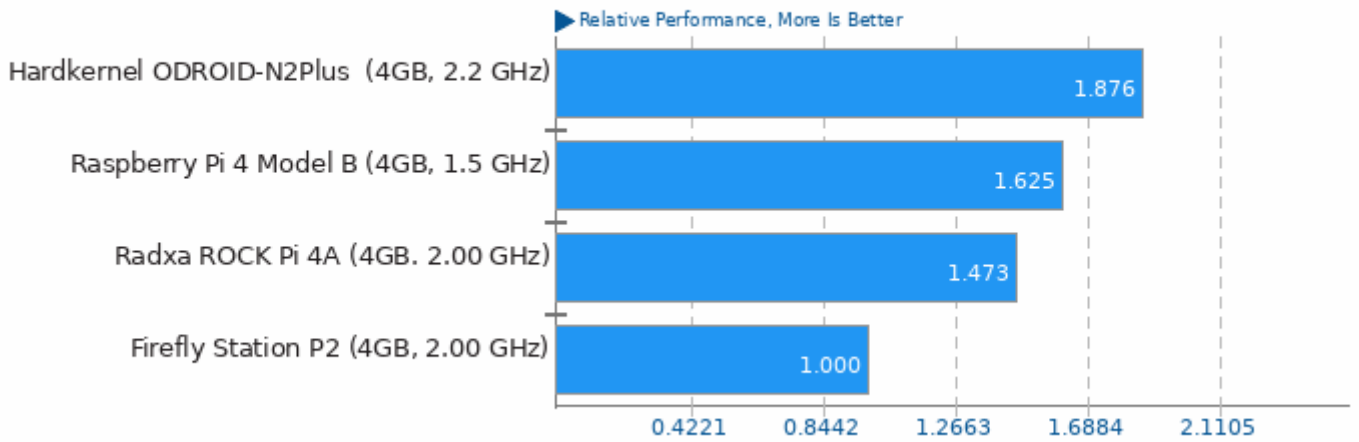
Result Composite - SBC SN Test



Geometric mean based upon tests: pts/phpbench, pts/openssl and pts/sqlite-speedtest

## Geometric Mean Of Single-Threaded Tests

Result Composite - SBC SN Test



Geometric mean based upon tests: pts/node-octane, pts/compress-gzip, pts/encode-mp3, pts/pybench, pts/phpbench and system/tesseract-ocr

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Monday, 21 March 2022 00:44.*