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# babysched

Intel Core i7-4600U testing with a LENOVO 20A7CTO1WW (GRET40WW 1.17 BIOS) and Intel HD 4400 2GB on Ubuntu 20.04 via the Phoronix Test Suite.

**Automated Executive Summary**

*baby524be had the most wins, coming in first place for 37% of the tests.*

## Test Systems:

### baby72a20 #1

### baby72a20 #2

Processor: Intel Core i7-4600U @ 3.30GHz (2 Cores / 4 Threads), Motherboard: LENOVO 20A7CTO1WW (GRET40WW 1.17 BIOS), Chipset: Intel Haswell-ULT DRAM, Memory: 8GB, Disk: 128GB TOSHIBA THNSNJ12, Graphics: Intel HD 4400 2GB (1100MHz), Audio: Intel Haswell-ULT HD Audio, Network: Intel I218-LM + Intel 7260

OS: Ubuntu 20.04, Kernel: 5.14.9-Baby+ (x86_64), Display Server: X Server 1.20.11, OpenGL: 4.5 Mesa 21.0.3, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 2560x1440

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x26 - Thermald 1.9.1
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Vulnerable IBPB: disabled STIBP: disabled + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

## baby524be

Processor: Intel Core i7-4600U @ 3.30GHz (2 Cores / 4 Threads), Motherboard: LENOVO 20A7CTO1WW (GRET40WW 1.17 BIOS), Chipset: Intel Haswell-ULT DRAM, Memory: 8GB, Disk: 128GB TOSHIBA THNSNJ12, Graphics: Intel HD 4400 2GB (1100MHz), Audio: Intel Haswell-ULT HD Audio, Network: Intel I218-LM + Intel 7260

OS: Ubuntu 20.04, Kernel: 5.14.9-Baby-dev+ (x86_64), Display Server: X Server 1.20.11, OpenGL: 4.5 Mesa 21.0.3, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 2560x1440

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x26 - Thermald 1.9.1
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Vulnerable IBPB: disabled STIBP: disabled + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

## 5.11.0-37-generic

Processor: Intel Core i7-4600U @ 3.30GHz (2 Cores / 4 Threads), Motherboard: LENOVO 20A7CTO1WW (GRET40WW 1.17 BIOS), Chipset: Intel Haswell-ULT DRAM, Memory: 8GB, Disk: 128GB TOSHIBA THNSNJ12, Graphics: Intel HD 4400 2GB (1100MHz), Audio: Intel Haswell-ULT HD Audio, Network: Intel I218-LM + Intel 7260

OS: Ubuntu 20.04, Kernel: 5.11.0-37-generic (x86_64), Display Server: X Server 1.20.11, OpenGL: 4.5 Mesa 21.0.3, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 2560x1440

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_cpufreq ondemand - CPU Microcode: 0x26 - Thermald 1.9.1
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

## 5.14.6-xanmod1-cacule

Processor: Intel Core i7-4600U @ 3.30GHz (2 Cores / 4 Threads), Motherboard: LENOVO 20A7CTO1WW (GRET40WW 1.17 BIOS), Chipset: Intel Haswell-ULT DRAM, Memory: 8GB, Disk: 128GB TOSHIBA THNSNJ12, Graphics: Intel HD 4400 2GB (1100MHz), Audio: Intel Haswell-ULT HD Audio, Network: Intel I218-LM + Intel 7260

OS: Ubuntu 20.04, Kernel: 5.14.6-xanmod1-cacule (x86_64), Display Server: X Server 1.20.11, OpenGL: 4.5 Mesa

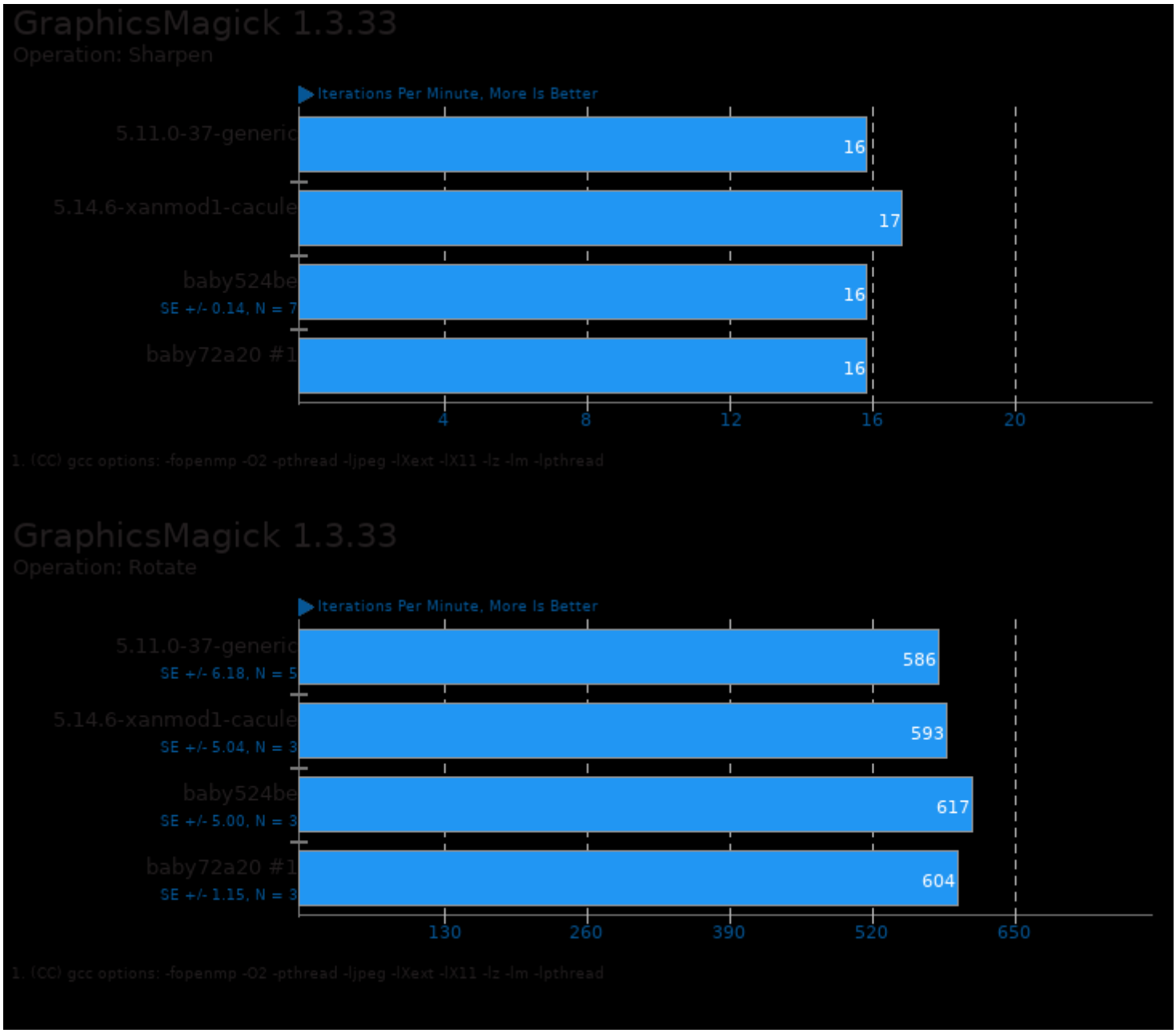
# babysched

21.0.3, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 2560x1440

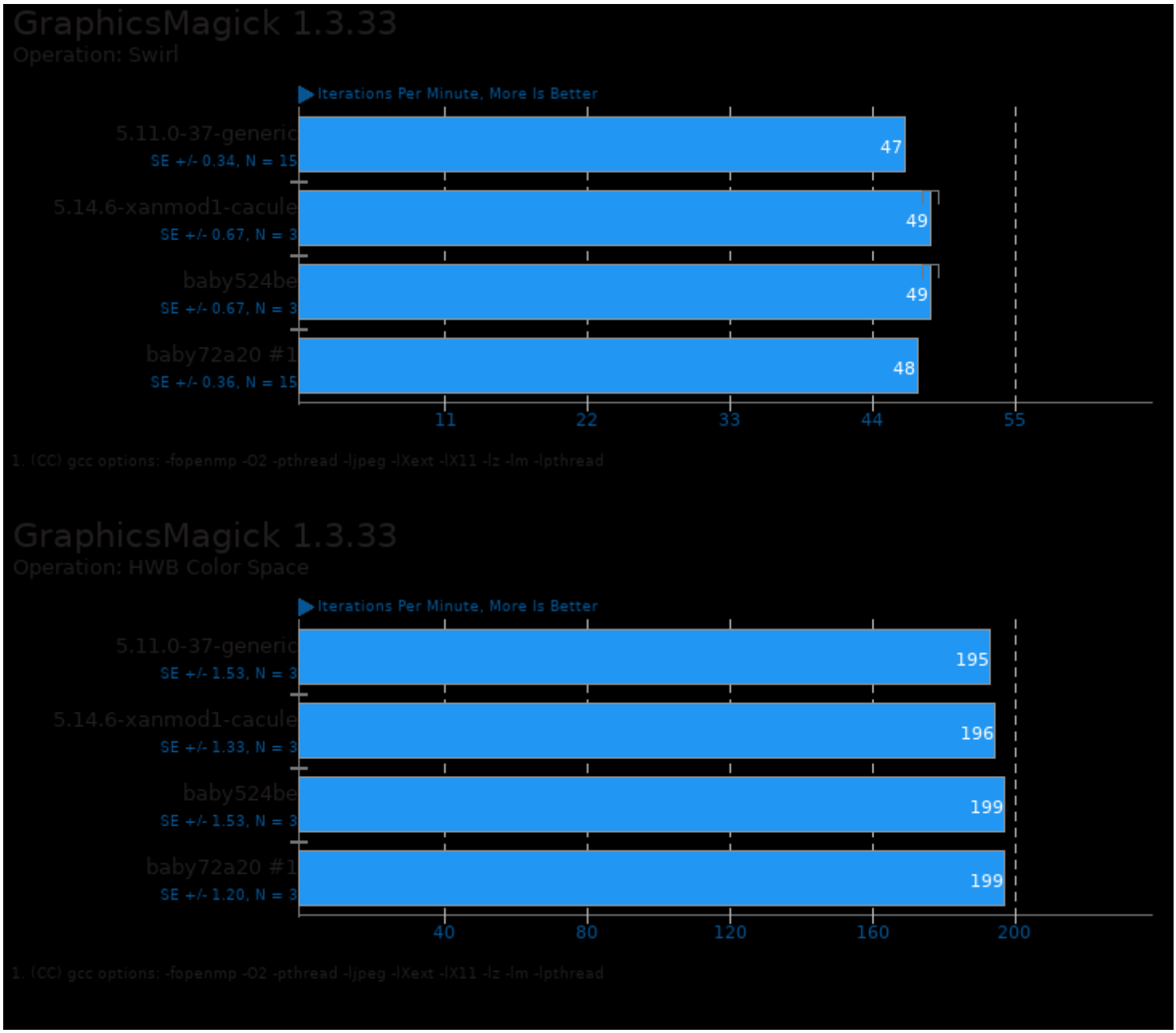
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x26 - Thermald 1.9.1
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Vulnerable IBPB: disabled STIBP: disabled + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

| | baby72a20 #1 | baby72a20 #2 | baby524be | 5.11.0-37-generic | 5.14.6-xanmod1-cacule |
|---|---|---|---|---|---|
| **GraphicsMagick - Sharpen (Iterations/min)** | 16 | | 16 | 16 | 17 |
| **Normalized** | 94.12% | | 94.12% | 94.12% | 100% |
| **Standard Deviation** | | | 2.3% | | |
| **GraphicsMagick - Rotate (Iterations/min)** | 604 | | 617 | 586 | 593 |
| **Normalized** | 97.89% | | 100% | 94.98% | 96.11% |
| **Standard Deviation** | 0.3% | | 1.4% | 2.4% | 1.5% |
| **GraphicsMagick - Swirl (Iterations/min)** | 48 | | 49 | 47 | 49 |
| **Normalized** | 97.96% | | 100% | 95.92% | 100% |
| **Standard Deviation** | 3% | | 2.4% | 2.8% | 2.4% |
| **GraphicsMagick - HWB Color Space (Iterations/min)** | 199 | | 199 | 195 | 196 |
| **Normalized** | 100% | | 100% | 97.99% | 98.49% |
| **Standard Deviation** | 1% | | 1.3% | 1.4% | 1.2% |
| **GraphicsMagick - Resizing (Iterations/min)** | 120 | | 122 | 121 | 122 |
| **Normalized** | 98.36% | | 100% | 99.18% | 100% |
| **Standard Deviation** | 1.7% | | 1.2% | 1.3% | 1.2% |
| **GraphicsMagick - Noise-Gaussian (Iterations/min)** | 35 | | 35 | 35 | 35 |
| **Standard Deviation** | | | 1.6% | 1.6% | |
| **GraphicsMagick - Enhanced (Iterations/min)** | 20 | | 20 | 20 | 20 |
| **Standard Deviation** | | | | | 2.5% |
| **FLAC Audio Encoding - WAV To FLAC (sec)** | 25.214 | | 24.459 | 24.203 | 23.562 |
| **Normalized** | 93.45% | | 96.33% | 97.35% | 100% |
| **Standard Deviation** | 7.6% | | 2.1% | 2.3% | 0.9% |

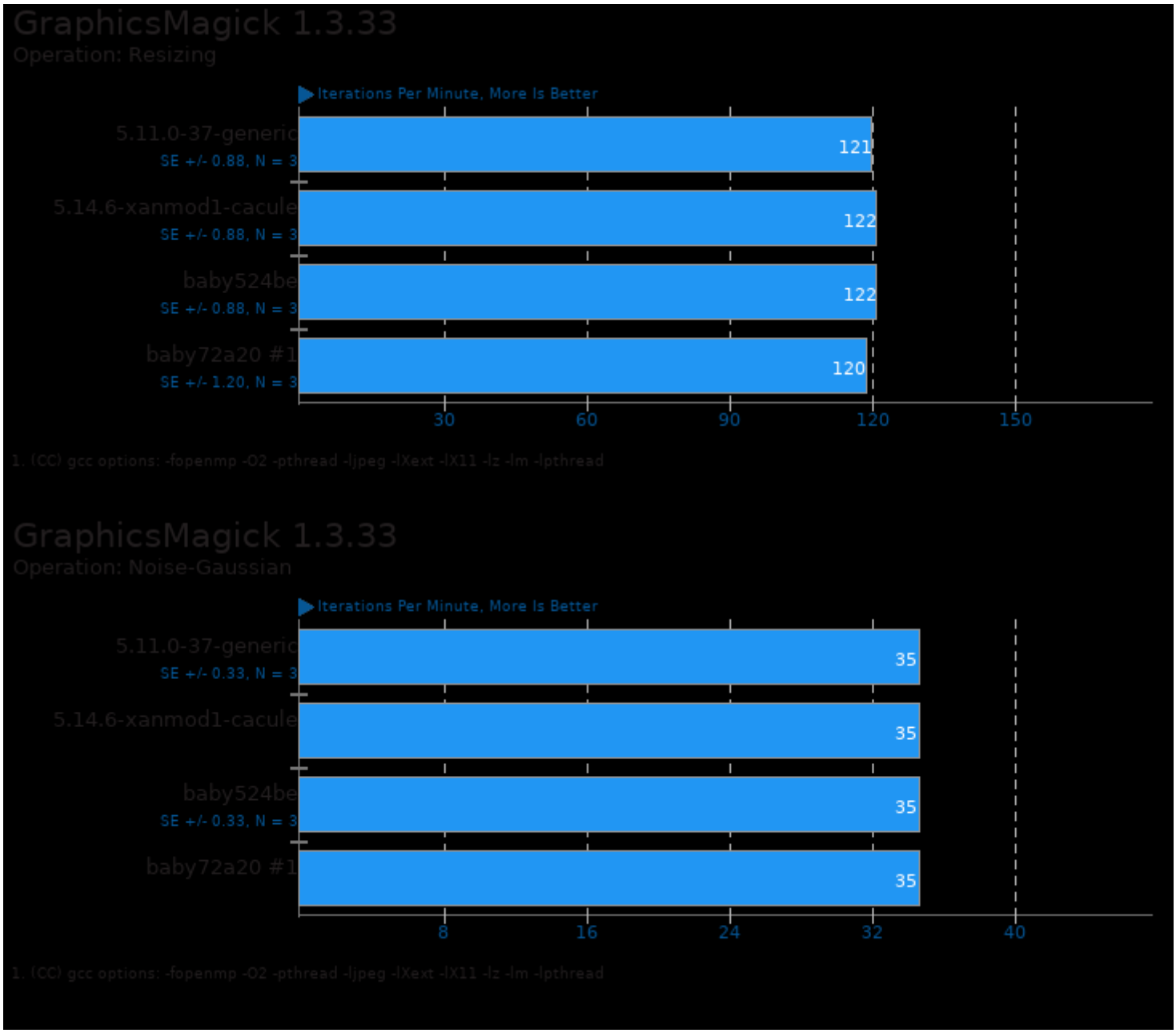
# babysched

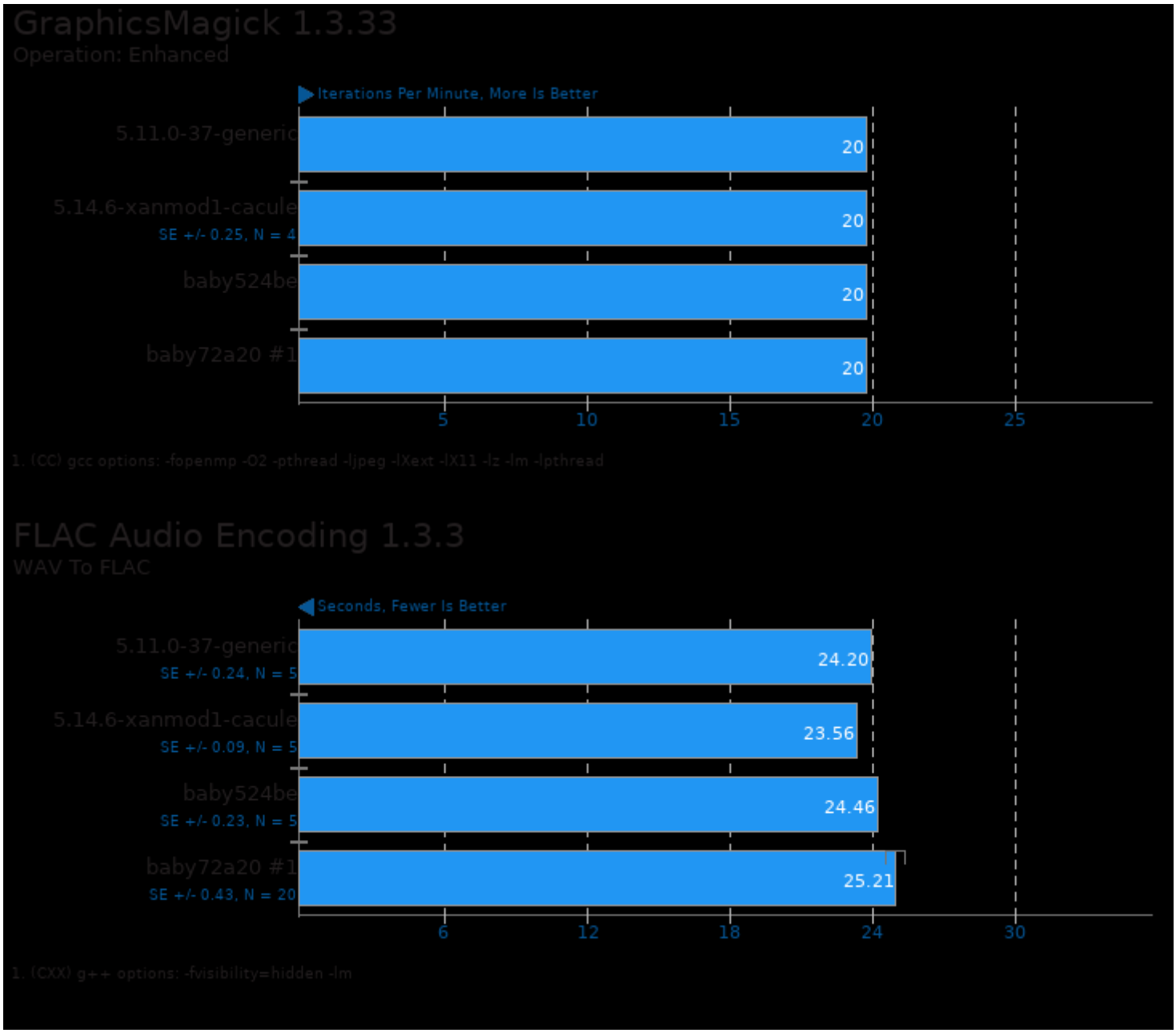

GraphicsMagick 1.3.33
Operation: Sharpen
Iterations Per Minute, More Is Better
5.11.0-37-generic
16
5.14.6-xanmod1-cacule
17
baby524be
SE +/- 0.14, N = 7
16
baby72a20 #1
16
4
8
12
16
20
1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lXext -lX11 -lz -lm -lpthread
GraphicsMagick 1.3.33
Operation: Rotate
Iterations Per Minute, More Is Better
5.11.0-37-generic
SE +/- 6.18, N = 5
586
5.14.6-xanmod1-cacule
SE +/- 5.04, N = 3
593
baby524be
SE +/- 5.00, N = 3
617
baby72a20 #1
SE +/- 1.15, N = 3
604
130
260
390
520
650
1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lXext -lX11 -lz -lm -lpthread

# babysched


GraphicsMagick 1.3.33
Operation: Swirl
Iterations Per Minute, More Is Better
5.11.0-37-generic
SE +/- 0.34, N = 15
47
5.14.6-xanmod1-cacule
SE +/- 0.67, N = 3
49
baby524be
SE +/- 0.67, N = 3
49
baby72a20 #1
SE +/- 0.36, N = 15
48
11
22
33
44
55
1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lXext -lX11 -lz -lm -lpthread
GraphicsMagick 1.3.33
Operation: HWB Color Space
Iterations Per Minute, More Is Better
5.11.0-37-generic
SE +/- 1.53, N = 3
195
5.14.6-xanmod1-cacule
SE +/- 1.33, N = 3
196
baby524be
SE +/- 1.53, N = 3
199
baby72a20 #1
SE +/- 1.20, N = 3
199
40
80
120
160
200
1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lXext -lX11 -lz -lm -lpthread

# babysched


GraphicsMagick 1.3.33
Operation: Resizing
Iterations Per Minute, More Is Better
5.11.0-37-generic
SE +/- 0.88, N = 3
121
5.14.6-xanmod1-cacule
SE +/- 0.88, N = 3
122
baby524be
SE +/- 0.88, N = 3
122
baby72a20 #1
SE +/- 1.20, N = 3
120
30
60
90
120
150
1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lXext -lX11 -lz -lm -lpthread
GraphicsMagick 1.3.33
Operation: Noise-Gaussian
Iterations Per Minute, More Is Better
5.11.0-37-generic
SE +/- 0.33, N = 3
35
5.14.6-xanmod1-cacule
35
baby524be
SE +/- 0.33, N = 3
35
baby72a20 #1
35
8
16
24
32
40
1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lXext -lX11 -lz -lm -lpthread




*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 09:53.*