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3600_oc

A Processor comparison via the Phoronix Test Suite.

Automated Executive Summary

final2 had the most wins, coming in first place for 89% of the tests.

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

Timed Linux Kernel Compilation (Time To Compile) at 1.099x
asmFish (1024 Hash Memory, 26 Depth) at 1.082x
FFTW (Build: Stock - Size: 2D FFT Size 4096) at 1.075x
C-Ray (Total Time - 4K, 16 Rays Per Pixel) at 1.075x
FFTW (Build: Stock - Size: 2D FFT Size 32) at 1.055x
FFTW (Build: Stock - Size: 2D FFT Size 512) at 1.048x
FFTW (Build: Stock - Size: 1D FFT Size 512) at 1.046x
FFTW (Build: Stock - Size: 1D FFT Size 1024) at 1.043x
FFTW (Build: Stock - Size: 2D FFT Size 64) at 1.042x
FFTW (Build: Stock - Size: 1D FFT Size 32) at 1.042x.

Test Systems:

stock

Processor: AMD Ryzen 5 3600 6-Core @ 3.60GHz (12 Cores), Motherboard: ASUS PRIME X570-P, Chipset: AMD Device 1480, Memory: 32768MB, Disk: 915GB, Graphics: AMD Radeon VII (VEGA20 DRM 3.41.0 5.8.5-050805-generic LLVM 10.0.0), Audio: AMD Device ab20, Monitor: HP LE1901w + VE228, Network: Realtek RTL8111/8168/8411

OS: LinuxMint 19.3, Kernel: 5.8.5-050805-generic (x86_64), Desktop: Xfce 4.14, Display Driver: radeon 19.1.0, OpenGL: 4.6 Mesa 20.0.8, Compiler: Clang 6.0.0-1ubuntu2, File-System: ext4, Screen Resolution: 3360x1080

Kernel Notes: amdgpu.ppfeaturemask=0xfffd7fff amdgpu.vm_block_size=10 amdgpu.vm_size=1024
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq ondemand

4.3_sanity

Processor: AMD Ryzen 5 3600 6-Core @ 4.30GHz (12 Cores), Motherboard: ASUS PRIME X570-P, Chipset: AMD Device 1480, Memory: 32768MB, Disk: 915GB, Graphics: AMD Radeon VII (VEGA20 DRM 3.41.0 5.8.5-050805-generic LLVM 10.0.0), Audio: AMD Device ab20, Monitor: HP LE1901w + VE228, Network: Realtek RTL8111/8168/8411

OS: LinuxMint 19.3, Kernel: 5.8.5-050805-generic (x86_64), Desktop: Xfce 4.14, Display Driver: radeon 19.1.0, OpenGL: 4.6 Mesa 20.0.8, Compiler: Clang 6.0.0-1ubuntu2, File-System: ext4, Screen Resolution: 3360x1080

Kernel Notes: amdgpu.ppfeaturemask=0xfffd7fff amdgpu.vm_block_size=10 amdgpu.vm_size=1024
Processor Notes: Scaling Governor: acpi-cpufreq performance

final

Processor: AMD Ryzen 5 3600 6-Core @ 2.80GHz (12 Cores), Motherboard: ASUS PRIME X570-P, Chipset: AMD Device 1480, Memory: 32768MB, Disk: 915GB, Graphics: AMD Radeon VII (VEGA20 DRM 3.41.0 5.8.5-050805-generic LLVM 10.0.0), Audio: AMD Device ab20, Monitor: HP LE1901w + VE228, Network: Realtek RTL8111/8168/8411

OS: LinuxMint 19.3, Kernel: 5.8.5-050805-generic (x86_64), Desktop: Xfce 4.14, Display Driver: radeon 19.1.0, OpenGL: 4.6 Mesa 20.0.8, Compiler: Clang 6.0.0-1ubuntu2, File-System: ext4, Screen Resolution: 3360x1080

Kernel Notes: amdgpu.ppfeaturemask=0xfffd7fff amdgpu.vm_block_size=10 amdgpu.vm_size=1024
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq performance

final2

Processor: AMD Ryzen 5 3600 6-Core @ 4.35GHz (12 Cores), Motherboard: ASUS PRIME X570-P, Chipset: AMD Device 1480, Memory: 32768MB, Disk: 915GB, Graphics: AMD Radeon VII (VEGA20 DRM 3.41.0 5.8.5-050805-generic LLVM 10.0.0), Audio: AMD Device ab20, Monitor: HP LE1901w + VE228, Network: Realtek RTL8111/8168/8411

OS: LinuxMint 19.3, Kernel: 5.8.5-050805-generic (x86_64), Desktop: Xfce 4.14, Display Driver: radeon 19.1.0, OpenGL: 4.6 Mesa 20.0.8, Compiler: Clang 6.0.0-1ubuntu2, File-System: ext4, Screen Resolution: 3360x1080

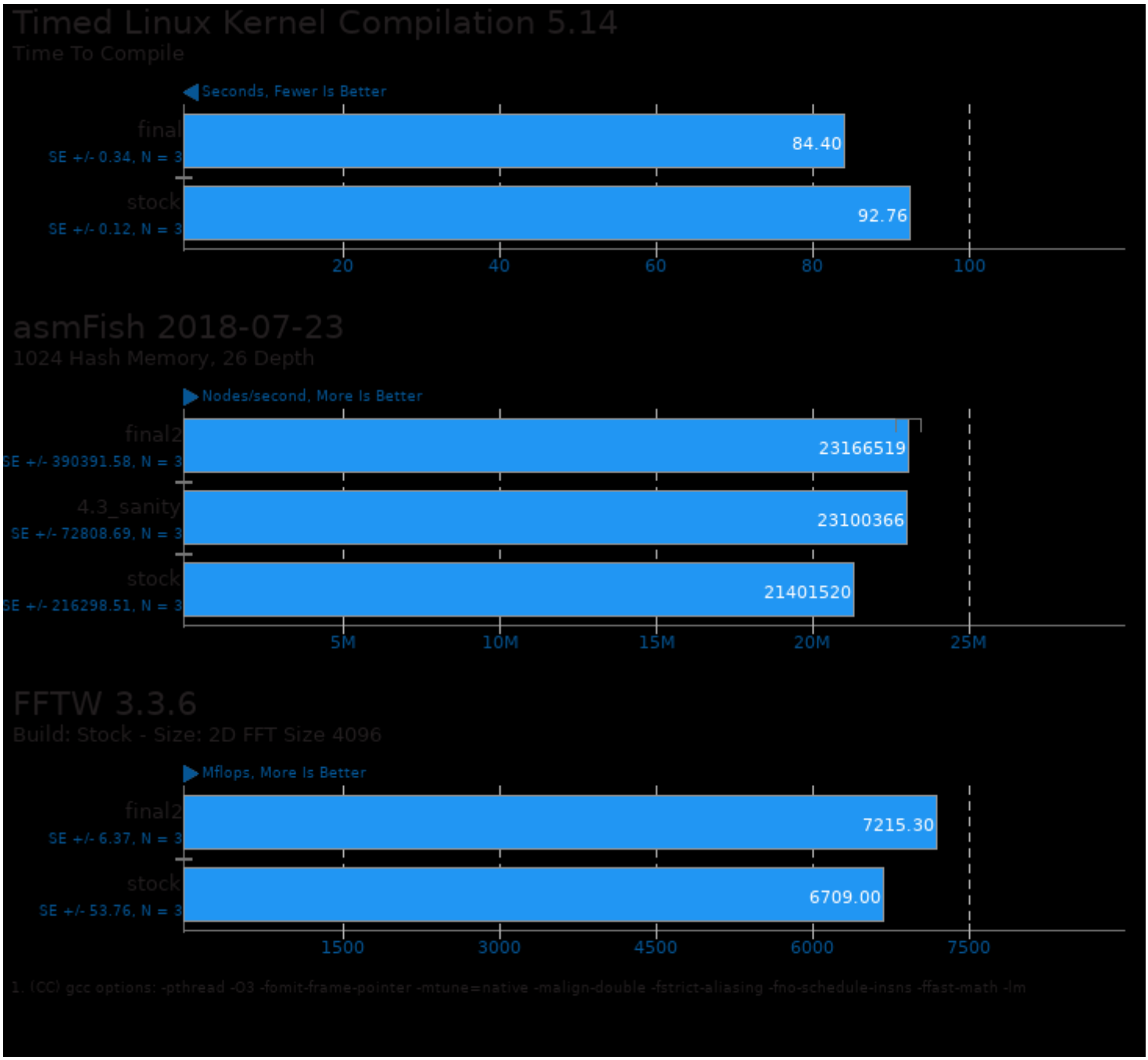
3600_oc

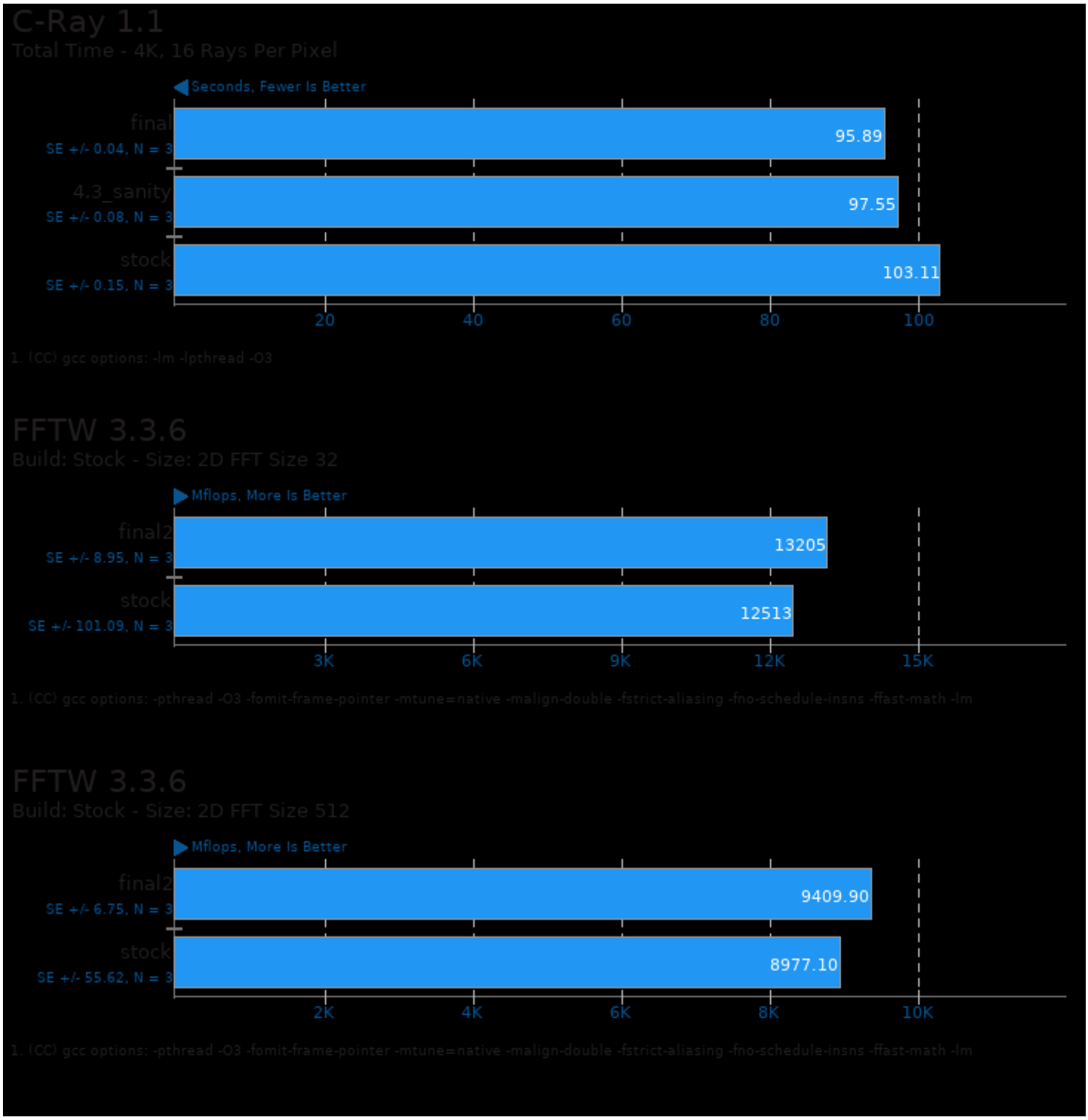
Kernel Notes: amdgpu.ppfeaturemask=0xfffd7fff amdgpu.vm_block_size=10 amdgpu.vm_size=1024
Processor Notes: Scaling Governor: acpi-cpufreq performance

	stock	4.3_sanity	final	final2
Timed Linux Kernel Compilation - Time To Compile (sec)	**92.76**		**84.40**	
Normalized	90.99%		100%	
Standard Deviation	0.2%		0.7%	
asmFish - 1.H.M.2.D (Nodes/s)	**21401520**	23100366		**23166519**
Normalized	92.38%	99.71%		100%
Standard Deviation	1.8%	0.5%		2.9%
FFTW - Stock - 2D FFT Size 4096 (Mflops)	**6709**			**7215**
Normalized	92.98%			100%
Standard Deviation	1.4%			0.2%
C-Ray - Total Time - 4.1.R.P.P (sec)	**103.11**	97.55	**95.89**	
Normalized	93%	98.3%	100%	
Standard Deviation	0.3%	0.2%	0.1%	
FFTW - Stock - 2D FFT Size 32	**12513**			**13205**
Normalized	94.76%			100%
Standard Deviation	1.4%			0.1%
FFTW - Stock - 2D FFT Size 512 (Mflops)	**8977**			**9410**
Normalized	95.4%			100%
Standard Deviation	1.1%			0.1%
FFTW - Stock - 1D FFT Size 512 (Mflops)	**9589**			**10027**
Normalized	95.63%			100%
Standard Deviation	0.6%			0.1%
FFTW - Stock - 1D FFT Size 1024 (Mflops)	**9706**			**10127**
Normalized	95.84%			100%
Standard Deviation	0.8%			0%
FFTW - Stock - 2D FFT Size 64	**11040**			**11503**
Normalized	95.97%			100%
Standard Deviation	0%			0.3%
FFTW - Stock - 1D FFT Size 32	**12042**			**12545**
Normalized	95.99%			100%
Standard Deviation	0.3%			0.2%
FFTW - Stock - 1D FFT Size 256 (Mflops)	**9619**			**10010**
Normalized	96.09%			100%
Standard Deviation	0.3%			0%
FFTW - Stock - 2D FFT Size 128 (Mflops)	**9305**			**9668**
Normalized	96.25%			100%
Standard Deviation	0.4%			0.2%
FFTW - Stock - 1D FFT Size 4096 (Mflops)	**9072**			**9424**
Normalized	96.26%			100%

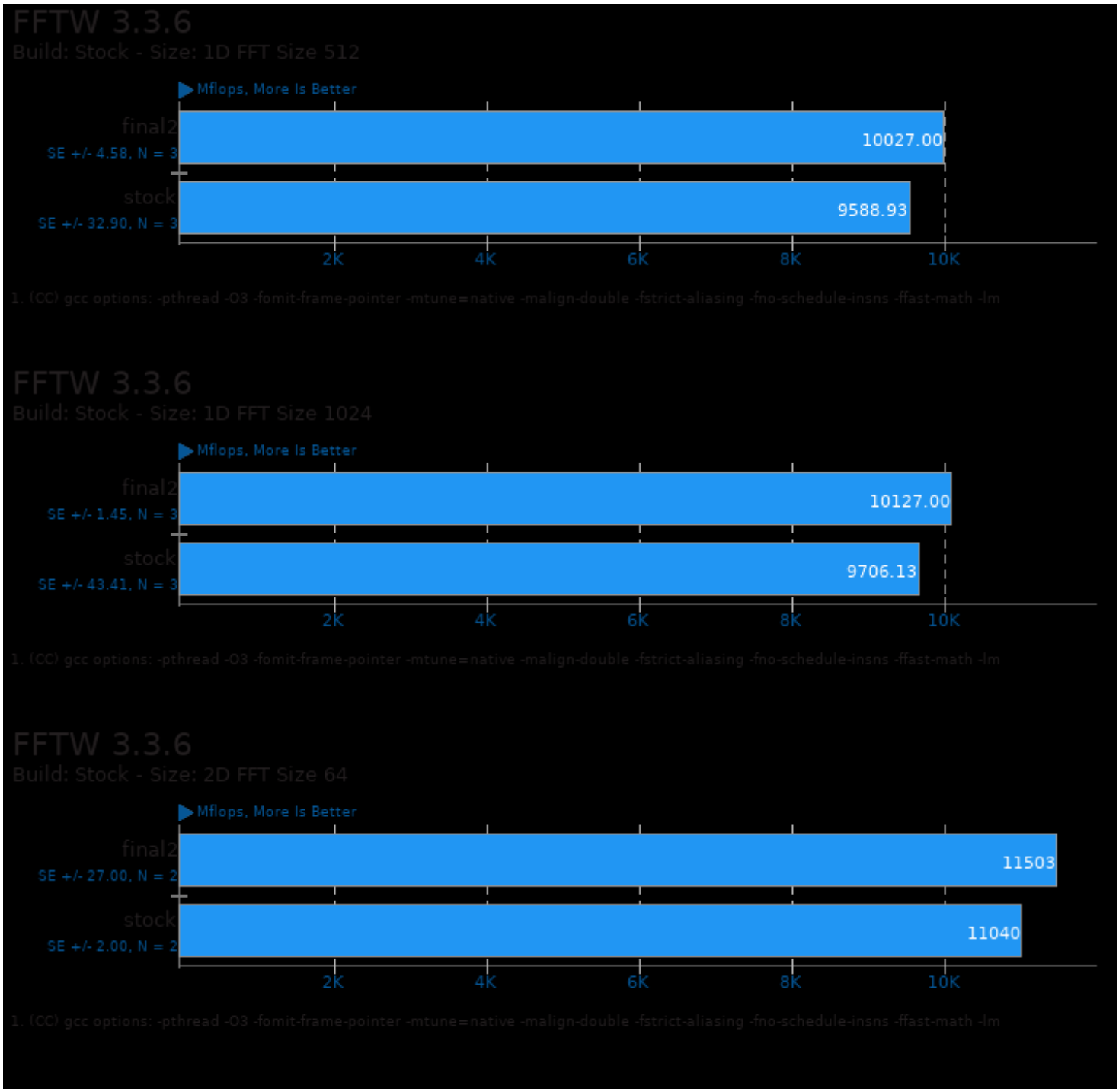
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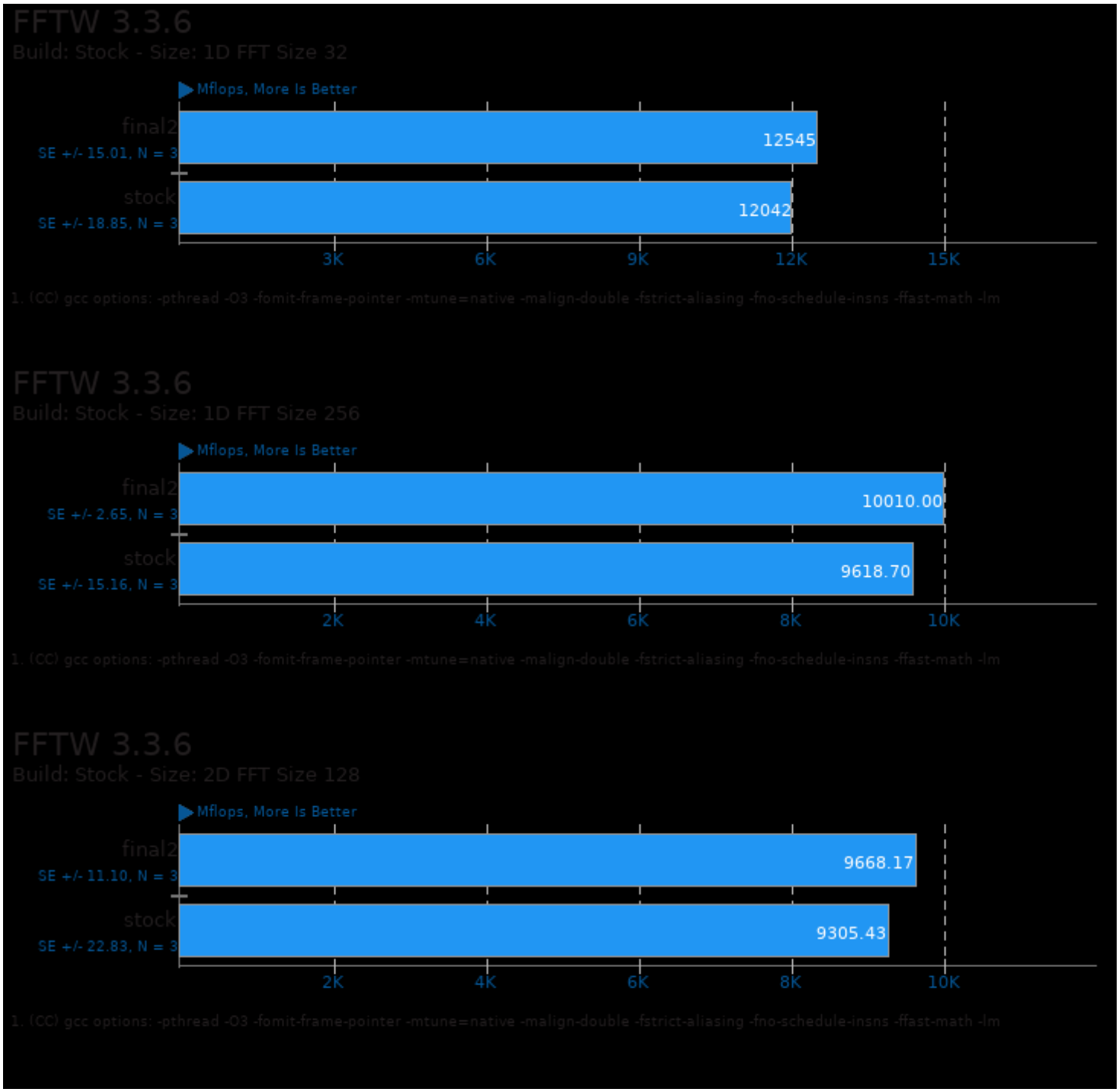
Standard Deviation	0.4%	0.6%
FFTW - Stock - 2D FFT Size 256 (Mflops)	**9060**	**9412**
Normalized	96.27%	100%
Standard Deviation	0.3%	0.2%
FFTW - Stock - 1D FFT Size 128 (Mflops)	**9251**	**9607**
Normalized	96.29%	100%
Standard Deviation	0.1%	0%
FFTW - Stock - 1D FFT Size 2048 (Mflops)	**9455**	**9814**
Normalized	96.34%	100%
Standard Deviation	0.4%	0.1%
FFTW - Stock - 1D FFT Size 64	**10881**	**11283**
Normalized	96.44%	100%
Standard Deviation	0%	
FFTW - Stock - 2D FFT Size 1024 (Mflops)	**8725**	**9026**
Normalized	96.66%	100%
Standard Deviation	0.1%	0.1%
FFTW - Stock - 2D FFT Size 2048 (Mflops)	**7096**	**7286**
Normalized	97.4%	100%
Standard Deviation	2.6%	0.2%
Liquid-DSP - 1 - 256 - 57 (samples/s)	64956333	
Standard Deviation	0.3%	


Timed Linux Kernel Compilation 5.14
Time To Compile
Seconds, Fewer Is Better
final
SE +/- 0.34, N = 3
84.40
stock
SE +/- 0.12, N = 3
92.76
20
40
60
80
100
asmFish 2018-07-23
1024 Hash Memory, 26 Depth
Nodes/second, More Is Better
final2
SE +/- 390391.58, N = 3
23166519
4.3_sanity
SE +/- 72808.69, N = 3
23100366
stock
SE +/- 216298.51, N = 3
21401520
5M
10M
15M
20M
25M
FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 4096
Mflops, More Is Better
final2
SE +/- 6.37, N = 3
7215.30
stock
SE +/- 53.76, N = 3
6709.00
1500
3000
4500
6000
7500
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm

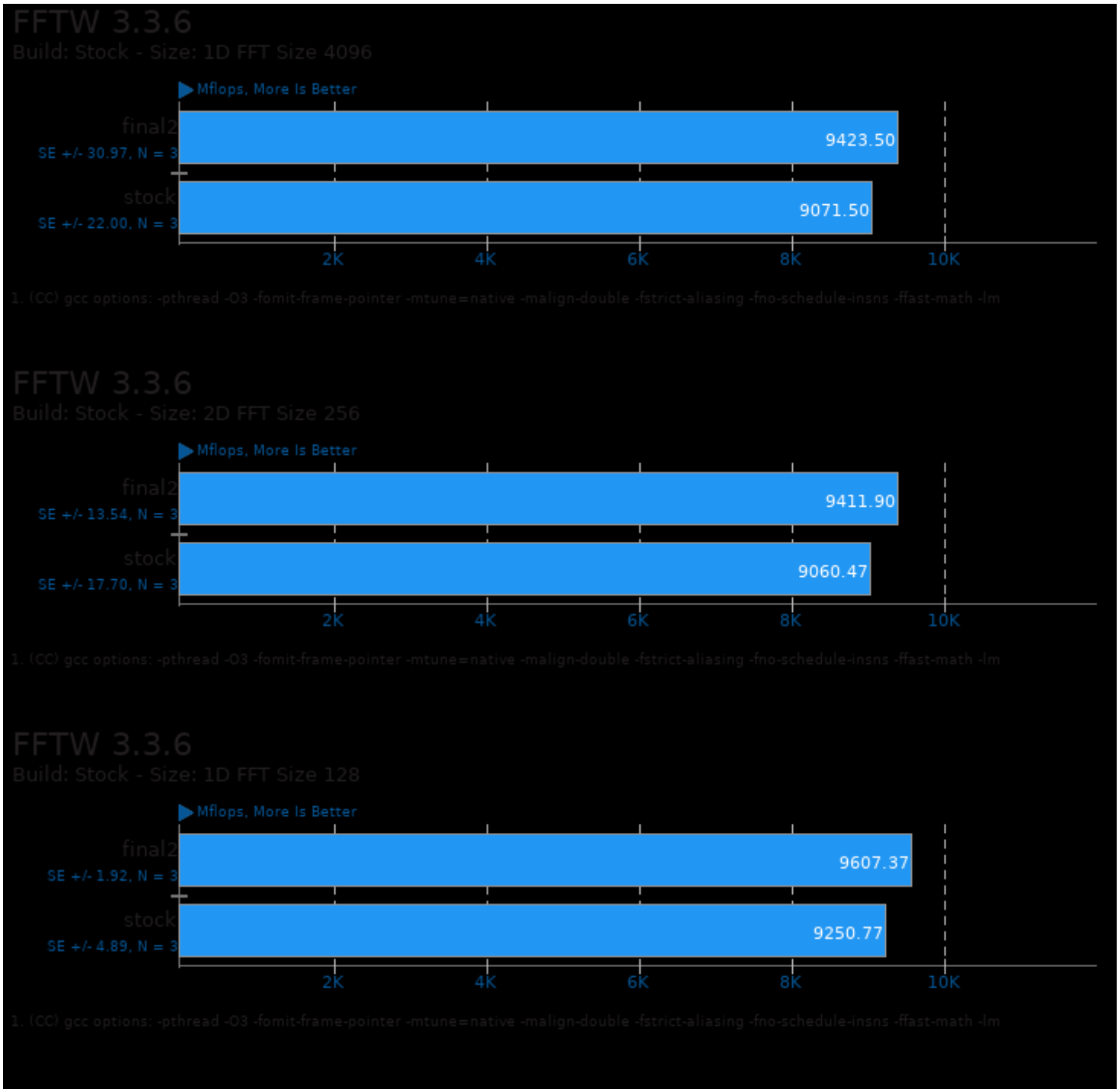

C-Ray 1.1
Total Time - 4K, 16 Rays Per Pixel
Seconds, Fewer Is Better
final
SE +/- 0.04, N = 3
95.89
4.3_sanity
SE +/- 0.08, N = 3
97.55
stock
SE +/- 0.15, N = 3
103.11
20
40
60
80
100
1. (CC) gcc options: -lm -lpthread -O3
FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 32
Mflops, More Is Better
final2
SE +/- 8.95, N = 3
13205
stock
SE +/- 101.09, N = 3
12513
3K
6K
9K
12K
15K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 512
Mflops, More Is Better
final2
SE +/- 6.75, N = 3
9409.90
stock
SE +/- 55.62, N = 3
8977.10
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm

3600_oc

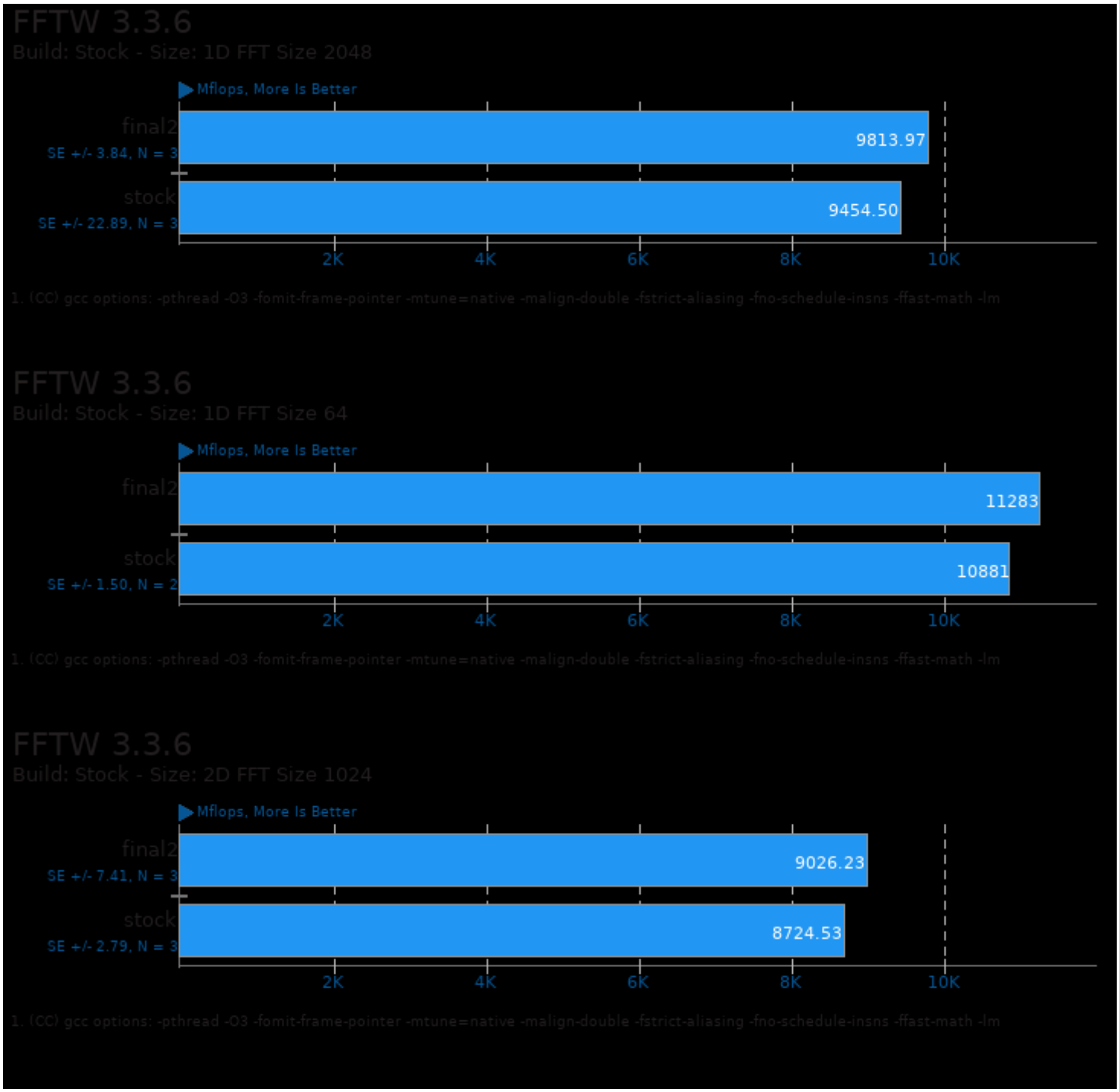

FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 512
Mflops, More Is Better
final2
SE +/- 4.58, N = 3
10027.00
stock
SE +/- 32.90, N = 3
9588.93
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 1024
Mflops, More Is Better
final2
SE +/- 1.45, N = 3
10127.00
stock
SE +/- 43.41, N = 3
9706.13
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 64
Mflops, More Is Better
final2
SE +/- 27.00, N = 2
11503
stock
SE +/- 2.00, N = 2
11040
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm

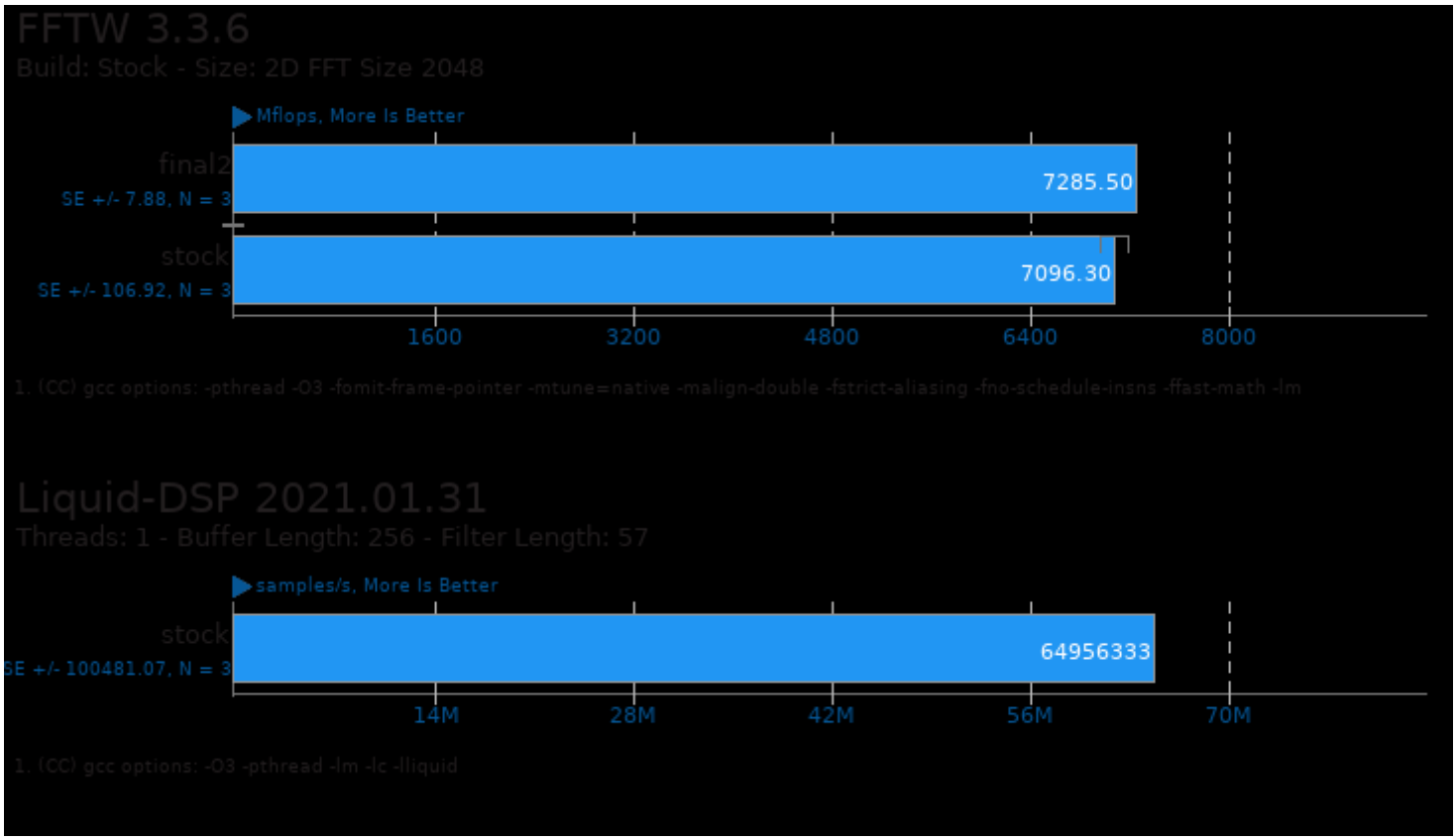

FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 32
Mflops, More Is Better
final2
SE +/- 15.01, N = 3
12545
stock
SE +/- 18.85, N = 3
12042
3K
6K
9K
12K
15K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 256
Mflops, More Is Better
final2
SE +/- 2.65, N = 3
10010.00
stock
SE +/- 15.16, N = 3
9618.70
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 128
Mflops, More Is Better
final2
SE +/- 11.10, N = 3
9668.17
stock
SE +/- 22.83, N = 3
9305.43
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm

3600_oc


FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 4096
Mflops, More Is Better
final2
SE +/- 30.97, N = 3
9423.50
stock
SE +/- 22.00, N = 3
9071.50
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 256
Mflops, More Is Better
final2
SE +/- 13.54, N = 3
9411.90
stock
SE +/- 17.70, N = 3
9060.47
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 128
Mflops, More Is Better
final2
SE +/- 1.92, N = 3
9607.37
stock
SE +/- 4.89, N = 3
9250.77
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm

3600_oc


FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 2048
Mflops, More Is Better
final2
SE +/- 3.84, N = 3
9813.97
stock
SE +/- 22.89, N = 3
9454.50
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 64
Mflops, More Is Better
final2
11283
stock
SE +/- 1.50, N = 2
10881
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 1024
Mflops, More Is Better
final2
SE +/- 7.41, N = 3
9026.23
stock
SE +/- 2.79, N = 3
8724.53
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 12:03.