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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

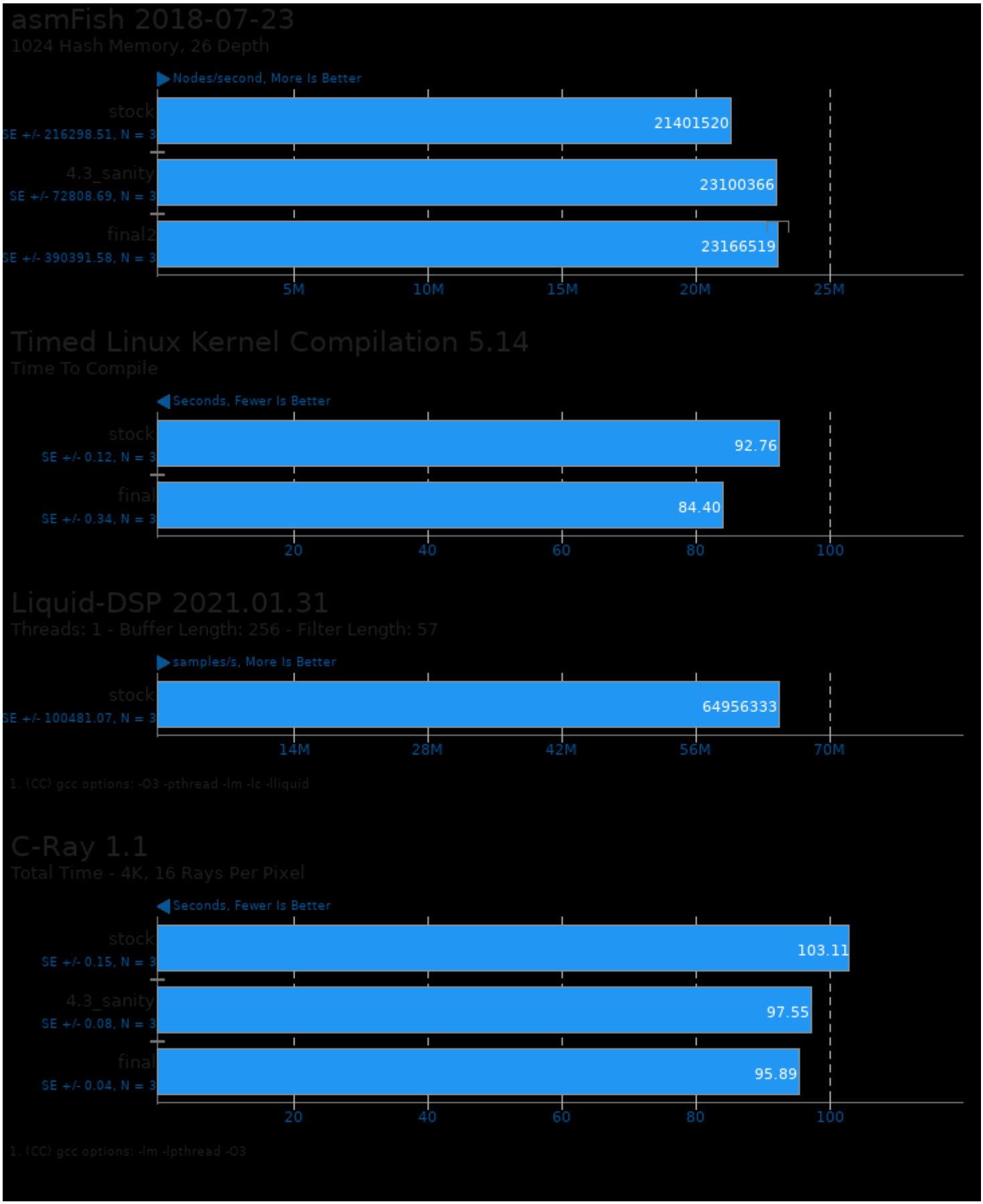
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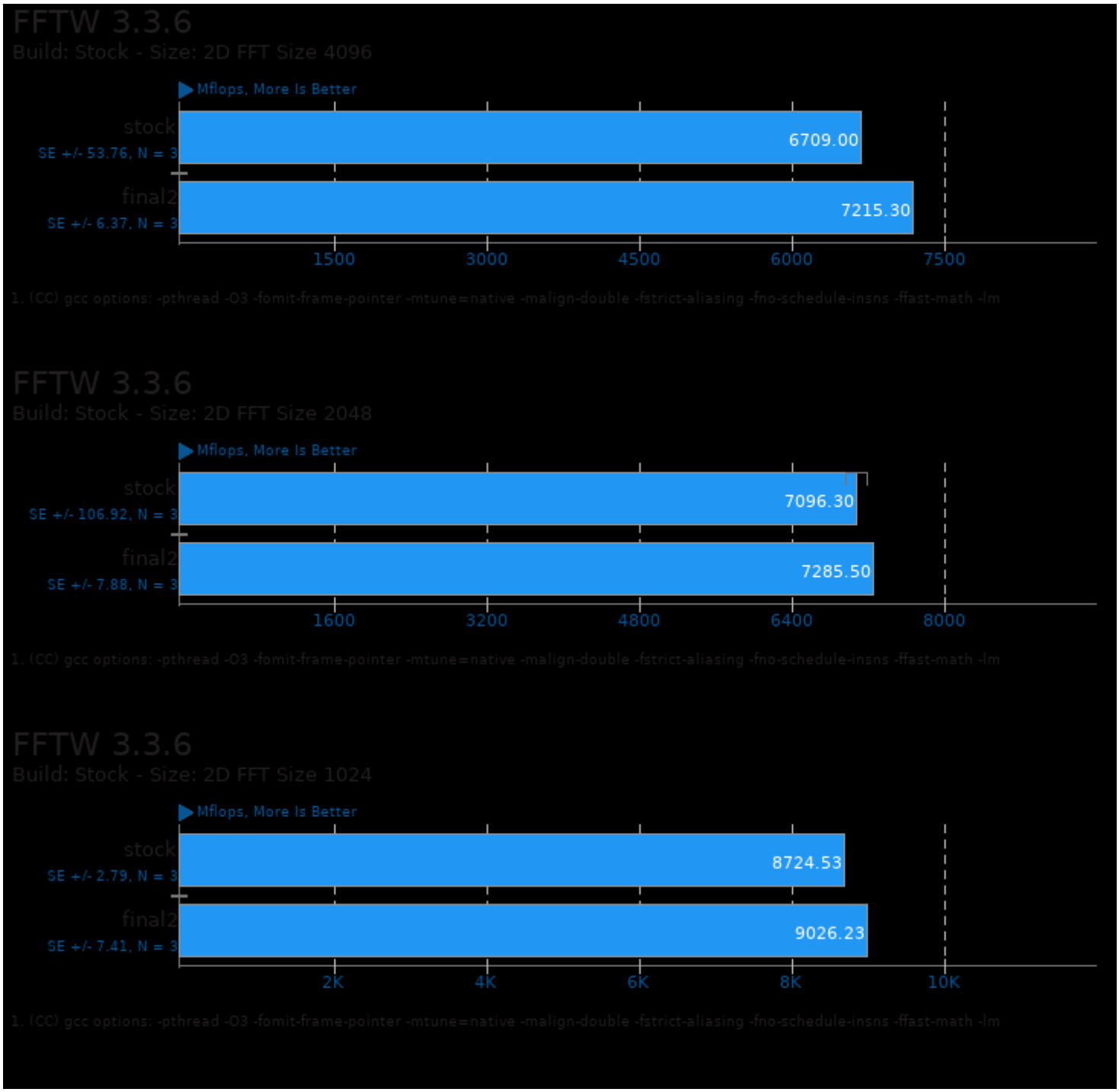
Kernel Notes: amdgpu.ppfeaturemask=0xfffd7fff amdgpu.vm_block_size=10 amdgpu.vm_size=1024
Processor Notes: Scaling Governor: acpi-cpufreq performance

	stock	4.3_sanity	final	final2
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%
Timed Linux Kernel Compilation - Time To Compile (sec)	92.76		84.40	
Normalized	90.99%		100%	
Standard Deviation	0.2%		0.7%	
Liquid-DSP - 1 - 256 - 57 (samples/s)	64956333			
Standard Deviation	0.3%			
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 4096 (Mflops)	6709			7215
Normalized	92.98%			100%
Standard Deviation	1.4%			0.2%
FFTW - Stock - 2D FFT Size 2048 (Mflops)	7096			7286
Normalized	97.4%			100%
Standard Deviation	2.6%			0.2%
FFTW - Stock - 2D FFT Size 1024 (Mflops)	8725			9026
Normalized	96.66%			100%
Standard Deviation	0.1%			0.1%
FFTW - Stock - 1D FFT Size 4096 (Mflops)	9072			9424
Normalized	96.26%			100%
Standard Deviation	0.4%			0.6%
FFTW - Stock - 1D FFT Size 2048 (Mflops)	9455			9814
Normalized	96.34%			100%
Standard Deviation	0.4%			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 512 (Mflops)	8977			9410
Normalized	95.4%			100%
Standard Deviation	1.1%			0.1%
FFTW - Stock - 2D FFT Size 256 (Mflops)	9060			9412
Normalized	96.27%			100%
Standard Deviation	0.3%			0.2%

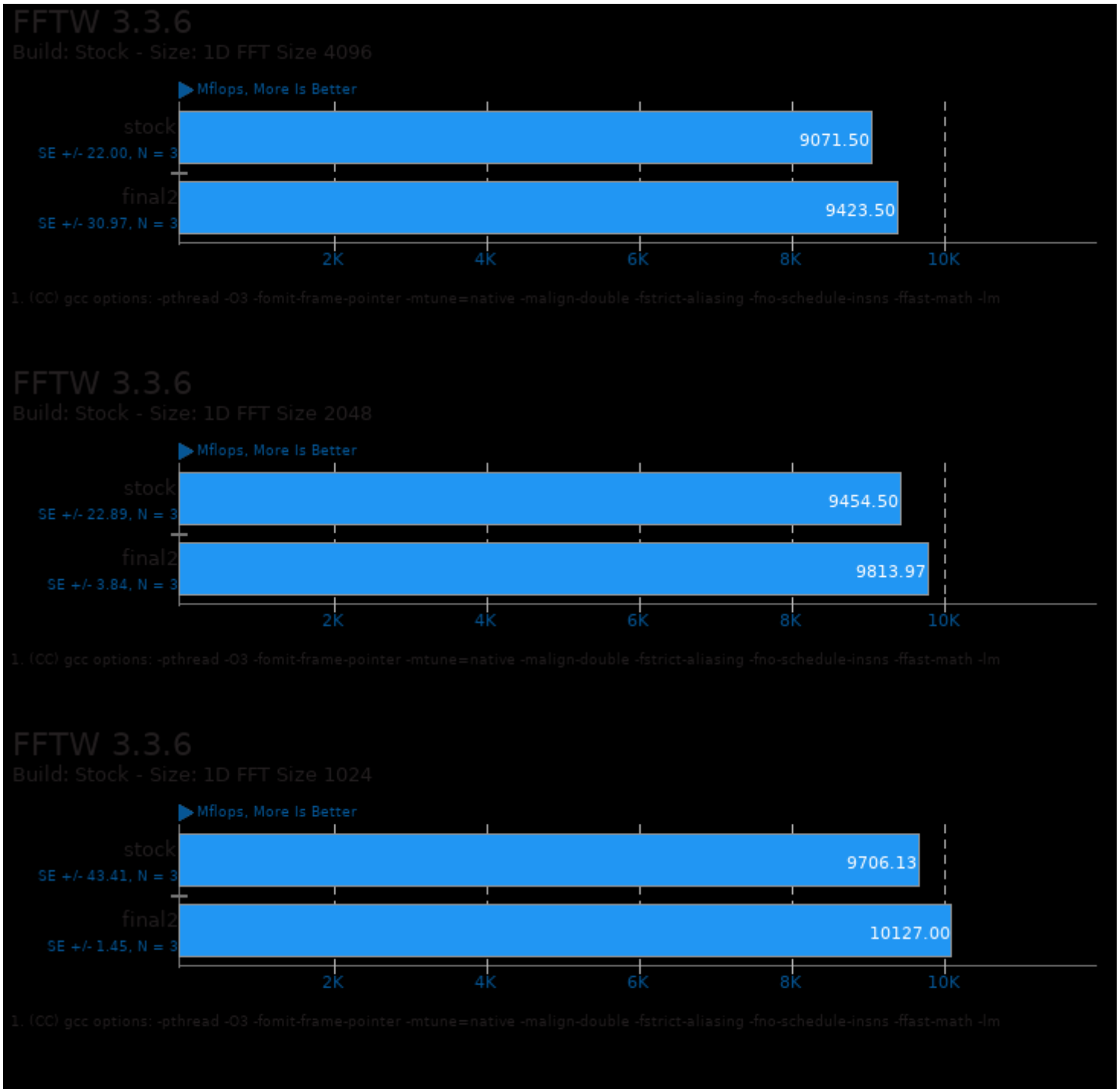
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FFTW - Stock - 2D FFT Size 128 (Mflops)	**9305**	**9668**
Normalized	96.25%	100%
Standard Deviation	0.4%	0.2%
FFTW - Stock - 1D FFT Size 512 (Mflops)	**9589**	**10027**
Normalized	95.63%	100%
Standard Deviation	0.6%	0.1%
FFTW - Stock - 1D FFT Size 256 (Mflops)	**9619**	**10010**
Normalized	96.09%	100%
Standard Deviation	0.3%	0%
FFTW - Stock - 1D FFT Size 128 (Mflops)	**9251**	**9607**
Normalized	96.29%	100%
Standard Deviation	0.1%	0%
FFTW - Stock - 2D FFT Size 64	**11040**	**11503**
Normalized	95.97%	100%
Standard Deviation	0%	0.3%
FFTW - Stock - 2D FFT Size 32	**12513**	**13205**
Normalized	94.76%	100%
Standard Deviation	1.4%	0.1%
FFTW - Stock - 1D FFT Size 64	**10881**	**11283**
Normalized	96.44%	100%
Standard Deviation	0%	
FFTW - Stock - 1D FFT Size 32	**12042**	**12545**
Normalized	95.99%	100%
Standard Deviation	0.3%	0.2%

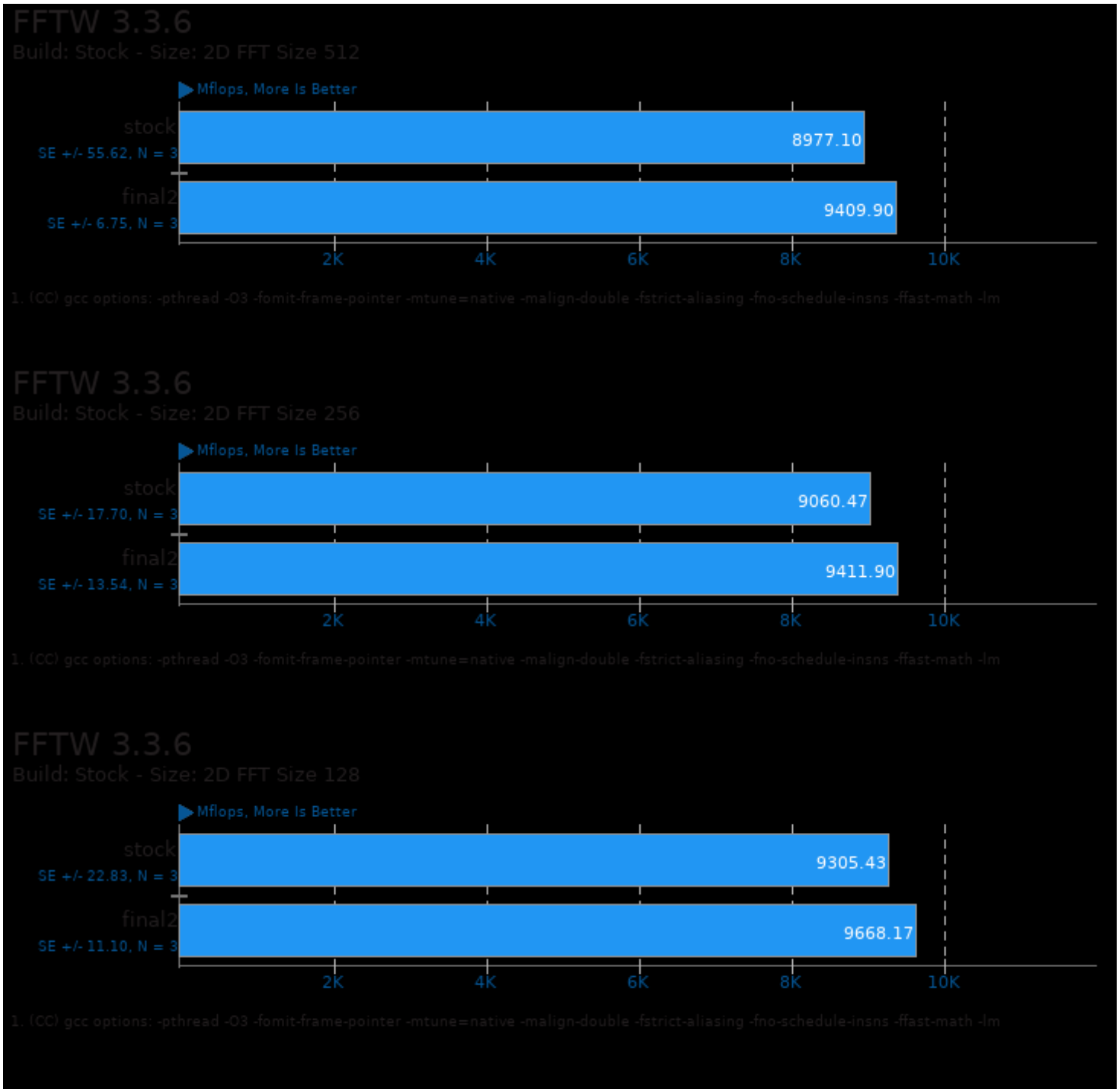

asmFish 2018-07-23
1024 Hash Memory, 26 Depth
Nodes/second, More Is Better
stock
SE +/- 216298.51, N = 3
21401520
4.3_sanity
SE +/- 72808.69, N = 3
23100366
final2
SE +/- 390391.58, N = 3
23166519
5M
10M
15M
20M
25M
Timed Linux Kernel Compilation 5.14
Time To Compile
Seconds, Fewer Is Better
stock
SE +/- 0.12, N = 3
92.76
final
SE +/- 0.34, N = 3
84.40
20
40
60
80
100
Liquid-DSP 2021.01.31
Threads: 1 - Buffer Length: 256 - Filter Length: 57
samples/s, More Is Better
stock
SE +/- 100481.07, N = 3
64956333
14M
28M
42M
56M
70M
1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid
C-Ray 1.1
Total Time - 4K, 16 Rays Per Pixel
Seconds, Fewer Is Better
stock
SE +/- 0.15, N = 3
103.11
4.3_sanity
SE +/- 0.08, N = 3
97.55
final
SE +/- 0.04, N = 3
95.89
20
40
60
80
100
1. (CC) gcc options: -lm -lpthread -O3


FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 4096
Mflops, More Is Better
stock
SE +/- 53.76, N = 3
6709.00
final2
SE +/- 6.37, N = 3
7215.30
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
FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 2048
Mflops, More Is Better
stock
SE +/- 106.92, N = 3
7096.30
final2
SE +/- 7.88, N = 3
7285.50
1600
3200
4800
6400
8000
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
stock
SE +/- 2.79, N = 3
8724.53
final2
SE +/- 7.41, N = 3
9026.23
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

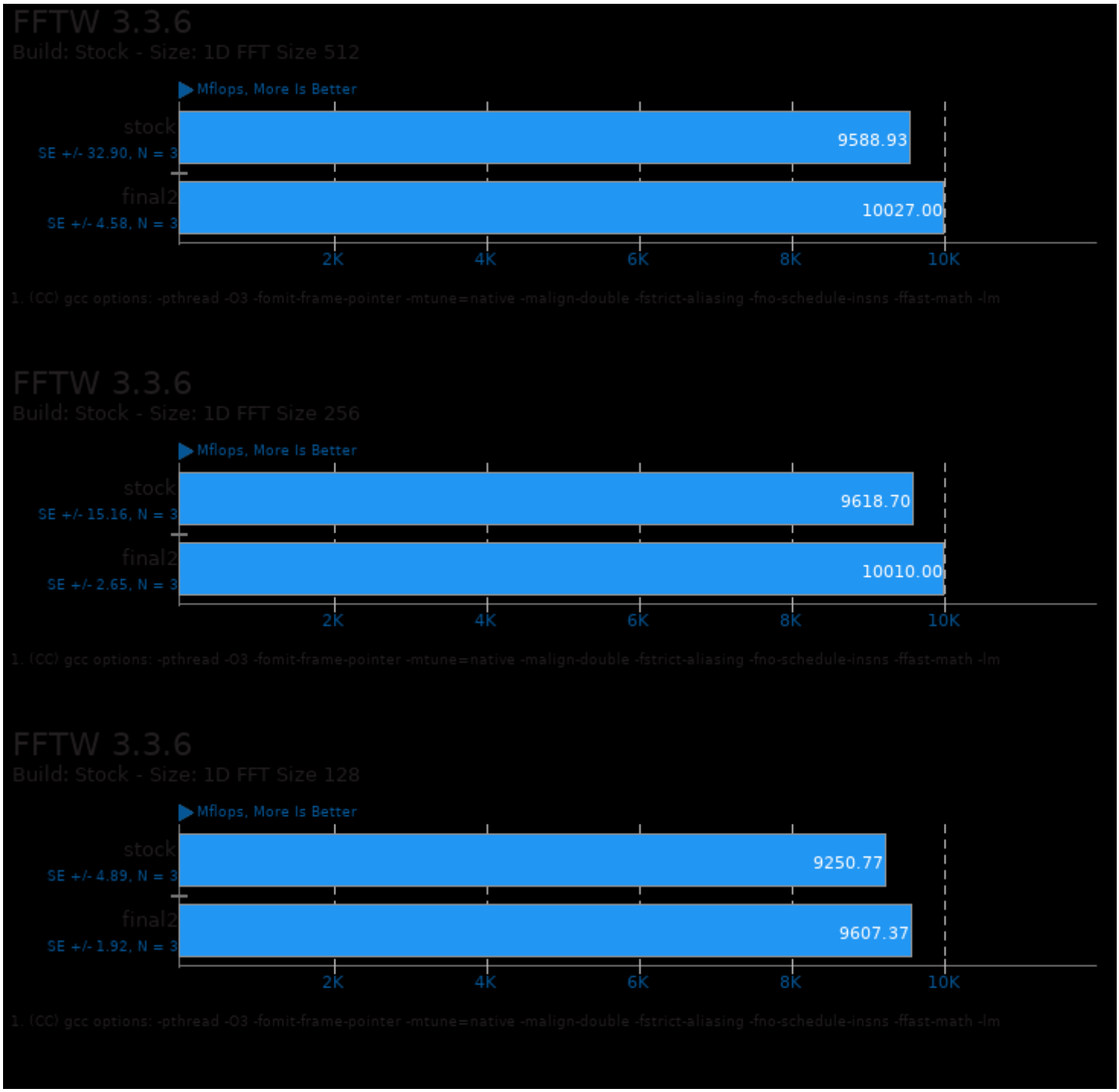
3600_oc

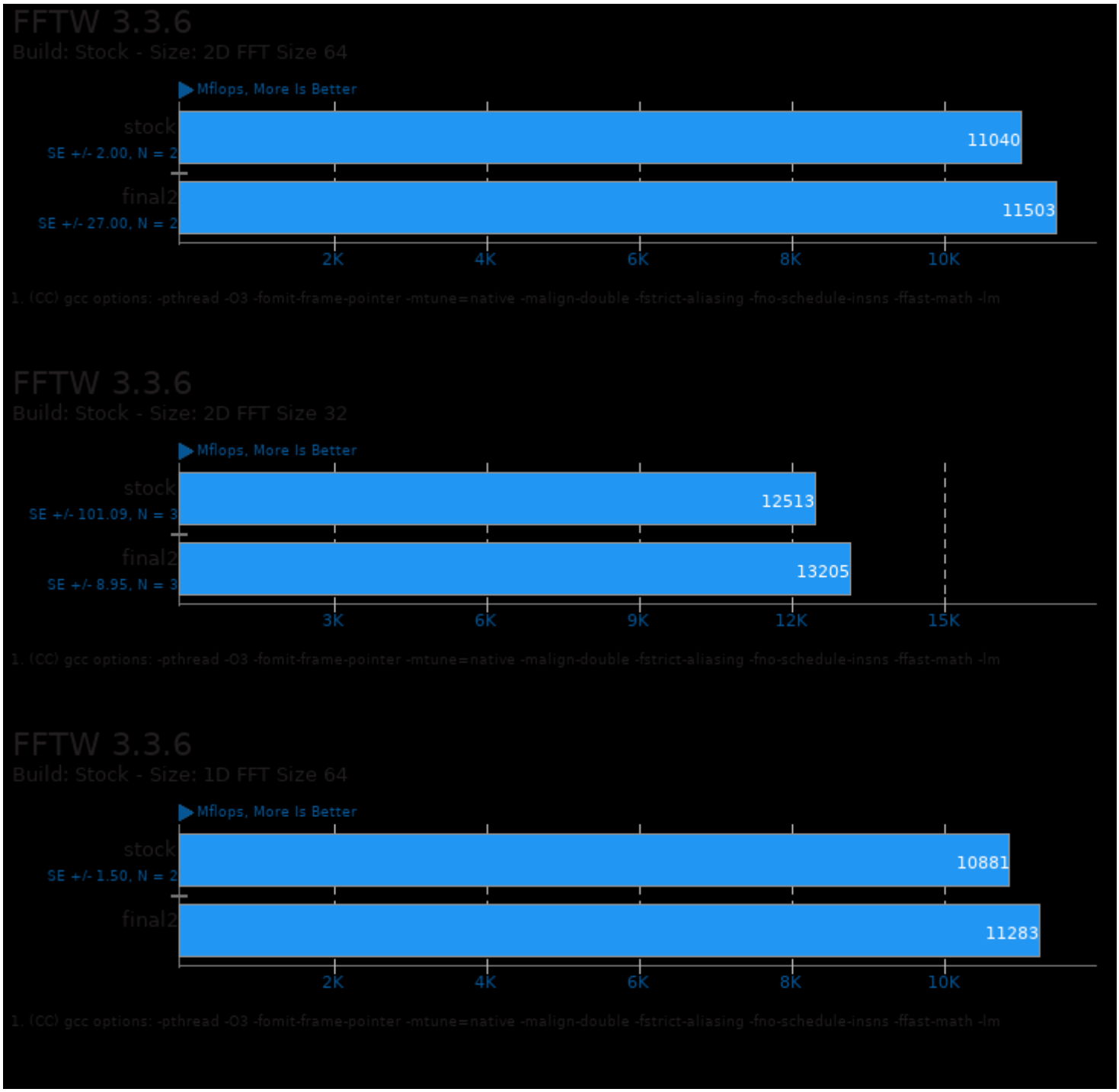

FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 4096
Mflops, More Is Better
stock
SE +/- 22.00, N = 3
9071.50
final2
SE +/- 30.97, N = 3
9423.50
2K
4K
6K
8K
10K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm
FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 2048
Mflops, More Is Better
stock
SE +/- 22.89, N = 3
9454.50
final2
SE +/- 3.84, N = 3
9813.97
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
stock
SE +/- 43.41, N = 3
9706.13
final2
SE +/- 1.45, N = 3
10127.00
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

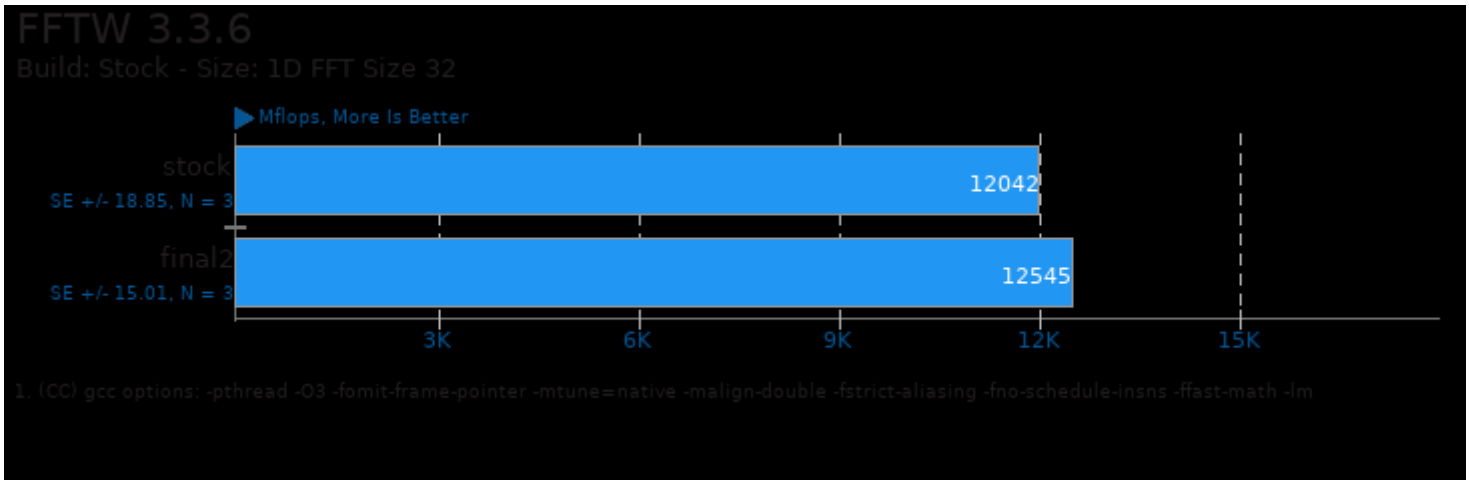
3600_oc


FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 512
Mflops, More Is Better
stock
SE +/- 55.62, N = 3
8977.10
final2
SE +/- 6.75, N = 3
9409.90
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
stock
SE +/- 17.70, N = 3
9060.47
final2
SE +/- 13.54, N = 3
9411.90
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
stock
SE +/- 22.83, N = 3
9305.43
final2
SE +/- 11.10, N = 3
9668.17
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
stock
SE +/- 32.90, N = 3
9588.93
final2
SE +/- 4.58, N = 3
10027.00
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 256
Mflops, More Is Better
stock
SE +/- 15.16, N = 3
9618.70
final2
SE +/- 2.65, N = 3
10010.00
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
stock
SE +/- 4.89, N = 3
9250.77
final2
SE +/- 1.92, N = 3
9607.37
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
stock
SE +/- 2.00, N = 2
11040
final2
SE +/- 27.00, N = 2
11503
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 32
Mflops, More Is Better
stock
SE +/- 101.09, N = 3
12513
final2
SE +/- 8.95, N = 3
13205
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 64
Mflops, More Is Better
stock
SE +/- 1.50, N = 2
10881
final2
11283
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 Friday, 29 March 2024 08:45.