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2021-01-21-2117

Intel Core i7-10610U testing with a LENOVO 20U9002NUS (N2WET25W 1.15 BIOS) and Intel UHD 3GB on Arch rolling via the Phoronix Test Suite.

Automated Executive Summary

2021-01-21-blackhound-suite had the most wins, coming in first place for 70% of the tests.

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

RAMspeed SMP (Type: Copy - Benchmark: Integer) at 1.611x
RAMspeed SMP (Type: Copy - Benchmark: Floating Point) at 1.603x
RAMspeed SMP (Type: Scale - Benchmark: Integer) at 1.574x
RAMspeed SMP (Type: Average - Benchmark: Integer) at 1.571x
RAMspeed SMP (Type: Scale - Benchmark: Floating Point) at 1.552x
RAMspeed SMP (Type: Triad - Benchmark: Integer) at 1.548x
RAMspeed SMP (Type: Average - Benchmark: Floating Point) at 1.547x
RAMspeed SMP (Type: Add - Benchmark: Integer) at 1.541x
RAMspeed SMP (Type: Add - Benchmark: Floating Point) at 1.527x
RAMspeed SMP (Type: Triad - Benchmark: Floating Point) at 1.52x.

Test Systems:

2021-01-21-blackhound-suite

Processor: Intel Core i7-1065G7 @ 3.90GHz (4 Cores / 8 Threads), Motherboard: Dell 077Y9N (1.4.1 BIOS), Chipset: Intel Device 34ef, Memory: 16GB, Disk: 2000GB Samsung SSD 970 EVO 2TB, Graphics: Intel Iris Plus G7 3GB (1100MHz), Audio: Realtek ALC289, Monitor: Acer V277U + 2 x V277U, Network: Intel Killer Wi-Fi 6 AX1650i 160MHz

OS: Arch rolling, Kernel: 5.10.9-arch1-1 (x86_64), Desktop: Sway 1.5.1, Display Server: Wayland, OpenGL: 4.6 Mesa 20.3.3, Compiler: GCC 10.2.0 + Clang 11.0.1, File-System: btrfs, Screen Resolution: 7680x1440

Kernel Notes: i915.enable_guc=2
Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Disk Notes: NONE / relatime,rw,space_cache,ssd,subvol=/@home,subvolid=257 / Block Size: 4096
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xa0
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

2021-01-23-onyx-suite

Processor: Intel Core i7-10610U @ 4.90GHz (4 Cores / 8 Threads), Motherboard: LENOVO 20U9002NUS (N2WET25W 1.15 BIOS), Chipset: Intel Device 02ef, Memory: 16GB, Disk: 2000GB Samsung SSD 970 EVO 2TB, Graphics: Intel UHD 3GB (1150MHz), Audio: Realtek ALC285, Monitor: 2 x V277U, Network: Intel + Intel-AC 9462

OS: Arch rolling, Kernel: 5.10.9-arch1-1 (x86_64), Desktop: Sway 1.5.1, Display Server: Wayland, OpenGL: 4.6 Mesa 20.3.3, Compiler: GCC 10.2.0 + Clang 11.0.1, File-System: btrfs, Screen Resolution: 5120x1440

Kernel Notes: i915.enable_guc=2
Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Disk Notes: NONE / relatime,rw,space_cache,ssd,subvol=/@home,subvolid=257 / Block Size: 4096
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xde
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Mitigation of TSX disabled + tsx_async_abort: Mitigation of TSX disabled

2021-01-23-onyx-suite2

Processor: Intel Core i7-10610U @ 4.90GHz (4 Cores / 8 Threads), Motherboard: LENOVO 20U9002NUS (N2WET25W 1.15 BIOS), Chipset: Intel Device 02ef, Memory: 16GB, Disk: 2000GB Samsung SSD 970 EVO 2TB, Graphics: Intel UHD 3GB (1150MHz), Audio: Realtek ALC285, Network: Intel + Intel-AC 9462

OS: Arch rolling, Kernel: 5.10.9-arch1-1 (x86_64), Desktop: Sway 1.5.1, Display Server: Wayland, OpenGL: 4.6 Mesa 20.3.3, Compiler: GCC 10.2.0 + Clang 11.0.1, File-System: btrfs, Screen Resolution: 1828x1028

Kernel Notes: i915.enable_guc=2
Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Disk Notes: NONE / relatime,rw,space_cache,ssd,subvol=/@home,subvolid=257 / Block Size: 4096
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xde
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Mitigation of TSX disabled + tsx_async_abort: Mitigation of TSX disabled

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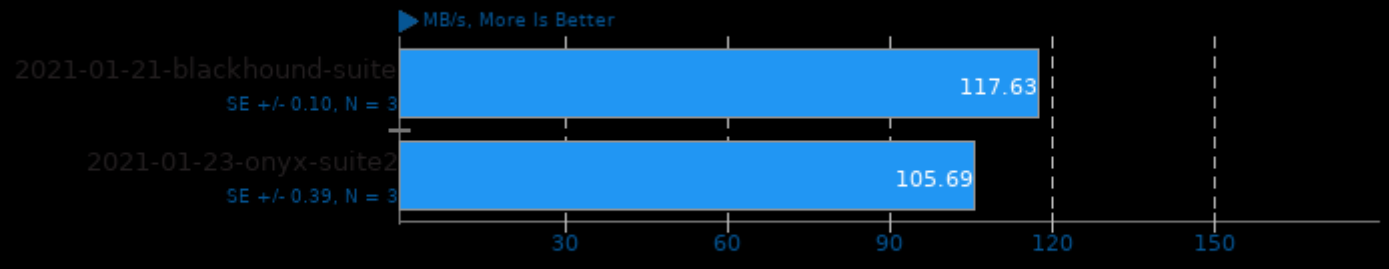
	2021-01-21-blackhound-suite	2021-01-23-onyx-suite	2021-01-23-onyx-suite2
Dbench - 1 (MB/s)	**117.625**		**105.693**
Normalized	100%		89.86%
Standard Deviation	0.2%		0.6%
Xonotic - 2560 x 1440 - Ultimate (FPS)	**94.4153363**		**69.6141348**
Normalized	100%		73.73%
Standard Deviation	1.7%		2.5%
RAMspeed SMP - Add - Integer (MB/s)	**31572**		**20484**
Normalized	100%		64.88%
Standard Deviation	0.5%		0.5%
RAMspeed SMP - Copy - Integer (MB/s)	**29900**		**18565**
Normalized	100%		62.09%
Standard Deviation	0%		0.3%
RAMspeed SMP - Scale - Integer (MB/s)	**29267**		**18596**
Normalized	100%		63.54%
Standard Deviation	0.1%		0%
RAMspeed SMP - Triad - Integer (MB/s)	**31779**		**20524**
Normalized	100%		64.58%
Standard Deviation	0.2%		0.1%
RAMspeed SMP - Average - Integer (MB/s)	**30554**		**19453**
Normalized	100%		63.67%
Standard Deviation	0%		1.1%
RAMspeed SMP - Add - Floating Point (MB/s)	**31394**		**20554**
Normalized	100%		65.47%
Standard Deviation	0.6%		0.1%
RAMspeed SMP - Copy - Floating Point	**29780**		**18582**
Normalized	100%		62.4%
Standard Deviation	0.2%		0.2%
RAMspeed SMP - Scale - Floating Point	**28778**		**18547**
Normalized	100%		64.45%
Standard Deviation	0.1%		0.4%
RAMspeed SMP - Triad - Floating Point	**31319**		**20607**
Normalized	100%		65.8%
Standard Deviation	0.2%		0.2%
RAMspeed SMP - Average - Floating Point (MB/s)	**30273**		**19564**
Normalized	100%		64.63%
Standard Deviation	0%		0.2%
CacheBench - R.M.W (MB/s)	**38765**		**45760**
Normalized	84.71%		100%
Standard Deviation	1.9%		1.8%
SciMark - Composite (Mflops)	**590.13**		**639.83**
Normalized	92.23%		100%
Standard Deviation	0.5%		0.1%
SciMark - Monte Carlo (Mflops)	**177.04**		**142.10**
Normalized	100%		80.26%
Standard Deviation	1.9%		0.1%
SciMark - F.F.T (Mflops)	**248.61**		**199.88**
Normalized	100%		80.4%
Standard Deviation	0.2%		0.1%
SciMark - S.M.M (Mflops)	**673.51**		**699.79**
Normalized	96.24%		100%
Standard Deviation	0.4%		0.3%

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SciMark - D.L.M.F (Mflops)	**773.49**	**938.98**
Normalized	82.38%	100%
Standard Deviation	1.1%	0.3%
SciMark - J.S.O.R (Mflops)	**1078**	**1218**
Normalized	88.48%	100%
Standard Deviation	0.3%	0.2%
Timed MPlayer Compilation - Time To Compile (sec)	**109.145**	**118.581**
Normalized	100%	92.04%
Standard Deviation	2%	0.9%
Timed PHP Compilation - Time To Compile (sec)	**125.172**	**135.126**
Normalized	100%	92.63%
Standard Deviation	0.2%	1.8%
C-Ray - Total Time - 4.1.R.P.P (sec)	**221.462**	**206.835**
Normalized	93.4%	100%
Standard Deviation	0.6%	0.7%
Gzip Compression - L.S.T.A.T.t.g (sec)	**38.936**	**37.752**
Normalized	96.96%	100%
Standard Deviation	0.5%	2.2%
LAME MP3 Encoding - WAV To MP3 (sec)	**8.306**	**9.009**
Normalized	100%	92.2%
Standard Deviation	1.2%	1.1%

Dbench 4.0

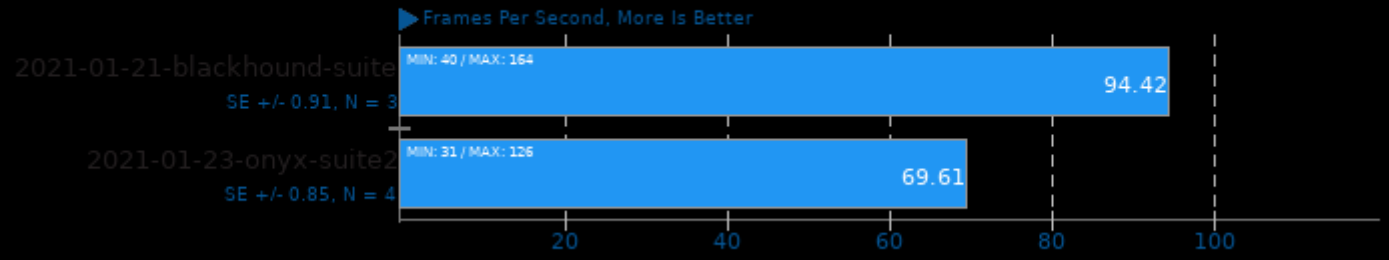
Client Count: 1



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

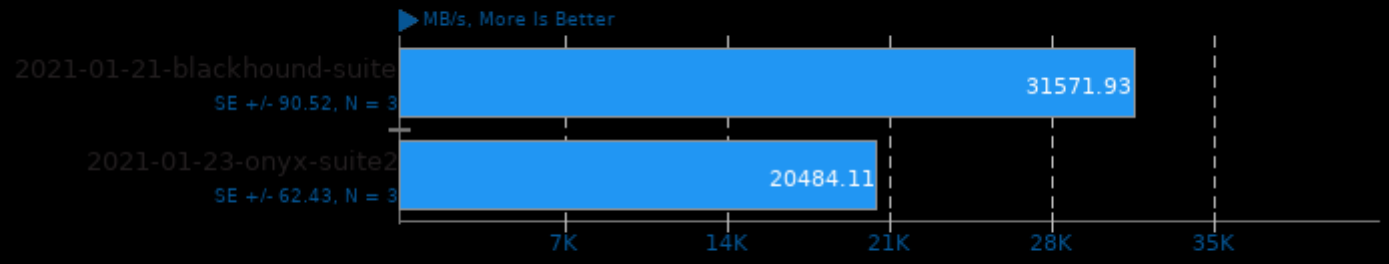
Xonotic 0.8.2

Resolution: 2560 x 1440 - Effects Quality: Ultimate



RAMspeed SMP 3.5.0

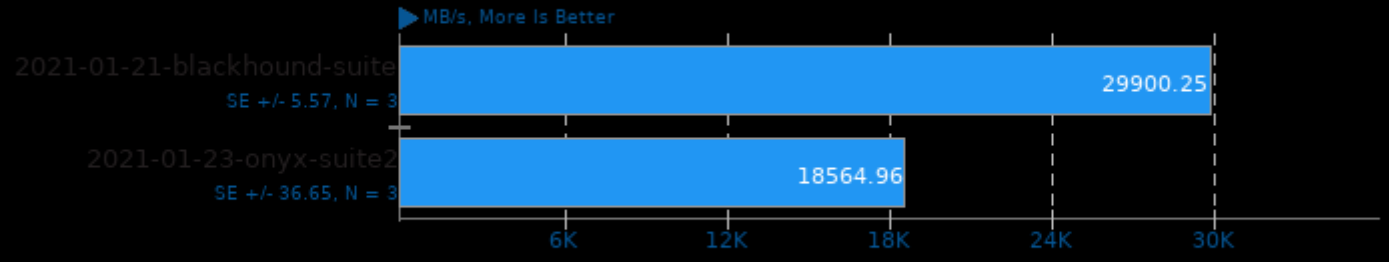
Type: Add - Benchmark: Integer



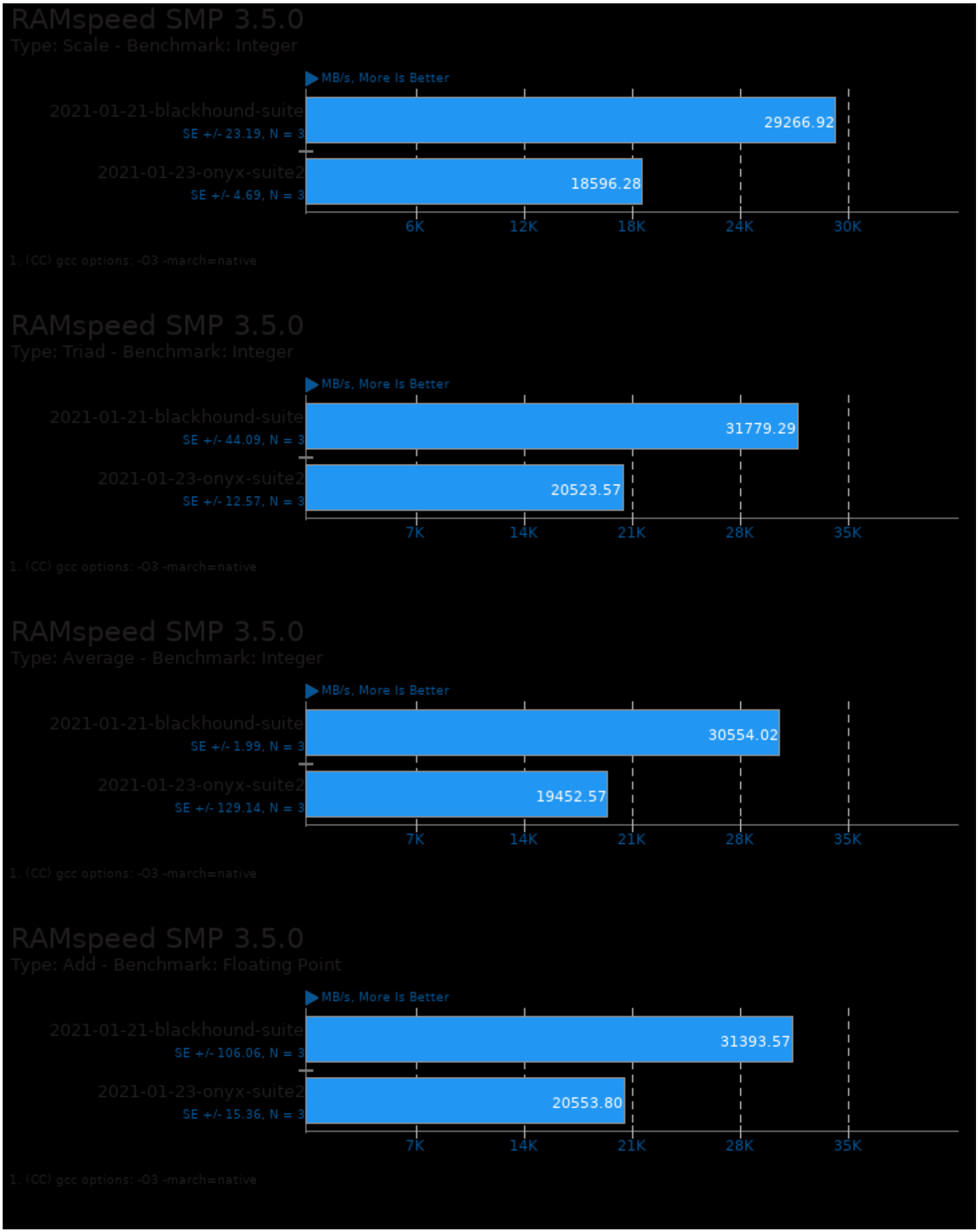
1. (CC) gcc options: -O3 -march=native

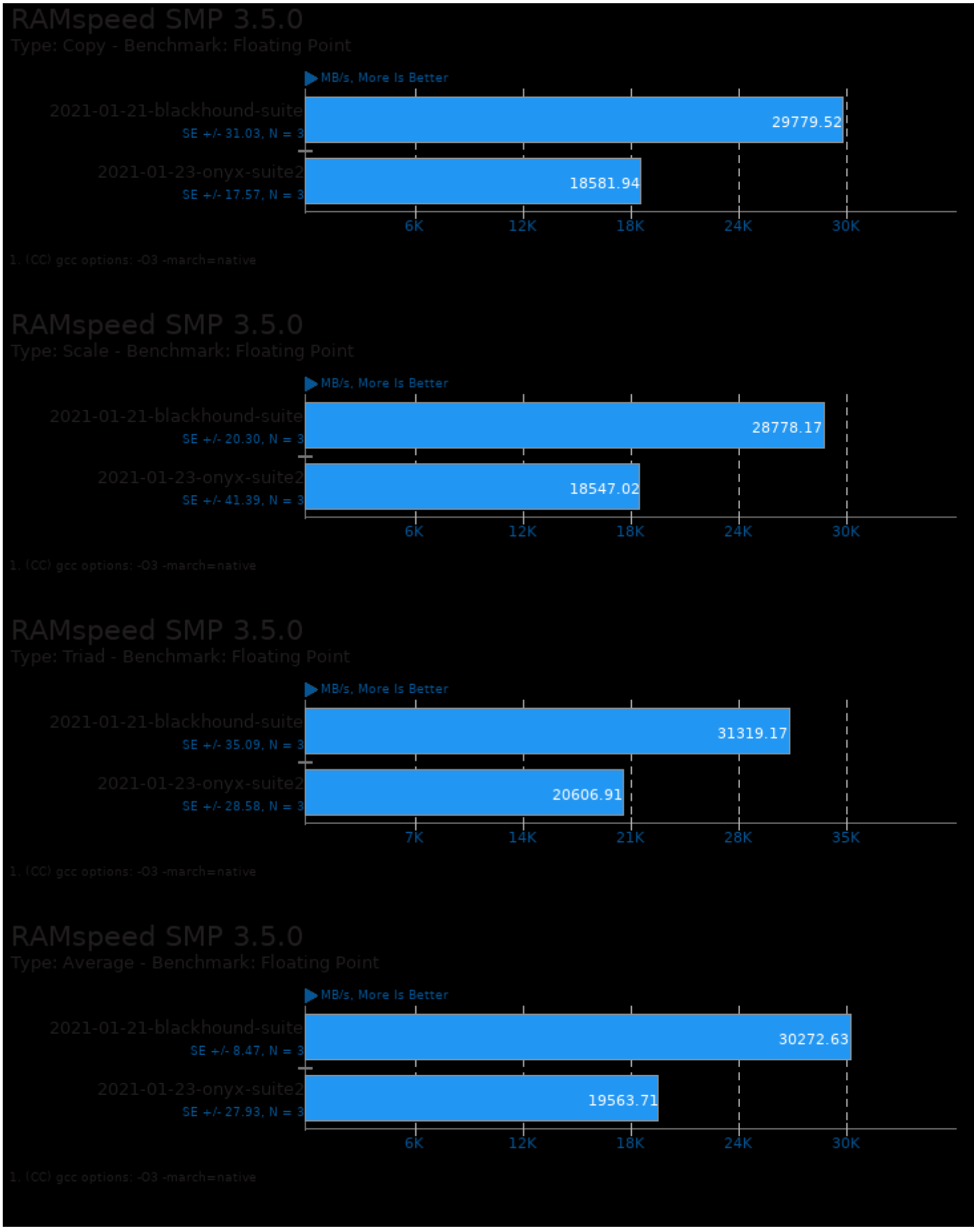
RAMspeed SMP 3.5.0

Type: Copy - Benchmark: Integer



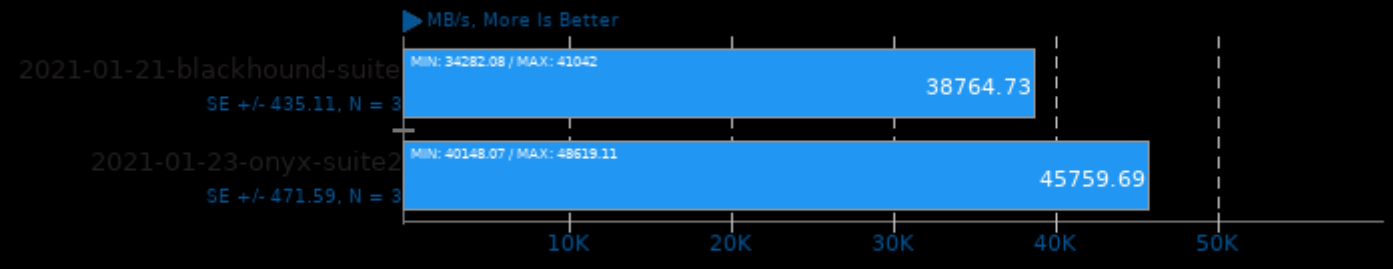
1. (CC) gcc options: -O3 -march=native


RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Integer
MB/s, More Is Better
2021-01-21-blackhound-suite
SE +/- 23.19, N = 3
29266.92
2021-01-23-onyx-suite2
SE +/- 4.69, N = 3
18596.28
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Triad - Benchmark: Integer
MB/s, More Is Better
2021-01-21-blackhound-suite
SE +/- 44.09, N = 3
31779.29
2021-01-23-onyx-suite2
SE +/- 12.57, N = 3
20523.57
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Average - Benchmark: Integer
MB/s, More Is Better
2021-01-21-blackhound-suite
SE +/- 1.99, N = 3
30554.02
2021-01-23-onyx-suite2
SE +/- 129.14, N = 3
19452.57
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Add - Benchmark: Floating Point
MB/s, More Is Better
2021-01-21-blackhound-suite
SE +/- 106.06, N = 3
31393.57
2021-01-23-onyx-suite2
SE +/- 15.36, N = 3
20553.80
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native


RAMspeed SMP 3.5.0
Type: Copy - Benchmark: Floating Point
MB/s, More Is Better
2021-01-21-blackhound-suite
SE +/- 31.03, N = 3
29779.52
2021-01-23-onyx-suite2
SE +/- 17.57, N = 3
18581.94
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Floating Point
MB/s, More Is Better
2021-01-21-blackhound-suite
SE +/- 20.30, N = 3
28778.17
2021-01-23-onyx-suite2
SE +/- 41.39, N = 3
18547.02
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Triad - Benchmark: Floating Point
MB/s, More Is Better
2021-01-21-blackhound-suite
SE +/- 35.09, N = 3
31319.17
2021-01-23-onyx-suite2
SE +/- 28.58, N = 3
20606.91
7K
14K
21K
28K
35K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Average - Benchmark: Floating Point
MB/s, More Is Better
2021-01-21-blackhound-suite
SE +/- 8.47, N = 3
30272.63
2021-01-23-onyx-suite2
SE +/- 27.93, N = 3
19563.71
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native

CacheBench

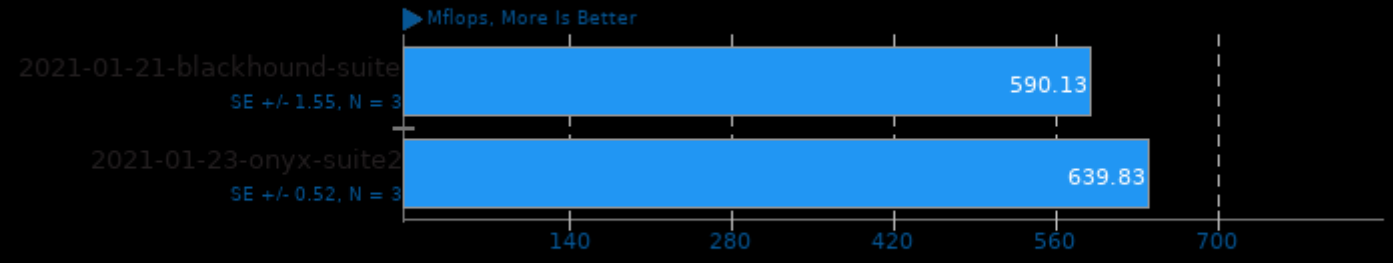
Test: Read / Modify / Write



1. (CC) gcc options: -lrt

SciMark 2.0

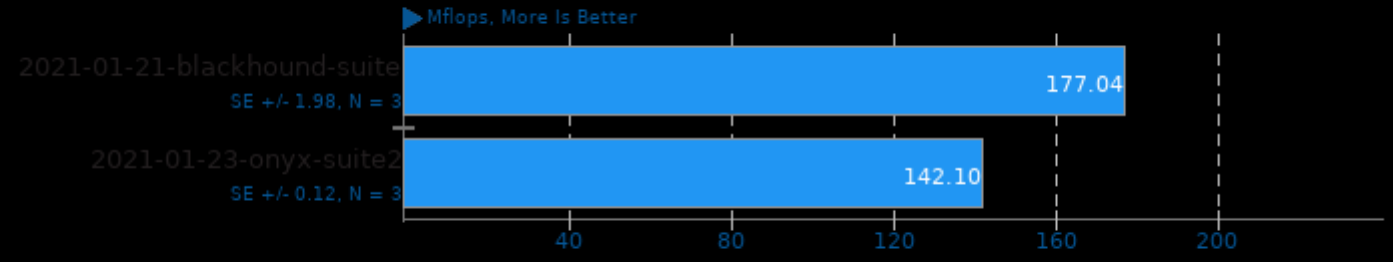
Computational Test: Composite



1. (CC) gcc options: -lm

SciMark 2.0

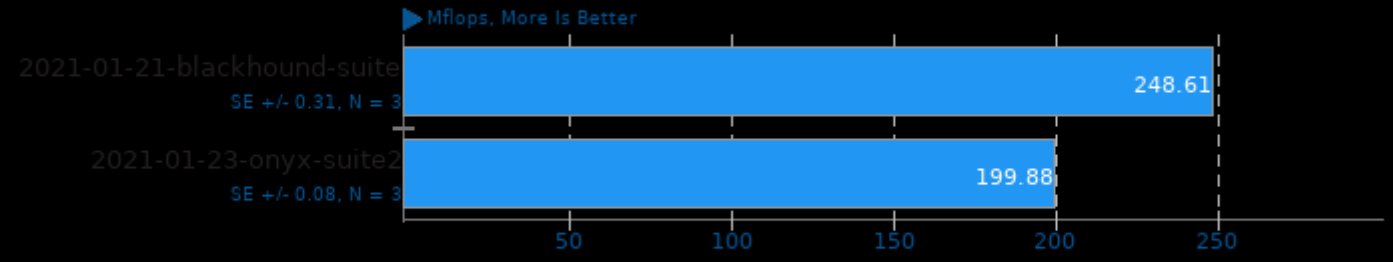
Computational Test: Monte Carlo



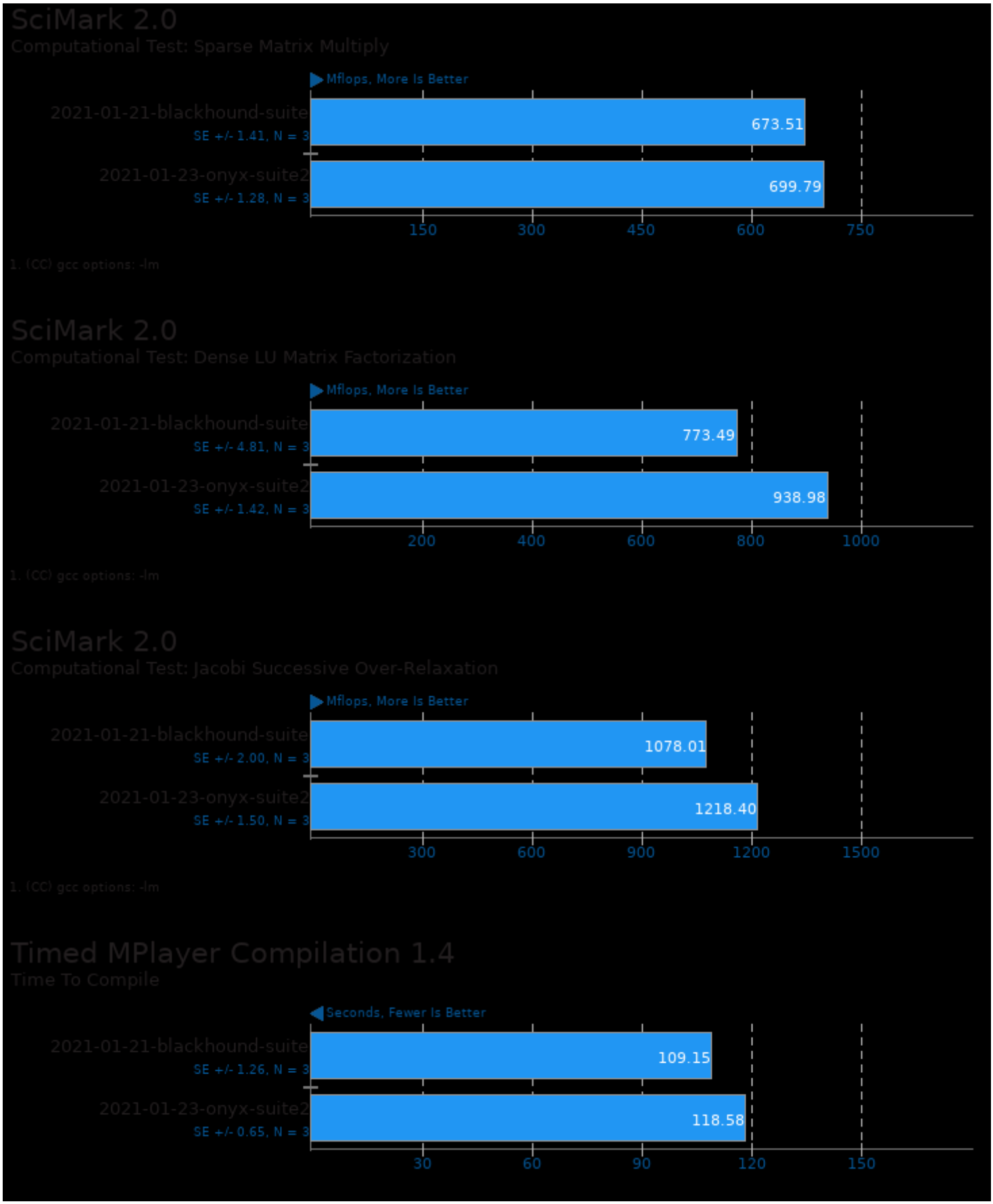
1. (CC) gcc options: -lm

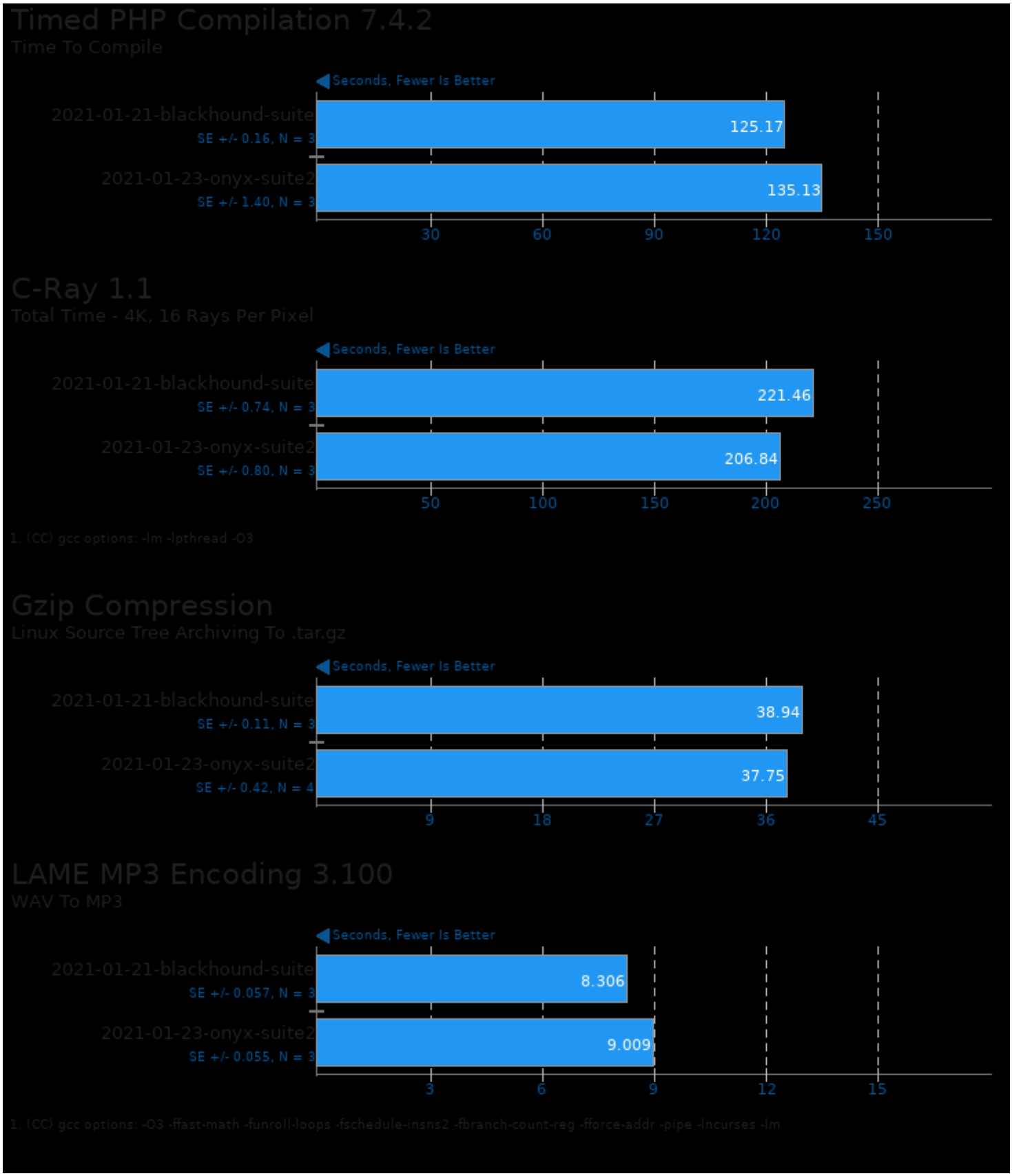
SciMark 2.0

Computational Test: Fast Fourier Transform



1. (CC) gcc options: -lm


SciMark 2.0
Computational Test: Sparse Matrix Multiply
Mflops, More Is Better
2021-01-21-blackhound-suite
SE +/- 1.41, N = 3
673.51
2021-01-23-onyx-suite2
SE +/- 1.28, N = 3
699.79
150
300
450
600
750
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Dense LU Matrix Factorization
Mflops, More Is Better
2021-01-21-blackhound-suite
SE +/- 4.81, N = 3
773.49
2021-01-23-onyx-suite2
SE +/- 1.42, N = 3
938.98
200
400
600
800
1000
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Jacobi Successive Over-Relaxation
Mflops, More Is Better
2021-01-21-blackhound-suite
SE +/- 2.00, N = 3
1078.01
2021-01-23-onyx-suite2
SE +/- 1.50, N = 3
1218.40
300
600
900
1200
1500
1. (CC) gcc options: -lm
Timed MPlayer Compilation 1.4
Time To Compile
Seconds, Fewer Is Better
2021-01-21-blackhound-suite
SE +/- 1.26, N = 3
109.15
2021-01-23-onyx-suite2
SE +/- 0.65, N = 3
118.58
30
60
90
120
150



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 07:34.