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askap 3200u

AMD Ryzen 3 3200U testing with a MOTILE PF4PU1F (N.1.03 BIOS) and AMD Picasso 512MB on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

1 had the most wins, coming in first place for 71% of the tests.

Based on the geometric mean of all complete results, the fastest (1) was 1.005x the speed of the slowest (3). 2 was 1x the speed of 1 and 3 was 0.995x the speed of 2.

Test Systems:

1

2

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3

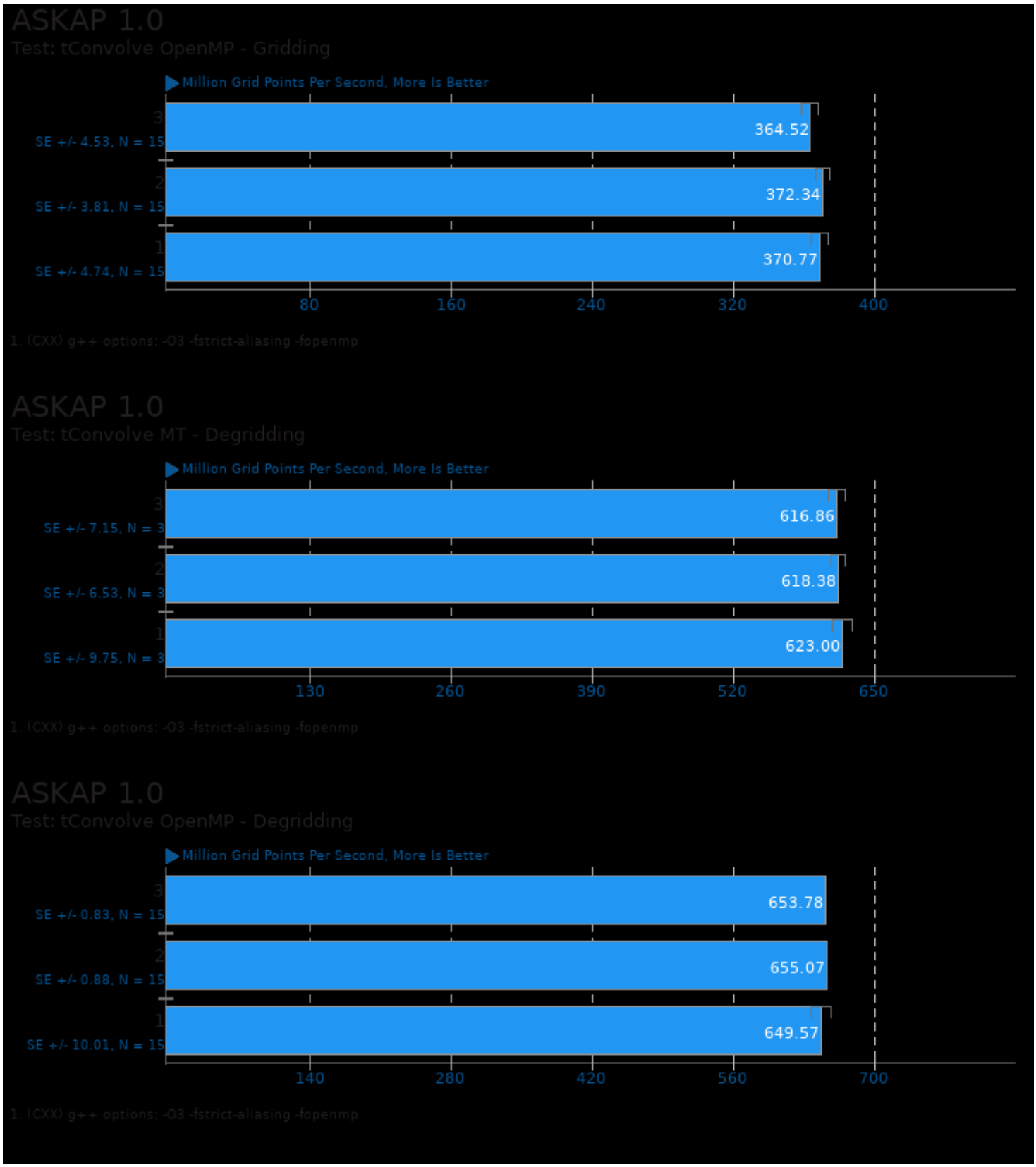
Processor: AMD Ryzen 3 3200U @ 2.60GHz (2 Cores / 4 Threads), Motherboard: MOTILE PF4PU1F (N.1.03 BIOS), Chipset: AMD Raven/Raven2, Memory: 3584MB, Disk: 128GB BIWIN SSD, Graphics: AMD Picasso 512MB (1200/1200MHz), Audio: AMD Raven/Raven2/Fenghuang, Network: Realtek RTL8111/8168/8411 + Intel Dual Band-AC 3168NGW

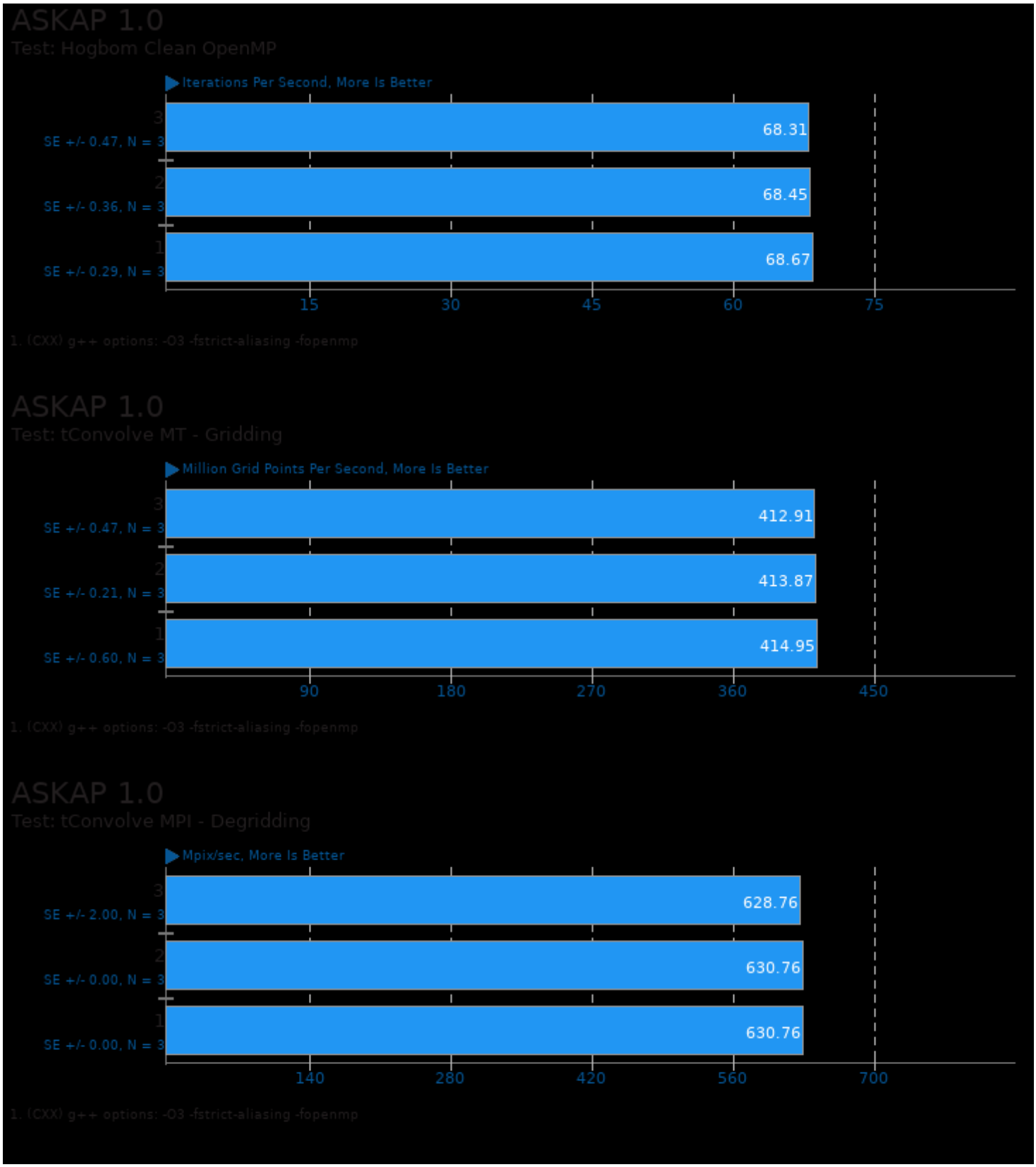
OS: Ubuntu 20.04, Kernel: 5.8.0-38-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.9, Display Driver: amdgpu 19.1.0, OpenGL: 4.6 Mesa 20.0.8 (LLVM 10.0.0), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

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: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0x8108102
Security Notes: itlb_multihit: Not affected + 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 Full AMD retpoline IBPB: conditional STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

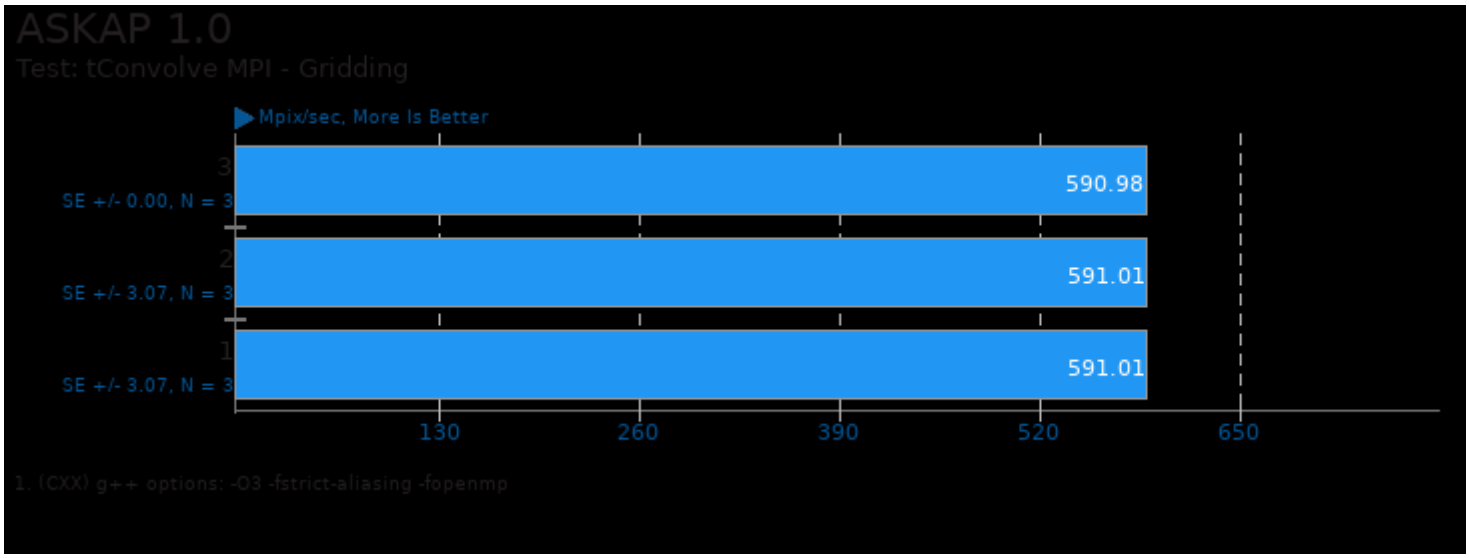
	1	2	3
ASKAP - tConvolve OpenMP - Gridding (Million Grid Points/sec)	370.768	**372.335**	**364.515**
Normalized	99.58%	100%	97.9%
Standard Deviation	4.9%	4%	4.8%
ASKAP - tConvolve MT - Degridding (Million Grid Points/sec)	**623.002**	618.379	**616.856**
Normalized	100%	99.26%	99.01%
Standard Deviation	2.7%	1.8%	2%
ASKAP - tConvolve OpenMP - Degridding (Million Grid Points/sec)	**649.571**	**655.067**	653.778
Normalized	99.16%	100%	99.8%
Standard Deviation	6%	0.5%	0.5%
ASKAP - H.C.O (Iterations/sec)	**68.6680**	68.4499	**68.3125**
Normalized	100%	99.68%	99.48%
Standard Deviation	0.7%	0.9%	1.2%
ASKAP - tConvolve MT - Gridding (Million Grid Points/sec)	**414.946**	413.870	**412.908**
Normalized	100%	99.74%	99.51%
Standard Deviation	0.3%	0.1%	0.2%
ASKAP - tConvolve MPI - Degridding	**630.759**	**630.759**	**628.757**
Normalized	100%	100%	99.68%
Standard Deviation	0%	0%	0.6%
ASKAP - tConvolve MPI - Gridding	**591.013**	**591.013**	**590.981**
Normalized	100%	100%	99.99%
Standard Deviation	0.9%	0.9%	0%

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ASKAP 1.0
Test: tConvolve OpenMP - Gridding
Million Grid Points Per Second, More Is Better
3
SE +/- 4.53, N = 15
364.52
2
SE +/- 3.81, N = 15
372.34
1
SE +/- 4.74, N = 15
370.77
80
160
240
320
400
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp
ASKAP 1.0
Test: tConvolve MT - Degridding
Million Grid Points Per Second, More Is Better
3
SE +/- 7.15, N = 3
616.86
2
SE +/- 6.53, N = 3
618.38
1
SE +/- 9.75, N = 3
623.00
130
260
390
520
650
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp
ASKAP 1.0
Test: tConvolve OpenMP - Degridding
Million Grid Points Per Second, More Is Better
3
SE +/- 0.83, N = 15
653.78
2
SE +/- 0.88, N = 15
655.07
1
SE +/- 10.01, N = 15
649.57
140
280
420
560
700
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp


ASKAP 1.0
Test: Hogbom Clean OpenMP
Iterations Per Second, More Is Better
3
SE +/- 0.47, N = 3
68.31
2
SE +/- 0.36, N = 3
68.45
1
SE +/- 0.29, N = 3
68.67
15
30
45
60
75
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp
ASKAP 1.0
Test: tConvolve MT - Gridding
Million Grid Points Per Second, More Is Better
3
SE +/- 0.47, N = 3
412.91
2
SE +/- 0.21, N = 3
413.87
1
SE +/- 0.60, N = 3
414.95
90
180
270
360
450
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp
ASKAP 1.0
Test: tConvolve MPI - Degridding
Mpix/sec, More Is Better
3
SE +/- 2.00, N = 3
628.76
2
SE +/- 0.00, N = 3
630.76
1
SE +/- 0.00, N = 3
630.76
140
280
420
560
700
1. (CXX) g++ options: -O3 -fstrict-aliasing -fopenmp

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This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 08:42.