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## BenchMarxAsusX555lb

Intel Core i5-5200U testing with a ASUS X555LB v1.0 (X555LB.505 BIOS) and ASUS Intel HD 5500 3GB on EndeavourOS rolling via the Phoronix Test Suite.

### Automated Executive Summary

*Arch-5.11.16-arch1-1 had the most wins, coming in first place for 41% of the tests.*

*Based on the geometric mean of all complete results, the fastest (Arch-5.11.16-zen1-1-zen) was 1.009x the speed of the slowest (Arch-5.10.33-1-clear). Arch-5.11.16-arch1-1 was 0.999x the speed of Arch-5.11.16-zen1-1-zen and Arch-5.10.33-1-clear was 0.992x the speed of Arch-5.11.16-arch1-1.*

## Test Systems:

### Arch-5.11.16-arch1-1

Processor: Intel Core i5-5200U @ 2.70GHz (2 Cores / 4 Threads), Motherboard: ASUS X555LB v1.0 (X555LB.505 BIOS), Chipset: Intel Broadwell-U-OPI, Memory: 12GB, Disk: 240GB KINGSTON SA400S3 + 1000GB TOSHIBA

MQ01ABD1, Graphics: ASUS Intel HD 5500 3GB (900MHz), Audio: Intel Broadwell-U Audio, Network: Realtek RTL8111/8168/8411 + Intel 7265

OS: EndeavourOS rolling, Kernel: 5.11.16-arch1-1 (x86\_64), Desktop: GNOME Shell 40.1, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.0.3, Compiler: GCC 10.2.0, File-System: xfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise  
Environment Notes: FFLAGS="-O3 -LTO -march=native -mtune=native" CXXFLAGS="-O3 -LTO -march=native -mtune=native" CFLAGS="-O3 -LTO -march=native -mtune=native"  
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,ito,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  
Processor Notes: Scaling Governor: intel\_cpufreq performance - CPU Microcode: 0x2f  
Security Notes: iflb\_multithit: 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 + srbs: Mitigation of Microcode + tsx\_async\_abort: Not affected

## Arch-5.11.16-zn1-1-zn

Processor: Intel Core i5-5200U @ 2.70GHz (2 Cores / 4 Threads), Motherboard: ASUS X555LB v1.0 (X555LB.505 BIOS), Chipset: Intel Broadwell-U-OPI, Memory: 12GB, Disk: 240GB KINGSTON SA400S3 + 1000GB TOSHIBA MQ01ABD1, Graphics: ASUS Intel HD 5500 3GB (900MHz), Audio: Intel Broadwell-U Audio, Network: Realtek RTL8111/8168/8411 + Intel 7265

OS: EndeavourOS rolling, Kernel: 5.11.16-zn1-1-zn (x86\_64), Desktop: GNOME Shell 40.1, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.0.3, Compiler: GCC 10.2.0, File-System: xfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always  
Environment Notes: FFLAGS="-O3 -LTO -march=native -mtune=native" CXXFLAGS="-O3 -LTO -march=native -mtune=native" CFLAGS="-O3 -LTO -march=native -mtune=native"  
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,ito,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  
Processor Notes: Scaling Governor: intel\_cpufreq performance - CPU Microcode: 0x2f  
Security Notes: iflb\_multithit: 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 + srbs: Mitigation of Microcode + tsx\_async\_abort: Not affected

## Arch-5.10.33-1-clear

Processor: Intel Core i5-5200U @ 2.70GHz (2 Cores / 4 Threads), Motherboard: ASUS X555LB v1.0 (X555LB.505 BIOS), Chipset: Intel Broadwell-U-OPI, Memory: 12GB, Disk: 240GB KINGSTON SA400S3 + 1000GB TOSHIBA MQ01ABD1, Graphics: ASUS Intel HD 5500 3GB (900MHz), Audio: Intel Broadwell-U Audio, Network: Realtek RTL8111/8168/8411 + Intel 7265

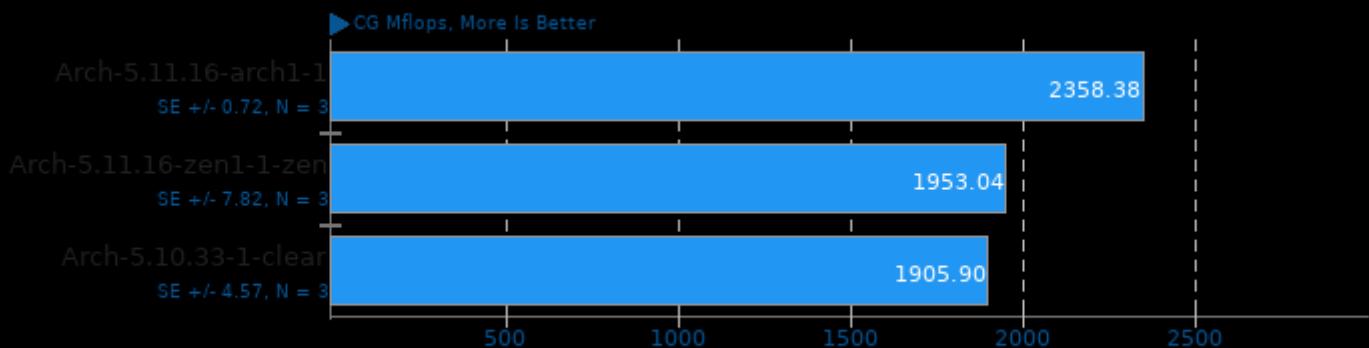
OS: EndeavourOS rolling, Kernel: 5.10.33-1-clear (x86\_64), Desktop: GNOME Shell 40.1, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.0.3, Compiler: GCC 10.2.0, File-System: xfs, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always  
Environment Notes: FFLAGS="-O3 -LTO -march=native -mtune=native" CXXFLAGS="-O3 -LTO -march=native -mtune=native" CFLAGS="-O3 -LTO -march=native -mtune=native"  
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,ito,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  
Processor Notes: Scaling Governor: intel\_cpufreq performance - CPU Microcode: 0x2f  
Security Notes: iflb\_multithit: 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 + srbs: Mitigation of Microcode + tsx\_async\_abort: Not affected

	Arch-5.11.16-arch1-1	Arch-5.11.16-zen1-1-z	Arch-5.10.33-1-clear
<b>miniFE - Small (CG Mflops)</b>	<b>2358</b>	1953	<b>1906</b>
Normalized	100%	82.81%	80.81%
Standard Deviation	0.1%	0.7%	0.4%
<b>7-Zip Compression - C.S.T (MIPS)</b>	<b>7768</b>	8894	<b>9011</b>
Normalized	86.21%	98.7%	100%
Standard Deviation	1.7%	1.1%	0.5%
<b>Dolfyn - C.F.D (sec)</b>	34.487	<b>33.124</b>	<b>34.774</b>
Normalized	96.05%	100%	95.26%
Standard Deviation	1.5%	0.7%	1%
<b>SciMark - Composite (Mflops)</b>	1239	<b>1243</b>	<b>1215</b>
Normalized	99.72%	100%	97.81%
Standard Deviation	0.4%	0.9%	0.5%
<b>ArrayFire - BLAS CPU (GFLOPS)</b>	<b>135.631</b>	<b>140.090</b>	139.811
Normalized	96.82%	100%	99.8%
Standard Deviation	0.2%	0.2%	0.4%
<b>ArrayFire - C.G.C (ms)</b>	<b>45.46</b>	42.39	<b>41.04</b>
Normalized	90.28%	96.82%	100%
Standard Deviation	0.3%	0.7%	2.7%
<b>Algebraic Multi-Grid Benchmark (Figure Of Merit)</b>	<b>88029953</b>	103234433	<b>107955367</b>
Normalized	81.54%	95.63%	100%
Standard Deviation	0.4%	0.5%	0.2%
<b>SciMark - J.S.O.R (Mflops)</b>	<b>1465</b>	1461	<b>1406</b>
Normalized	100%	99.76%	95.96%
Standard Deviation	0.3%	0.3%	1.4%
<b>SciMark - D.L.M.F (Mflops)</b>	<b>2347</b>	<b>2453</b>	2445
Normalized	95.69%	100%	99.67%
Standard Deviation	2.5%	2.5%	0.2%
<b>SciMark - S.M.M (Mflops)</b>	<b>1599</b>	1570	<b>1518</b>
Normalized	100%	98.18%	94.91%
Standard Deviation	4.3%	0.4%	0.4%
<b>SciMark - F.F.T (Mflops)</b>	<b>235.64</b>	<b>180.29</b>	184.17
Normalized	100%	76.51%	78.16%
Standard Deviation	0.1%	0.7%	1.6%
<b>SciMark - Monte Carlo (Mflops)</b>	<b>548.68</b>	548.29	<b>524.34</b>
Normalized	100%	99.93%	95.56%
Standard Deviation	0.6%	0.4%	0%

## miniFE 2.2

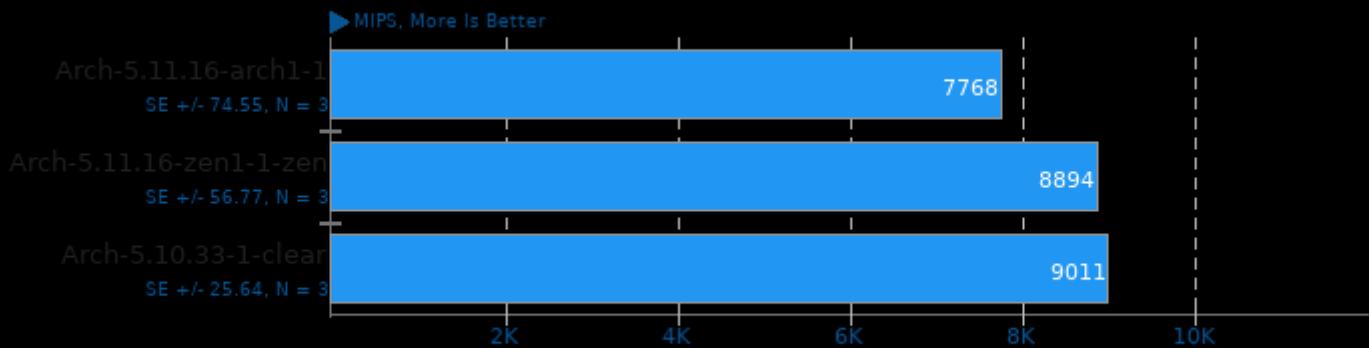
Problem Size: Small



1. (CXX) g++ options: -O3 -fopenmp -pthread -lmpi\_cxx -lmpi

## 7-Zip Compression 16.02

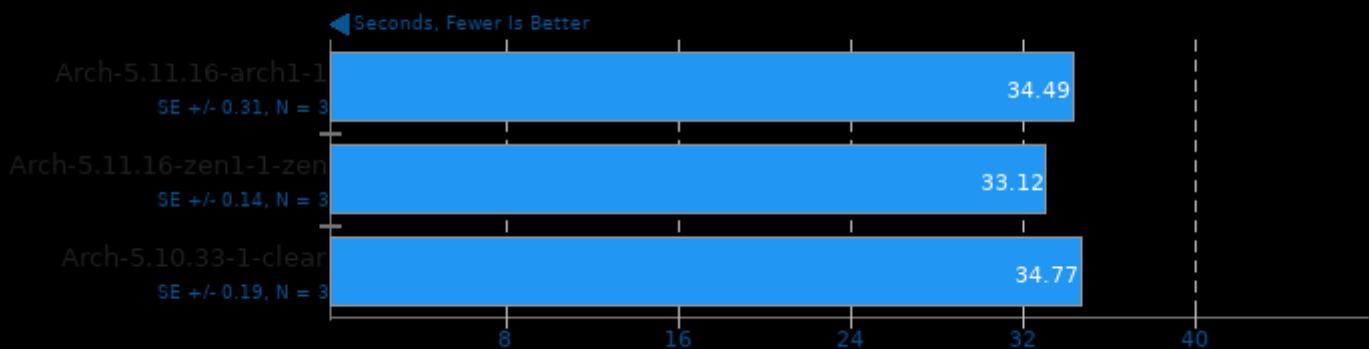
Compress Speed Test



1. (CXX) g++ options: -pipe -pthread

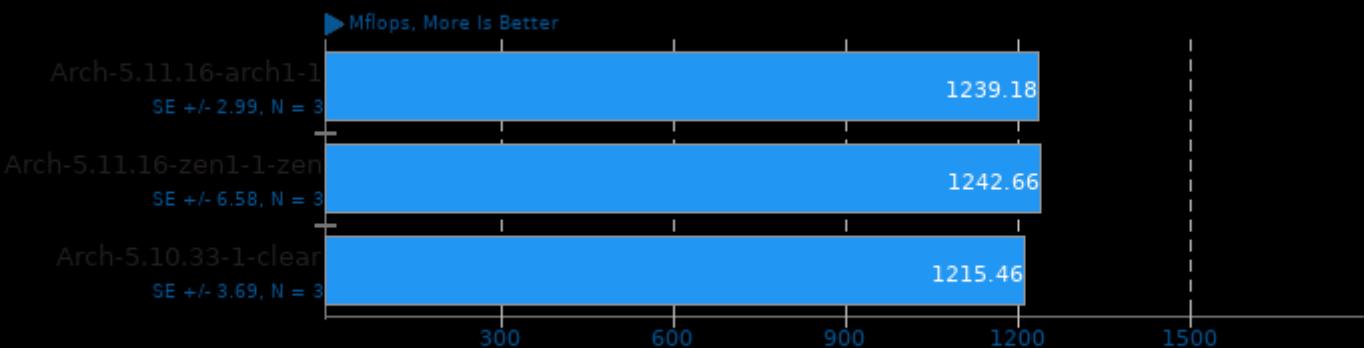
## Dolfyn 0.527

Computational Fluid Dynamics



## SciMark 2.0

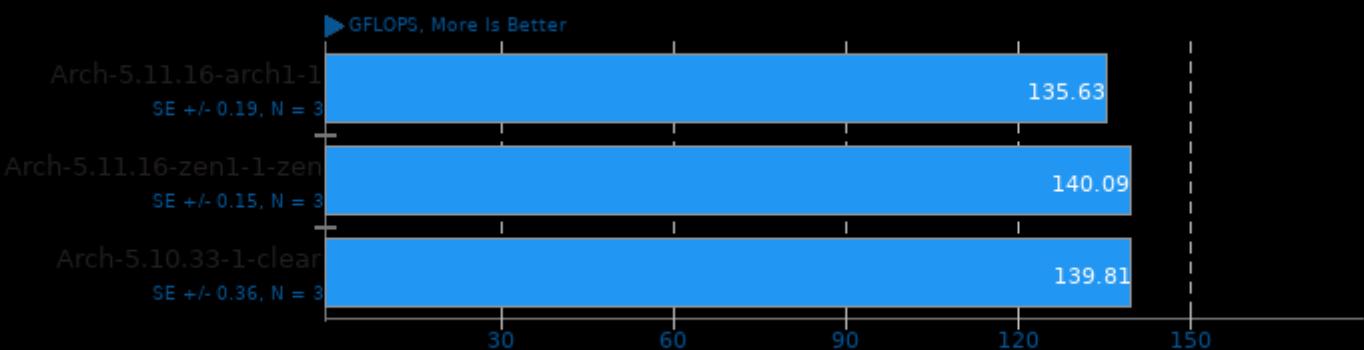
Computational Test: Composite



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

## ArrayFire 3.7

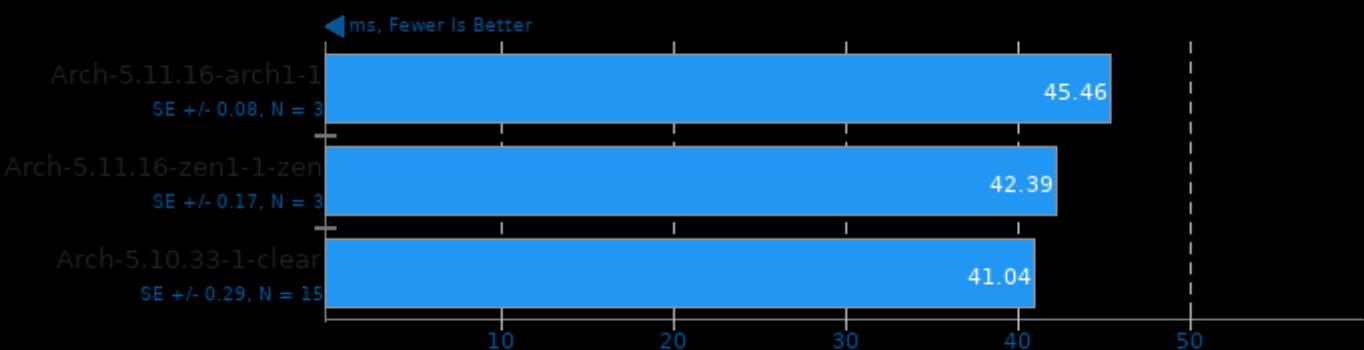
Test: BLAS CPU



1. (CXX) g++ options: -O3 -march=native -mtune=native -rdynamic

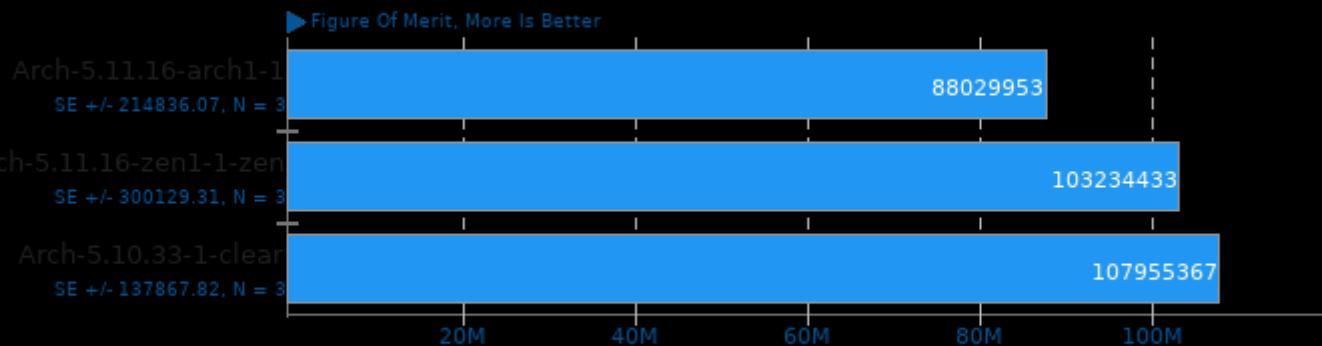
## ArrayFire 3.7

Test: Conjugate Gradient CPU



1. (CXX) g++ options: -O3 -march=native -mtune=native -rdynamic

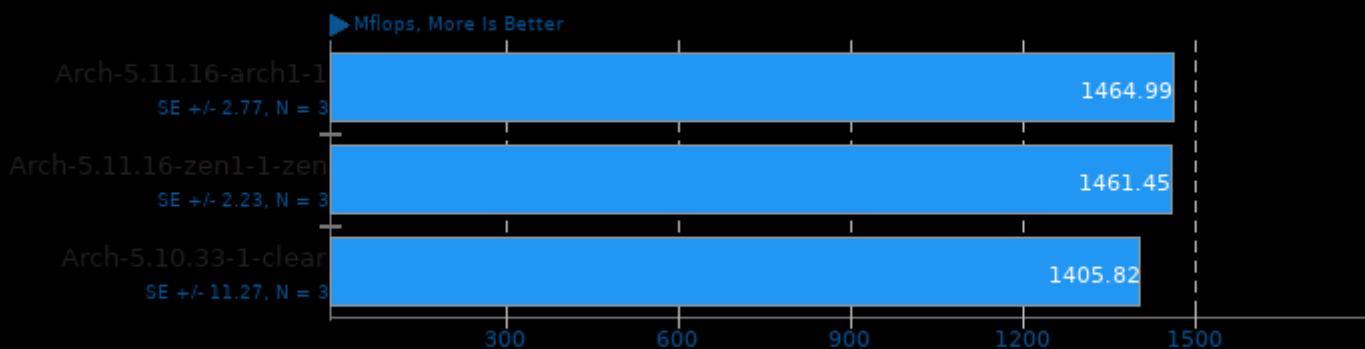
## Algebraic Multi-Grid Benchmark 1.2



1. (CC) gcc options: -lparcsr\_ls -lparcsr\_mv -lseq\_mv -lj\_mv -lkrylov -lHYPRE\_utilities -lm -fopenmp -pthread -lmpi

## SciMark 2.0

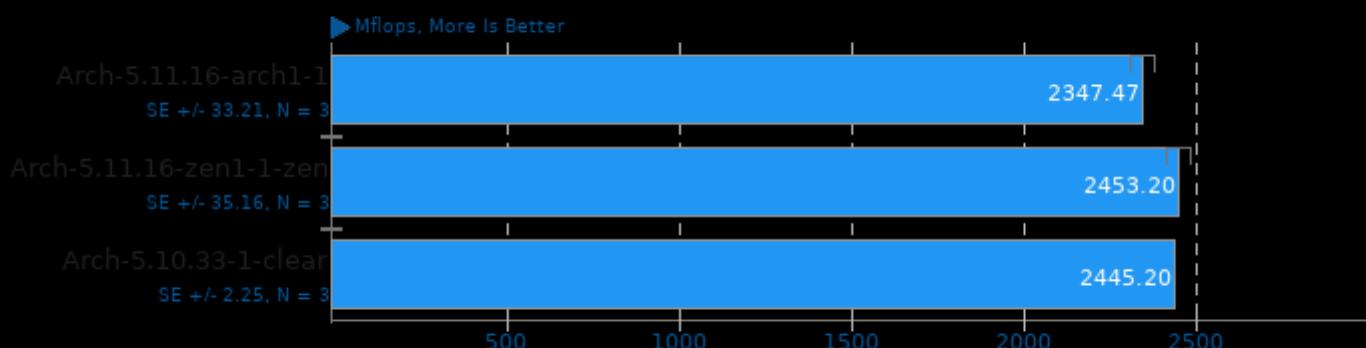
Computational Test: Jacobi Successive Over-Relaxation



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

## SciMark 2.0

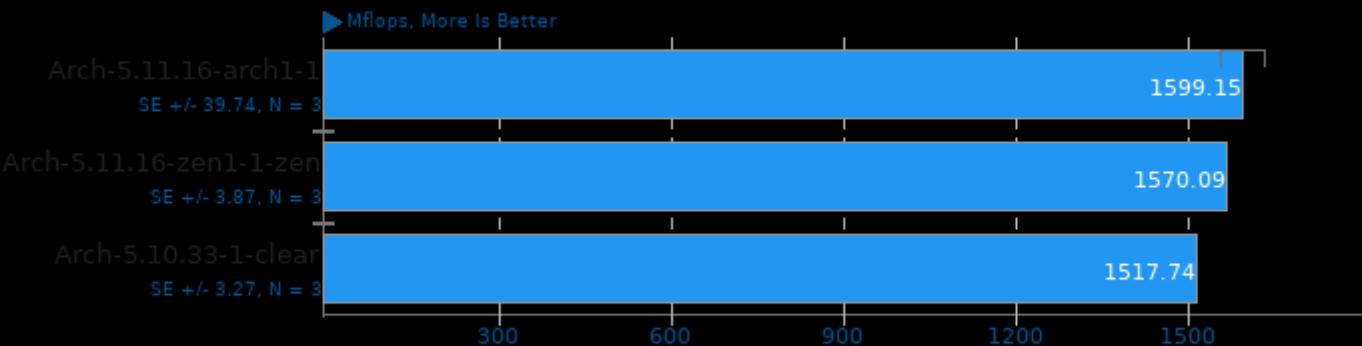
Computational Test: Dense LU Matrix Factorization



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

## SciMark 2.0

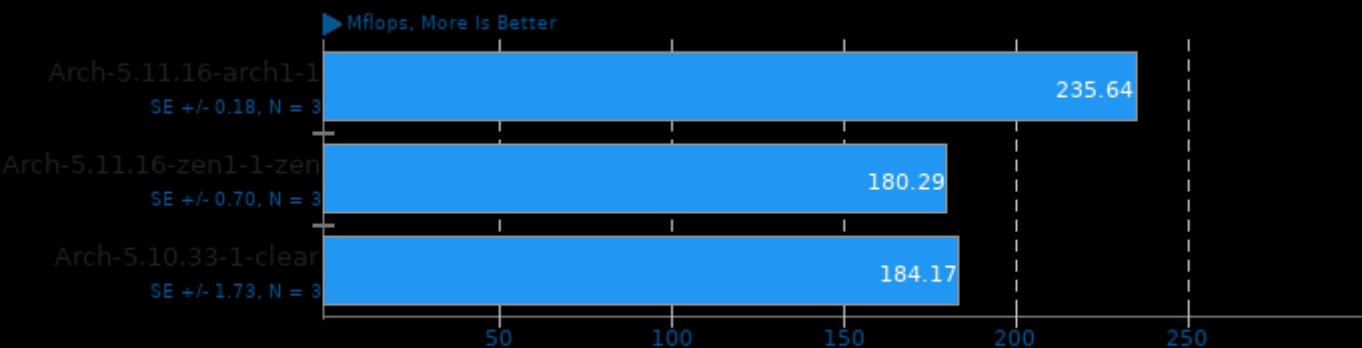
Computational Test: Sparse Matrix Multiply



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

## SciMark 2.0

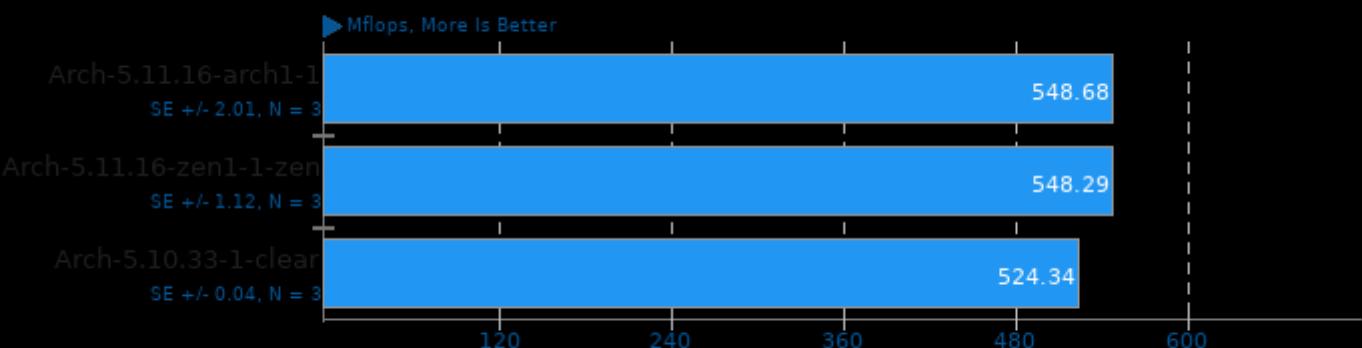
Computational Test: Fast Fourier Transform



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

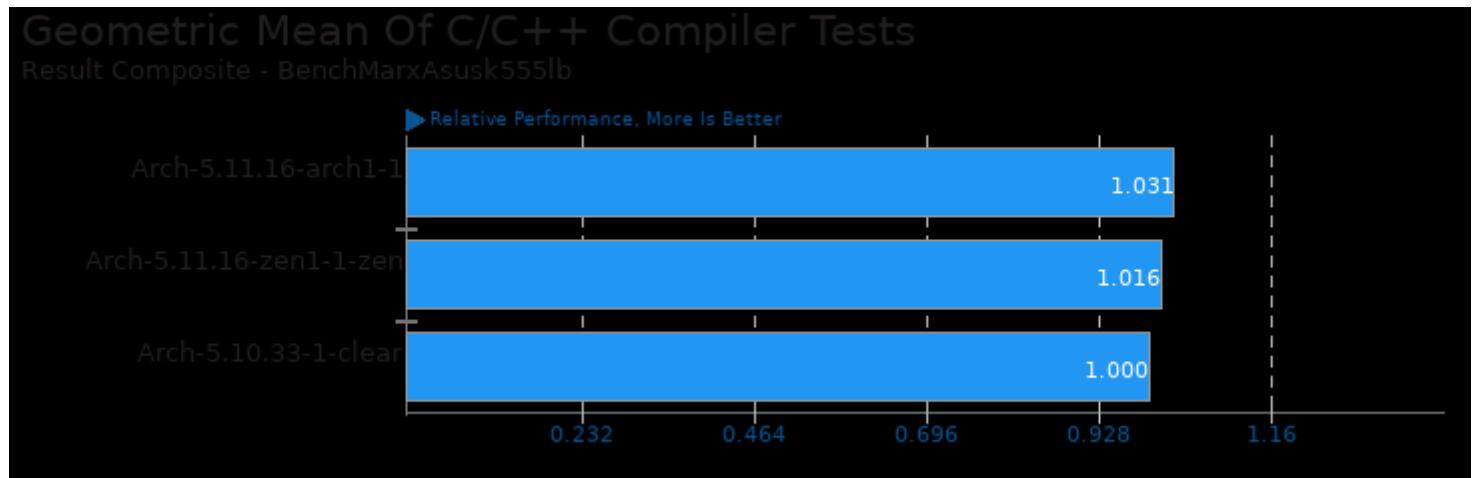
## SciMark 2.0

Computational Test: Monte Carlo

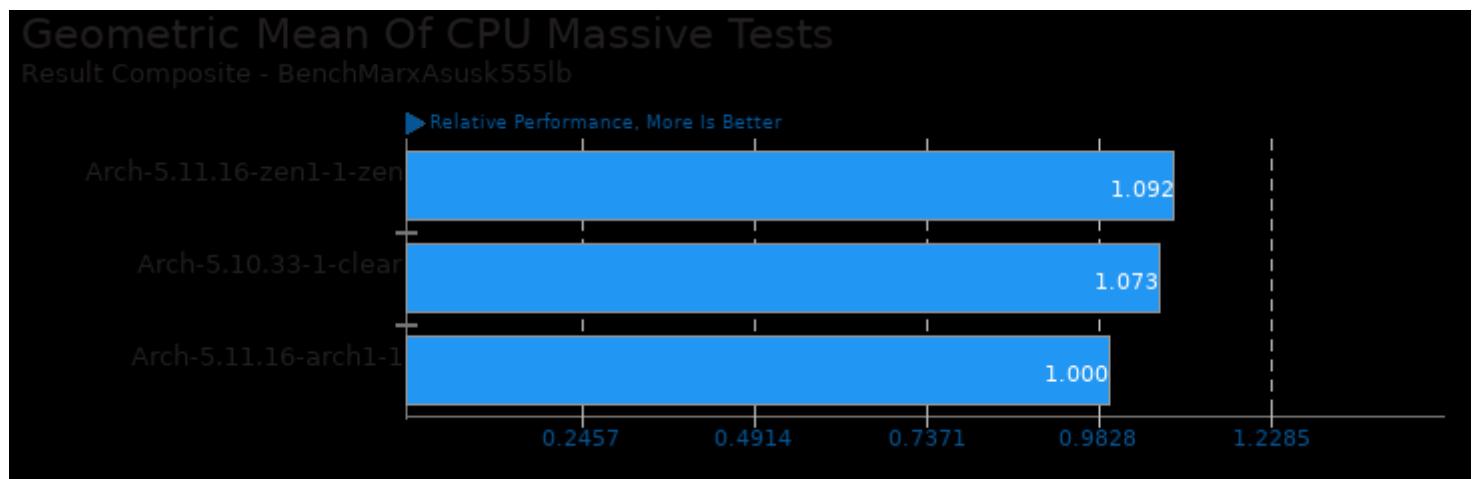


1. (CC) gcc options: -O3 -march=native -mtune=native -lm

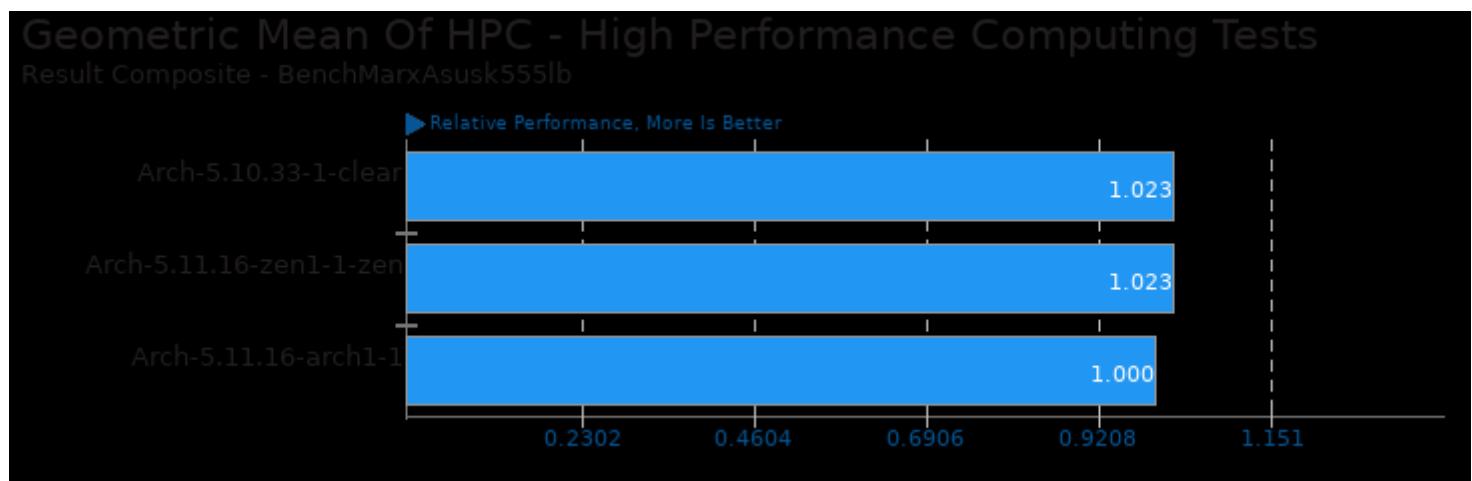
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/scimark2 and pts/compress-7zip



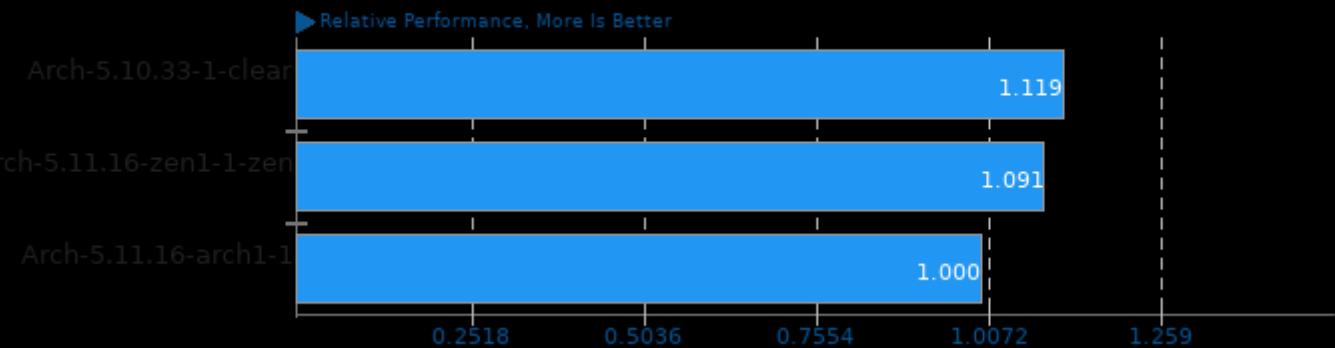
Geometric mean based upon tests: pts/compress-7zip and pts/dolfyn



Geometric mean based upon tests: pts/arrayfire, pts/amg, pts/dolfyn and pts/minife

## Geometric Mean Of Linear Algebra Tests

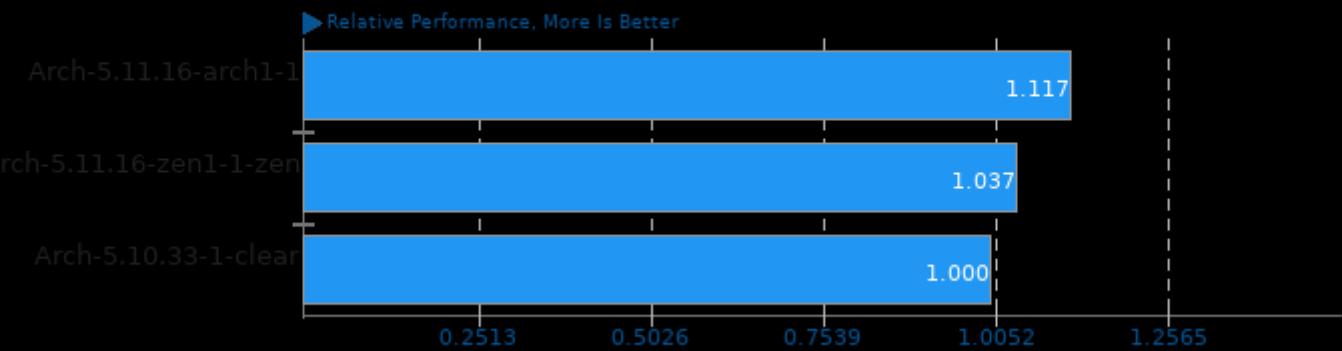
Result Composite - BenchMarxAsusK555lb



Geometric mean based upon tests: pts/arrayfire and pts/amg

## Geometric Mean Of Molecular Dynamics Tests

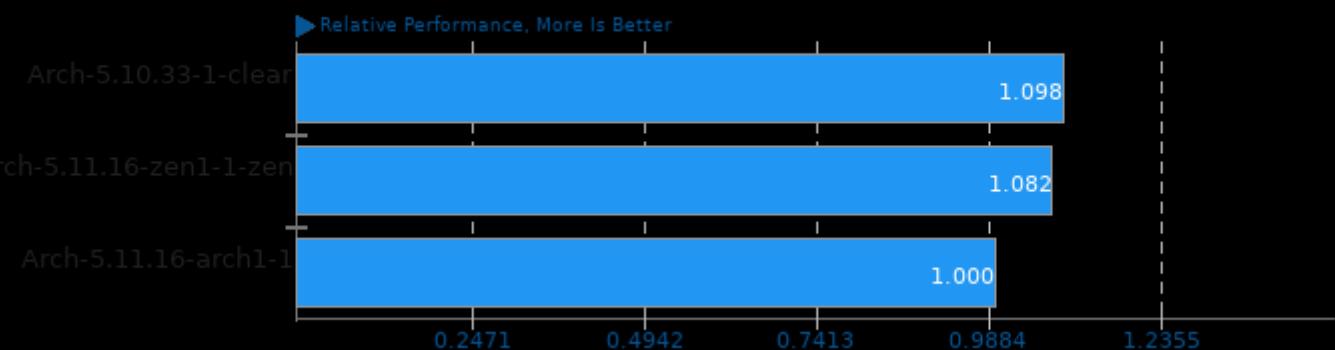
Result Composite - BenchMarxAsusK555lb



Geometric mean based upon tests: pts/dolfin and pts/minife

## Geometric Mean Of Multi-Core Tests

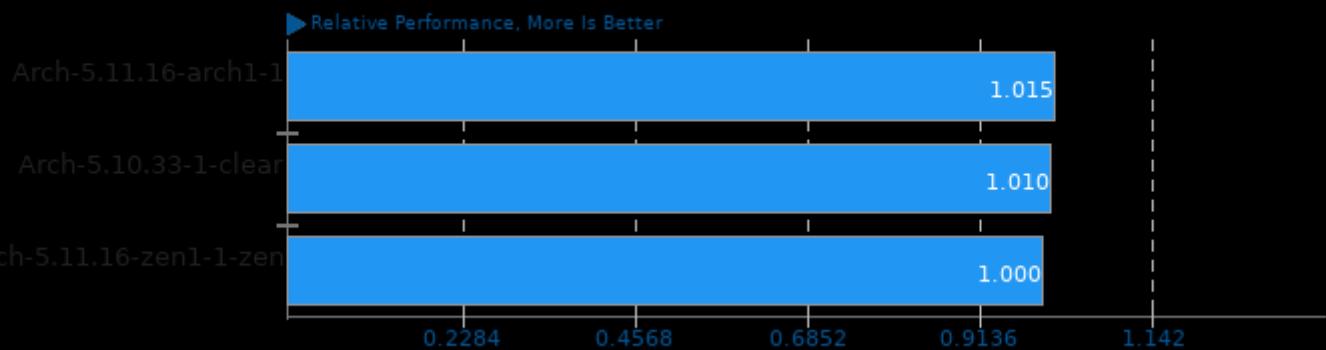
Result Composite - BenchMarxAsusK555lb



Geometric mean based upon tests: pts/arrayfire and pts/compress-7zip

## Geometric Mean Of OpenMPI Tests

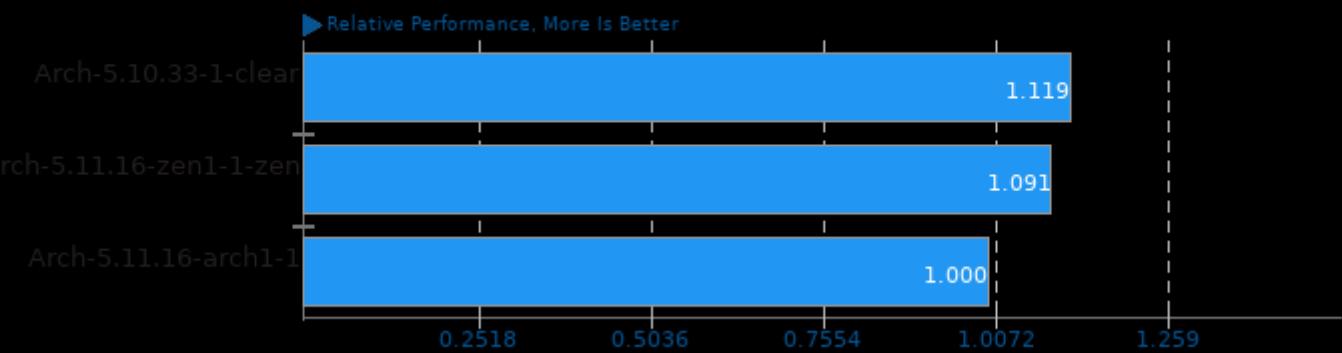
Result Composite - BenchMarxAsusk555lb



Geometric mean based upon tests: pts/minife and pts/amg

## Geometric Mean Of Programmer / Developer System Benchmarks Tests

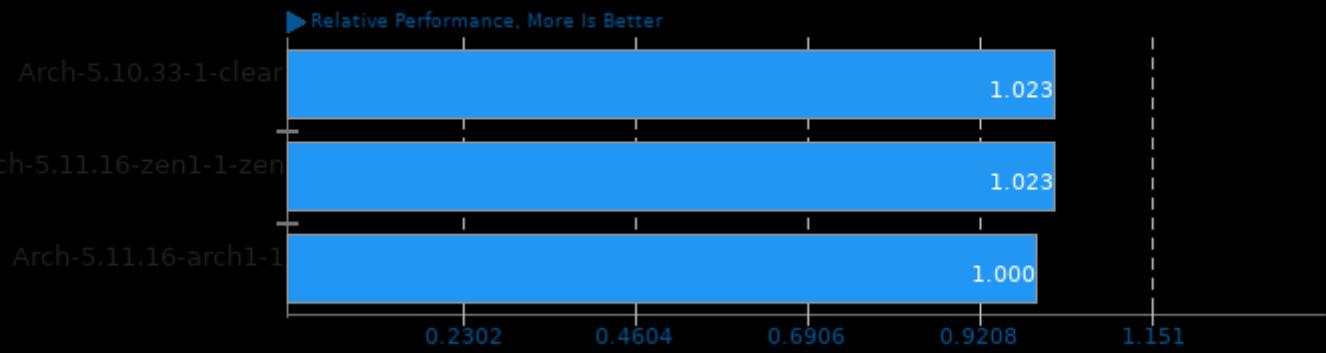
Result Composite - BenchMarxAsusk555lb



Geometric mean based upon tests: pts/arrayfire and pts/amg

## Geometric Mean Of Scientific Computing Tests

Result Composite - BenchMarxAsusk555lb



Geometric mean based upon tests: pts/arrayfire, pts/amg, pts/dolfin and pts/minife

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 11:05.*