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BenchMarxAsusk555lb

Intel Core i5-5200U testing with a ASUS X555LB v1.0 (X555LB.505 BIOS) and Intel HD 5500 3GB on Fedora 34 via the Phoronix Test Suite.

Automated Executive Summary

Arch-5.12.0-xanmod1-2 had the most wins, coming in first place for 25% of the tests.

Based on the geometric mean of all complete results, the fastest (Arch-5.12.0-xanmod1-2) was 1.077x the speed of the slowest (Arch-5.11.17-lqx1-1-lqx). fedora34-5.11.17-300.fc34.x86_64 was 0.989x the speed of Arch-5.12.0-xanmod1-2, Arch-5.12.0-xanmod1-2-march=native was 1x the speed of fedora34-5.11.17-300.fc34.x86_64, fedora34-5.12.0-xanmod1.1.fc34 was 1x the speed of Arch-5.12.0-xanmod1-2-march=native, Arch-5.11.16-zen1-1-zen was 0.988x the speed of fedora34-5.12.0-xanmod1.1.fc34, Arch-5.11.16-arch1-1 was 0.996x the speed of Arch-5.11.16-zen1-1-zen, Arch-5.10.33-1-clear was 0.991x the speed of Arch-5.11.16-arch1-1, Clear-5.10.33-1036.native was 0.974x the speed of Arch-5.10.33-1-clear, fedora34-5.12.0-xanmod1_cacule.1.fc34 was 0.991x the speed of Clear-5.10.33-1036.native, Arch-5.11.17-lqx1-1-lqx was 0.998x the speed of fedora34-5.12.0-xanmod1_cacule.1.fc34.

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,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
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x2f
Security Notes: itlb_multihit: 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 + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Arch-5.11.16-zen1-1-zen

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-zen1-1-zen (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,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
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x2f
Security Notes: itlb_multihit: 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 + srbds: 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,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
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x2f
Security Notes: itlb_multihit: 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 + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Arch-5.12.0-xanmod1-2

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: 5.12.0-xanmod1-2 (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,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
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x2f
Security Notes: itlb_multihit: 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 + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Arch-5.11.17-lqx1-1-lqx

Processor: Intel Core i5-5200U @ 2.20GHz (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: 5.11.17-lqx1-1-lqx (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,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
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0x2f
Security Notes: itlb_multihit: 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 + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Arch-5.12.0-xanmod1-2-march=native

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: 5.12.0-xanmod1-2 (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,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
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x2f
Security Notes: itlb_multihit: 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 + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Clear-5.10.33-1036.native

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: Clear Linux OS 34560, Kernel: 5.10.33-1036.native (x86_64), Desktop: GNOME Shell 40.0, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.3, Compiler: GCC 11.1.1 20210428 releases/gcc-11.1.0-24-g6f60fd21fd + Clang 11.1.0 + LLVM 11.1.0, 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" MESA_GLSL_CACHE_DISABLE=0 FCFLAGS="-g -O3 -feliminate-unused-debug-types -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -fstack-protector --param=ssp-buffer-size=32 -m64 -fasynchronous-unwind-tables -Wp,-D_REENTRANT -ftree-loop-distribute-patterns -Wl,-z -Wl,now -Wl,-z -Wl,relro -malign-data=abi -fno-semantic-interposition -ftree-vectorize -ftree-loop-vectorize -Wl,-sort-common -Wl,--enable-new-dtags" CFLAGS="-O3 -LTO -march=native -mtune=native" THEANO_FLAGS="floatX=float32,openmp=true,gcc.cxxflags="-ftree-vectorize -mavx""
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x2f - Thermald 2.4.4
Security Notes: itlb_multihit: 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 + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

fedora34-5.11.17-300.fc34.x86_64

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: 12288MB, Disk: 240GB KINGSTON SA400S3 + 1000GB TOSHIBA MQ01ABD1, Graphics: Intel HD 5500 3GB, Audio: Intel Broadwell-U Audio, Network: Realtek RTL8111/8168/8411 + Intel 7265

OS: Fedora 34, Kernel: 5.11.17-300.fc34.x86_64 (x86_64), Desktop: GNOME Shell 40.0, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.0.3, Compiler: GCC 11.1.1 20210428, File-System: btrfs, Screen Resolution: 1920x1080

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: --build=x86_64-redhat-linux --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,objc,obj-c++,ada,go,d,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-gcc-major-version-only --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Processor Notes: Scaling Governor: intel_cpufreq performance
Security Notes: SELinux + itlb_multihit: 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 + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

fedora34-5.12.0-xanmod1.1.fc34

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: 12288MB, Disk: 240GB KINGSTON SA400S3 + 1000GB TOSHIBA MQ01ABD1, Graphics: Intel HD 5500 3GB, Audio: Intel Broadwell-U Audio, Network: Realtek RTL8111/8168/8411 + Intel 7265

OS: Fedora 34, Kernel: 5.12.0-xanmod1.1.fc34 (x86_64), Desktop: GNOME Shell 40.0, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.0.3, Compiler: GCC 11.1.1 20210428, File-System: btrfs, Screen Resolution: 1920x1080

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: --build=x86_64-redhat-linux --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,objc,obj-c++,ada,go,d,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-gcc-major-version-only --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Processor Notes: Scaling Governor: intel_cpufreq performance
Security Notes: SELinux + itlb_multihit: 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 + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

fedora34-5.12.0-xanmod1_cacule.1.fc34

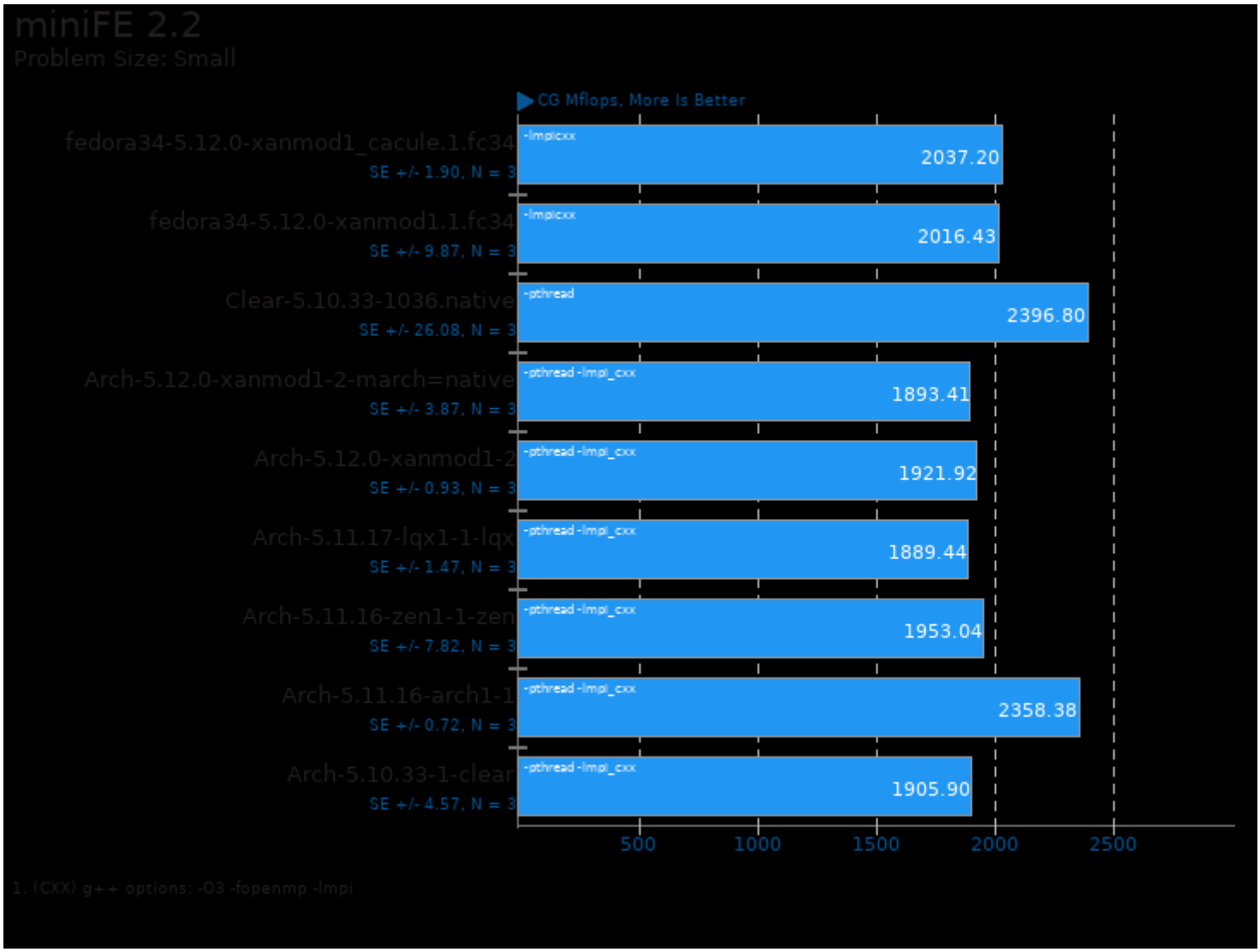
Processor: Intel Core i5-5200U @ 2.70GHz (2 Cores / 4 Threads), Motherboard: ASUS X555LB v1.0 (X555LB.505 BIOS), Chipset: Intel Broadwell-U-OPI, Memory: 12288MB, Disk: 240GB KINGSTON SA400S3 + 1000GB TOSHIBA MQ01ABD1, Graphics: Intel HD 5500 3GB (900MHz), Audio: Intel Broadwell-U Audio, Network: Realtek RTL8111/8168/8411 + Intel 7265

OS: Fedora 34, Kernel: 5.12.0-xanmod1_cacule.1.fc34 (x86_64), Desktop: GNOME Shell 40.0, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.0.3, Compiler: GCC 11.1.1 20210428, File-System: btrfs, Screen Resolution: 1920x1080

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: --build=x86_64-redhat-linux --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,objc,obj-c++,ada,go,d,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=i686 --with-gcc-major-version-only --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Processor Notes: Scaling Governor: intel_cpufreq performance
Security Notes: SELinux + itlb_multihit: 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 + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

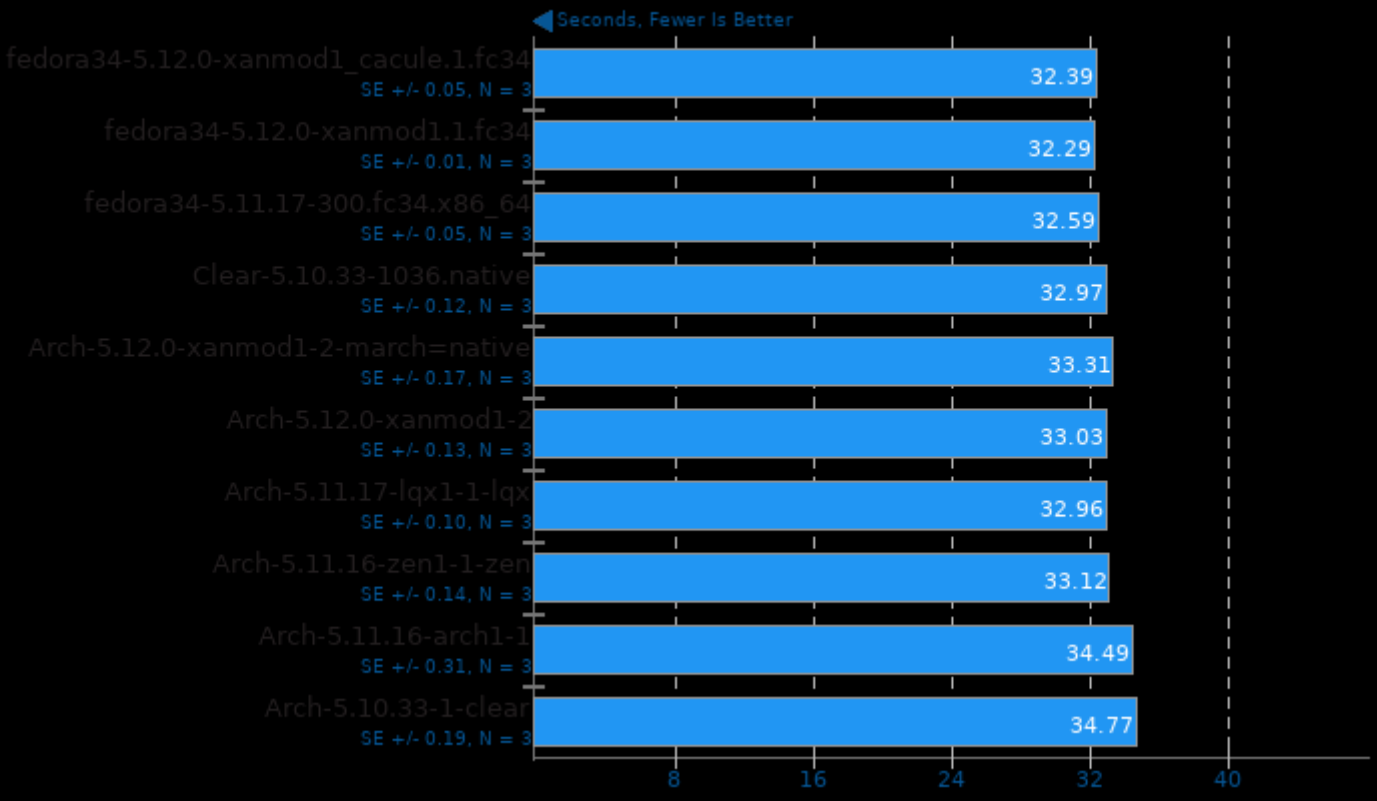
BenchMarxAsusk555lb

	Arch-5.11.16-arch1-1	Arch-5.11.16-zen1-1-zen	Arch-5.10.33-1-clear	Arch-5.12.0-xanmod1-2	Arch-5.11.17-lqx1-1-lqx	Arch-5.12.0-xanmod1-2-march=native	Clear-5.10.33-1036.native	fedora34-5.11.17-300.fc34.x86_64	fedora34-5.12.0-xanmod1.1.fc34	fedora34-5.12.0-xanmod1_cacule.1.fc34
miniFE - Small (CG Mflops)	2358	1953	1906	1922	1889	1893	2397		2016	2037
Normalized	98.4%	81.49%	79.52%	80.19%	78.83%	79%	100%		84.13%	85%
Standard Deviation	0.1%	0.7%	0.4%	0.1%	0.1%	0.4%	1.9%		0.8%	0.2%
Dolfyn - C.F.D (sec)	34.487	33.124	34.774	33.029	32.962	33.305	32.971	32.59	32.29	32.39
Normalized	93.63%	97.48%	92.86%	97.76%	97.96%	96.95%	97.93%	99.08%	100%	99.69%
Standard Deviation	1.5%	0.7%	1%	0.7%	0.5%	0.9%	0.6%	0.3%	0.1%	0.3%
Algebraic Multi-Grid Benchmark (Figure	8802995 3	1032344 33	1079553 67	1119641 67	1055662 67	1117609 33	1031294 00			
Normalized	78.62%	92.2%	96.42%	100%	94.29%	99.82%	92.11%			
Standard Deviation	0.4%	0.5%	0.2%	0.2%	1%	0.4%	1.1%			
SciMark - Composite (Mflops)	1239	1243	1215	1257	1174	1250	1184	1248	1254	1226
Normalized	98.57%	98.84%	96.68%	100%	93.39%	99.45%	94.2%	99.3%	99.74%	97.5%
Standard Deviation	0.4%	0.9%	0.5%	0.5%	0.1%	1%	2.2%	1.1%	1.2%	1.6%
SciMark - Monte Carlo (Mflops)	548.68	548.29	524.34	550.18	514.21	544.33	547.91	515.69	553.79	558.13
Normalized	98.31%	98.24%	93.95%	98.58%	92.13%	97.53%	98.17%	92.4%	99.22%	100%
Standard Deviation	0.6%	0.4%	0%	0.3%	0%	0.6%	0.2%	13.4%	0.1%	0.2%
SciMark - F.F.T (Mflops)	235.64	180.29	184.17	218.20	204.58	226.37	168.54	229.12	211.31	195.81
Normalized	100%	76.51%	78.16%	92.6%	86.82%	96.07%	71.52%	97.23%	89.67%	83.1%
Standard Deviation	0.1%	0.7%	1.6%	0.2%	1.7%	1.4%	0.9%	0.3%	0.7%	2.8%
SciMark - S.M.M (Mflops)	1599	1570	1518	1592	1466	1556	1555	1557	1625	1593
Normalized	98.39%	96.6%	93.38%	97.96%	90.22%	95.72%	95.65%	95.8%	100%	97.99%
Standard Deviation	4.3%	0.4%	0.4%	0.6%	1.2%	1.2%	0.4%	0.2%	0.4%	1.4%
SciMark - D.L.M.F (Mflops)	2347	2453	2445	2468	2326	2470	2195	2480	2420	2322
Normalized	94.64%	98.9%	98.58%	99.48%	93.76%	99.56%	88.48%	100%	97.55%	93.61%
Standard Deviation	2.5%	2.5%	0.2%	1.3%	0.7%	1.6%	5.6%	0.2%	3.4%	5%
SciMark - J.S.O.R (Mflops)	1465	1461	1406	1458	1360	1455	1456	1460	1460	1460
Normalized	100%	99.76%	95.96%	99.51%	92.83%	99.33%	99.39%	99.65%	99.67%	99.68%
Standard Deviation	0.3%	0.3%	1.4%	0.1%	0.1%	0.1%	0.3%	0.1%	0%	0%
ArrayFire - BLAS CPU (GFLOPS)	135.631	140.090	139.811	140.222	139.715	140.576	139.694	138.12	140.36	137.41
Normalized	96.48%	99.65%	99.46%	99.75%	99.39%	100%	99.37%	98.25%	99.85%	97.75%
Standard Deviation	0.2%	0.2%	0.4%	0.4%	0.4%	0%	0.6%	0.8%	0.1%	0.2%
ArrayFire - C.G.C (ms)	45.46	42.39	41.04	40.35	46.56	44.78	47.90	41.72	43.99	67.86
Normalized	88.76%	95.19%	98.32%	100%	86.66%	90.11%	84.24%	96.72%	91.73%	59.46%
Standard Deviation	0.3%	0.7%	2.7%	1.1%	2.1%	2.3%	0.3%	1.1%	0.5%	2.1%
7-Zip Compression - C.S.T (MIPS)	7768	8894	9011	8539	7094	8544	8662	8244	8313	8386
Normalized	86.21%	98.7%	100%	94.76%	78.73%	94.82%	96.13%	91.49%	92.25%	93.06%
Standard Deviation	1.7%	1.1%	0.5%	1.4%	0.8%	1.1%	1.9%	0.6%	1.9%	0.5%

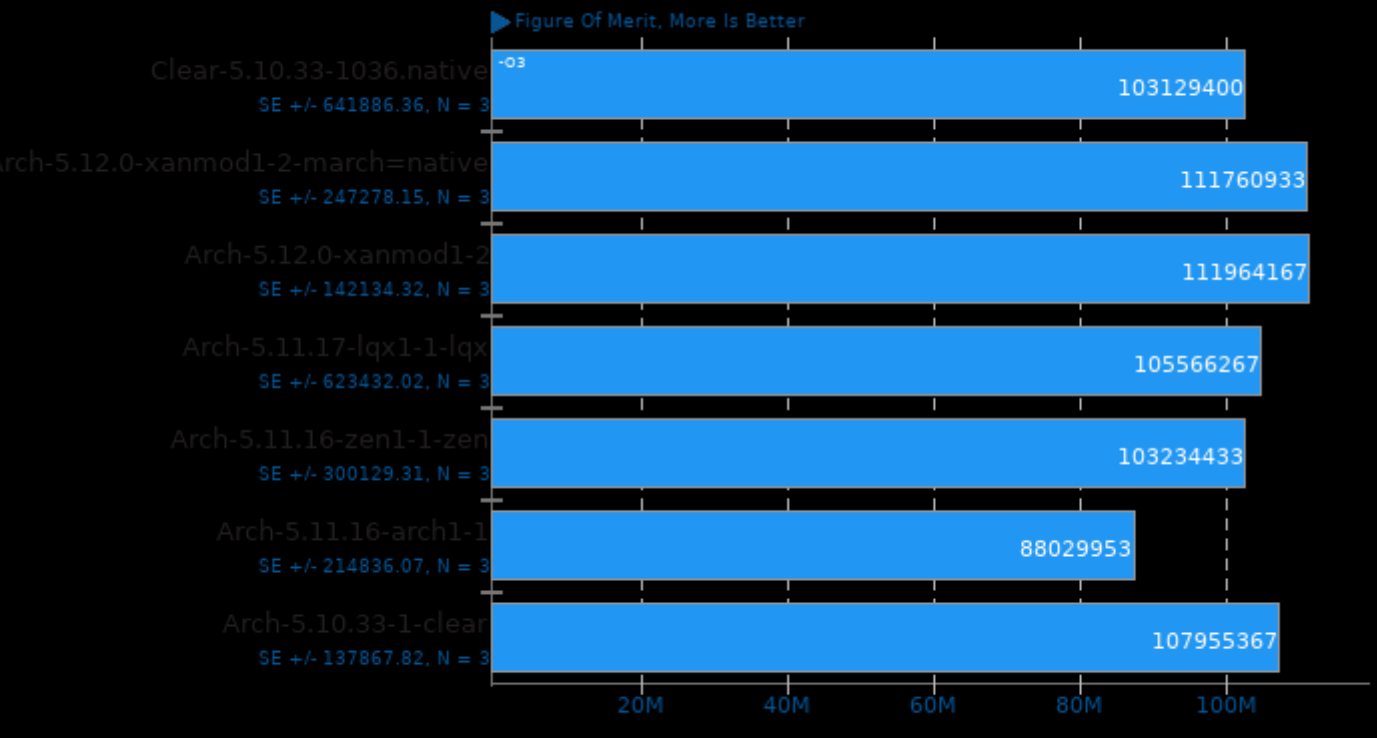

miniFE 2.2
Problem Size: Small
CG Mflops, More Is Better
fedora34-5.12.0-xanmod1_cacule.1.fc34
SE +/- 1.90, N = 3
-lmpicxx
2037.20
fedora34-5.12.0-xanmod1.1.fc34
SE +/- 9.87, N = 3
-lmpicxx
2016.43
Clear-5.10.33-1036.native
SE +/- 26.08, N = 3
-pthread
2396.80
Arch-5.12.0-xanmod1-2-march=native
SE +/- 3.87, N = 3
-pthread -lmpi_cxx
1893.41
Arch-5.12.0-xanmod1-2
SE +/- 0.93, N = 3
-pthread -lmpi_cxx
1921.92
Arch-5.11.17-lqx1-1-lqx
SE +/- 1.47, N = 3
-pthread -lmpi_cxx
1889.44
Arch-5.11.16-zen1-1-zen
SE +/- 7.82, N = 3
-pthread -lmpi_cxx
1953.04
Arch-5.11.16-arch1-1
SE +/- 0.72, N = 3
-pthread -lmpi_cxx
2358.38
Arch-5.10.33-1-clear
SE +/- 4.57, N = 3
-pthread -lmpi_cxx
1905.90
500
1000
1500
2000
2500
1. (CXX) g++ options: -O3 -fopenmp -lmpi

Dolfyn 0.527

Computational Fluid Dynamics

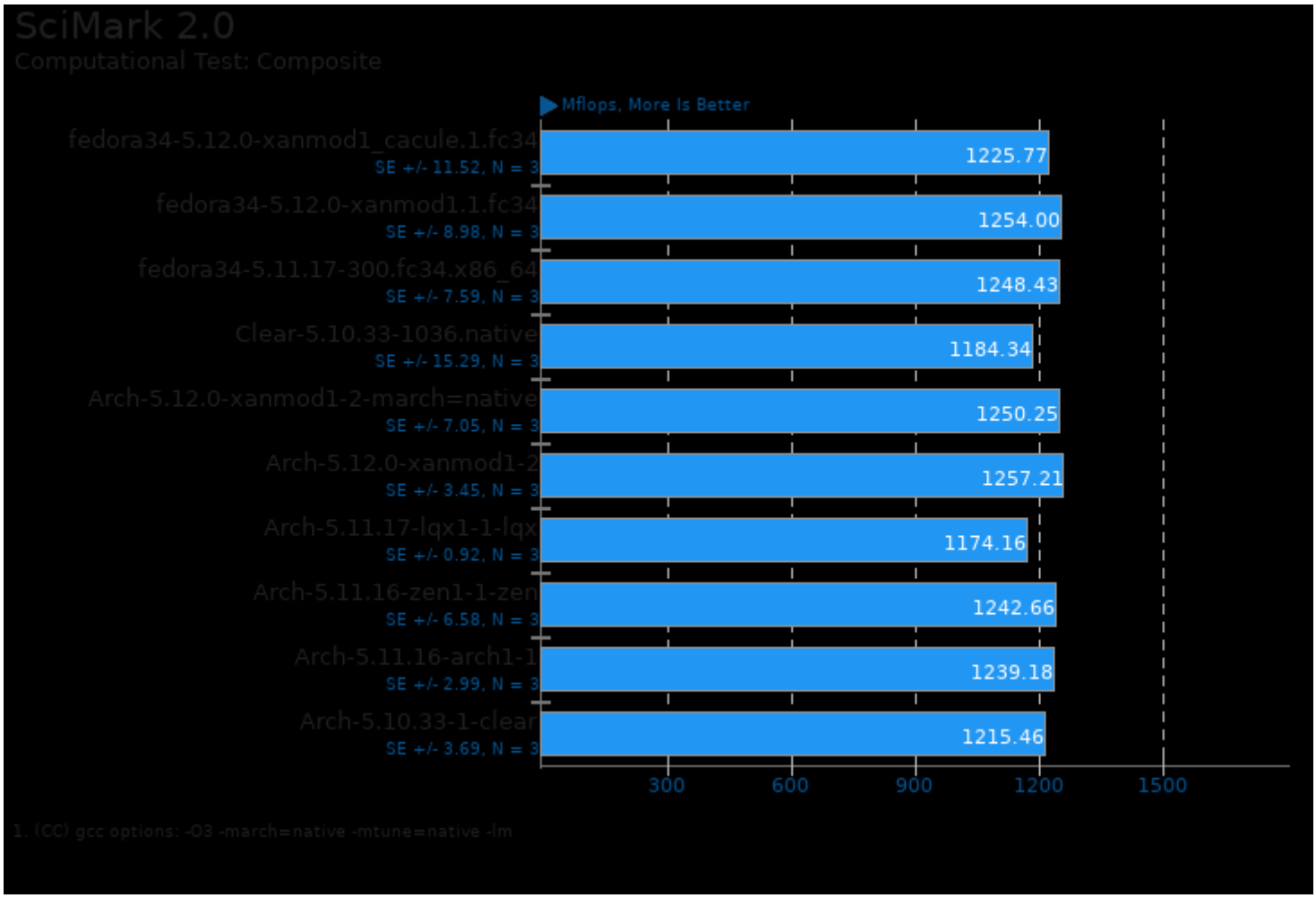


Algebraic Multi-Grid Benchmark 1.2

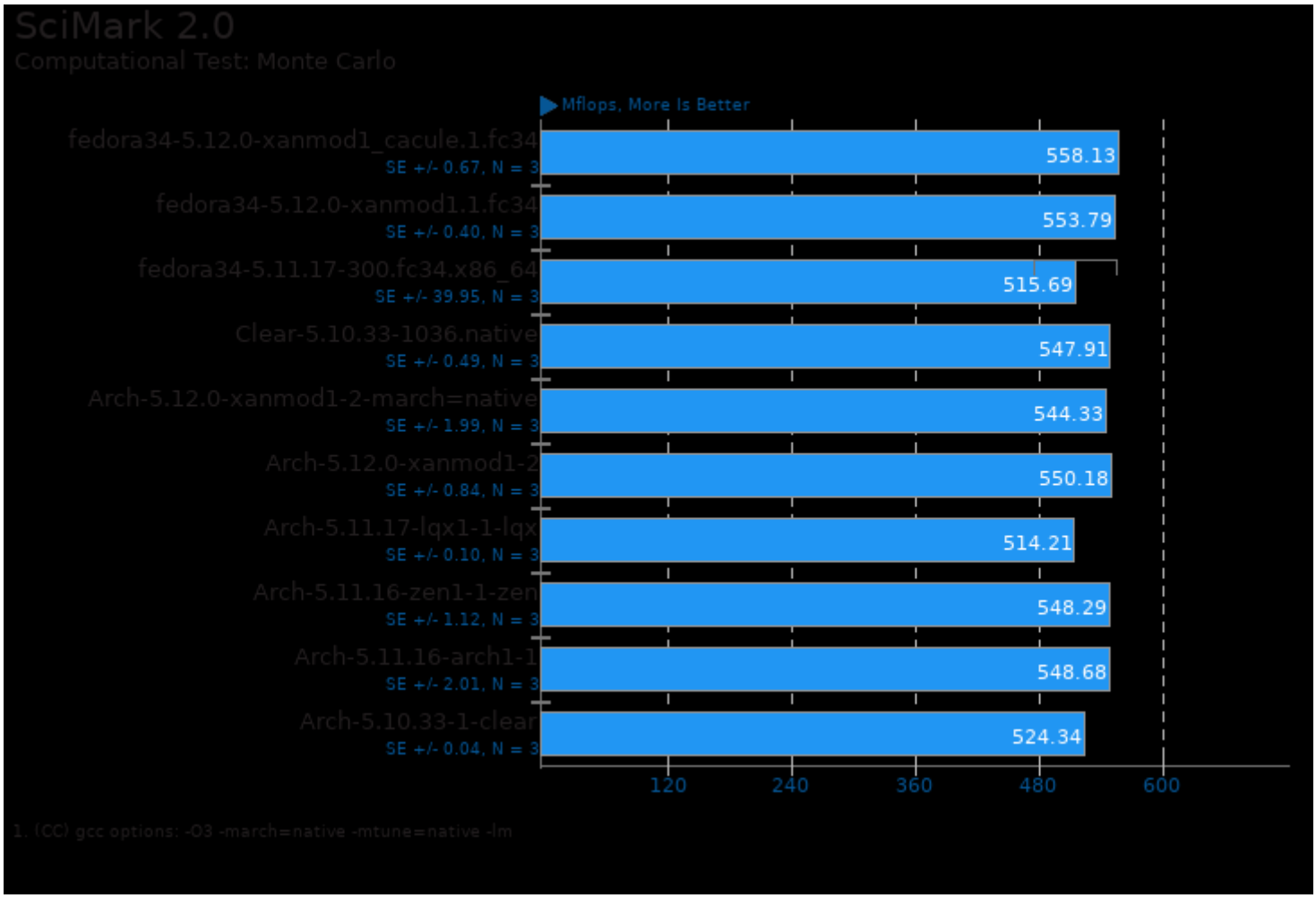


1. (CC) gcc options: -lparcsr_ls -lparcsr_mv -lseq_mv -lIJ_mv -lkrylov -lHYPRE_utilities -lm -fopenmp -pthread -lmpi

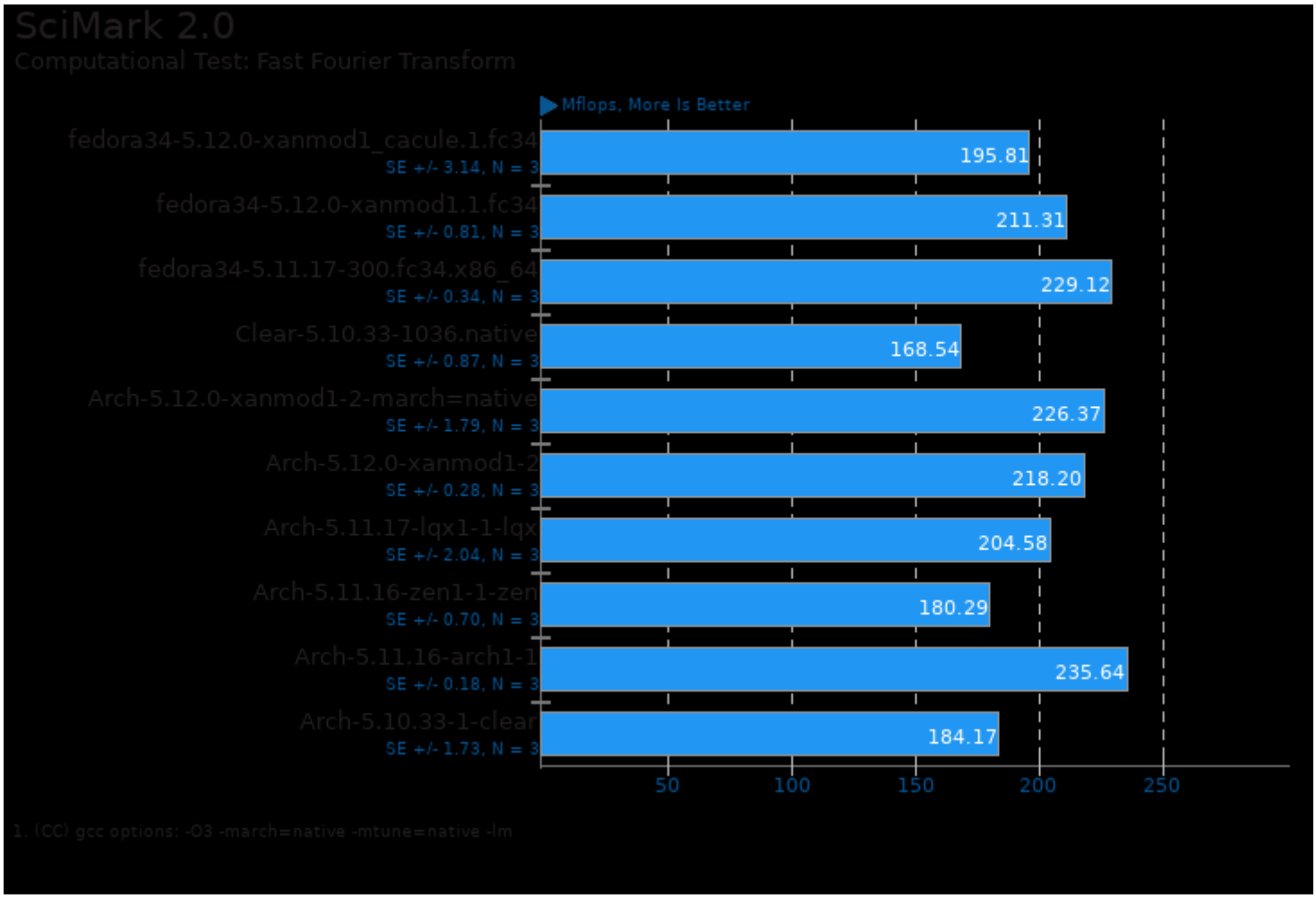
BenchMarxAsusk555lb



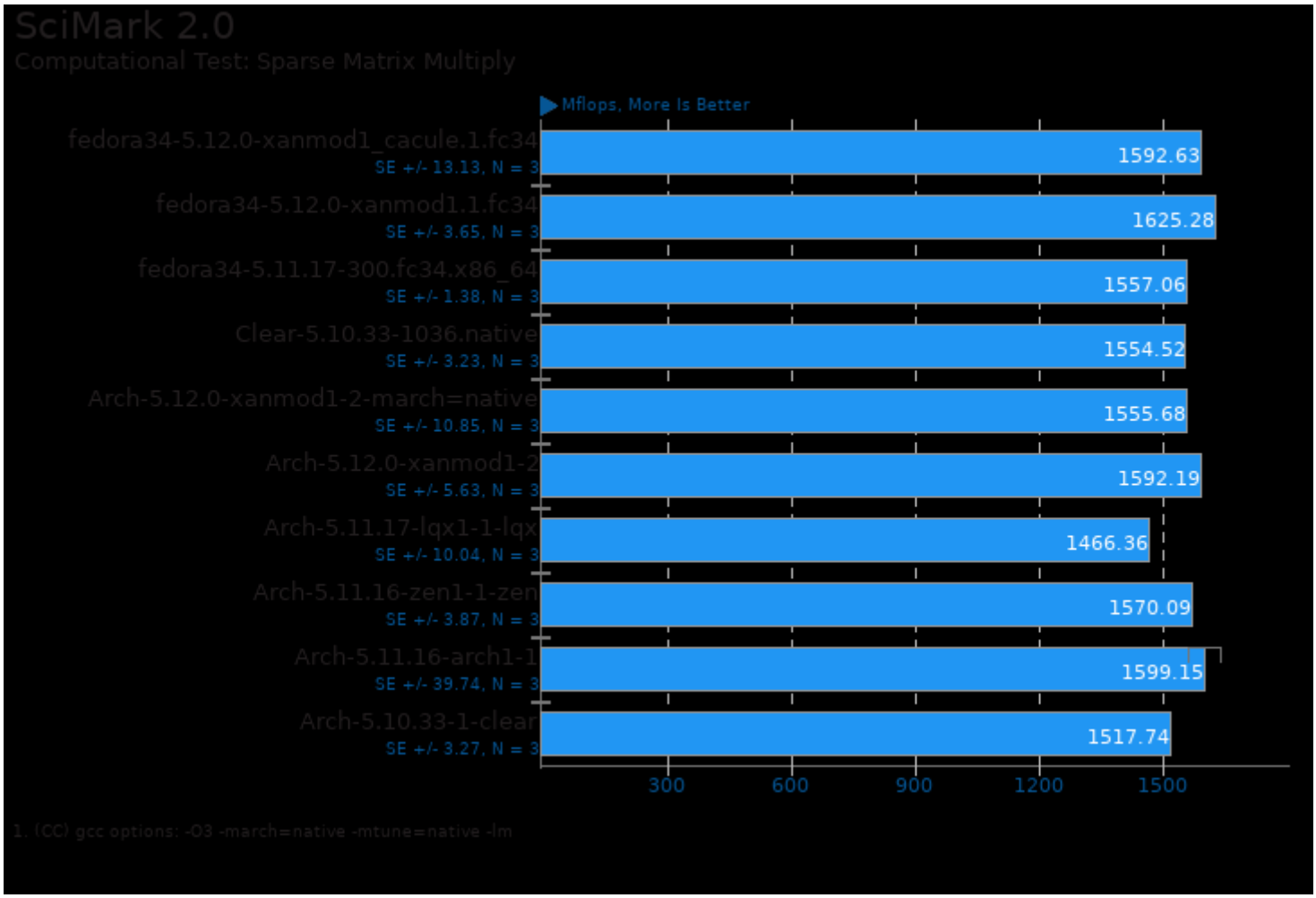
BenchMarxAsusk555lb



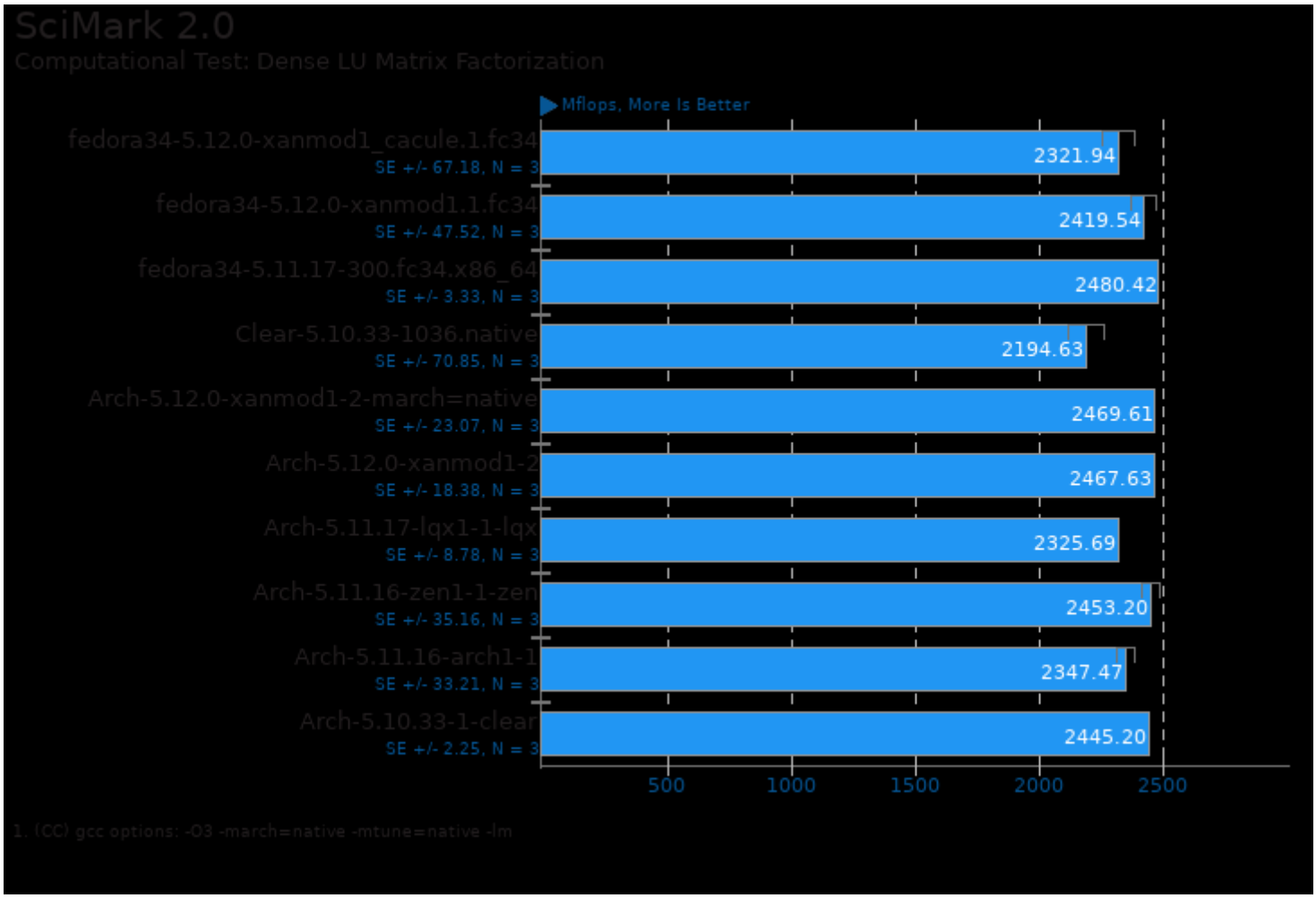
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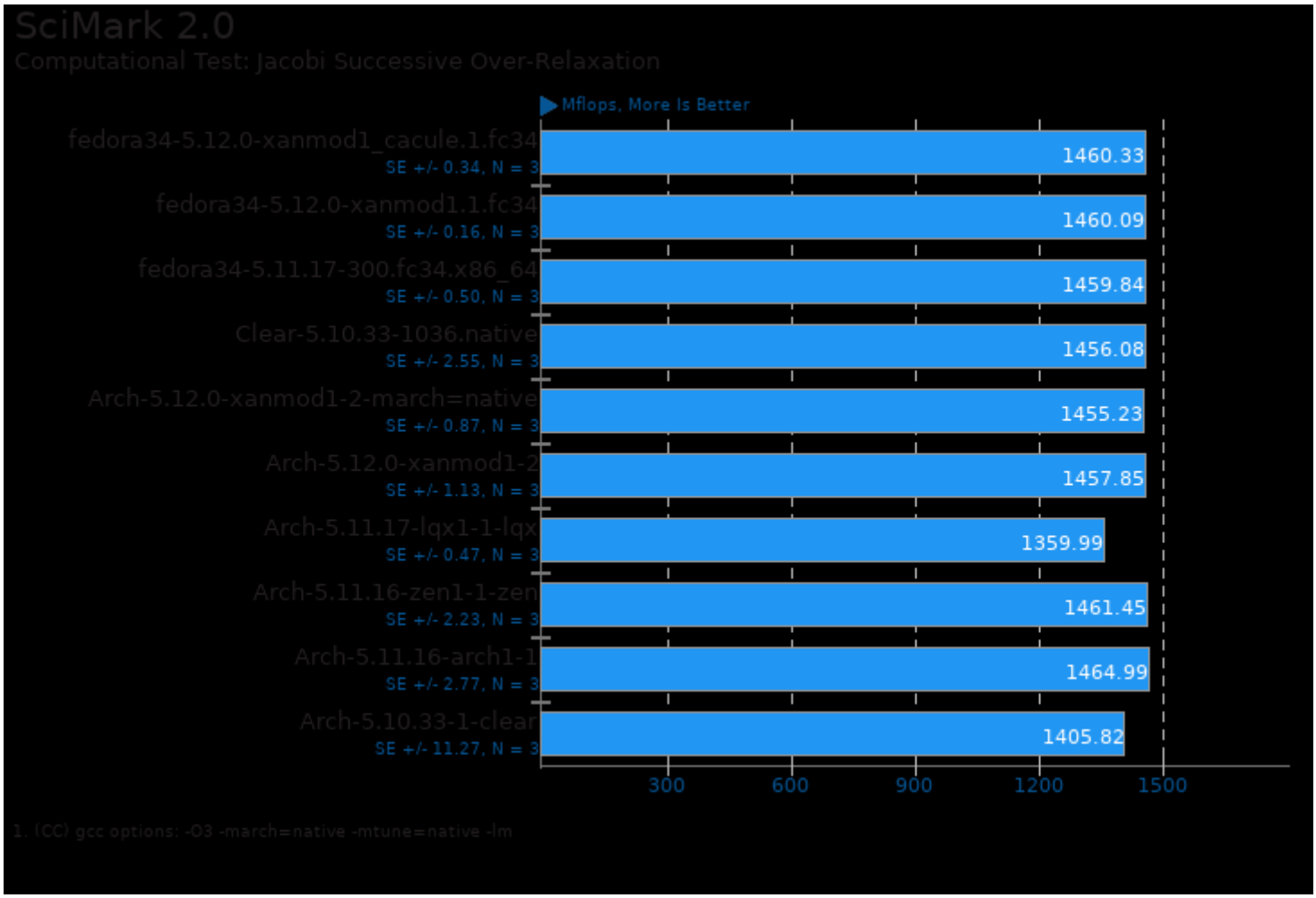
BenchMarxAsusk555lb



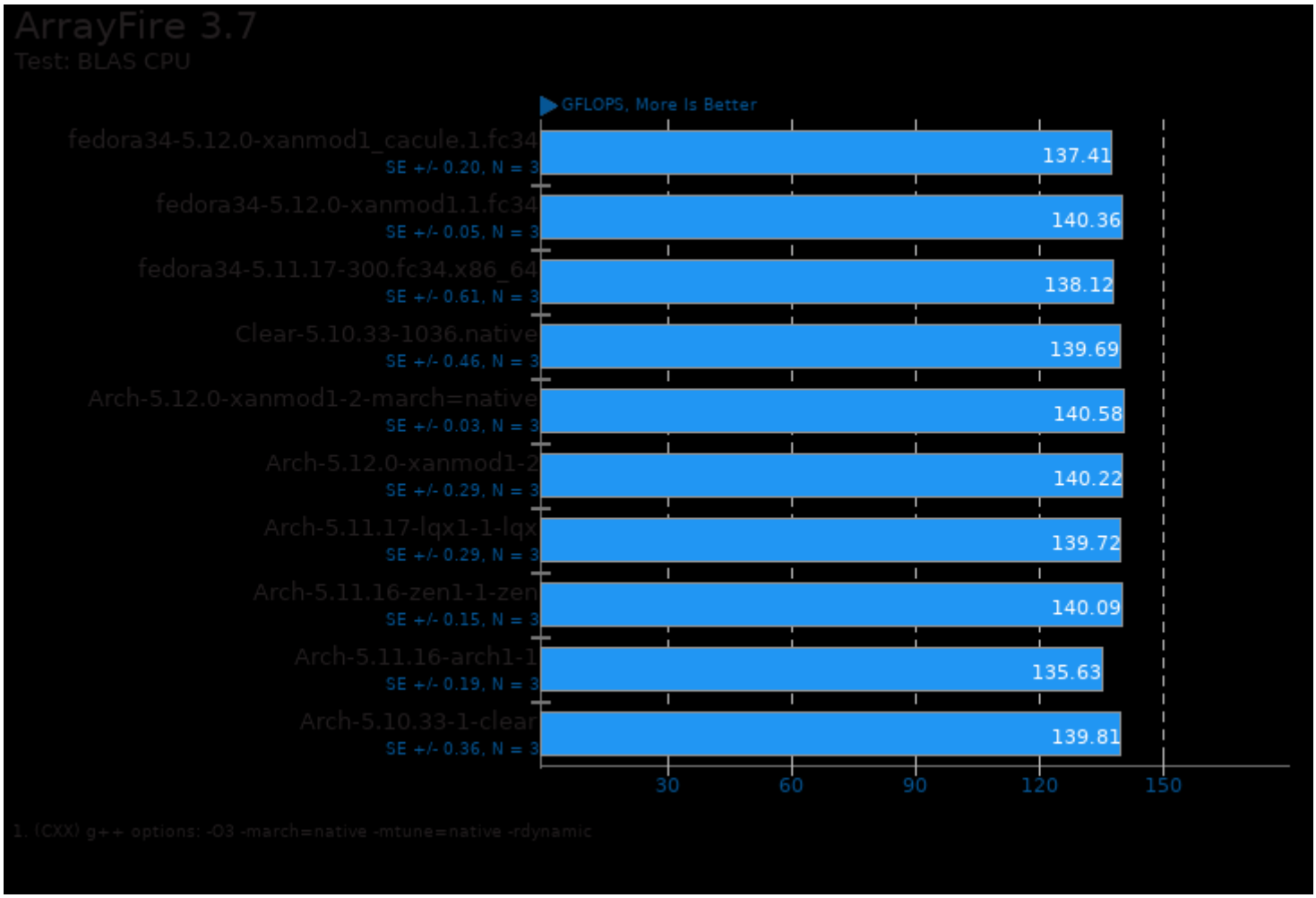
BenchMarxAsusk555lb

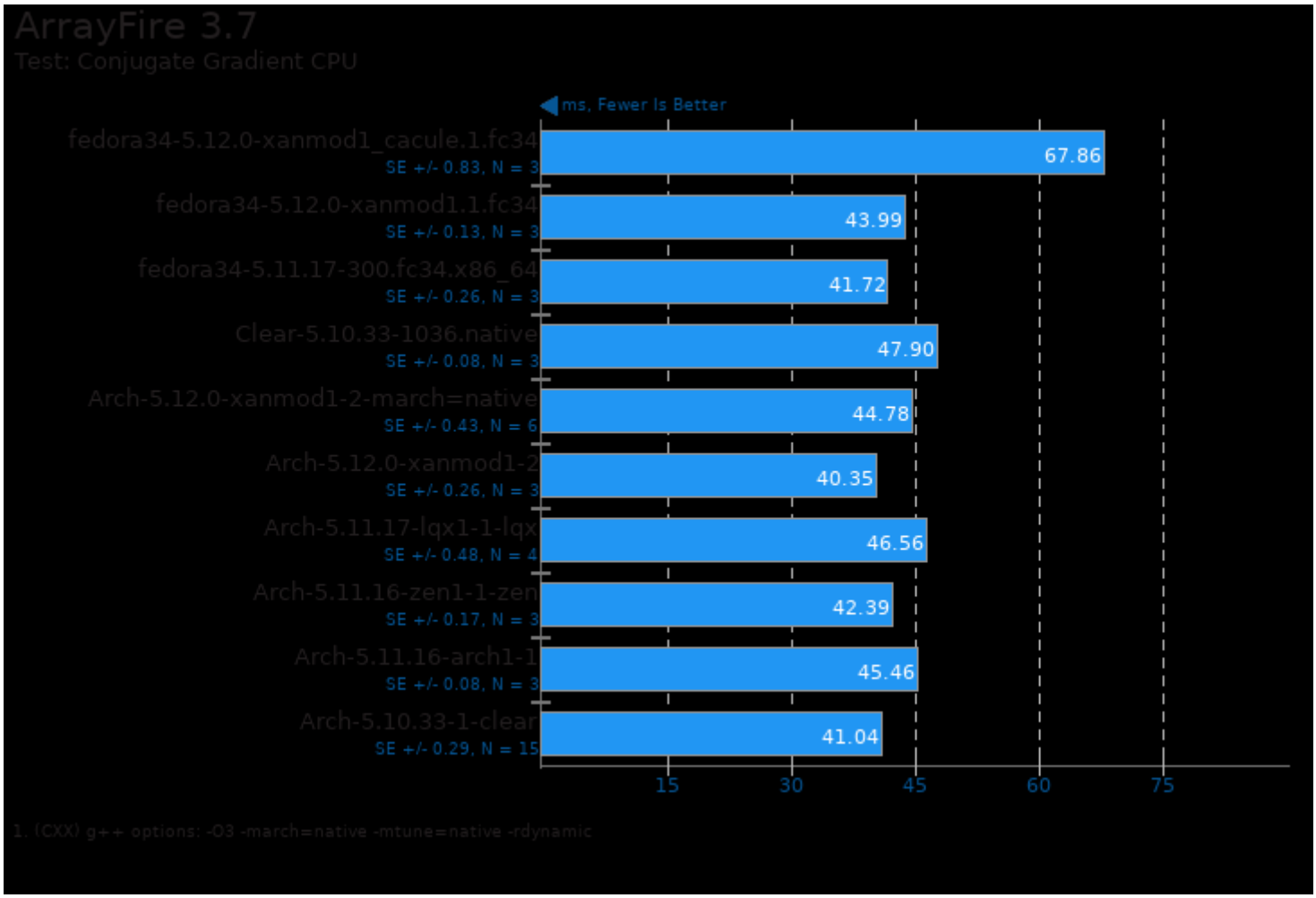


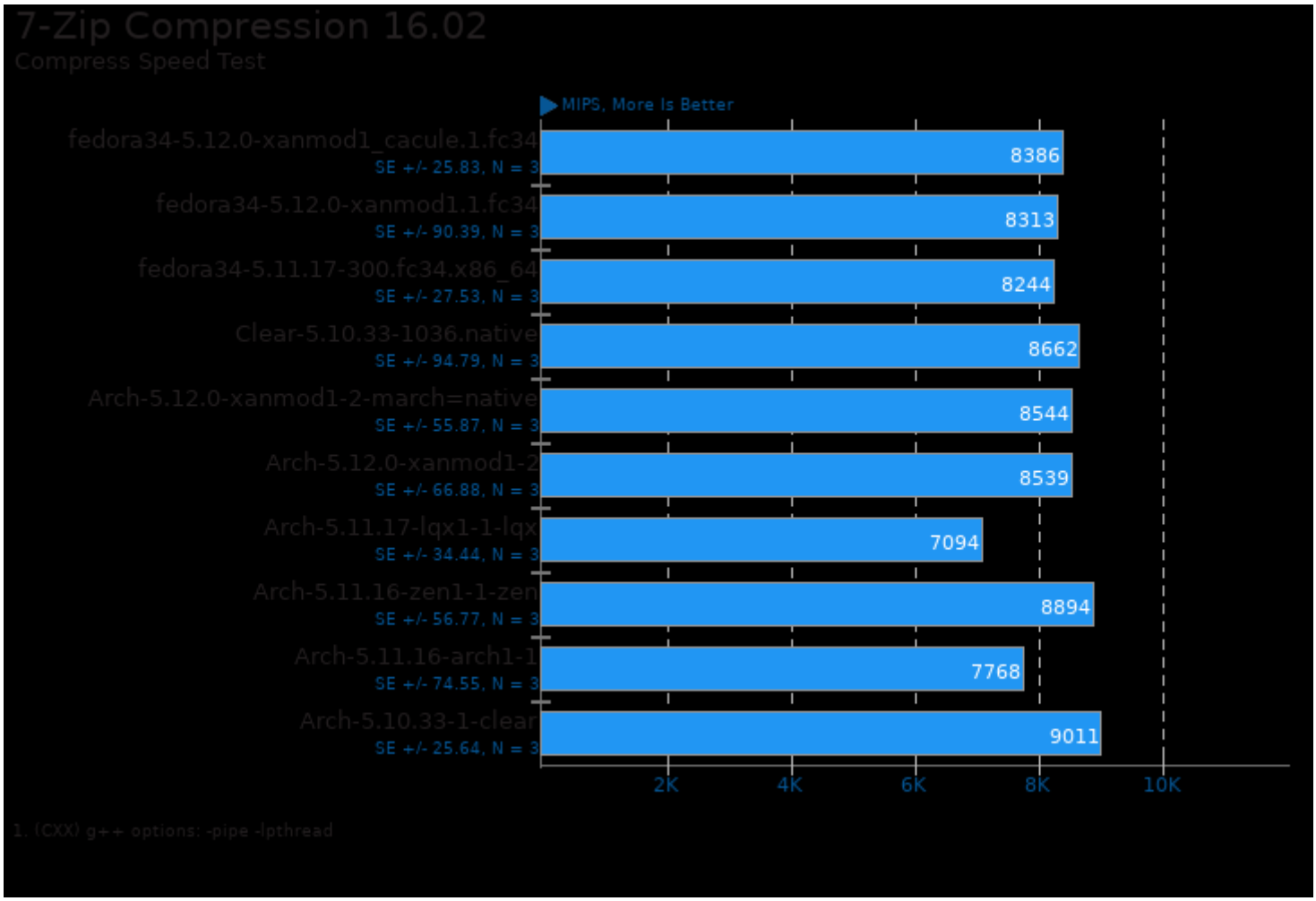
BenchMarxAsusk555lb



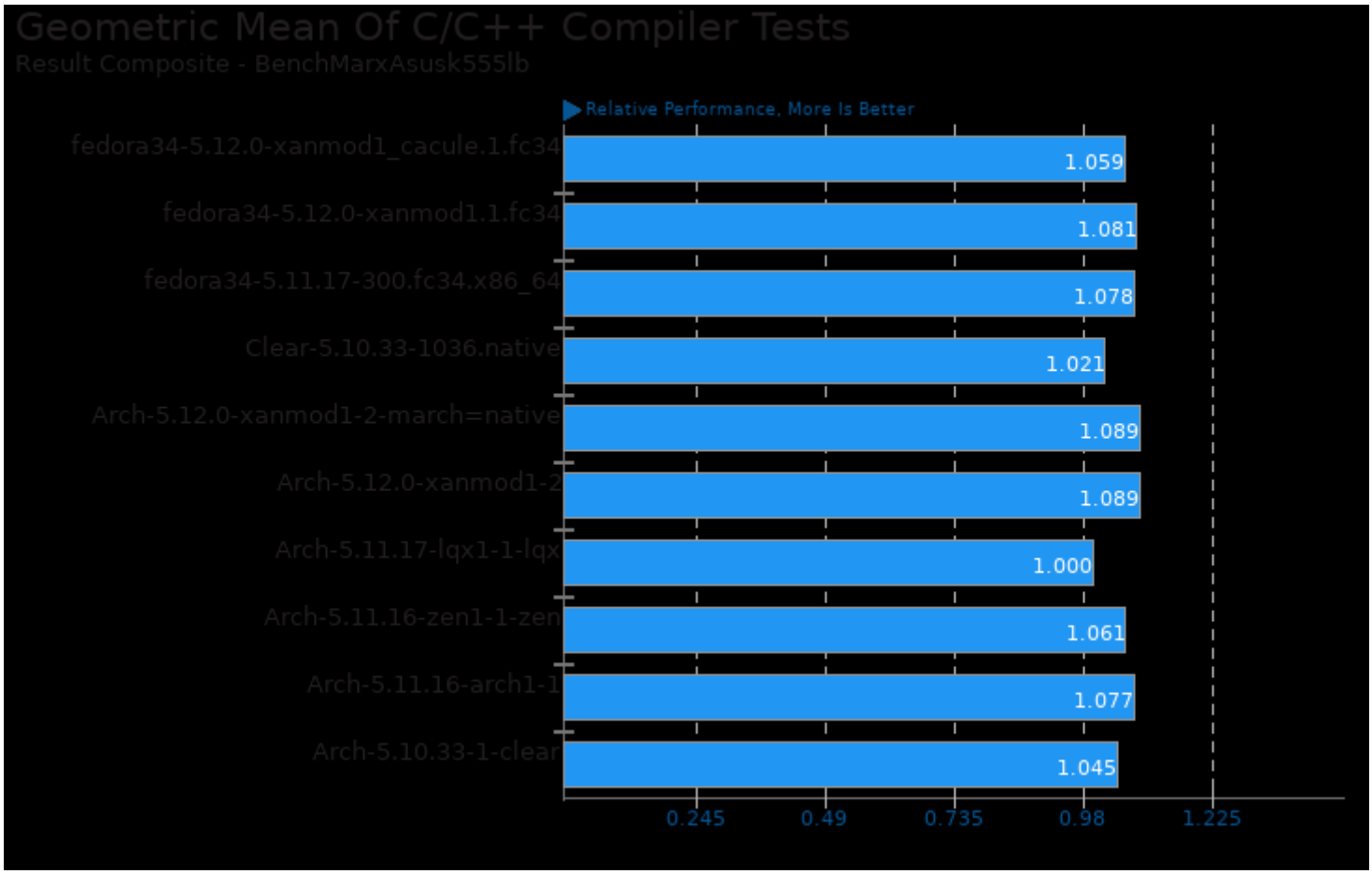
BenchMarxAsusk555lb




ArrayFire 3.7
Test: Conjugate Gradient CPU
ms, Fewer Is Better
fedora34-5.12.0-xanmod1_cacule.1.fc34
SE +/- 0.83, N = 3
67.86
fedora34-5.12.0-xanmod1.1.fc34
SE +/- 0.13, N = 3
43.99
fedora34-5.11.17-300.fc34.x86_64
SE +/- 0.26, N = 3
41.72
Clear-5.10.33-1036.native
SE +/- 0.08, N = 3
47.90
Arch-5.12.0-xanmod1-2-march=native
SE +/- 0.43, N = 6
44.78
Arch-5.12.0-xanmod1-2
SE +/- 0.26, N = 3
40.35
Arch-5.11.17-lqx1-1-lqx
SE +/- 0.48, N = 4
46.56
Arch-5.11.16-zen1-1-zen
SE +/- 0.17, N = 3
42.39
Arch-5.11.16-arch1-1
SE +/- 0.08, N = 3
45.46
Arch-5.10.33-1-clear
SE +/- 0.29, N = 15
41.04
15
30
45
60
75
1. (CXX) g++ options: -O3 -march=native -mtune=native -rdynamic

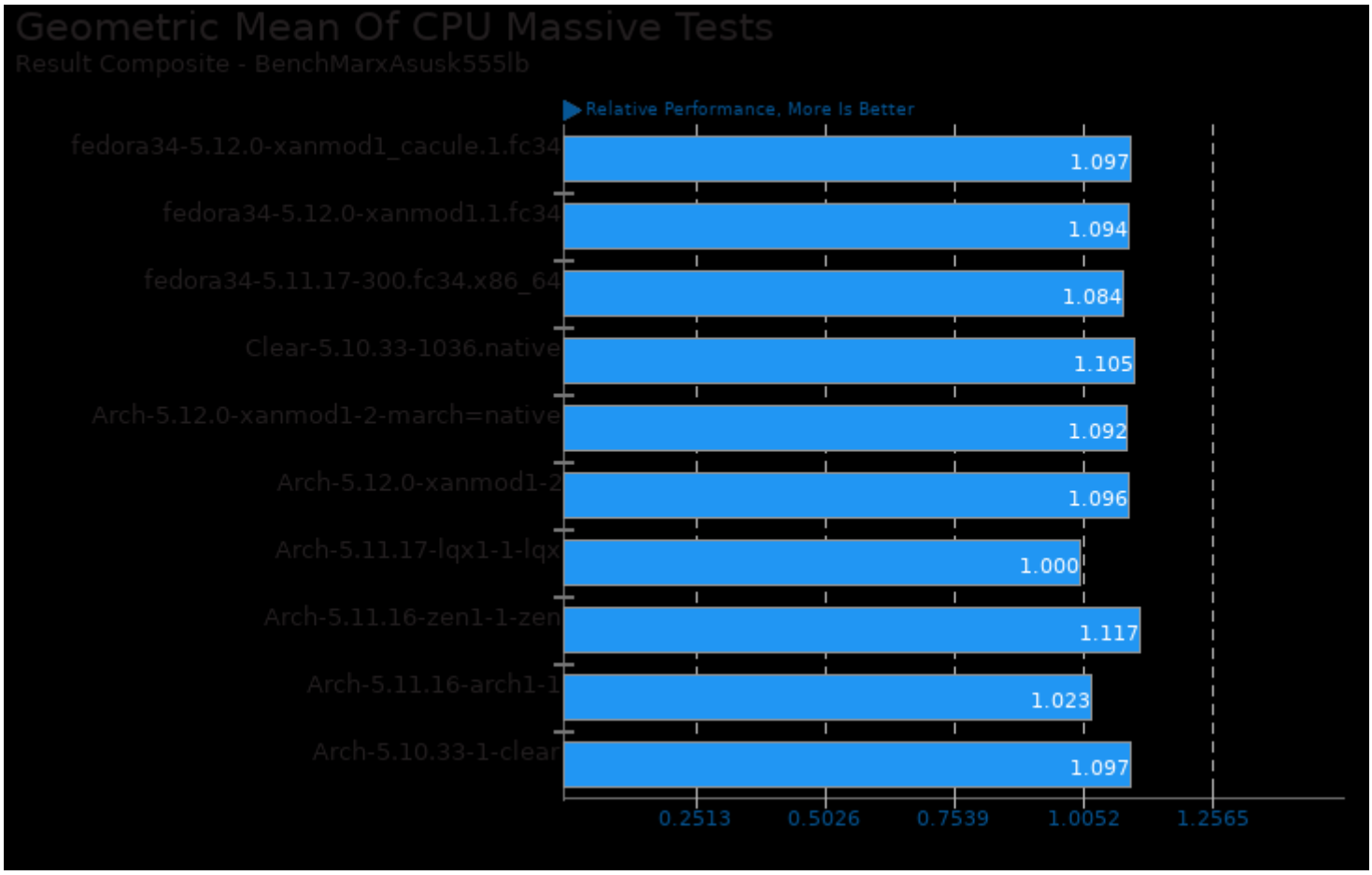

7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
fedora34-5.12.0-xanmod1_cacule.1.fc34
SE +/- 25.83, N = 3
8386
fedora34-5.12.0-xanmod1.1.fc34
SE +/- 90.39, N = 3
8313
fedora34-5.11.17-300.fc34.x86_64
SE +/- 27.53, N = 3
8244
Clear-5.10.33-1036.native
SE +/- 94.79, N = 3
8662
Arch-5.12.0-xanmod1-2-march=native
SE +/- 55.87, N = 3
8544
Arch-5.12.0-xanmod1-2
SE +/- 66.88, N = 3
8539
Arch-5.11.17-lqx1-1-lqx
SE +/- 34.44, N = 3
7094
Arch-5.11.16-zen1-1-zen
SE +/- 56.77, N = 3
8894
Arch-5.11.16-arch1-1
SE +/- 74.55, N = 3
7768
Arch-5.10.33-1-clear
SE +/- 25.64, N = 3
9011
2K
4K
6K
8K
10K
1. (CXX) g++ options: -pipe -lpthread

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

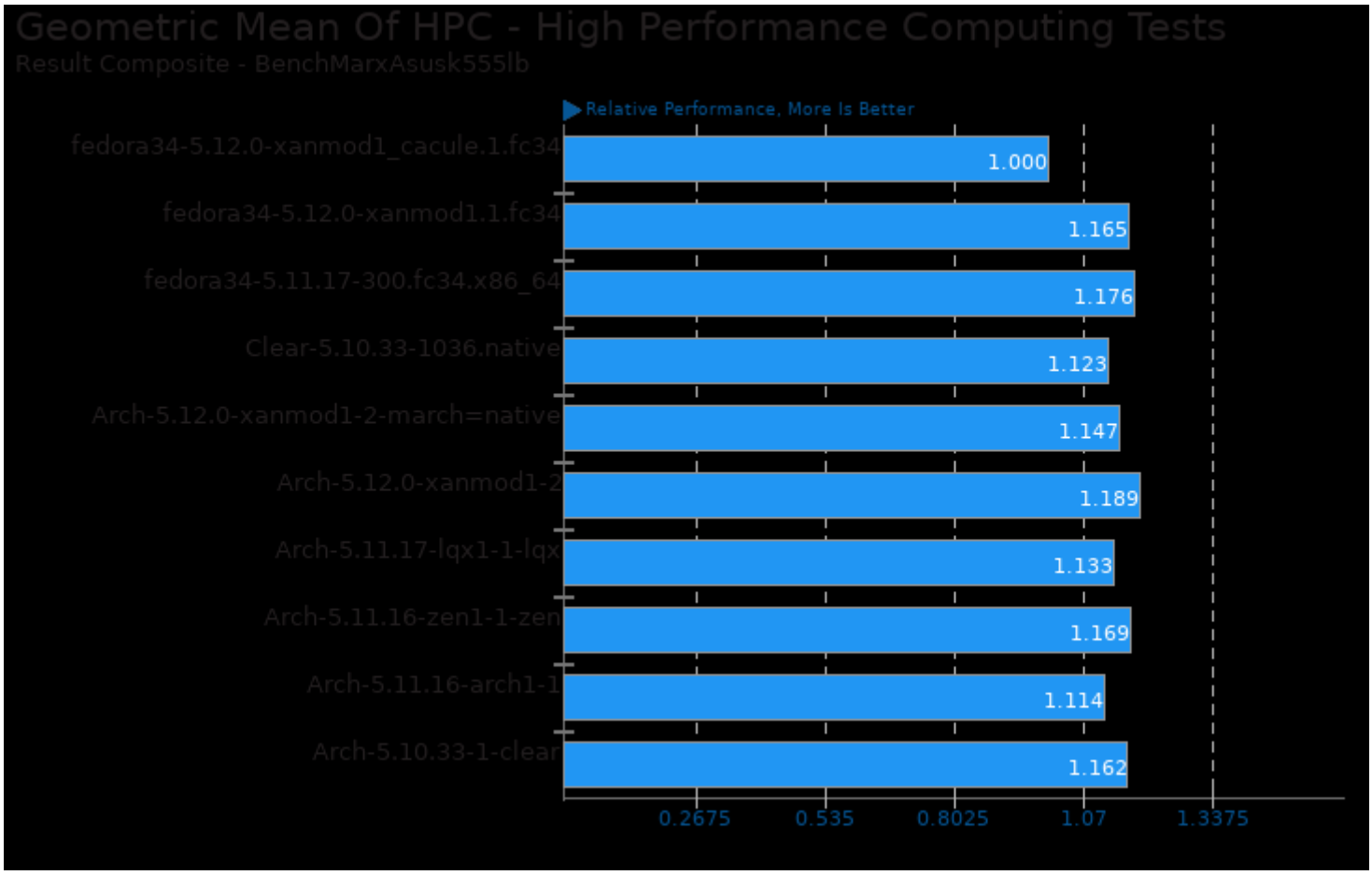


Geometric mean based upon tests: pts/scimark2 and pts/compress-7zip

BenchMarxAsusk555lb

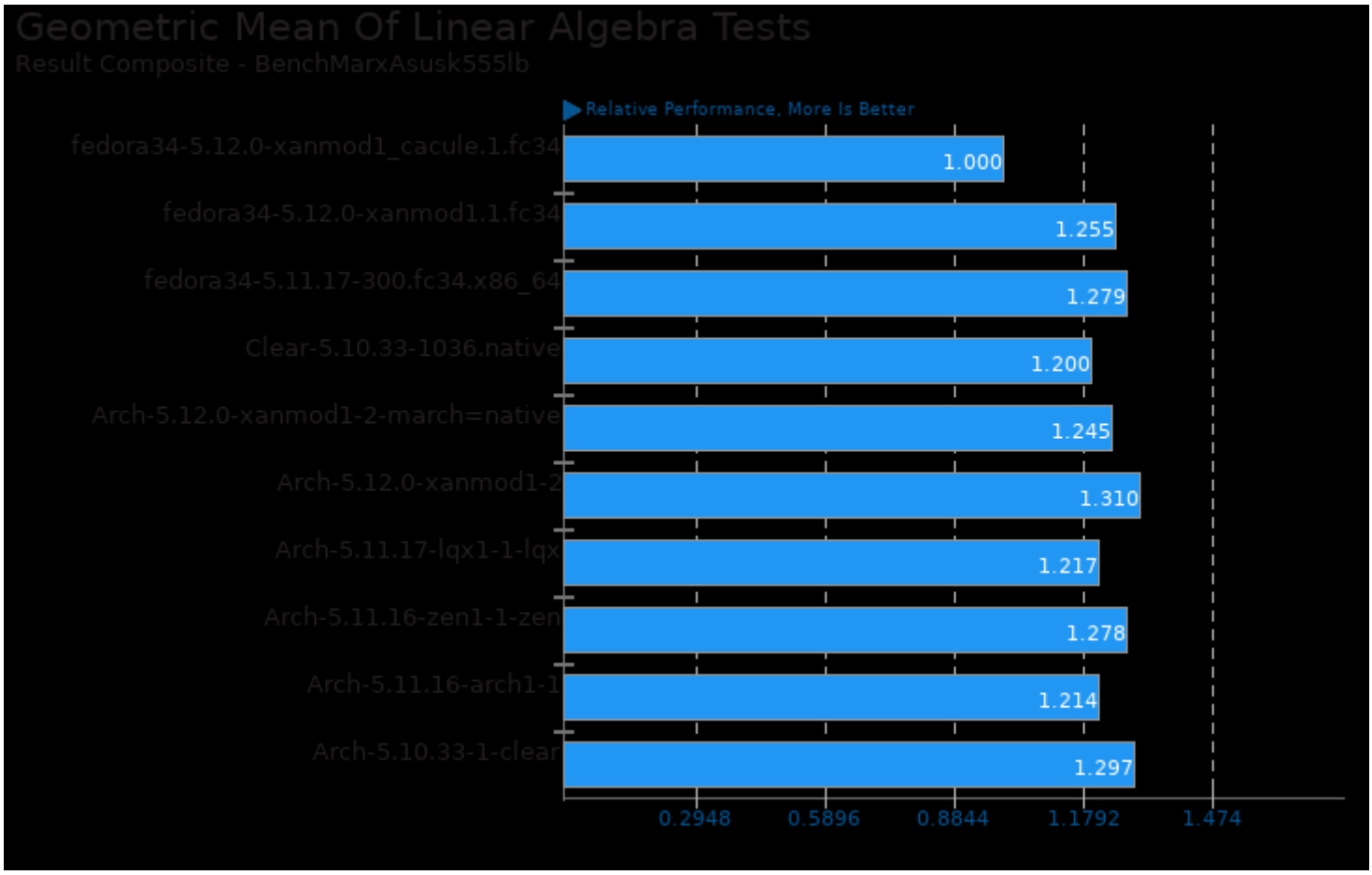


Geometric mean based upon tests: pts/compress-7zip and pts/dolfyn

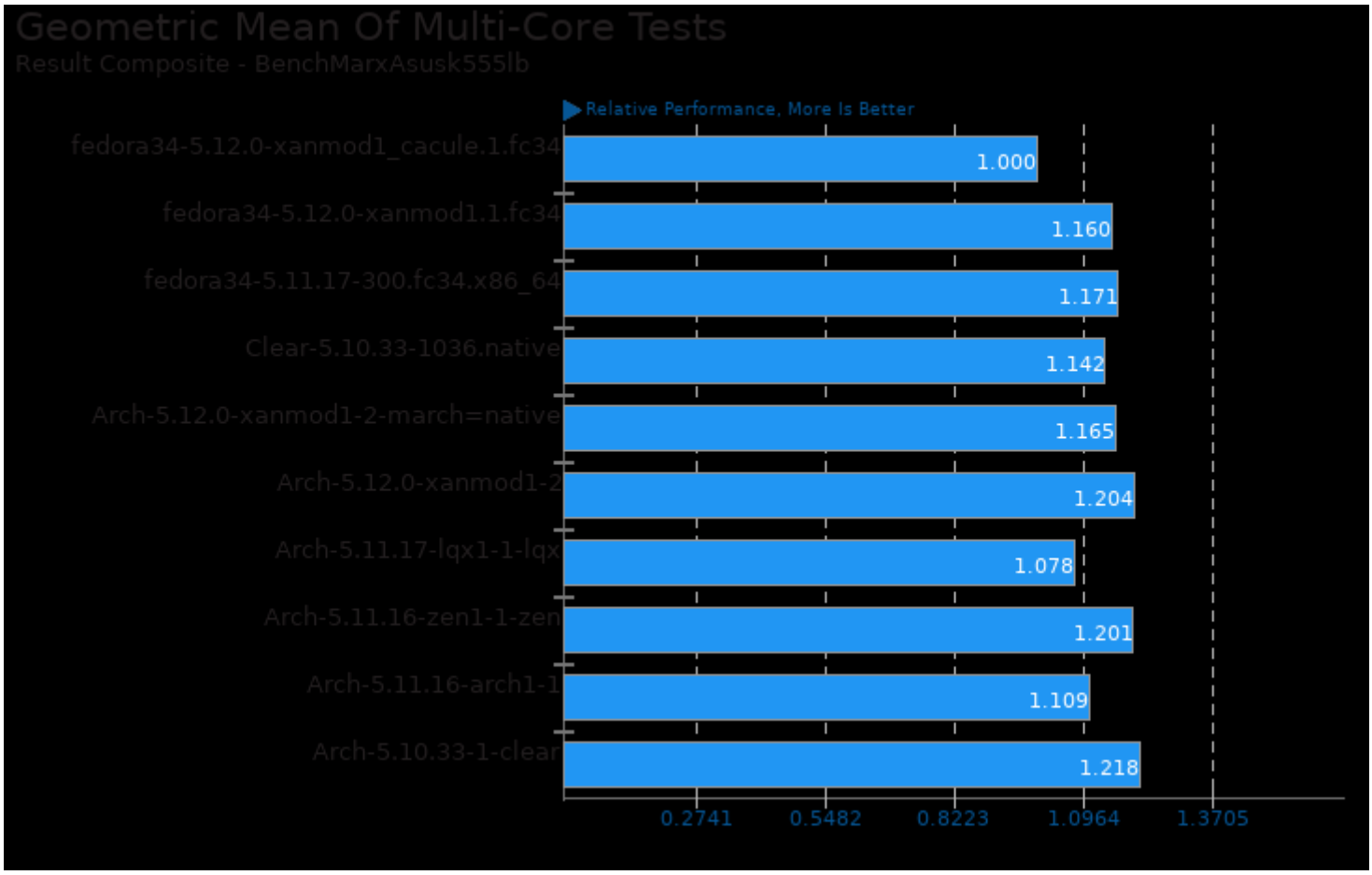


Geometric mean based upon tests: pts/arrayfire, pts/amg, pts/dolfyn and pts/minife

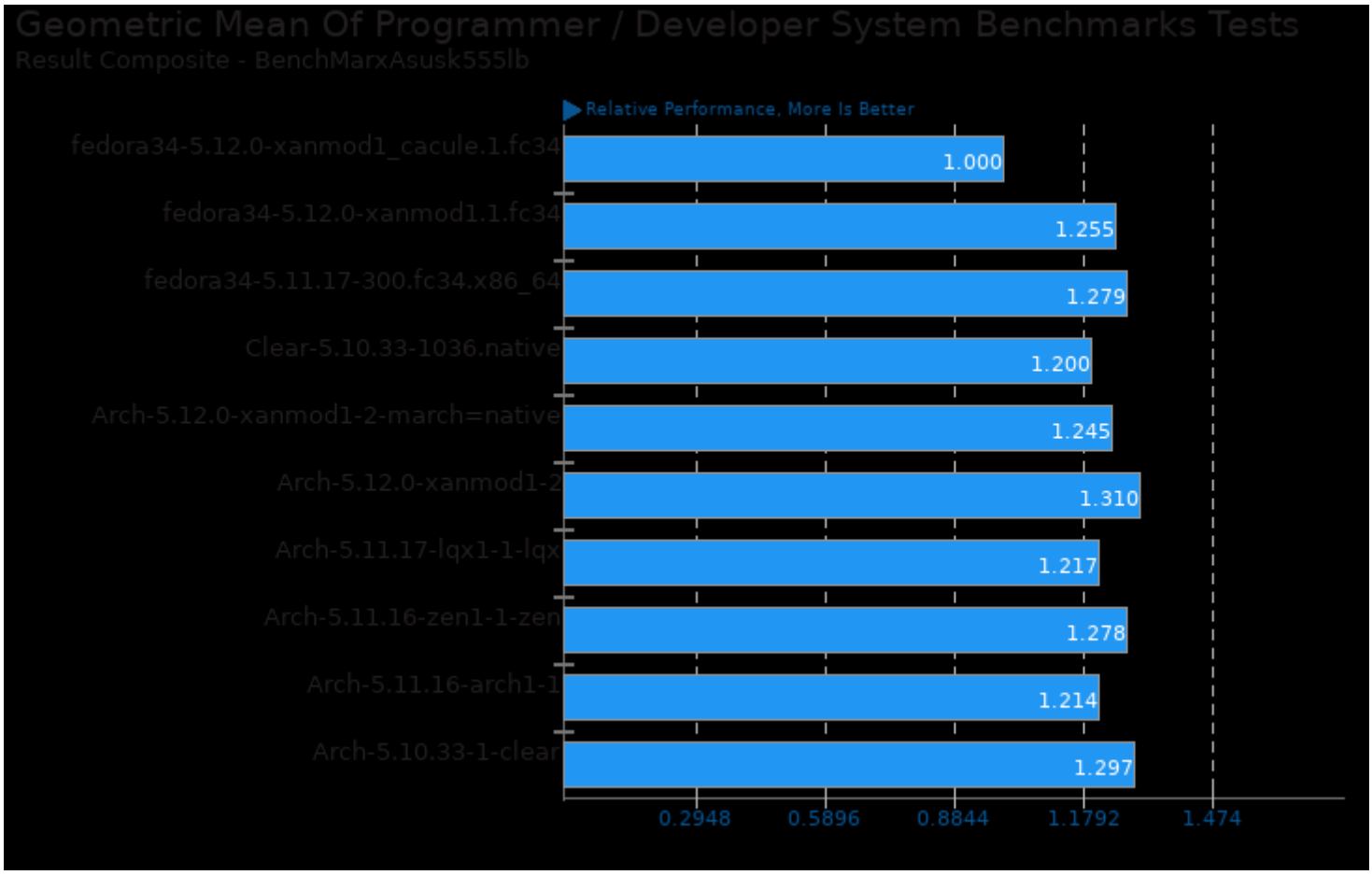
BenchMarxAsusk555lb



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

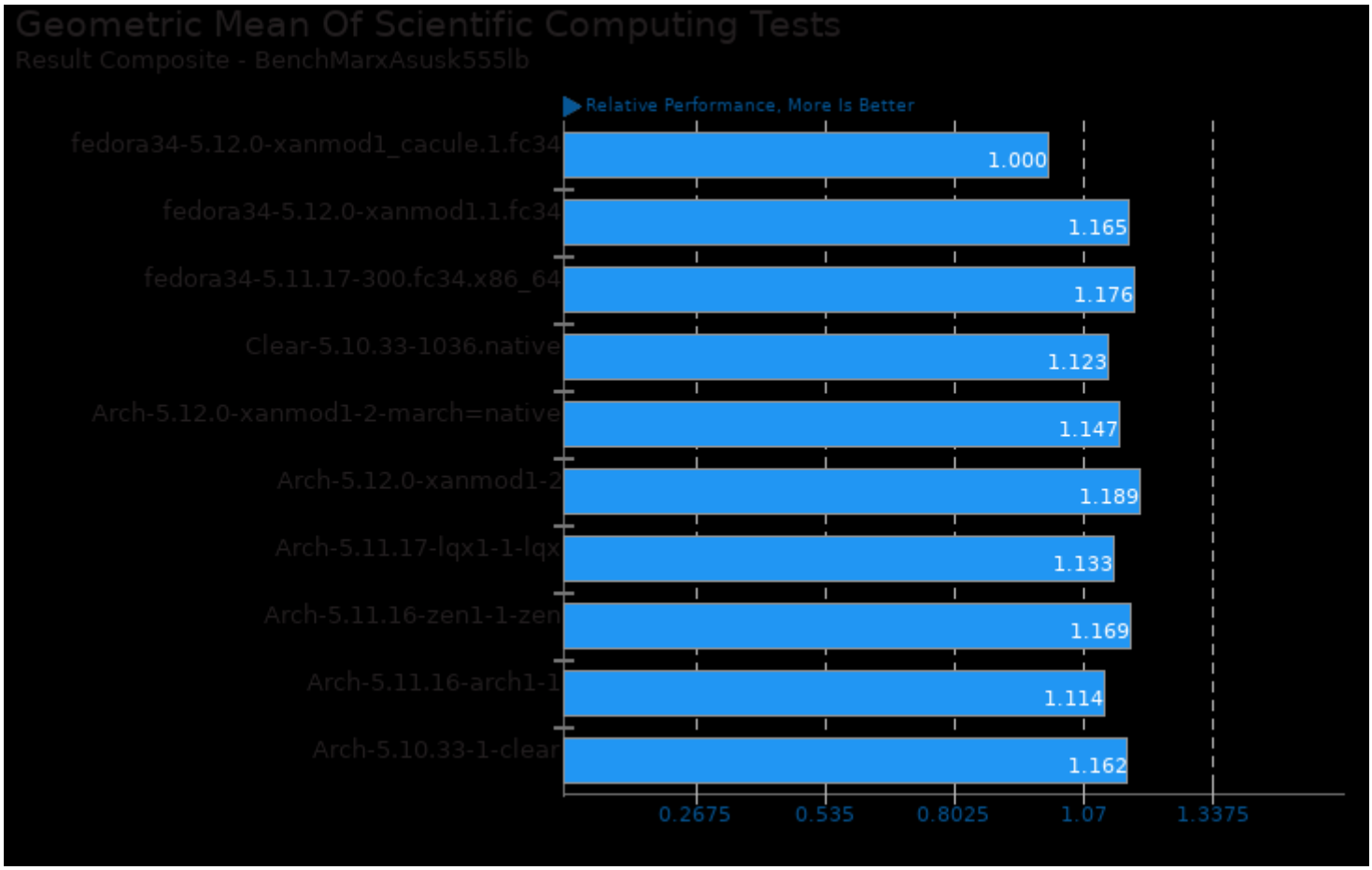


Geometric mean based upon tests: pts/arrayfire and pts/compress-7zip



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

BenchMarxAsusk555lb



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

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 02:13.