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xdacputestsep2019

PTS Processor Tests across AMD and Intel CPUs for XDA-Developers

Automated Executive Summary

3900XOC4250 had the most wins, coming in first place for 29% of the tests.

Based on the geometric mean of all complete results, the fastest (3900XOC4250) was 1.887x the speed of the slowest (3400GStock).

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

ebizzy (Phoronix Test Suite v5.2.1) at 23.756x
Core-Latency (Average Latency Between CPU Cores) at 9.161x
SVT-VP9 (1080p 8-bit YUV To VP9 Video Encode) at 8.98x
Himeno Benchmark (Poisson Pressure Solver) at 6.076x
Renaissance (Test: Twitter Finagle) at 5.619x
Y-Cruncher (Calculating 500M Pi Digits) at 4.883x
OpenSSL (RSA 4096-bit Performance) at 4.865x
Timed LLVM Compilation (Time To Compile) at 4.363x
x264 (H.264 Video Encoding) at 4.133x
7-Zip Compression (Compress Speed Test) at 4.122x.

Test Systems:

1600XStock

Processor: AMD Ryzen 5 1600X Six-Core @ 3.60GHz (12 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 5.0.0-27-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

1600X_39GHz

Processor: AMD Ryzen 5 1600X Six-Core @ 3.78GHz (12 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 5.0.0-27-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

1800XStock

1800XOCAuto

Processor: AMD Ryzen 7 1800X Eight-Core @ 3.60GHz (16 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 469GB, Graphics: NV136 6144MB, Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.18.0-24-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.3 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

TR1950XStock

Processor: AMD Ryzen Threadripper 1950X 16-Core @ 3.40GHz (32 Cores), Motherboard: MSI X399 GAMING PRO CARBON AC (MS-7B09) v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 2000GB HUS724020ALA640 +

1000GB Samsung SSD 850, Graphics: NVIDIA GeForce RTX 2080 8192MB (1515/7000MHz), Audio: Realtek ALC1220, Network: Intel I211 Gigabit Connection + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 3840x1080

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++ --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
OpenCL Notes: GPU Compute Cores: 2944
System Notes: GPU Compute Cores: 2944.

2400GStock

Processor: AMD Ryzen 5 2400G with Radeon Vega @ 3.60GHz (8 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 15d0, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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
OpenCL Notes: GPU Compute Cores: 1280
System Notes: GPU Compute Cores: 1280.

2400G_39All

Processor: AMD Ryzen 5 2400G with Radeon Vega @ 3.88GHz (8 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 15d0, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 5.0.0-23-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

2700XStock

Processor: AMD Ryzen 7 2700X Eight-Core @ 3.70GHz (16 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 469GB, Graphics: NV136 6144MB, Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.18.0-24-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.3 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

2700XOC4050

Processor: AMD Ryzen 7 2700X Eight-Core @ 3.61GHz (16 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 469GB, Graphics: NV136 6144MB, Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.3 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

3700XStock

Processor: AMD Ryzen 7 3700X 8-Core @ 3.60GHz (16 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 1480, Memory: 16384MB, Disk: 469GB, Graphics: NV136 6144MB, Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.3 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

3700XOC4250

Processor: AMD Ryzen 7 3700X 8-Core @ 4.25GHz (16 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 1480, Memory: 16384MB, Disk: 469GB, Graphics: NV136 6144MB, Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.3 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

3900XStock

Processor: AMD Ryzen 9 3900X 12-Core @ 3.80GHz (24 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 1480, Memory: 16384MB, Disk: 469GB, Graphics: NV136 6144MB, Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.3 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

3900XOC4250

Processor: AMD Ryzen 9 3900X 12-Core @ 4.25GHz (24 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 1480, Memory: 16384MB, Disk: 469GB, Graphics: NV136 6144MB, Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.3 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

7700KStock

Processor: Intel Core i7-7700K @ 4.50GHz (8 Cores), Motherboard: Gigabyte Z170X-Gaming 7, Chipset: Intel Xeon E3-1200 v6/7th, Memory: 16384MB, Disk: 469GB, Graphics: Sapphire AMD Radeon RX 580 (POLARIS10 DRM 3.26.0 4.18.0-22-generic LLVM 7.0.0) 8192MB, Audio: Creative Recon3Di, Network: Intel Connection + Intel Dual Band Wireless-AC 3168NGW

OS: Ubuntu 18.04, Kernel: 4.18.0-22-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.5 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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: intel_pstate powersave

7700K_5GHz

Processor: Intel Core i7-7700K @ 4.50GHz (8 Cores), Motherboard: Gigabyte Z170X-Gaming 7, Chipset: Intel Xeon E3-1200 v6/7th, Memory: 16384MB, Disk: 469GB, Graphics: Sapphire AMD Radeon RX 580 (POLARIS10 DRM 3.26.0 4.18.0-24-generic LLVM 7.0.0) 8192MB, Audio: Creative Recon3Di, Network: Intel Connection + Intel Dual Band Wireless-AC 3168NGW

OS: Ubuntu 18.04, Kernel: 4.18.0-24-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.5 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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: intel_pstate powersave

7900XStock

7900XOC4300

Processor: Intel Core i7-7900X @ 4.30GHz (20 Cores), Motherboard: ASUS ROG STRIX X299-E GAMING, Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: Realtek ALC1220, Network: Intel Connection + Realtek RTL8822BE 802.11a/b/g/n/ac

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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: intel_pstate powersave
OpenCL Notes: GPU Compute Cores: 1280
System Notes: GPU Compute Cores: 1280.

8700KStock

Processor: Intel Core i7-8700K @ 4.70GHz (12 Cores), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF, Chipset: Intel 8th Gen Core /DRAM, Memory: 16384MB, Disk: 469GB, Graphics: Sapphire AMD Radeon RX 580 (POLARIS10 DRM 3.26.0 4.18.0-24-generic LLVM 7.0.0) 8192MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.18.0-24-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.5 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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: intel_pstate powersave

8700K_5GHz

Processor: Intel Core i7-8700K @ 4.70GHz (12 Cores), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF, Chipset: Intel 8th Gen Core /DRAM, Memory: 16384MB, Disk: 469GB, Graphics: Sapphire AMD Radeon RX 580 (POLARIS10 DRM 3.26.0 4.18.0-24-generic LLVM 7.0.0) 8192MB, Audio: Realtek ALC1220, Network: Intel Connection + Intel Dual Band Wireless-AC 3168NGW

OS: Ubuntu 18.04, Kernel: 4.18.0-24-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.5 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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: intel_pstate powersave

9900KStock

Processor: Intel Core i9-9900K @ 5.00GHz (16 Cores), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF, Chipset: Intel Device 3e30, Memory: 16384MB, Disk: 469GB, Graphics: Sapphire AMD Radeon RX 580 (POLARIS10 DRM 3.26.0 4.18.0-25-generic LLVM 7.0.0) 8192MB, Audio: Realtek ALC1220, Network: Intel Connection + Intel Dual Band Wireless-AC 3168NGW

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.5 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

9900K_5GHz

Processor: Intel Core i9-9900K @ 4.90GHz (16 Cores), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF, Chipset: Intel Device 3e30, Memory: 16384MB, Disk: 469GB, Graphics: Sapphire AMD Radeon RX 580 (POLARIS10 DRM 3.26.0 4.18.0-25-generic LLVM 7.0.0) 8192MB, Audio: Realtek ALC1220, Network: Intel Connection + Intel Dual Band Wireless-AC 3168NGW

OS: Ubuntu 18.04, Kernel: 4.18.0-25-generic (x86_64), Desktop: GNOME Shell 3.28.4, OpenGL: 4.5 Mesa 18.2.8, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

2600XStock

Processor: AMD Ryzen 5 2600X Six-Core @ 3.60GHz (12 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 5.0.0-27-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

2600X42GHz

Processor: AMD Ryzen 5 2600X Six-Core @ 3.37GHz (12 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 5.0.0-27-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

3600XStock

Processor: AMD Ryzen 5 3600X 6-Core @ 3.80GHz (12 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 1480, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 5.0.0-27-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0 NVIDIA 430.26, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

3600X_43GHz

Processor: AMD Ryzen 5 3600X 6-Core @ 4.30GHz (12 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 1480, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 5.0.0-27-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0 NVIDIA 430.26, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

3400GStock

Processor: AMD Ryzen 5 3400G with Radeon Vega @ 3.70GHz (8 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 15d0, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 5.0.0-27-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

3400G_4175

Processor: AMD Ryzen 5 3400G with Radeon Vega @ 3.52GHz (8 Cores), Motherboard: MSI X470 GAMING M7 AC (MS-7B77) v1.0, Chipset: AMD Device 15d0, Memory: 16384MB, Disk: 469GB, Graphics: eVGA NVIDIA GeForce GTX 1060 6GB 6144MB (1607/4006MHz), Audio: NVIDIA GP106 HD Audio, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 5.0.0-27-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Driver: NVIDIA 430.26, OpenGL: 4.6.0, Compiler: Clang 6.0.0-1ubuntu2 + LLVM 6.0.0, File-System: ext4, Screen Resolution: 1920x1080

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++ --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

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Phoronix Test Suite

	1600 XStock	1600 X_39 GHz	1800 XStock	1800 XOCAuto	TR1950 XStock	2400 GStock	2400 G_39 All	2700 XStock	2700 XOC4 0500	3700 XStock	3700 XOC4 2500	3900 XStock	3900 XOC4 2500	7700 KStock	7700 K_5GHz	7900 XStock	7900 XOC4 3000	8700 KStock	8700 K_5GHz	9900 KStock	9900 K_5GHz	2600 XStock	2600 X42GHz	3600 XStock	3600 X_43GHz	3400 GStock	3400 G_41 75
GNU MPC - M.P.B (Global Score)	69 20	74 43	68 37	74 13	65 10	68 93	72 97	80 57	71 00	76 27	90 37	80 03	89 73	10 600	11 700	90 47	90 93	11 000	11 700	11 267	11 000	69 20	80 27	80 53	90 73	70 67	79 63
Normalized	59.1	63.6	58.4	63.3	55.6	58.9	62.3	68.8	60.6	65.1	77.2	68.4	76.6	90.6	100	77.3	77.7	94.0	100	96.3	94.0	59.1	68.6	68.8	77.5	60.4	68.
Standard Deviation	5% 0%	2% 0.4 %	4% 0.4 %	6% 0.4 %	4% 0.3 %	1% 0.2 %	7% 4.1 %	6% 0.4 %	8% 0.4 %	9% 0.1 %	4% 0.1 %	% 0.1 %	9% 0.1 %	% 0%	% 0%	2% 0.7 %	2% 0.1 %	2% 0%	% 0%	% 0.5 %	2% 0%	5% 0.3 %	1% 0.2 %	3% 0.1 %	5% 0.1 %	% 0.5 %	6% 0.3
NAS Parallel Benchmarks - SP.A (Mop/s)	27 88	29 31	25 14	24 69	26 21	27 47	28 19	26 92	29 10	31 89	35 52	31 21	35 83	33 14	32 82	24 86	26 09	31 92	35 81	29 93	29 26	28 78	31 15	33 10	35 32	27 95	30 18
Normalized	77.8	81.8	70.1	68.9	73.1	76.6	78.6	75.1	81.2	89.0	99.1	87.1	100	92.5	91.6	69.4	72.8	89.0	99.9	83.5	81.6	80.3	86.9	92.3	98.6	78.0	84.
Standard Deviation	3% 0.3 %	% 0.5 %	6% 1.4 %	2% 2.1 %	5% 3.3 %	7% 0.6 %	9% 1.3 %	4% 0.3 %	2% 0.1 %	2% 0%	5% 0.5 %	1% 0.8 %	% 0.5 %	% 0.2 %	1% 0.6 %	% 0.1 %	1% 1.4 %	9% 0.5 %	6% 0.6 %	4% 0.6 %	7% 0.3 %	5% 0.2 %	5% 0.7 %	8% 0.3 %	% 2.7 %	2% 0.5 %	3% 0.9
CloverLeaf - L.E.H (sec)	4.5 2	4.7 1	4.9 9	5.0 1	2.7 5	5.1 4	5.6 4	5.2 1	4.7 5	5.2 5	5.0 3	3.7 5	3.6 6	3.8 5	3.8 1	2.4 4	2.4 3	4.1 0	4.0 4	5.6 4	5.8 0	4.5 4	4.4 4	4.9 0	5.1 8	5.3 9	4.9 9
Normalized	53.7	51.5	48.7	48.5	88.3	47.2	43.0	46.6	51.1	46.2	48.3	64.8	66.3	63.1	63.7	99.5	100	59.2	60.1	43.0	41.9	53.5	54.7	49.5	46.9	45.0	48.
Standard Deviation	6% 0.2 %	9% 0.4 %	% 0.4 %	% 0.5 %	6% 0.6 %	8% 0.1 %	9% 2% %	4% 0.2 %	6% 0.5 %	9% 0.4 %	1% 0% %	% 0.4 %	9% 0.2 %	2% 0.1 %	8% 0% %	9% 0.6 %	% 0.5 %	7% 0.1 %	5% 0.2 %	9% 0% %	% 0% %	2% 0.5 %	3% 0.8 %	9% 0.3 %	1% 0.4 %	8% 0.7 %	% 0.3
CP2K Molecular Dynamics - Fayalite-FIST Data (sec)	59 2.93	53 7.16	60 6.95	60 6.31	65 2.88	43 2.74	40 4.62	55 5.04	56 7.93	36 7.88	31 4.03	36 6.11	31 9.77	53 7.23	42 4.83	71 9.91	65 6.40	59 9.11	57 1.31	63 8.50	63 4.83	58 3.92	46 9.65	34 9.23	31 8.02	43 4.34	36 3.1
Normalized	52.9	58.4	51.7	51.7	48.1	72.5	77.6	56.5	55.2	85.3	100	85.7	98.2	58.4	73.9	43.6	47.8	52.4	54.9	49.1	49.4	53.7	66.8	89.9	98.7	72.3	86.
d	6%	6%	4%	9%	%	7%	1%	8%	9%	6%	%	7%	%	5%	2%	2%	4%	2%	7%	8%	7%	8%	6%	2%	5%	%	4%

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High Performance Conjugate Gradient - P.T.S.v. 2.1 (GFLOP/s)	1.09	1.11	1.08	1.11	**0.78**	1.05	1.06	0.99	1.20	0.97	1.01	0.83	1.01	1.78	**1.83**	1.44	1.48	1.73	**1.83**	1.72	1.73	1.15	1.21	0.99	1.02	1.04	1.10
Normalized	59.5%	60.6%	59.0%	60.6%	42.6%	57.3%	57.9%	54.1%	65.5%	53.0%	55.1%	45.3%	55.1%	97.2%	100%	78.6%	80.8%	94.5%	100%	93.9%	94.5%	62.8%	66.1%	54.1%	55.7%	56.8%	60.2%
Standard Deviation	6%	6%	2%	6%	2%	8%	2%	0%	7%	1%	9%	6%	9%	7%	0%	9%	7%	4%	0%	9%	4%	4%	2%	0%	4%	3%	1%
	0.9	1.3	1%	1.3	0%	0.8	1.3	1.3	0.9	1%	0.3	1.1	1.7	0.4	1.4	0.1	0.9	1.8	1.1	0.9	0.6	0.9	0.2	1%	0.4	1.4	1.3
CLOMP - Static OMP Speedup (Speed up)	4.49	3.60	5.57	5.62	3.61	5.04	4.50	4.03	4.74	4.78	4.52	3.34	3.46	4.66	4.65	4.05	4.10	4.81	5.14	**5.66**	5.50	3.66	3.48	3.47	**3.14**	4.55	4.93
Normalized	79.3%	63.6%	98.4%	99.2%	63.7%	89.0%	79.5%	71.2%	83.7%	84.4%	79.8%	59.0%	61.1%	82.3%	82.1%	71.5%	72.4%	84.9%	90.8%	100%	97.1%	64.6%	61.4%	61.3%	55.4%	80.3%	87.1%
Standard Deviation	3%	7%	26%	6%	8%	5%	1%	2%	5%	5%	6%	1%	3%	3%	6%	5%	4%	8%	1%	7%	6%	8%	1%	8%	9%	9%	2%
	3.4	7.3	26.2	6.4	3.2	0.7	1%	2.5	4.8	4.2	2.1	1.5	3.5	0.3	0.1	5.8	1%	1.6	1.1	1.8	2.2	3.4	3.2	7%	7.1	2.8	2.2
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	3.36771	3.15168	3.31289	3.37765	1.50903	**4.92827**	4.60707	2.34574	2.30574	2.29207	1.92552	1.50139	1.39966	3.05398	3.25607	1.47013	**1.38358**	2.11333	2.48480	1.80889	1.89317	3.21791	2.79176	2.80376	2.60000	4.86195	4.27658
Normalized	39.0%	41.6%	39.6%	38.8%	87.0%	26.6%	28.5%	56%	55.3%	57.3%	67.2%	87.5%	98.0%	43.0%	40.3%	93.3%	100%	61.5%	53.6%	69.8%	69.5%	40.8%	47.0%	45.6%	50.5%	27.0%	30.4%
Standard Deviation	1%	8%	5%	9%	5%	5%	1%		3%	1%	9%	1%	5%	1%	4%	6%	%	6%	5%	6%	1%	2%	5%	7%	1%	2%	2%
	0.9	0.7	0.1	0.2	3.1	0%	0.3	0.3	0.1	0.3	0.1	0.6	0.7	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.7	0.2	0%
PolyBench-C - C.C (sec)	3.99	3.67	3.96	3.68	**5.11**	3.86	3.57	**3.28**	3.67					5.02	4.55	4.97	4.92	4.85	4.50	4.71	4.81	3.79	3.34			3.80	3.44
Normalized	82.2%	89.3%	82.8%	89.1%	64.1%	84.9%	91.8%	100%	89.3%					65.3%	72.0%	66%	66.6%	67.6%	72.8%	69.6%	68.1%	86.5%	98.2%			86.3%	98.2%
Standard Deviation	1%	7%	3%	3%	9%	7%	8%	%	7%					4%	9%		7%	3%	9%	4%	9%	4%	%			2%	%
	0.4	0.6	0.5	0.2	1.3	1.2	0.8	0.8	0.3					0.1	0.1	0.1	0.2	0.3	0.1	0.4	0.6	0.6	1%			0.3	0.6
lzbench - XZ 0 (MB/s)	28	30	28	30	**27**	29	30	34	29	30	35	31	35	41	**45**	39	40	42	**45**	43	43	29	33	31	36	29	32
Normalized	62.2%	66.6%	62.2%	66.6%	60%	64.4%	66.6%	75.5%	64.4%	66.6%	77.7%	68.8%	77.7%	91.1%	100%	86.6%	88.8%	93.3%	100%	95.5%	95.5%	64.4%	73.3%	68.8%	80%	64.4%	71.1%
Standard Deviation	2%	7%	2%	7%		4%	7%	6%	4%	7%	8%	9%	8%	1%	%	7%	9%	3%	%	6%	6%	4%	3%	9%		4%	1%

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Standard Deviation	0%	3.3 %	0%	0%	0%	2%	1.9 %	0%	2%	1.9 %	0%	0%	0%	0%	0%	1.5 %	1.5 %	1.4 %	0%	1.3 %	1.4 %	0%	1.8 %	1.8 %	0%	0%	1.8 %
FFTE - N.2.1.C. F.R (MFLOPS)	74	80	74	79	71	75	81	87	77	80	95	85	95	90	10	86	86	94	10	96	94	75	88	85	96	77	87
	81	98	71	71	20	42	24	11	58	77	45	33	46	97	11	46	74	69	10	78	80	33	02	21	50	12	44
															0				8								
Normalized	74%	80.1	73.9	78.8	70.4	74.6	80.3	86.1	76.7	79.8	94.4	84.4	94.4	89.9	100	85.5	85.7	93.6	99.9	95.7	93.7	74.5	87.0	84.2	95.4	76.2	86
Standard Deviation	0.1 %	0.2 %	0.1 %	0.6 %	0.2 %	0.3 %	0.6 %	0.5 %	0.1 %	0%	0%	0%	0%	0.1 %	0%	0.3 %	0.1 %	0.1 %	0.1 %	0.1 %	0.1 %	0.4 %	0.2 %	0.2 %	0.1 %	0.9 %	0.2
FFTW - Stock - 2D FFT Size 4096 (Mflops	53	55	53	55	52	52	56	59	55	58	65	57	65	66	71	54	54	68	71	69	68	53	60	59	66	54	59
	57	82	05	25	14	45	04	95	18	29	05	37	29	19	99	08	01	91	30	17	65	58	86	80	23	25	17
Normalized	74.4	77.5	73.6	76.7	72.4	72.8	77.8	83.2	76.6	80.9	90.3	79.7	90.6	91.9	100	75.1	75.0	95.7	99.0	96.0	95.3	74.4	84.5	83.0	92%	75.3	82
Standard Deviation	0%	0.6 %	0.9 %	1.2 %	0.5 %	0.4 %	1.3 %	1.9 %	0.4 %	0.2 %	0.7 %	0.9 %	0.3 %	0.6 %	0.4 %	0.7 %	0.5 %	0.6 %	1.1 %	0.2 %	0.6 %	0.2 %	1.1 %	0.1 %	0.2	1%	0.3
FFTW - Float + SSE - 2D FFT Size 4096 (Mflops	14	15	14	14	12	14	14	14	15	18	18	16	18	26	27	20	20	26	27	26	26	14	16	17	19	14	15
	34	05	61	99	57	00	99	97	00	25	48	18	89	36	68	22	51	44	26	42	70	71	07	98	38	22	46
	6	5	5	2	7	6	4	8	4	0	5	9	8	4	2	8	8	1	9	7	3	2	2	4	6	7	2
Normalized	51.8	54.3	52.8	54.1	45.4	50.6	54.1	54.1	54.2	65.9	66.7	58.4	68.2	95.2	100	73.0	74.1	95.5	98.5	95.4	96.4	53.1	58.0	64.9	70.0	51.3	55
Standard Deviation	2.3 %	0.6 %	3%	1.9 %	3.3 %	0.4 %	1.1 %	2.2 %	1.3 %	1.7 %	2.1 %	1.6 %	2%	1.2 %	0.4 %	0.4 %	1%	3.3 %	0.5 %	2%	2%	0.2 %	0.6 %	0.1 %	0.2 %	2.5 %	0.1
Timed HMMer Search - P.D.S (sec)	7.8	6.8	7.5	7.6	6.4	9.1	8.5	6.8	6.2	9.1	6.9	8.6	6.6	6.1	6.1	7.0	6.0	4.9	5.0	4.6	4.7	7.5	6.2	8.7	6.4	9.0	7.9
	7	3	7	2	9	8	3	6	5	1	6	3	5	0	4	8	5	6	4	0	3	5	5	7	8	8	3
Normalized	58.4	67.3	60.7	60.3	70.8	50.1	53.9	67.0	73.6	50.4	66.0	53.3	69.1	75.4	74.9	64.9	76.0	92.7	91.2	100	97.2	60.9	73.6	52.4	70.9	50.6	58
Standard Deviation	1.2 %	1%	0.3 %	0.7 %	1.5 %	1.1 %	0.8 %	1.5 %	1.3 %	1.3 %	1.6 %	3.5 %	0.6 %	0.3 %	0.4 %	1.8 %	1%	0.3 %	0.2 %	0.3 %	0.1 %	1.4 %	1.1 %	1.5 %	0.7 %	0.6 %	0.3

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Timed MAFFT Alignment - M.S.A (sec)	3.85	3.42	3.28	3.33		**4.80**	4.42	3.05	**3.00**					3.30	3.29			3.21				3.61	3.15	3.43	3.17	4.63	4.6
Normalized	77.9%	87.7%	91.4%	90.0%		62.5%	67.8%	98.3%	100%					90.9%	91.1%			93.4%				83.1%	95.2%	87.4%	94.6%	64.7%	72.%
Standard Deviation	2.5%	0.8%	0.7%	2%		3.9%	7.8%	0.4%						2.8%	4.3%			3.3%				4.3%	3.1%	5.8%	0.4%	4.8%	3.9%
Timed MrBayes Analysis - P.P.A	17	16	15	16	**81.23**	22	22	12	12	12	12	94.	88.	17	19	93.	87.	13	14	12	12	15	13	13	13	**23**	19
	2.31	0.70	5.92	1.21		9.72	3.01	7.03	2.47	4.64	1.95	93	73	9.42	0.05	39	55	3.46	8.27	2.43	4.97	6.22	7.68	6.65	3.69	**4.69**	8.9
Normalized	47.1%	50.5%	52.1%	50.3%	100%	35.3%	36.4%	63.9%	66.3%	65.1%	66.6%	85.5%	91.5%	45.2%	42.7%	86.9%	92.7%	60.8%	54.7%	66.3%	65%	52%	59%	59.4%	60.7%	34.6%	40.%
Standard Deviation	0.6%	0.4%	0.7%	0.5%	3.4%	0.1%	0.3%	0.1%	0.5%	0.1%	0%	0.3%	0.1%	0%	0.1%	0.2%	1%	0.1%	0%	0.1%	0.1%	0.8%	0.1%	0.2%	0.7%	0.6%	0.2%
BLAKE2 - P.T.S.v. 2.1 (Cycles/Byte)	10.10	10.09	10.11	9.71	10.09	10.10	10.09	8.82	**11.05**	10.09	8.55	10.11	9.04	5.37	4.82	6.37	4.46	4.32	**4.24**	4.32	4.40	10.10	10.09	10.11	8.92	10.10	8.9
Normalized	41.9%	42.0%	41.9%	43.6%	42.0%	41.9%	42.0%	48.0%	38.3%	42.0%	49.5%	41.9%	46.9%	78.9%	87.9%	66.5%	95.0%	98.1%	100%	98.1%	96.3%	41.9%	42.0%	41.9%	47.5%	41.9%	47.%
Standard Deviation	0.1%	0%	0%	5%	0%	0.1%	0%	0.7%	0%	0%	0.1%	0%	0%	0.1%	0.2%	72.6%	0%	0.1%	0%	0.2%	0.3%	0.1%	0%	0%	0%	0%	0%
GNU GMP GMPbench - Total Time (GMPbench Score)	44.26	48.04	44.42	47.61	**41.98**	44.32	47.69	52.57	45.66	48.77	57.66	51.54	57.67	57.56	63.93	54.95	55.15	60.10	**63.96**	61.21	60.11	44.39	51.77	51.50	58.30	45.34	51.40
Normalized	69.2%	75.1%	69.4%	74.4%	65.6%	69.2%	74.5%	82.1%	71.3%	76.2%	90.1%	80.5%	90.1%	89.9%	99.9%	85.9%	86.2%	93.9%	100%	95.7%	93.9%	69.4%	80.9%	80.5%	91.1%	70.8%	80.%
Java SciMark - D.L.M.F (Mflops)	42.13	45.96	41.77	44.03	**39.63**	43.40	46.20	49.11	43.45	56.33	65.82	59.77	67.04	67.08	**74.09**	53.81	53.67	67.43	73.27	68.62	66.75	42.82	49.61	60.70	68.13	43.82	49.31
Normalized	56.8%	62.0%	56.3%	59.4%	53.5%	58.5%	62.3%	66.2%	58.6%	76.0%	88.8%	80.6%	90.4%	90.5%	100%	72.6%	72.4%	91.0%	98.9%	92.6%	90.1%	57.8%	66.9%	81.9%	91.9%	59.1%	66.%
Standard Deviation	1%	0.7%	0.4%	2.2%	3.2%	0.2%	0.9%	0.2%	0.4%	4.3%	2.8%	0.3%	0.4%	1.3%	2%	2.3%	1.3%	2.1%	2.3%	2.6%	1%	0.8%	0.2%	0.4%	1.1%	1%	0.3%

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Bork File Encrypter - F.E.T (sec)	10.92	9.97	10.87	10.23	**11.35**	10.99	9.92	9.26	10.38	9.80	8.52	9.63	8.52	6.00	**5.40**	6.49	6.40	5.79	5.42	5.51	5.67	10.83	9.17	9.41	8.36	10.67	9.5
Normalized	49.4	54.1	49.6	52.7	47.5	49.1	54.4	58.3	52.0	55.1	63.3	56.0	63.3	90%	100	83.2	84.3	93.2	99.6	98%	95.2	49.8	58.8	57.3	64.5	50.6	58.
Standard Deviation	5%	6%	8%	9%	8%	4%	4%	2%	2%	%	8%	7%	8%		%	%	8%	6%	3%		4%	6%	9%	9%	9%	1%	8%
	1.7	0.8	1.5	0.7	0.2	0.7	1.5	0.7	0.2	0.1	0.2	0.4	0.8	0.4	0%	1.7	0.6	0.9	0.9	0.3	1.9	0.8	0.2	0.5	0.9	0.2	0.3
	%	%	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%	%	%	%	%	%	%	%	%	%
Renaissance - Twitter Finagle (ms)	75	68	77	77		81	78	73	66	57	50	**14**		49	49	55	53	50	51	49	50	71	61	56	48	**82**	73
	83	04	13	70		95	97	36	50	12	08	**61**		81	73	31	46	25	69	72	38	68	25	89	88	**12**	16
Normalized	19.2	21.4	18.9	18.8		17.8	18.5	19.9	21.9	25.5	29.1	100		29.3	29.3	26.4	27.3	29.0	28.2	29.3	29.0	20.3	23.8	25.6	29.9	17.8	19.
Standard Deviation	7%	8%	5%	1%		3%	1%	2%	7%	8%	8%	%		4%	9%	2%	4%	8%	7%	9%	1%	9%	6%	9%	%	%	8%
	4.1	3.8	1.1	4%		3%	2.7	2.7	1.7	1.7	2.5	3%		2.7	2.6	1.8	3.2	2.1	4.9	3.3	1.6	3.2	2.2	2.3	1%	3.2	2.8
	%	%	%				%	%	%	%	%			%	%	%	%	%	%	%	%	%	%	%		%	%
Fhourstones - C.C.4.S (Kpos / sec)	11	12	11	11	**10**	11	11	12	11	12	14	12	14	15	16	13	13	15	**16**	16	16	11	13	13	14	11	12
	28	14	30	92	**17**	37	94	25	97	78	67	61	69	20	36	77	73	88	**51**	26	18	46	21	41	80	47	68
	1	6	1	1	**7**	0	4	9	5	9	3	8	3	0	9	1	0	6	**7**	0	5	5	8	3	9	6	5
Normalized	68.3	73.5	68.4	72.1	61.6	68.8	72.3	74.2	72.5	77.4	88.8	76.3	88.9	92.0	99.1	83.3	83.1	96.1	100	98.4	97.9	69.4	80.0	81.2	89.6	69.4	76.
Standard Deviation	%	4%	2%	7%	1%	4%	1%	2%	%	2%	3%	9%	6%	2%	%	7%	2%	8%	%	4%	9%	1%	2%	1%	5%	8%	%
	0.4	0.2	0.1	0.2	0.2	0%	0.2	0.2	0.5	0.3	0.1	0.1	0.4	0.1	0.1	0%	0.2	0.4	0.3	1%	0.1	0.7	0.8	0.2	0.2	0.2	0.3
	%	%	%	%	%		%	%	%	%	%	%	%	%	%		%	%	%		%	%	%	%	%	%	%
BYTE Unix Benchmark - F.P.A (LPS)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Standard Deviation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CacheBench - R.M.W (MB/s)	16	18	17	18	**16**	17	19	20	17	25	30	27	30	33	**37**	31	31	34	37	35	34	16	19	27	30	17	19
	57	89	25	48	**35**	48	26	39	36	82	50	27	01	31	**01**	73	83	63	00	45	74	71	65	28	83	73	63
	7	4	0	0	**9**	1	6	3	7	6	0	0	6	0	**3**	2	0	7	2	6	4	6	8	6	1	3	6
Normalized	44.7	51.0	46.6	49.9	44.2	47.2	52.0	55.1	46.9	69.7	82.4	73.6	81.0	90%	100	85.7	86%	93.5	99.9	95.7	93.8	45.1	53.1	73.7	83.3	47.9	53.
Standard Deviation	9%	5%	1%	3%	%	3%	5%	%	2%	7%	%	8%	9%		%	3%		8%	7%	9%	7%	6%	1%	2%	%	1%	5%
	0.1	3.9	1.1	1.5	1.5	0.8	0.5	0.5	0.2	0.1	0.1	0.1	4.1	0%	0%	0%	0%	0.1	0.1	0%	0%	0.2	0.6	0%	0.3	1%	0.4
	%	%	%	%	%	%	%	%	%	%	%	%	%					%	%		%	%		%			%
LuaJIT - D.L.M.F	30	31	29	31	28	21	22	34	29	33	39	35	39	40	44	37	37	42	**44**	43	43	30	31	35	39	**20**	22
	36	62	83	69	80	32	18	64	93	61	75	33	75	19	26	52	50	58	**62**	68	06	58	61	33	79	**57**	61
Normalized	68.0	70.8	66.8	71.0	64.5	47.7	49.7	77.6	67.0	75.3	89.0	79.1	89.0	90.0	99.2	84.1	84.0	95.4	100	97.9	96.5	68.5	70.8	79.1	89.1	46.1	50.
Standard Deviation	6%	8%	6%	3%	5%	9%	2%	5%	9%	4%	9%	8%	9%	7%	1%	%	6%	4%	%	1%	1%	4%	5%	9%	9%	1%	9%
	1.1	0.4	12%	1.1	0.8	0.3	0.8	1.2	1.8	0.1	0.4	0.3	0.1	0.4	0.3	0.9	0.9	0.2	0.8	0.4	0.1	1.4	1.3	0.5	0.7	1.4	0.2
	%	%		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

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SciMark -	38	40	44	50	43	43	40	50	39	52	60	55	59	10	11	95	95	10	11	10	10	38	43	55	62	39	43
	4.0	5.8	6.5	2.9	0.7	2.9	1.6	8.5	7.0	1.8	9.4	0.1	9.1	07	20	8.3	9.8	54	23	76	54	0.3	7.2	2.7	1.1	3.5	5.
D.L.M.F (Mflops	2	1	3	5	3	3	4	4	9	9	7	8	0			1	3					7	5	6	3	5	3
Normalize	34.1	36.1	39.7	44.7	38.3	38.5	35.7	45.2	35.3	46.4	54.2	48.9	53.3	89.6	99.7	85.3	85.4	93.8	100	95.7	93.8	33.8	38.9	49.2	55.3	35.0	38
d	9%	3%	6%	8%	5%	5%	6%	8%	5%	7%	6%	9%	4%	2%	1%	2%	6%	8%	%	8%	6%	7%	3%	1%	%	4%	4%
Standard Deviation	2.5 %	0.9 %	4.5 %	10.7 %	9.1 %	3.5 %	0.1 %	6.9 %	4.1 %	3.4 %	1.1 %	1.7 %	3.3 %	0.3 %	0.1 %	0.1 %	0.1 %	0.1 %	0%	0%	0.1 %	0.2 %	0.9 %	2.5 %	0.7 %	3.4 %	3.7
Botan - Twofish (MiB/s)	30	33	31	33	29	30	33	36	31	31	37	33	37	39	43	37	37	40	43	42	41	31	36	33	37	31	36
	9.6	5.5	0.3	5.9	3.0	9.9	3.7	5.8	9.0	6.3	4.4	3.6	4.0	5.3	9.1	5.2	6.7	7.8	8.9	0.5	1.9	0.1	2.2	4.1	6.5	8.3	0.0
	6	3	0	3	3	3	5	9	8	9	8	8	9	8	9	7	4	5	3	7	8	1	9	9	1	4	5
Normalize	70.5	76.4	70.6	76.4	66.7	70.5	75.9	83.3	72.6	72.0	85.2	75.9	85.1	90.0	100	85.4	85.7	92.8	99.9	95.7	93.8	70.6	82.4	76.0	85.7	72.4	81.
d	1%	%	5%	9%	2%	7%	9%	1%	5%	4%	7%	8%	8%	2%	%	5%	8%	6%	4%	6%	%	1%	9%	9%	3%	8%	8%
Standard Deviation	0.4 %	0.5 %	0.1 %	0.4 %	0.1 %	0%	0.4 %	1.9 %	0.2 %	0%	0%	0.1 %	0.1 %	0%	0.1 %	0.1 %	0.1 %	1.4 %	0.1 %	0.1 %	0.1 %	0.2 %	0.1 %	0%	0.5 %	0.2 %	0.1
Crafty - Elapsed Time (Nodes/s)	62	68	63	67	59	63	68	75	66	74	88		88	89	98	84	85	93	99	95	93	64	74	79	89	64	73
	95	70	82	51	61	52	65	79	19	67	58		43	25	21	96	25	34	01	19	56	27	54	10	12	64	18
	27	03	89	91	66	24	71	59	96	72	72		25	47	51	99	83	00	77	79	90	36	60	60	78	36	07
	0	2	8	9	3	5	5	8	9	3	1		4	4	1	9	0	4	2	6	5	7	4	5	6	2	9
Normalize	63.5	69.3	64.4	68.1	60.2	64.1	69.3	76.5	66.8	75.4	89.4		89.3	90.1	99.1	85.8	86.1	94.2	100	96.1	94.5	64.9	75.2	79.8	90.0	65.2	73.
d	8%	8%	6%	9%	1%	5%	4%	5%	6%	2%	7%		1%	4%	9%	1%	%	7%	%	4%	%	1%	9%	9%	1%	8%	1%
Standard Deviation	0.4 %	0.9 %	0.1 %	0.1 %	0.3 %	0.2 %	0.4 %	0.2 %	0.4 %	0.1 %	0.2 %		0.7 %	0.1 %	0.1 %	0.1 %	0.1 %	0.3 %	0.3 %	0.3 %	0.1 %	0.4 %	0.3 %	0.2 %	1.1 %	0.1 %	0.7
John The Ripper - Blowfish (Real C/S)	11	12	11	13	30	80	82	17	16	17	20	22	29		83	19	20	12	11	15	14	12	14	13	14	79	94
	10	57	46	79	04	73	63	51	63	23	41	71	19		17	43	67	38	29	06	52	05	40	57	63	83	72
	3	5	9	2	4			1	1	3	1	3	5			8	2	6	0	2	1	3	0	5	9		
Normalize	36.9	41.8	38.1	45.9	100	26.8	27.5	58.2	55.3	57.3	67.9	75.6	97.1		27.6	64.7	68.8	41.2	37.5	50.1	48.3	40.1	47.9	45.1	48.7	26.5	31.
d	6%	6%	7%	1%	%	7%	%	8%	6%	6%	4%	%	7%		8%	%	1%	3%	8%	3%	3%	2%	3%	8%	3%	7%	3%
Standard Deviation	0.4 %	1.5 %	2.1 %	0.8 %	0.3 %	3.3 %	3.4 %	1.1 %	2.2 %	0.1 %	0.2 %	1.5 %	0.1 %		0.1 %	0%	2.3 %	0%	0.2 %	0.2 %	0.3 %	4.7 %	0.4 %	0.1 %	0.1 %	0.7 %	0.2
John The Ripper - MD5 (Real C/S)	34	38	40	39	88	24	25	58	54	95					49			75	65	86	84	40	46	75	80	24	28
	40	44	63	24	63	63	49	04	67	14					12			12	66	40	95	24	73	09	64	29	58
	64	94	46	13	06	31	90	37	30	63					55			32	78	68	44	89	02	76	77	17	32
Normalize	36.1	40.4	42.7	41.2	93.1	25.8	26.8	61%	57.4	100					51.6			78.9	69.0	90.8	89.2	42.3	49.1	78.9	84.7	25.5	30.
d	6%	1%	1%	4%	5%	9%	%		6%	%					3%			6%	2%	1%	9%	%	1%	3%	6%	3%	4%
Standard Deviation	0.3 %	0.1 %	0.8 %	1%	1.8 %	0%	0.5 %	0.7 %	0.7 %	0.2 %					0%			0%	0.1 %	0.1 %	0.2 %	0.1 %	1.3 %	0.2 %	0.1 %	0.4 %	0%

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Open FMM Nero2D - Total Time (sec)			59.67	62.14				47.43	50.52	45.67	39.02	31.58	27.81	74.76	77.77			54.57	57.71	43.70	45.45								
Normalized			46.6	44.7				58.6	55.0	60.8	71.2	88.0	100	37.2	35.7			50.9	48.1	63.6	61.1								
Standard Deviation			1% 0.7 %	5% 0.8 %				3% 1.1 %	5% 1%	9% 0.4 %	7% 1.8 %	6% 0.3 %	% 0.7 %	% 0.3 %	6% 4.7 %			6% 0.7 %	9% 0.3 %	4% 0.8 %	9% 0.2 %								
TTSIOD 3D Renderer - P.R.W.S.S.M (FPS)	27	29	31	30	42	23	23	37	37	44	51	50	64	28	27	51	53	39	36	47	46	29	33	36	39	22	26
	0.8	4.8	5.6	6.4	1.5	3.1	9.9	8.6	7.5	8.3	7.7	1.4	1.1	5.5	6.4	4.1	7.2	5.5	6.5	6.2	3.3	0.6	2.7	8.5	4.1	8.0	7.5
	3	8	5	9	7	2	9	2	8	4	7	8	8	1	0	2	8	4	6	6	4	7	4	5	7	2	0
Normalized	42.2	45.9	49.2	47.8	65.7	36.3	37.4	59.0	58.8	69.9	80.7	78.2	100	44.5	43.1	80.1	83.8	61.6	57.1	74.2	72.2	45.3	51.8	57.4	61.4	35.5	41.
Standard Deviation	4% 0.4 %	9% 0.3 %	3% 0.4 %	% 1%	5% 0.1 %	6% 0.2 %	3% 0.2 %	5% 0.1 %	9% 0.9 %	2% 0.2 %	5% 0.3 %	1% 1.3 %	% 1.5 %	3% 0.4 %	1% 0.2 %	8% 0.3 %	% 3.1 %	9% 0.4 %	7% 0.3 %	8% 0.3 %	6% 0.4 %	3% 0.1 %	9% 0.1 %	8% 0.6 %	8% 0.1 %	6% 0.2 %	2% 0.2
SVT-AV1 - 1.8.b.Y. T.A.V.E (FPS)	16.60	18.49	20.46	20.07	34.26	12.50	13.43	25.32	25.49	31.77	38.72	43.05	50.35	20.00	19.06	34.68	38.50	25.58	24.14	32.30	31.53	17.63	20.91	24.26	27.97	12.54	14.
Normalized	32.9	36.7	40.6	39.8	68.0	24.8	26.6	50.2	50.6	63.1	76.9	85.5	100	39.7	37.8	68.8	76.4	50.8	47.9	64.1	62.6	35.0	41.5	48.1	55.5	24.9	28.
Standard Deviation	7% 0.5 %	2% 0.1 %	4% 1.9 %	6% 2.4 %	4% 0.8 %	3% 0.1 %	7% 0%	9% 0.4 %	3% 1%	% 0.5 %	% 0.8 %	% 0.2 %	% 0.7 %	2% 0.1 %	6% 0.4 %	8% 0.6 %	6% 0.4 %	% 0.2 %	4% 0.5 %	5% 0.3 %	2% 0.2 %	1% 0.4 %	3% 0.2 %	8% 0.2 %	5% 0.6 %	1% 0.5 %	2% 0.4
SVT-HEVC - 1.8.b.Y. T.H.V.E (FPS)	10	11	12	12	21	74.	79.	14	14	17	20	22	26	10	10	22	23	14	14	17		11	13	14	16	74.	85
	2.8	3.7	3.9	2.0	5.0	70	23	3.4	9.3	5.1	3.5	1.9	0.9	9.3	4.5	3.4	5.9	9.3	0.9	3.6		0.7	0.1	5.5	0.3	28	33
	1	8	9	9	1			5	7	0	9	8	1	4	2	5	1	1	0	4		4	7	5	9		
Normalized	39.4	43.6	47.5	46.7	82.4	28.6	30.3	54.9	57.2	67.1	78.0	85.0	100	41.9	40.0	85.6	90.4	57.2	54%	66.5		42.4	49.8	55.7	61.4	28.4	32.
Standard Deviation	% 0.9 %	1% 0.4 %	2% 0.9 %	9% 0.9 %	1% 0.4 %	3% 0.6 %	7% 0.5 %	8% 1.1 %	5% 0.8 %	1% 1.2 %	3% 0.9 %	8% 0.6 %	% 0.4 %	1% 0.5 %	6% 0.5 %	4% 1%	2% 1.4 %	3% 0.9 %	0.6 %	5% 0.7 %		4% 0.9 %	9% 0.7 %	9% 0.7 %	7% 0.4 %	7% 0.5 %	% 0.6
SVT-VP9 - 1.8.b.Y. T.V.V.E (FPS)	35.85	38.96	40.61	40.51	82.35	24.66	26.31	51.48	49.83	54.45	64.04	83.56	93.60	30.27	29.10	21.6	22.1.5	43.17	39.66	52.40	51.60	37.46	43.45	43.83	49.07	24.92	28.
Normalized	16.1	17.5	18.3	18.2	37.1	11.1	11.8	23.2	22.5	24.5	28.9	37.7	42.2	13.6	13.1	95.8	100	19.4	17.9	23.6	23.3	16.9	19.6	19.7	22.1	11.2	12.
Standard Deviation	9% 0.3 %	9% 0.4 %	4% 1.5 %	9% 1.7 %	9% 0.7 %	4% 0.1 %	8% 0.2 %	5% 0.1 %	% 0.2 %	9% 0.1 %	2% 0.4 %	3% 0.3 %	7% 0%	7% 0.1 %	4% 0.2 %	% 1.1 %	% 1.9 %	9% 0.2 %	1% 0.1 %	6% 0.1 %	% 4.4 %	2% 0.1 %	2% 0.3 %	9% 0.1 %	6% 0.3 %	5% 0.2 %	6% 0.1

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VP9 libvpx Encoding - v.V.1.V.E (FPS)	1.06	1.18	1.18	1.19	1.06	1.06	1.01	1.05	1.05	1.01	1.32	1.19	1.12	1.10	1.06	1.24	1.21	1.24	1.20	1.20	1.17	1.05	1.19	1.12	1.03	1.08	1.2
Normalized	80.3	89.3	89.3	90.1	80.3	80.3	76.5	79.5	79.5	76.5	100	90.1	84.8	83.3	80.3	93.9	91.6	93.9	90.9	90.9	88.6	79.5	90.1	84.8	78.0	81.8	84.
d	%	9%	9%	5%	%	%	2%	5%	5%	2%	%	5%	5%	3%	%	4%	7%	4%	1%	1%	4%	5%	5%	5%	3%	2%	5%
Standard	0.9	0.5	1.8	1.3	0%	4.7	0.6	1.1	1%	1%	0%	6.9	3.4	0%	3.3	1.2	4.4	0.5	1.3	1%	0.9	0%	0%	7.1	0.6	1.1	0%
Deviation	%	%	%	%		%	%	%				%	%		%	%	%	%	%		%			%	%	%	
x264 - H.2.V.E (FPS)	54.84	61.07	62.83	61.83	12	36.64	39.94	77.47	76.08	83.94	10	13	15	51.15	49.86	10	11	72.57	69.00	86.58	85.02	56.82	67.79	71.24	82.35	37.27	42.99
					3.41						2.57	0.04	1.44			8.57	3.78										
Normalized	36.2	40.3	41.4	40.8	81.4	24.1	26.3	51.1	50.2	55.4	67.7	85.8	100	33.7	32.9	71.6	75.1	47.9	45.5	57.1	56.1	37.5	44.7	47.0	54.3	24.6	28.
d	1%	3%	9%	3%	9%	9%	7%	6%	4%	3%	3%	7%	%	8%	2%	9%	3%	2%	6%	7%	4%	2%	6%	4%	8%	1%	9%
Standard	1.8	1.6	0.5	0.9	1.4	0.9	0.2	2.1	1.7	2.1	2.3	2.2	2.4	1.6	2.2	2.4	1.4	3.1	2.1	3.1	2.5	1.8	2.2	1.7	2.3	1.6	1.8
Deviation	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
x265 - H.2.1.V.E (FPS)	6.33	6.96	6.73	6.62	10.51	4.47	4.83	8.70	8.48	8.75	10.48	11.38	13.16	5.42	5.17	9.81	10.74	7.43	6.82	8.76	8.41	6.51	7.66	7.36	8.32	4.57	5.7
Normalized	48.1	52.8	51.1	50.3	79.8	33.9	36.7	66.1	64.4	66.4	79.6	86.4	100	41.1	39.2	74.5	81.6	56.4	51.8	66.5	63.9	49.4	58.2	55.9	63.2	34.7	40.
d	%	9%	4%	%	6%	7%	%	1%	4%	9%	4%	7%	%	9%	9%	4%	1%	6%	2%	7%	1%	7%	1%	3%	2%	3%	5%
Standard	0.7	0.5	0.7	1.8	1%	0.3	0.3	0.1	0.3	0.3	0.5	0.4	0.1	0.9	0.2	0.4	0.2	0.2	0.4	0.2	0.2	0.9	0.7	0.7	0.7	0.3	0.7
Deviation	%	%	%	%		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Graphics Magick - Swirl (Iteratio	18	20	19	20	20	16	17	21	20	20	24	21	25	18	21	20	22	21	23	24	24	18	21	20	22	16	19
	0	0	2	1	1	3	7	9	4	3	0	8	0	9	0	8	4	8	9	3	3	3	7	2	9	3	2
Normalized	72%	80%	76.8	80.4	80.4	65.2	70.8	87.6	81.6	81.2	96%	87.2	100	75.6	84%	83.2	89.6	87.2	95.6	97.2	97.2	73.2	86.8	80.8	91.6	65.2	76.
d			%	%	%	%	%	%	%	%		%	%	%		%	%	%	%	%	%	%	%	%	%	%	%
Standard	0.3	0.3	1.4	0%	0%	0%	0.3	0.3	0%	0%	0.2	0.5	0.2	0.3	0.3	0%	0%	0%	0%	0.2	0.2	1.3	0%	0%	0.3	0.6	0%
Deviation	%	%	%				%	%			%	%	%	%	%					%	%	%			%	%	
Himeno Benchmark - P.P.S (MFLOPS)	10	10	10	11	10	76	11	13	80	10	11	10	99	29	28	29	29	28	29	27	28	11	11	10	12	48	97
	10	38	50	31	72	7.07	65	26	3.43	89	27	70	4.83	25	61	75	71	21	46	91	86	04	47	44	14	9.67	9.1
Normalized	33.9	34.8	35.2	38.0	36.0	25.7	39.1	44.5	27%	36.6	37.8	35.9	33.4	98.3	96.1	100	99.8	94.8	99.0	93.8	97%	37.1	38.5	35.0	40.7	16.4	32.
d	5%	8%	8%	3%	2%	8%	6%	7%		%	9%	8%	4%	%	6%	%	4%	3%	1%	1%		2%	5%	9%	9%	6%	3%
Standard	1.1	2.7	0.2	1.1	1.2	3.1	3.9	0.4	11%	0.6	6.9	4%	11.2	0.7	0.7	0.7	0.5	0.2	0.8	2.5	0.7	1.5	1.9	8.4	2.4	1.7	12.
Deviation	%	%	%	%	%	%	%	%		%	%		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
7-Zip Compression - C.S.T (MIPS)	30	32	36	35	65	19	20	38	39	50	56	71	79	29	30	60	64	41	41	50	50	31	34	40	44	19	21
	27	09	17	64	35	52	29	16	24	03	91	99	26	98	93	39	42	35	02	03	02	26	93	49	90	23	48
	1	8	9	6	2	3	6	6	3	0	5	4	4	2	3	7	2	3	9	1	2	1	3	0	5	1	8
Normalized	38.1	40.5	45.6	44.9	82.4	24.6	25.6	48.1	49.5	63.1	71.8	90.8	100	37.8	39.0	76.2	81.2	52.1	51.7	63.1	63.1	39.4	44.0	51.0	56.6	24.2	27.
d	9%	%	4%	7%	5%	3%	1%	5%	1%	2%	%	3%	%	3%	3%	%	8%	7%	6%	2%	1%	4%	7%	8%	5%	6%	1%
Standard	0.8	0.8	0.5	1.4	0.4	0.6	0.2	0.7	0.6	0.7	0.2	0.3	0.2	1%	1.2	1.1	0.2	2%	1.7	1%	0.7	0.4	0.2	1%	0.7	0.4	0.4
Deviation	%	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%		%		%	%	%		%	%	%

Phoronix Test Suite

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Stockfi	16	17	18	17	36	**10**	11	22	22	24	27	36	**41**	13	12	29	31	19	17	22	22	16	19	18	21	11	12
sh -	12	53	15	69	38	**87**	67	62	76	33	91	33	**24**	55	68	92	78	36	24	82	29	78	32	87	20	17	75
Total	32	01	00	90	21	**37**	31	71	41	87	03	17	**16**	64	92	09	90	40	37	56	20	65	34	34	58	20	26
Time	23	66	92	51	28	**24**	85	44	45	55	17	85	**95**	58	81	62	19	26	52	99	15	33	86	16	31	15	00
(Nodes/																											
Normalize	39.0	42.5	44.0	42.9	88.2	26.3	28.3	54.8	55.2	59.0	67.6	88.0	100	32.8	30.7	72.5	77.0	46.9	41.8	55.3	54.0	40.7	46.8	45.7	51.4	27.0	30.
d	9%	1%	1%	2%	2%	7%	%	6%	%	1%	7%	9%	%	7%	7%	5%	8%	5%	1%	5%	5%	%	5%	6%	2%	9%	2%
Standard	1.2	1.8	0.5	2%	2.1	2.3	1%	1.1	1%	1.2	0.2	0.4	2.4	3.1	1%	0.2	0.7	0.6	1.4	1.8	1%	1%	2.5	1.2	0.4	0.9	0.7
Deviation	%	%	%		%	%		%		%	%	%	%	%		%	%	%	%	%			%	%	%	%	%
asmFis	16	18	18	18	34	11	11	23	23	25	29	36	**41**	14	14	32	34	21	19	27	25	17	19	20	22	**11**	12
h -	53	17	25	61	32	24	79	74	38	60	29	78	**88**	75	48	26	58	12	98	01	22	26	86	32	29	**05**	55
1.H.M.2.	41	21	45	82	21	98	53	79	21	98	85	88	**04**	68	02	99	15	85	18	41	94	88	49	59	99	**12**	86
D	65	61	20	14	39	21	86	07	53	54	06	05	**58**	89	29	77	41	57	80	81	84	90	28	13	52	**54**	09
(Nodes/																											
s)																											
Normalize	39.4	43.3	43.5	44.4	81.9	26.8	28.1	56.7	55.8	61.1	69.9	87.8	100	35.2	34.5	77.0	82.5	50.4	47.7	64.5	60.2	41.2	47.4	48.5	53.2	26.3	29.
d	8%	9%	9%	6%	5%	6%	6%	%	3%	5%	6%	4%	%	4%	8%	5%	7%	5%	1%	%	4%	3%	3%	3%	5%	9%	9%
Standard	0.7	2.5	0.7	3.1	0.7	2%	3.3	1.4	1.1	1.9	0.4	0.8	1.2	0.7	1.1	0.9	3.1	1.4	1.5	1.1	0.8	1.9	3.1	1.5	2.2	3.4	3.4
Deviation	%	%	%	%	%		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Swet -	63	69	**56**	66	59	62	68	72	65	69	82	71	80	80	**89**	71	75	82	88	84	82	63	74	73	80	64	74
Averag	64	61	**76**	84	05	98	88	57	78	64	54	85	32	54	**29**	70	02	52	32	38	87	97	99	65	49	75	26
e	98	33	**68**	72	29	06	51	57	27	14	92	06	51	95	**51**	96	21	73	02	62	21	11	36	87	22	58	73
(Operat	86	92	**83**	58	24	98	43	93	36	15	49	67	55	78	**58**	49	60	14	89	57	31	04	32	28	50	75	24
ions/se	5	5	**0**	6	9	5	3	3	1	5	6	8	5	1	**6**	8	0	3	6	4	2	2	5	3	0	9	7
Normalize	71.2	77.9	63.5	74.8	66.1	70.5	77.1	81.2	73.6	77.9	92.4	80.4	89.9	90.2	100	80.3	84.0	92.4	98.9	94.5	92.8	71.6	83.9	82.4	90.1	72.5	83.
d	8%	6%	7%	6%	3%	3%	4%	8%	7%	9%	5%	6%	5%	1%	%	1%	2%	2%	1%	%	1%	4%	8%	9%	4%	2%	7%
Standard	2.3	0.5	13.5	1.1	2.3	1.2	0.4	1.6	0.1	1.1	0.6	1.1	2%	2%	1.1	4%	1.7	1.3	0.6	2.4	1.9	1%	0.4	1.5	0.5	3%	1.5
Deviation	%	%	%	%	%	%	%	%	%	%	%	%			%		%	%	%	%	%		%	%	%		%
ebizzy -	40	52	42	39	85	83	80	54	51	53	**53**	10	**12**	30	29	38	35	40	39	38	41	49	57	54	54	82	78
P.T.S.v.	29	47	04	44	98	04	97	42	17	71	**68**	65	**75**	48	67	30	68	27	37	77	61	42	01	22	82	49	89
2.1	85	72	53	33	53	7	1	14	94	5	**1**	28	**23**	82	90	62	71	55	53	43	73	29	83	3	2	2	5
(Record												1	**0**														
s/s)																											
Normalize	31.6	41.1	32.9	30.9	67.4	6.51	6.35	42.6	40.1	4.21	4.21	83.5	100	23.9	23.2	30.0	27.9	31.5	30.8	30.4	32.6	38.7	44.7	4.25	4.3	6.47	6.1
d	%	5%	7%	3%	3%	%	%	8%	3%	%	%	4%	%	1%	7%	4%	8%	8%	8%	1%	4%	6%	1%	%	%	%	%
Standard	2.7	0.2	2.2	3.9	3.7	0.4	0.7	5.3	4.6	1.8	1.9	2.6	1%	0.7	7.7	1.3	9.2	5.7	2.7	2%	6.1	0.2	2.5	2%	0%	0.7	5.1
Deviation	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%	%	%	%		%	%	%			%	%

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Timed ImageMagick Compilation - Time To Compil			47.02	**47.47**				44.73	42.42	34.94	31.40	30.19	**26.01**	45.94	46.91			36.33	37.79	32.69	33.07											
Normalized			54.38%	53.87%				57.17%	60.28%	73.18%	81.43%	84.70%	98.31%	55.66%	54.51%			70.38%	67.66%	78.26%	77.32%											
Standard Deviation			1.4%	0.4%				0.3%	0.8%	0.8%	0.2%	0.7%	0.2%	0.3%	0.3%			0.3%	0.3%	0.3%	0.3%											
Timed Linux Kernel Compilation - Time To Compil	11 7.02	10 8.17	10 5.94	10 8.80	56.38	**17 8.72**	16 9.15	86.20	86.83	73.49	62.27	50.74	**45.10**	12 1.84	12 7.86	59.33	55.85	87.73	95.46	73.39	75.42	11 3.19	98.17	88.85	79.31	17 7.86	15 7.2
Normalized	37.43%	40.49%	41.34%	40.20%	77.63%	24.51%	25.89%	50.81%	50.42%	59.66%	70.33%	86.32%	97.10%	35.96%	34.26%	73.87%	78.49%	49.95%	45.86%	59.66%	58.07%	38.79%	44.62%	49.33%	55.29%	24.63%	27.5
Standard Deviation	1.4%	1.3%	1.4%	1.2%	3.1%	1%	0.9%	2%	2%	2.3%	1.4%	2.8%	1.1%	1.1%	1%	3.5%	2.9%	1.7%	1.5%	1.9%	2%	1.4%	1.1%	1.6%	1.3%	0.9%	0.9
Timed LLVM Compilation - Time To Compil	75 5.63	70 7.10	66 5.45	68 7.32	34 6.53		11 41	58 4.43	56 9.63	45 4.53	39 7.69	30 1.66	**27 4.13**	73 9.04	76 7.05	35 5.95	32 7.92	53 2.38	56 7.45	44 1.07	44 7.34	71 7.25	63 7.17	53 3.19	48 6.09	**11 96**	10 73
Normalized	36.23%	38.77%	41.19%	39.88%	79.11%		24.03%	46.91%	48.11%	60.33%	68.99%	90.86%	100%	37.09%	35.74%	77.09%	83.62%	51.48%	48.31%	62.11%	61.29%	38.29%	43.09%	51.48%	56.31%	22.96%	25.6
Timed PHP Compilation - Time To Compil	74.02	68.77	73.17	73.50	59.86	10 4.37	99.79	63.27	64.39	52.97	45.12	46.09	**40.67**	68.27	68.90	50.23	47.32	52.55	53.92	48.45	49.08	71.09	62.46	53.74	48.02	**10 4.46**	92 80
Normalized	54.38%	58.41%	54.99%	54.69%	67.16%	38.51%	40.26%	63.56%	62.48%	75.86%	89.16%	87.29%	98.81%	58.87%	58.38%	80.06%	84.97%	76.55%	74.56%	82.97%	81.99%	56.56%	64.38%	74.89%	83.77%	38.48%	43.2
Standard Deviation	0.5%	1.9%	0.6%	1%	0.5%	0.2%	0.4%	0.7%	0.8%	0.9%	0.4%	0.3%	0.3%	0.5%	0%	0.3%	0.1%	0.1%	0.3%	0.3%	0.3%	0.7%	0.9%	0.6%	0.6%	0.8%	0.5

Phoronix Test Suite

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C-Ray - Total Time - 4.1.R.P.P (sec)	11 9.2 9	10 9.9 5	11 0.5 0	11 2.3 7	51. 38	17 7.7 0	16 5.1 4	81. 73	86. 34	87. 00	73. 60	55. 29	49. 21	16 2.3 2	16 5.2 0	73. 26	68. 08	11 3.3 1	12 4.4 2	91. 38	95. 98	11 8.3 6	10 1.3 2	10 9.8 9	97. 51	17 4.0 3	15 3.1 2
Normalized	41.1	44.6	44.4	43.6	95.5	27.6	29.7	60.0	56.8	56.4	66.7	88.7	99.7	30.2	29.7	67.0	72.1	43.3	39.4	53.7	51.1	41.4	48.4	44.6	50.3	28.2	32.
Standard Deviation	5% 0%	5% 0.1 %	3% 0.9 %	9% 0.7 %	4% 1.9 %	3% 0%	3% 0.1 %	6% 0.2 %	6% 0%	3% 0%	% 0.1 %	9% 0.1 %	6% 0%	4% 0%	2% 0%	1% 0%	1% 0.1 %	2% 0%	6% 0.1 %	2% 0%	5% 0%	8% 0.1 %	5% 0.1 %	7% 0%	4% 0.1 %	1% 0%	6% 0.1
Parallel BZIP2 Compression - 2.F.C (sec)	5.9 3	5.4 8	5.0 7	5.0 0		9.5 6	9.1 4	4.4 7	4.4 1	3.6 9	3.1 4			7.0 8	6.8 9	3.4 1	3.1 8	5.1 8	5.3 2	3.9 7	4.1 1	5.7 9	5.0 0	4.7 4	4.2 4	9.6 2	8.5 3
Normalized	52.9	57.3	61.9	62.8		32.8	34.3	70.2	71.2	85.0	100			44.3	45.5	92.0	98.7	60.6	59.0	79.0	76.4	54.2	62.8	66.2	74.0	32.6	36.
Standard Deviation	5% 0.4 %	% 0.8 %	3% 3%	% 1.2 %		5% 0.2 %	5% 0.4 %	5% 0.9 %	% 1.3 %	9% 0.8 %	% 1.2 %			5% 0.6 %	7% 0.3 %	8% 0.5 %	4% 1.2 %	2% 0.9 %	2% 1% %	9% 0.5 %	% 1.3 %	3% 0.9 %	% 0.6 %	4% 0.5 %	6% 3.3 %	4% 1.2 %	1% 0.4 %
LLVM Test Suite - Time To Run (sec)	25 7.6 8	23 6.8 6	22 7.2 5	21 1.4 7	27 1.6 9	26 1.3 5	24 0.7 2	18 9.8 3	21 3.6 8	20 8.6 8	17 5.3 2	19 8.1 7	17 5.3 9	17 4.2 0	15 7.8 4	22 1.8 7	21 7.1 4	16 7.6 1	15 6.8 1	16 4.4 0	16 7.1 7	25 4.1 0	21 6.4 8	22 8.3 6	20 2.6 3	25 6.9 3	22 3.0 4
Normalized	60.8	66.2	69%	74.1	57.7	60%	65.1	82.6	73.3	75.1	89.4	79.1	89.4	90.0	99.3	70.6	72.2	93.5	100	95.3	93.8	61.7	72.4	68.6	77.3	61.0	70.
Standard Deviation	5% 0.4 %	% 0.2 %	0.4	5% 0.5 %	2% 0.4 %	0.3 %	4% 0.4 %	1% 0.4 %	9% 0.2 %	4% 0.2 %	4% 0.3 %	3% 0.2 %	1% 0.2 %	2% 0.7 %	5% 0.4 %	8% 0.1 %	2% 0.1 %	6% 0.8 %	% 0.6 %	8% 0.5 %	% 0.5 %	1% 0.9 %	4% 0.4 %	7% 0.5 %	9% 0.7 %	3% 0.6 %	2% 0.3
POV-Ray - Trace Time (sec)			70. 74	73. 05				51. 58	53. 45	50. 70	43. 20	32. 95	29. 24	86. 73	92. 86			60. 86	69. 45	52. 56	53. 25						
Normalized			41.1	39.8				56.4	54.5	57.4	67.4	88.4	99.6	33.5	31.3			47.8	41.9	55.4	54.7						
Standard Deviation			8% 2.3 %	8% 1.7 %				8% 0.3 %	% 0%	6% 0.1 %	3% 0.1 %	1% 0.3 %	2% 0.1 %	9% 0.1 %	7% 0.1 %			6% 0.2 %	4% 0.1 %	2% 0.3 %	% 0.1 %						
Primesieve - 1.P.N.G (sec)	38. 55	35. 38	34. 98	36. 49	14. 84	53. 17	49. 39	24. 78	25. 65	25. 37	21. 42	16. 19	14. 35	45. 58	48. 23	19. 57	18. 31	32. 00	35. 73	27. 08	27. 73	34. 92	29. 97	31. 90	28. 40	52. 64	45. 72
Normalized	37.1	40.5	40.9	39.2	96.5	26.9	29.0	57.8	55.8	56.4	66.9	88.5	99.8	31.4	29.7	73.2	78.2	44.7	40.1	52.9	51.6	41.0	47.8	44.9	50.4	27.2	31.
Standard Deviation	7% 0.3 %	% 0.1 %	7% 1.2 %	7% 1%	6% 0.2 %	5% 0.2 %	1% 0.2 %	3% 0.2 %	7% 0.3 %	8% 0.2 %	% 0.2 %	1% 0.1 %	6% 0.3 %	4% 0.1 %	1% 0.3 %	2% 0.1 %	6% 0.7 %	8% 0.2 %	1% 0.2 %	2% 0.4 %	8% 0.7 %	4% 0.2 %	1% 0.2 %	2% 0.3 %	6% 0.2 %	2% 1.3 %	4% 0.2

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Smallpt - G.I.R.1.S (sec)	18.34	16.89	15.88	16.43	**7.55**	**27.16**	25.32	12.67	13.39	13.34	11.28	8.95	7.80	22.08	22.63	11.30	10.49	15.52	17.03	12.70	13.31	18.23	15.60	16.69	14.98	26.82	23.38
Normalized	41.1	44.7	47.5	45.9	100	27.8	29.8	59.5	56.3	56.6	66.9	84.3	96.7	34.1	33.3	66.8	71.9	48.6	44.3	59.4	56.7	41.4	48.4	45.2	50.4	28.1	32.[illegible]
d	7%	%	4%	5%	%	%	2%	9%	9%	%	3%	6%	9%	9%	6%	1%	7%	5%	3%	5%	2%	2%	%	4%	%	5%	9%
Standard	0.1	0.1	2.5	3%	0.4	0%	0.1	0.4	0.1	0.2	0.1	0.4	0.4	0.3	0.5	9.8	5.9	0.4	0.1	0.9	0.1	0.1	0.1	0.5	0%	0.6	0.1
Deviation	%	%	%		%		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%		%	%
Y-Cruncher - C.5.P.D (sec)	53.63	49.13	48.39	50.57	24.56	**75.79**	70.83	38.23	37.94	24.86	22.77	24.43	21.43	35.78	38.68	15.70	**15.52**	28.62				51.61	44.48	29.40	27.08	75.55	65.62
Normalized	28.9	31.5	32.0	30.6	63.1	20.4	21.9	40.6	40.9	62.4	68.1	63.5	72.4	43.3	40.1	98.8	100	54.2				30.0	34.8	52.7	57.3	20.5	23.[illegible]
d	4%	9%	7%	9%	9%	8%	1%	%	1%	3%	6%	3%	2%	8%	2%	5%	%	3%				7%	9%	9%	1%	4%	5%
Standard	0%	0.1	0.6	0.6	1.9	0.1	0.1	0.1	0.2	0%	0.1	0.1	0.2	0.1	1.9	0.1	0.2	0%				0.1	0%	0.2	0.3	0.4	0%
Deviation		%	%	%	%	%	%	%	%		%	%	%	%	%	%	%					%		%	%	%	
AOBench - 2048 x 2048 - Total Time	46.10	42.52	46.67	43.34	**48.79**	46.23	42.83	39.36	44.85	42.32	35.83	40.14	35.82	35.41	31.95	37.49	37.34	33.99	**31.87**	33.24	33.95	46.14	39.48	40.37	35.73	45.03	39.74
Normalized	69.1	74.9	68.2	73.5	65.3	68.9	74.4	80.9	71.0	75.3	88.9	79.4	88.9	90%	99.7	85.0	85.3	93.7	100	95.8	93.8	69.0	80.7	78.9	89.2	70.7	80.[illegible]
d	3%	5%	9%	3%	2%	4%	1%	7%	6%	1%	5%	%	7%		5%	1%	5%	6%	%	8%	7%	7%	2%	4%	%	8%	%
Standard	0%	0%	2.1	0.3	0%	0.3	0.4	0.4	0.1	0%	0%	0.1	0%	0%	0.4	0.1	0.1	0.1	0%	0%	0.1	0.1	0%	1.2	0.3	0.1	0.1
Deviation			%	%		%	%	%	%			%			%	%	%	%			%	%		%	%	%	
Bullet Physics Engine -	2.87	2.65	2.87	2.69	**3.00**	2.86	2.67	2.43	2.76	2.57	2.18	2.43	2.17	2.27	**2.05**	2.38	2.37	2.17	**2.05**	2.14	2.19	2.84	2.43	2.43	2.15	2.81	2.4[illegible]
Normalized	71.4	77.3	71.4	76.2	68.3	71.6	76.7	84.3	74.2	79.7	94.0	84.3	94.4	90.3	100	86.1	86.5	94.4	100	95.7	93.6	72.1	84.3	84.3	95.3	72.9	83.[illegible]
d	3%	6%	3%	1%	3%	8%	8%	6%	8%	7%	4%	6%	7%	1%	%	3%	%	7%	%	9%	1%	8%	6%	6%	5%	5%	7%
Standard	0.2	0.2	0%	0.5	0%	0.1	1.2	0.7	0.1	0%	0%	0%	0.1	0.3	0.1	0.2	0.1	0.3	0.5	0.2	0.2	0.2	0.1	0%	0.4	1%	0.1
Deviation	%	%		%		%	%	%	%				%	%	%	%	%	%	%	%	%	%	%		%		%
Gzip Compression - L.S.T.A.T.t.g (sec)	44.91	41.38	**45.19**	42.58	43.80	40.81	37.59	34.92	39.84	41.47	35.65	39.26	34.71	31.91	28.80	34.55	33.64	31.09	**28.70**	30.09	29.77	41.76	35.17	39.32	34.36	39.88	35.79
Normalized	63.9	69.3	63.5	67.4	65.5	70.3	76.3	82.1	72.0	69.2	80.5	73.1	82.6	89.9	99.6	83.0	85.3	92.3	100	95.3	96.4	68.7	81.6	72.9	83.5	71.9	80.[illegible]
d	1%	6%	1%	%	3%	3%	5%	9%	4%	1%	%	%	9%	4%	5%	7%	2%	1%	%	8%	1%	3%	%	9%	3%	7%	9%
Standard	0.4	0.6	1.8	0.1	2%	0.3	0.3	1%	1.3	2.2	0.3	1.8	0.2	3.9	1.8	0.3	0%	2.3	3.8	2.1	0.7	2.2	2%	1.9	0.3	0.5	1.8
Deviation	%	%	%	%		%	%		%	%	%	%	%	%	%	%		%	%	%	%	%		%	%	%	%

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LZMA Compression - 2.F.C (sec)	29	27	29	27	**32**	30	28	26	28	26	22	25	22	22	20	23	23	20	**19**	20	20	29	25	25	22	30	26
	7.51	5.96	7.02	8.67	**1.95**	3.55	6.89	0.02	1.11	3.58	6.96	7.58	6.56	0.82	2.75	5.72	4.76	8.62	**7.53**	2.29	3.88	1.21	2.36	1.50	5.64	0.59	7.8
Normalized	66.3	71.5	66.5	70.8	61.3	65.0	68.8	75.9	70.2	74.9	87.0	76.6	87.1	89.4	97.4	83.8	84.1	94.6	100	97.6	96.8	67.8	78.2	78.5	87.5	65.7	73.
Standard Deviation	9%	8%	%	8%	5%	7%	5%	7%	7%	4%	3%	9%	9%	5%	3%	%	4%	8%	%	5%	9%	3%	7%	4%	4%	1%	4%
	0.3	0.1	0.3	0.2	0.3	0.3	0.5	0.7	0.3	0.2	0.3	0.3	0.4	0.2	0.4	0.7	0.4	0.3	0.4	0.1	0.2	0.3	0.9	0.3	0.3	0.4	0.3
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)	49.22	47.47	41.86	42.29	27.71	**64.94**	62.62	42.86	39.88	33.59	31.46	26.52	24.92	38.93	37.20	20.75	**20.03**	32.64	31.96	28.79	29.32	46.94	44.31	41.38	39.75	64.48	60.54
Normalized	40.6	42.2	47.8	47.3	72.2	30.8	31.9	46.7	50.2	59.6	63.6	75.5	80.3	51.4	53.8	96.5	100	61.3	62.6	69.5	68.3	42.6	45.2	48.4	50.3	31.0	33.
Standard Deviation	9%	%	5%	6%	8%	4%	9%	3%	3%	3%	7%	3%	8%	5%	4%	3%	%	7%	7%	7%	2%	7%	%	1%	9%	6%	9%
	0.5	0.4	1.1	0.6	1.8	0.4	1.2	0.2	0.2	0.1	0.3	0.4	0.3	1.1	1%	0.4	1%	0.6	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.2	0.6
	%	%	%	%	%	%	%	%	%	%	%	%	%	%		%		%	%	%	%	%	%	%	%	%	%
Zstd Compression - C.u.1.0.3.s.i.i.C.L.1 (sec)	35.85	34.74	29.89	30.23	18.11	**46.30**	44.52	31.24	28.72	23.34	22.78	19.88	18.16	26.45	25.72	15.50	**15.24**	23.52	23.39	25.47	25.27	34.26	32.78	28.47	27.62	46.01	43.57
Normalized	42.5	43.8	50.9	50.4	84.1	32.9	34.2	48.7	53.0	65.3	66.9	76.6	83.9	57.6	59.2	98.3	100	64.8	65.1	59.8	60.3	44.4	46.4	53.5	55.1	33.1	34.
Standard Deviation	1%	7%	9%	1%	5%	2%	3%	8%	6%	%	%	6%	2%	2%	5%	2%	%	%	6%	4%	1%	8%	9%	3%	8%	2%	8%
	0.9	0.5	0.7	0.7	0.2	0.2	0.9	2.6	0.4	1.4	0.7	0.1	0.1	0.7	0.8	0.6	0.3	0.3	0.6	0.2	0.3	0.2	0.4	0.5	0.2	0.8	0.1
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
dcraw - R.T.P.I.C (sec)	51.31	47.56	51.10	48.00	**54.29**	51.42	47.79	43.41	50.06	48.00	40.66	45.52	40.73	36.58	32.87	38.87	38.72	35.05	**32.86**	34.24	35.23	51.10	44.06	45.54	40.32	50.08	44.41
Normalized	64.0	69.0	64.3	68.4	60.5	63.9	68.7	75.7	65.6	68.4	80.8	72.1	80.6	89.8	99.9	84.5	84.8	93.7	100	95.9	93.2	64.3	74.5	72.1	81.5	65.6	73.
Standard Deviation	4%	9%	1%	6%	3%	1%	6%	%	4%	6%	2%	9%	8%	3%	7%	4%	7%	5%	%	7%	7%	1%	8%	6%	%	2%	9%
	0.7	0.1	0.2	0.6	0.1	0.1	0.3	0.5	0.3	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0%	1.1	0.5	0.2	0.2	0.2	0.5	0.2
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%	%	%	%	%
LAME MP3 Encoding - WAV To MP3	39.01	35.85	38.88	36.43	**41.13**	38.96	36.05	33.06	37.76	31.32	26.52	29.70	26.52	26.68	**24.03**	27.85	27.79	25.63	**24.03**	25.06	25.61	38.95	33.28	29.69	26.20	38.08	33.48
Normalized	61.6	67.0	61.8	65.9	58.4	61.6	66.6	72.6	63.6	76.7	90.6	80.9	90.6	90.0	100	86.2	86.4	93.7	100	95.8	93.8	61.6	72.2	80.9	91.7	63.1	71.
Standard Deviation	%	3%	1%	6%	2%	8%	6%	9%	4%	2%	1%	1%	1%	7%	%	8%	7%	6%	%	9%	3%	9%	1%	4%	2%	%	7%
	0.3	0.1	0.1	0.1	0%	0.3	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0%	0%	0.1	0.1	0%	0.2	0.6	0.3	0.1	0.1	0.3	0.1
	%	%	%	%		%	%	%	%	%	%	%	%	%	%			%	%		%	%	%	%	%	%	%

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Phoronix Test Suite

eSpeak Speech Engine - T.T.S.S	36.07	33.53	35.89	33.97	**38.25**	36.17	33.33	31.05	35.05	32.77	28.57	31.88	28.31	25.34	**23.22**	27.12	26.72	24.64	23.26	24.15	24.18	36.04	31.55	31.96	28.05	35.50	31 63
Normalized	64.3	69.2	64.7	68.3	60.7	64.2	69.6	74.7	66.2	70.8	81.2	72.8	82.0	91.6	100	85.6	86.9	94.2	99.8	96.1	96.0	64.4	73.6	72.6	82.7	65.4	73
Standard Deviation	7%	5%	%	5%	1%	%	7%	8%	5%	6%	7%	4%	2%	3%	%	2%	%	4%	3%	5%	3%	3%	%	5%	8%	1%	1%
	0.7	1.4	0.8	1.8	0.7	1%	0.9	0.8	1%	0.6	0.4	0.4	0.1	1.9	0.8	0.3	0.1	0.5	0.5	0.2	0.6	0.9	1%	0.4	0.5	0.5	0.4
	%	%	%	%	%		%	%		%	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%	%
FFmpeg - H.2.H.T.N.D (sec)	5.53	4.88	7.98	7.86	7.92	6.24	5.62	7.61	6.22	7.60	5.18	7.25	4.98	4.94	4.85	**13.20**	9.23	4.35	4.17	5.07	4.78	5.39	4.42	4.89	**4.12**	6.19	5.2 2
Normalized	74.5	84.4	51.6	52.4	52.0	66.0	73.3	54.1	66.2	54.2	79.5	56.8	82.7	83.4	84.9	31.2	44.6	94.7	98.8	81.2	86.1	76.4	93.2	84.2	100	66.5	78
Standard Deviation	%	3%	3%	2%	2%	3%	1%	4%	4%	1%	4%	3%	3%	%	5%	1%	4%	1%	%	6%	9%	4%	1%	5%	%	6%	3%
	1.6	0.8	1.3	1.4	0.9	1.3	0.7	1.6	1.7	0.7	0.6	0.5	0.7	1.6	0.9	0.9	0.6	1%	1.3	1.4	1.3	2.1	1.6	0.3	1.4	0.8	0.9
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%	%	%	%	%	%	%
GnuPG - 2.F.E (sec)	13.79	12.72	13.79	12.92	**14.62**	13.80	12.79	11.66	13.39	11.28	9.55	10.70	9.55	9.47	**8.54**	10.09	10.07	9.13	8.56	8.88	9.07	13.76	11.80	10.69	9.47	14.25	11 86
Normalized	61.9	67.1	61.9	66.1	58.4	61.8	66.7	73.2	63.7	75.7	89.4	79.8	89.4	90.1	100	84.6	84.8	93.5	99.7	96.1	94.1	62.0	72.3	79.8	90.1	59.9	72
Standard Deviation	3%	4%	3%	%	1%	8%	7%	4%	8%	1%	2%	1%	2%	8%	%	4%	1%	4%	7%	7%	6%	6%	7%	9%	8%	3%	1%
	0.2	0.1	0.2	0.8	0.2	0.1	0.3	1.1	0.3	0.3	0.4	0.2	0.3	0.3	0.3	0.7	0.8	0.3	0.2	0.2	0.6	0.2	0.3	0.3	0.6	0.7	0.3
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Hackbench - 32 - Process (sec)	11 4.53	10 6.62	86.05	88.95	50.04	15 2.87	15 1.45	75.79	74.30	67.55	57.99	53.53	**43.02**	17 1.91	**17 6.52**	81.07	76.91	11 7.50	12 5.54	81.87	84.17	10 9.73	99.27	96.68	88.19	15 7.03	14 0.4 9
Normalized	37.5	40.3	49.9	48.3	85.9	28.1	28.4	56.7	57.9	63.6	74.1	80.3	100	25.0	24.3	53.0	55.9	36.6	34.2	52.5	51.1	39.2	43.3	44.5	48.7	27.4	30
Standard Deviation	6%	5%	9%	6%	7%	4%	1%	6%	%	9%	9%	7%	%	2%	7%	7%	4%	1%	7%	5%	1%	1%	4%	%	8%	%	2%
	0.1	0.5	2.1	2.7	3.1	0.1	0.8	1.2	0.9	3%	1.7	1.3	4.7	0.1	0.5	0.8	0.9	0.4	0.2	3.7	0.3	1%	0.2	1.7	3.4	0.8	3.1
	%	%	%	%	%	%	%	%	%		%	%	%	%	%	%	%	%	%	%	%		%	%	%	%	%
m-queens - Time To Solve	10 6.39	98.05	91.82	92.84	**43.50**	15 9.02	15 3.31	72.22	77.22	78.27	66.26	49.84	44.21	**16 4.44**	14 7.97	73.66	68.52	11 4.72	11 8.43	86.28	90.51	10 5.71	90.66	98.90	87.78	15 5.47	13 6.1 9
Normalized	40.8	44.3	47.3	46.8	100	27.3	28.3	60.2	56.3	55.5	65.6	87.2	98.3	26.4	29.4	59.0	63.4	37.9	36.7	50.4	48.0	41.1	47.9	43.9	49.5	27.9	31
Standard Deviation	9%	7%	8%	5%	%	6%	7%	3%	3%	8%	5%	8%	9%	5%	%	6%	9%	2%	3%	2%	6%	5%	8%	8%	6%	8%	%
	0.1	0%	0.3	0.3	0.6	0.5	9%	0.1	0%	0%	0%	0.1	0%	0%	0%	0%	0.1	0%	0.1	0%	0%	0%	0%	0%	0%	0%	0.1
	%		%	%	%	%		%				%					%		%								%
Mencoder - AVI To LAVC (sec)	19.93	18.38	20.11	18.76	**21.03**	20.25	18.89	16.90	19.41	18.88	16.05	18.04	15.96	15.32	13.84	16.25	16.13	14.91	**13.80**	14.42	14.71	19.90	17.07	17.88	15.85	20.08	17 47
Normalized	69.2	75.0	68.6	73.5	65.6	68.1	73.0	81.6	71.1	73.0	85.9	76.5	86.4	90.0	99.7	84.9	85.5	92.5	100	95.7	93.8	69.3	80.8	77.1	87.0	68.7	78
Standard Deviation	4%	8%	2%	6%	2%	5%	5%	6%	%	9%	8%	%	7%	8%	1%	2%	5%	6%	%	%	1%	5%	4%	8%	7%	3%	9%
	0.2	0.3	1.7	0.7	0.2	0.5	0.7	0.6	0.5	0.2	0.3	0.3	0.2	0.3	0.4	0.3	0.2	0.3	0.4	0.5	0.4	0.1	0.8	0.3	0.1	1.2	0.3
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

Phoronix Test Suite

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Minion - Solitair	78.68	72.83	78.91	74.54	79.67	77.07	70.83	64.70	73.22	70.74	59.89	68.60	60.76	60.25	54.73	63.10	63.76	58.79	56.33	57.65	58.40	75.81	64.71	67.98	59.71	75.96	66.07
Normalized	69.5	75.1	69.3	73.4	68.7	71.0	77.2	84.5	74.7	77.3	91.3	79.7	90.0	90.8	100	86.7	85.8	93.0	97.1	94.9	93.7	72.1	84.5	80.5	91.6	72.0	82.2
Standard Deviation	6%	5%	6%	2%	%	1%	7%	9%	5%	7%	8%	8%	8%	4%	%	4%	4%	9%	6%	3%	2%	9%	8%	1%	6%	5%	4%
	0.1	0.6	1%	0.7	0.3	1.3	0.9	1.5	0.2	0.1	0.2	2%	0.1	0.1	1%	0.6	1.3	1%	0.3	0.2	0.5	1.2	0.5	0.2	0.1	1.4	1.6
	%	%		%	%	%	%	%	%	%	%		%	%		%	%		%	%	%	%	%	%	%	%	%
N-Queens - Elapsed Time (sec)	21.43	19.74	17.48	17.88	8.47	31.94	29.77	14.45	15.53	15.34	12.98	9.7 8	8.7 1	29.69	26.75	13.06	12.14	20.74	21.33	15.68	16.33	21.28	18.22	19.38	17.22	31.34	27.52
Normalized	39.5	42.9	48.4	47.3	100	26.5	28.4	58.6	54.5	55.2	65.2	86.6	97.2	28.5	31.6	64.8	69.7	40.8	39.7	54.0	51.8	39.8	46.4	43.7	49.1	27.0	30.3
Standard Deviation	2%	1%	6%	7%	%	2%	5%	2%	4%	2%	5%	1%	4%	3%	6%	5%	7%	4%	1%	2%	7%	%	9%	%	9%	3%	8%
	0%	0%	2.3	2.3	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0.1	0%	0.1	0%	0.1	0.7	0.2	0%	0%	0%	0%	0%	0%
			%	%											%		%		%	%	%						
Perl Benchmarks - Pod2html (sec)			0.176 85 27 7	0.163 10 40 4				0.146 72 75 8	0.169 90 92 5	0.145 56 97 0	0.123 01 44 0	0.137 71 75 7	0.119 19 02 4	0.194 94 35 1	0.006 06 49 2			0.121 21 01 0	0.097 38 82 8	0.178 78 80 8	0.168 68 88 9						
Normalized			54.3	58.9				65.4	56.5	65.9	78.0	69.7	79.9	90.6	100			93.9	98.6	95.3	94.4						
Standard Deviation			2%	%				7%	4%	9%	9%	6%	3%	8%	%			9%	4%	1%	7%						
			0.7	2.6				0.2	0.9	0.1	0.4	0.3	0.4	0.7	0.6			0.2	0.7	0.4	0.5						
			%	%				%	%	%	%	%	%	%	%			%	%	%	%						
Perl Benchmarks - Interpreter			0.001 22 93 6	0.012 21 96 9				0.008 08 78 9	0.007 80 55 7	0.008 95 44 8	0.001 55 87 1	0.007 96 62 7	0.005 58 31 7	0.002 87 63 2	0.003 85 22 3			0.001 83 11 1	0.009 73 78 9	0.004 79 13 4	0.001 78 26 1						
Normalized			45.4	45.8				51.3	69.3	58.5	100	57.8	95.8	63.7	65.5			67.2	75.7	70.6	71.3						
Standard Deviation			5%	1%				6%	6%	4%	%	2%	1%	6%	6%			2%	2%	%	9%						
			0.4	0.2				0.9	0.1	0.4	0.1	5.4	0.1	7.2	10.5			4.7	7.8	13.1	8.8						
			%	%				%	%	%	%	%	%	%	%			%	%	%	%						
Radiance Benchmark - Serial (sec)	91 1.8 0	84 2.2 4	91 0.6 3	85 7.6 5	95 0.6 4	90 1.7 0	83 7.3 0	75 9.2 2	87 3.0 4	71 0.1 0	60 3.3 3	67 3.8 0	60 2.7 1	69 0.4 9	62 4.4 6	70 5.9 7	70 3.6 0	66 6.3 4	62 5.4 9	65 6.4 7	66 9.8 7	89 6.6 4	76 9.2 1	67 4.9 0	59 4.7 8	89 8.8 2	78 0.0 9
Normalized	65.2	70.6	65.3	69.3	62.5	65.9	71.0	78.3	68.1	83.7	98.5	88.2	98.6	86.1	95.2	84.2	84.5	89.2	95.0	90.6	88.7	66.3	77.3	88.1	100	66.1	76.2
Standard Deviation	3%	2%	2%	5%	7%	6%	4%	4%	3%	6%	8%	7%	8%	4%	5%	5%	3%	6%	9%	%	9%	3%	2%	3%	%	7%	5%

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Radiance Benchmark - SMP Parallel (sec)	28	26	28	29	**29**	28	26	24	27	22	18	20	**18**	21	22	23	22	21	21	21	21	28	23	20	18	28	24
	2.7	1.0	7.8	2.1	**7.2**	6.6	5.5	8.0	2.0	3.4	6.9	9.3	**6.0**	5.3	2.6	1.5	1.9	8.9	9.5	9.2	1.8	2.5	9.4	8.5	6.5	9.5	8.4
	8	0	4	2	**7**	3	5	4	4	6	4	7	**8**	7	7	2	0	5	8	4	5	3	6	1	9	2	8
Normalized	65.8%	71.3%	64.6%	63.7%	62.6%	64.9%	70.0%	75.0%	68.4%	83.2%	99.5%	88.8%	100%	86.4%	83.5%	80.3%	83.8%	84.9%	84.7%	84.8%	87.8%	65.8%	77.7%	89.2%	99.7%	64.2%	74.9%
Sample Program - P.T.S.v. 2.1 (sec)	15.47	14.22	15.51	14.58	**16.36**	15.44	14.36	13.28	14.98	13.07	11.10	12.46	11.10	13.44	12.05	14.19	13.97	12.83	12.04	12.56	12.85	15.44	13.20	12.46	**11.00**	15.19	13.29
Normalized	71.1%	77.3%	70.9%	75.4%	67.2%	71.2%	76.6%	82.8%	73.4%	84.1%	99.1%	88.2%	99.1%	81.8%	91.2%	77.5%	78.7%	85.7%	91.3%	87.5%	85.6%	71.2%	83.3%	88.2%	100%	72.4%	82.1%
Standard Deviation	1%	6%	2%	5%	4%	4%	0%	3%	3%	6%	0%	8%	0%	5%	9%	2%	4%	4%	6%	8%	0%	4%	3%	8%	0%	2%	7%
	0.2	0.1	0.6	0.5	0.3	0.1	0.2	0.3	0.2	0.0%	0.0%	0.1	0.0%	1.2	0.8	0.4	0.5	0.4	0.7	0.6	0.8	0.1	0.0%	0.0%	0.1	0.4	0.1
Sudoku - Total Time (sec)	16.90	15.12	17.08	16.17	**17.67**	16.72	15.13	14.62	15.89	14.55	11.74	13.84	11.78	9.30	**8.43**	10.99	9.53	9.04	8.46	8.92	9.04	16.90	13.93	13.87	11.67	16.30	14.05
Normalized	49.8%	55.7%	49.3%	52.1%	47.7%	50.4%	55.7%	57.6%	53.0%	57.9%	71.8%	60.9%	71.5%	90.6%	100%	76.7%	88.4%	93.2%	99.6%	94.5%	93.2%	49.8%	60.5%	60.7%	72.2%	51.7%	60.9%
Standard Deviation	8%	5%	6%	3%	1%	2%	2%	6%	5%	4%	1%	1%	6%	5%	0%	1%	6%	5%	5%	1%	5%	8%	2%	8%	4%	2%	
	1.6	0.1	0.1	0.1	0.1	0.6	0.1	0.4	0.1	0.2	0.1	0.1	0.0%	0.2	0.3	0.6	0.5	0.4	0.2	0.2	0.4	0.1	0.1	0.1	0.0%	0.6	0.2
Tachyon - Total Time	8.74	7.93	7.45	7.69	3.35	**12.55**	12.08	5.77	6.06	5.48	4.65	3.68	**3.10**	9.00	8.96	4.11	3.82	6.28	6.69	4.95	5.13	8.29	7.03	6.92	6.21	12.44	10.77
Normalized	35.4%	39.0%	41.6%	40.3%	92.5%	24.7%	25.6%	53.7%	51.1%	56.5%	66.6%	84.2%	100%	34.4%	34.6%	75.4%	81.1%	49.3%	46.3%	62.6%	60.4%	37.3%	44.1%	44.8%	49.9%	24.9%	28.8%
Standard Deviation	7%	9%	1%	1%	4%	0%	6%	3%	6%	7%	7%	4%	0%	4%	0%	3%	5%	6%	4%	3%	3%	9%	0%	0%	2%	2%	8%
	0.4	0.6	2.3	3.2	0.9	0.7	0.2	0.7	0.8	0.1	0.7	1.3	0.1	0.2	0.2	0.4	0.1	0.3	0.1	0.1	0.2	0.5	0.9	0.2	0.6	0.8	0.4
OpenSSL - R.4.b.P (Signs/sec)	11	12	14	13	29	**77**	83	16	15	21	25	33	**37**	13	13	30	32	19	18	24	23	11	13	16	18	78	89
	53	50	18	72	14	**1.63**	0.57	95	86	16	02	24	**54**	78	51	65	92	78	46	68	84	57	51	74	86	8.27	5.43
Normalized	30.7%	33.3%	37.7%	36.5%	77.6%	20.5%	22.1%	45.1%	42.2%	56.3%	66.6%	88.5%	100%	36.7%	35.9%	81.6%	87.6%	52.7%	49.1%	65.7%	63.5%	30.8%	35.9%	44.6%	50.2%	21%	23.1%
Standard Deviation	1%	1%	9%	6%	2%	6%	3%	4%	5%	7%	5%	5%	0%	1%	9%	4%	9%	0%	9%	5%	1%	3%	9%	0%	4%		5%
	0%	0%	1.8	1.9	0.1	0%	0.1	0.1	0.1	0.0%	0.0%	0.1	0.0%	0.3	0.4	0.1	0.1	0.3	0.2	0.3	0.2	0.1	0.1	0.0%	0.1	0.0%	0.0%

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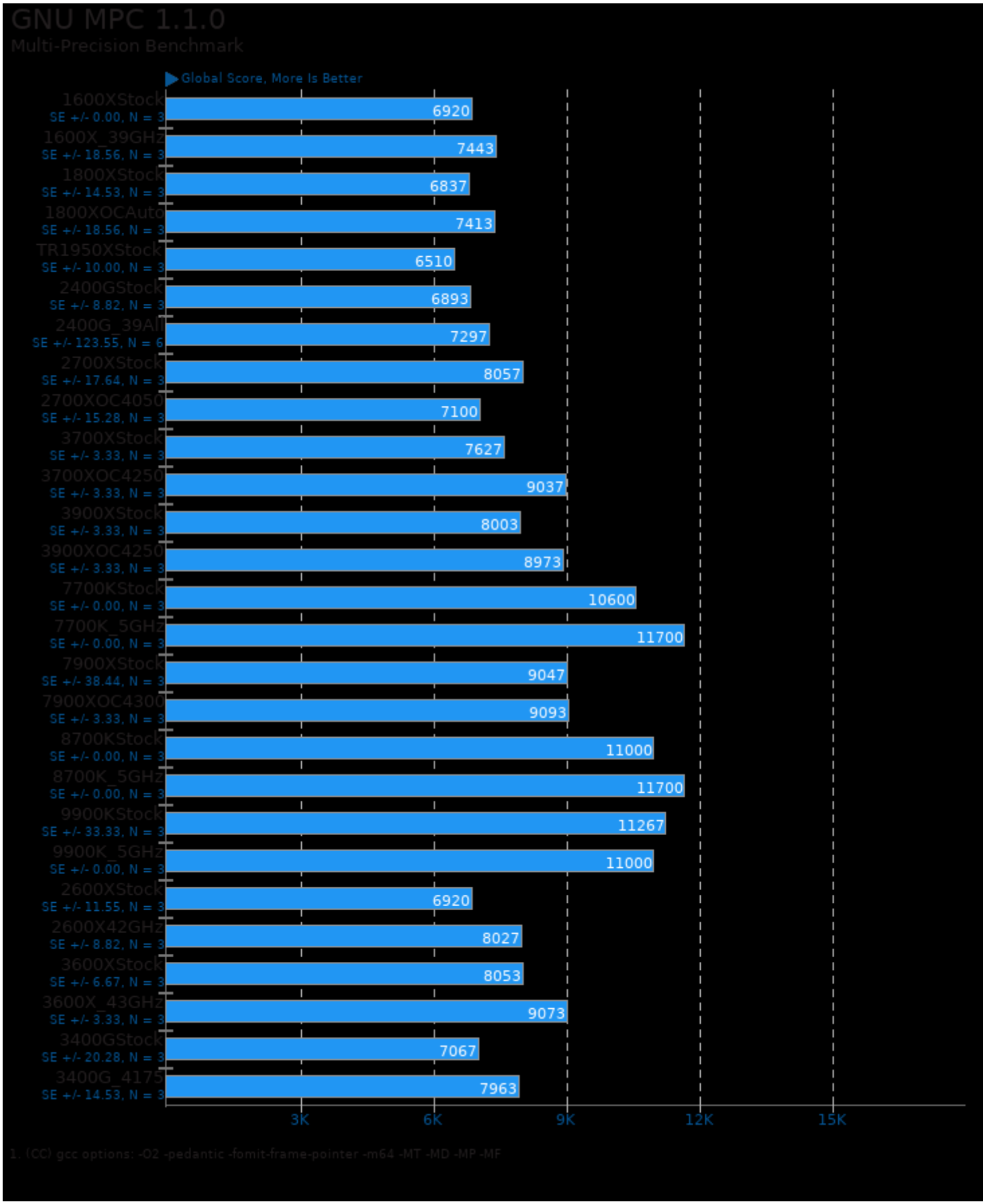
Phoronix Test Suite

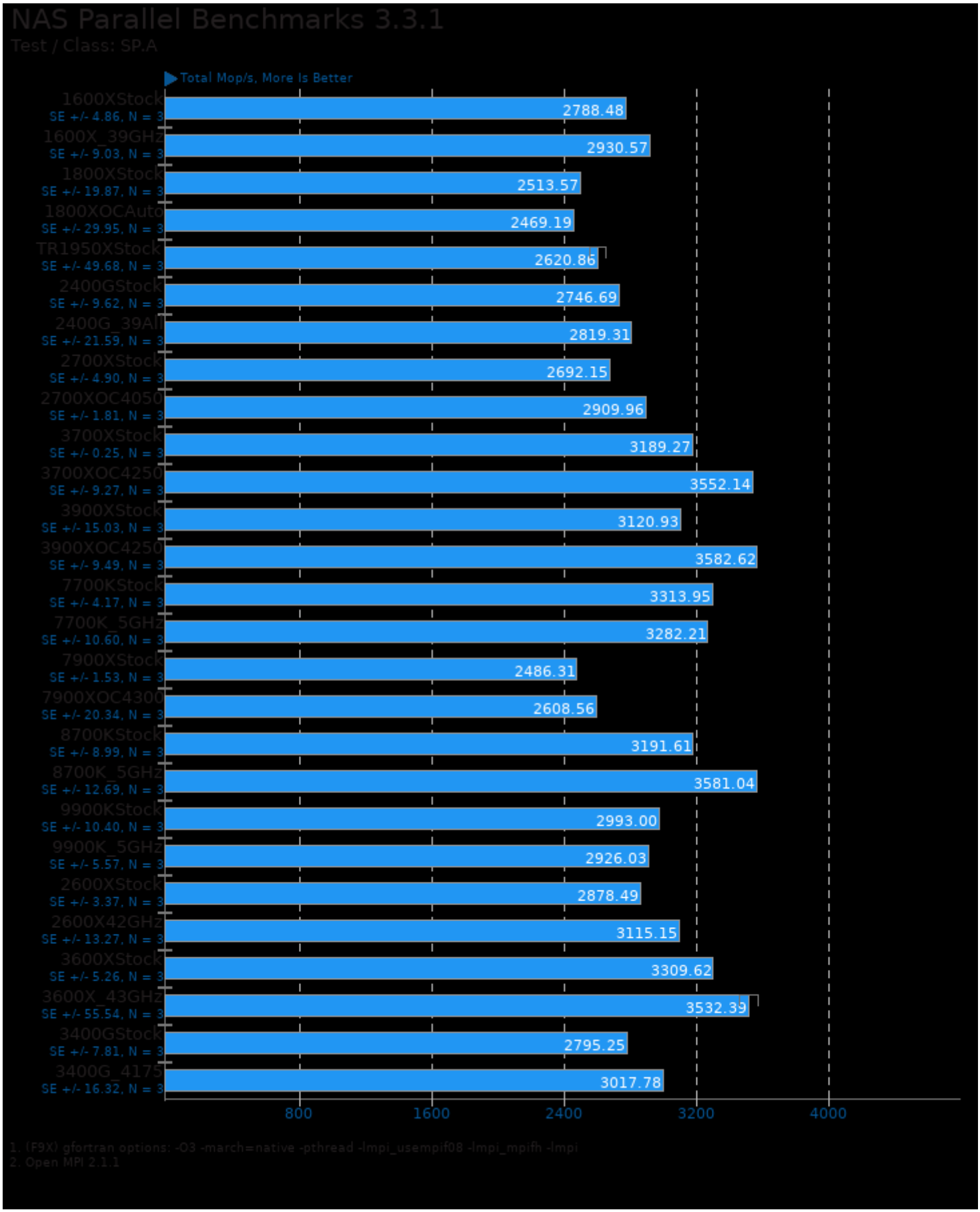
Aircrack-ng - P.T.S.v. 2.1 (k/s)			12 46 7	12 06 8				14 75 2	13 97 0	27 26 2	32 25 9	42 95 4	48 37 1	17 78 7	18 53 8			25 49 1	28 28 8	33 87 0	35 31 2							
Normalized			25.7	24.9				30.5	28.8	56.3	66.6	88.8	100	36.7	38.3			52.7	58.4	70.0	73%							
Standard Deviation			7% 2.4 %	5% 3.4 %				% 0.5 %	8% 0%	6% 0.1 %	9% 0%	% 0.5 %	% 0.2 %	7% 0.2 %	2% 0.5 %			% 0.2 %	8% 0.3 %	2% 0.4 %	0.1 %							
System Libxml2 Parsing - 112 MB	86 63 8	80 04 5	86 79 5	82 26 0	91 59 1	86 91 8	79 73 1	73 77 6	84 59 2	77 00 4	65 14 1	73 37 8	65 07 2	55 86 2	49 43 8	57 04 8	57 07 0	52 21 6	49 26 8	50 98 5	52 08 1	86 83 9	74 21 6	72 59 0	64 49 4	84 03 7	75 47 1
Normalized	56.8	61.5	56.7	59.8	53.7	56.6	61.7	66.7	58.2	63.9	75.6	67.1	75.7	88.2	99.6	86.3	86.3	94.3	100	96.6	94.6	56.7	66.3	67.8	76.3	58.6	65.
Standard Deviation	7% 0.5 %	5% 0.2 %	6% 1.1 %	9% 1.5 %	9% 0.1 %	8% 0.9 %	9% 0.2 %	8% 0.8 %	4% 1.1 %	8% 0.2 %	3% 0.2 %	4% 0.2 %	1% 0.1 %	% 3.3 %	6% 0.4 %	6% 0.2 %	3% 0.3 %	5% 0%	% 0.3 %	3% 0%	% 0.2 %	3% 0.8 %	8% 0.5 %	7% 0.2 %	9% 0.3 %	3% 1.7 %	8% 0.4 %
glibc bench - cos (nanoseconds	47 70 9	44 17 0	47 65 2	44 22 0	50 35 6	47 83 9	44 33 1	40 64 4	46 80 3	41 70 9	35 31 5	39 52 0	35 37 5	32 07 1	28 79 8	33 71 3	33 64 1	30 71 3	28 83 2	30 02 6	31 19 2	48 10 6	41 24 4	39 56 2	35 01 8	46 73 9	41 41 9
Normalized	60.3	65.2	60.4	65.1	57.1	60.2	64.9	70.8	61.5	69.0	81.5	72.8	81.4	89.7	100	85.4	85.6	93.7	99.8	95.9	92.3	59.8	69.8	72.7	82.2	61.6	69.
Standard Deviation	6% 1%	% 0.8 %	3% 1.7 %	2% 1.1 %	9% 0.5 %	% 0.9 %	6% 0.8 %	5% 0.2 %	3% 1.1 %	4% 0.1 %	4% 0%	7% 0%	1% 0.1 %	9% 0.3 %	% 0%	2% 0%	% 0.2 %	6% 0.1 %	8% 0.2 %	1% 0.1 %	2% 3.5 %	6% 0.5 %	2% 0.5 %	9% 0%	4% 0.2 %	1% 0.7 %	3% 1.1 %
Core-Latency - A.L.B.C.C (ns)	18 9.9 1	16 0.1 9	19 0.3 8	18 5.3 9	40 7.2 0	80. 10	47. 96	19 9.9 2	15 3.9 1	13 7.0 9	10 6.9 1	19 0.5 5		77. 27	73. 95	22 4.2 8	21 3.1 9	12 5.2 8	78. 59	15 3.9	90. 13	18 7.9 7	14 7.7 9	13 5.0 2	10 7.3 5	78. 99	44 45
Normalized	23.4	27.7	23.3	23.9	10.9	55.4	92.6	22.2	28.8	32.4	41.5	23.3		57.5	60.1	19.8	20.8	35.4	56.5	28.8	49.3	23.6	30.0	32.9	41.4	56.2	100
Multichase Pointer Chaser - 1.A.2.B.S.4.T (ns)	74. 19	72. 83	75. 95	75. 55	10 1.0 7	71. 48	71. 46	84. 25	68. 46	74. 29	71. 46	86. 42	70. 78	46. 98	46. 67	69. 60	68. 95	48. 45	47. 53	47. 07	46. 80	69. 06	66. 58	72. 07	70. 84	72. 50	70 34
Normalized	62.9	64.0	61.4	61.7	46.1	65.2	65.3	55.3	68.1	62.8	65.3	54%	65.9	99.3	100	67.0	67.6	96.3	98.1	99.1	99.7	67.5	70.1	64.7	65.8	64.3	66
Standard Deviation	1% 0.1 %	8% 0.2 %	5% 0.8 %	7% 1.1 %	8% 0.1 %	9% 0.1 %	1% 0.2 %	9% 2%	7% 0.2 %	2% 0%	1% 0%	% 1.1 %	4% 0%	4% 0.2 %	% 0%	5% 0.3 %	9% 0.2 %	3% 0%	9% 0%	5% 0%	2% 0%	8% 0.1 %	% 0%	6% 0%	8% 0%	7% 0.2 %	5% 0.1 %

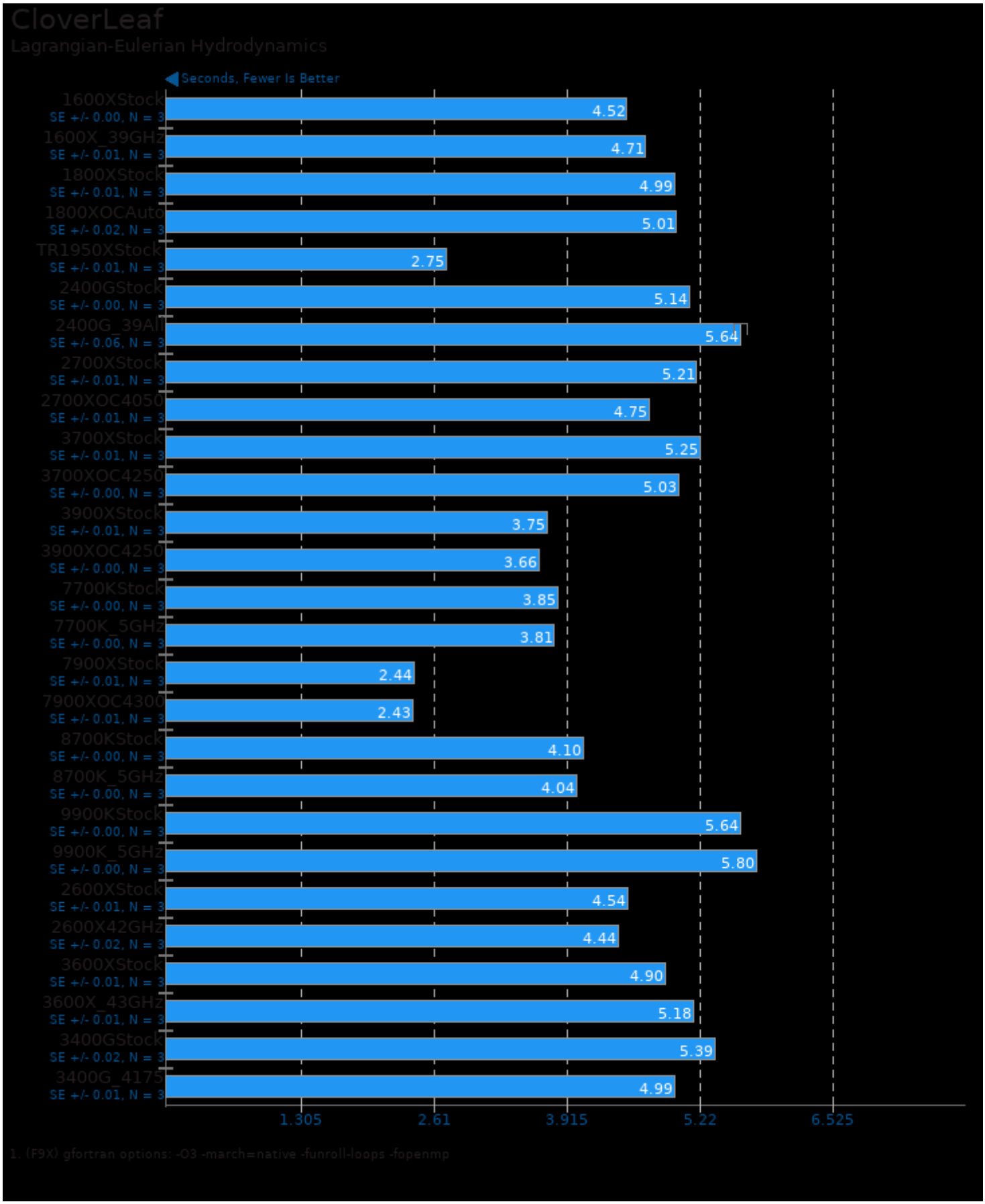
xdacputestsep2019

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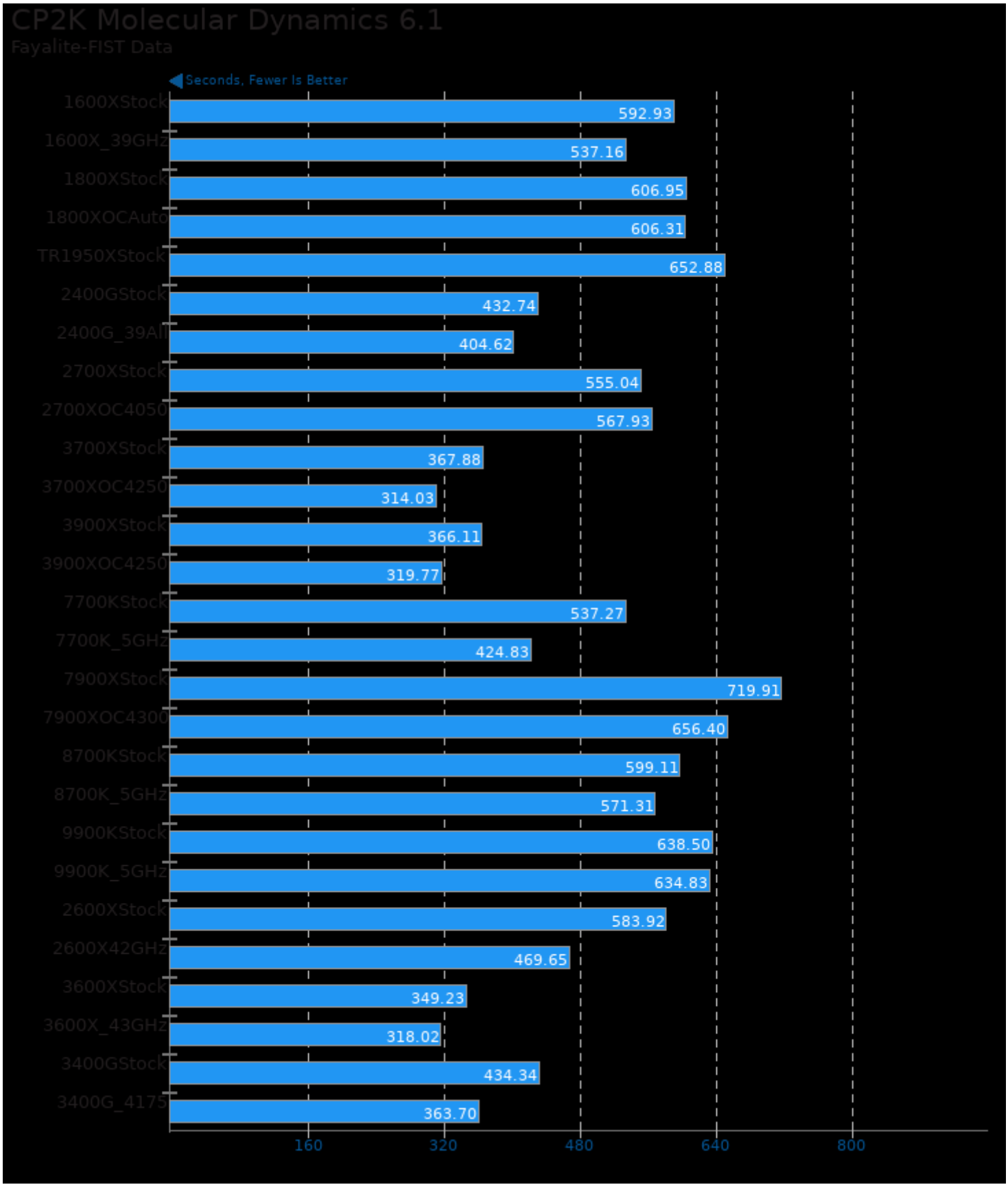
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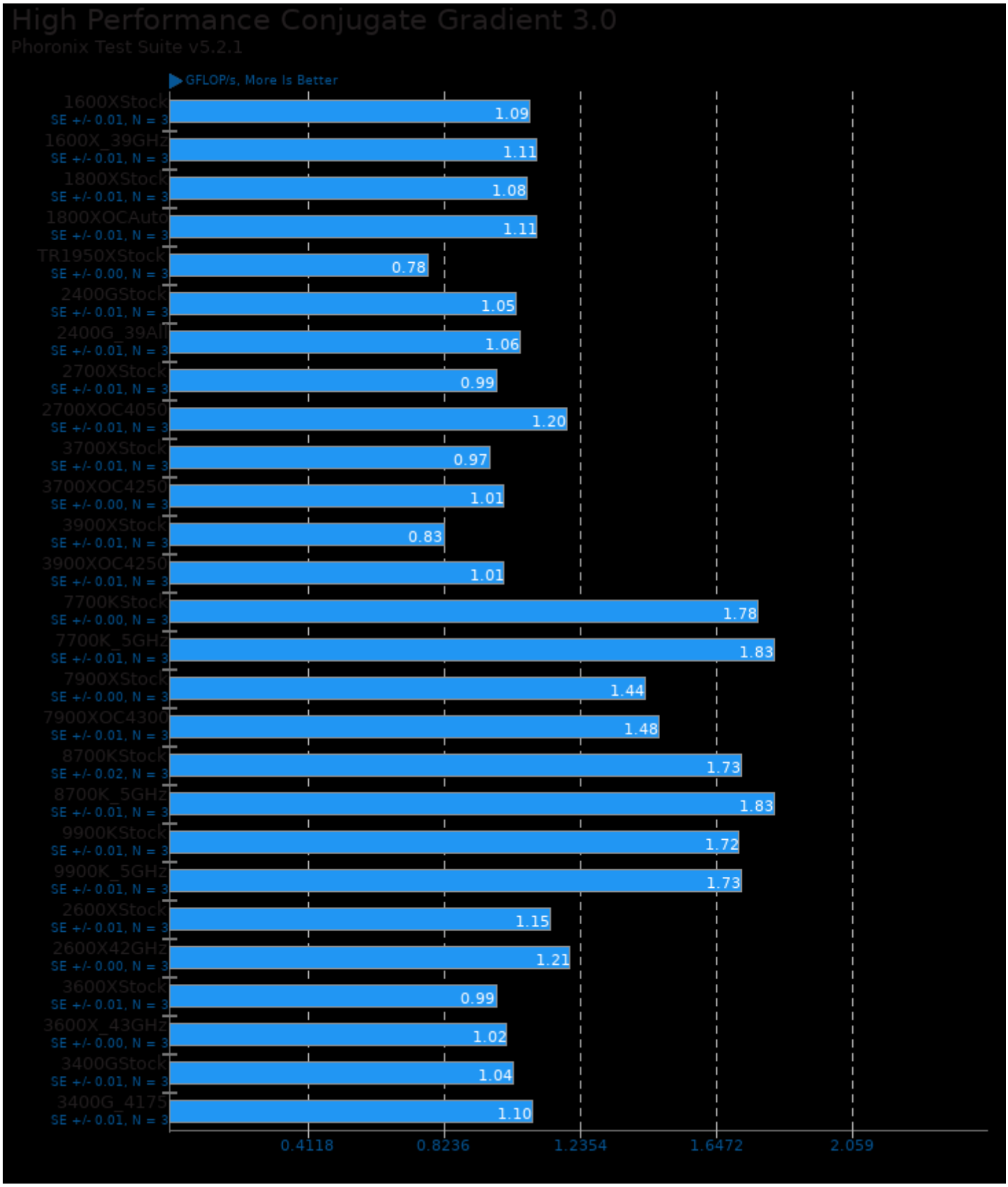

NAS Parallel Benchmarks 3.3.1
Test / Class: SP.A
Total Mop/s, More Is Better
1600XStock
SE +/- 4.86, N = 3
2788.48
1600X_39GHz
SE +/- 9.03, N = 3
2930.57
1800XStock
SE +/- 19.87, N = 3
2513.57
1800XOCAuto
SE +/- 29.95, N = 3
2469.19
TR1950XStock
SE +/- 49.68, N = 3
2620.86
2400GStock
SE +/- 9.62, N = 3
2746.69
2400G_39AM
SE +/- 21.59, N = 3
2819.31
2700XStock
SE +/- 4.90, N = 3
2692.15
2700XOC4050
SE +/- 1.81, N = 3
2909.96
3700XStock
SE +/- 0.25, N = 3
3189.27
3700XOC4250
SE +/- 9.27, N = 3
3552.14
3900XStock
SE +/- 15.03, N = 3
3120.93
3900XOC4250
SE +/- 9.49, N = 3
3582.62
7700KStock
SE +/- 4.17, N = 3
3313.95
7700K_5GHz
SE +/- 10.60, N = 3
3282.21
7900XStock
SE +/- 1.53, N = 3
2486.31
7900XOC4300
SE +/- 20.34, N = 3
2608.56
8700KStock
SE +/- 8.99, N = 3
3191.61
8700K_5GHz
SE +/- 12.69, N = 3
3581.04
9900KStock
SE +/- 10.40, N = 3
2993.00
9900K_5GHz
SE +/- 5.57, N = 3
2926.03
2600XStock
SE +/- 3.37, N = 3
2878.49
2600X42GHz
SE +/- 13.27, N = 3
3115.15
3600XStock
SE +/- 5.26, N = 3
3309.62
3600X_43GHz
SE +/- 55.54, N = 3
3532.39
3400GStock
SE +/- 7.81, N = 3
2795.25
3400G_4175
SE +/- 16.32, N = 3
3017.78
800
1600
2400
3200
4000
1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi
2. Open MPI 2.1.1


CloverLeaf
Lagrangian-Eulerian Hydrodynamics
Seconds, Fewer Is Better
1600XStock
SE +/- 0.00, N = 3
4.52
1600X_39GHz
SE +/- 0.01, N = 3
4.71
1800XStock
SE +/- 0.01, N = 3
4.99
1800XOCAuto
SE +/- 0.02, N = 3
5.01
TR1950XStock
SE +/- 0.01, N = 3
2.75
2400GStock
SE +/- 0.00, N = 3
5.14
2400G_39AM
SE +/- 0.06, N = 3
5.64
2700XStock
SE +/- 0.01, N = 3
5.21
2700XOC4050
SE +/- 0.01, N = 3
4.75
3700XStock
SE +/- 0.01, N = 3
5.25
3700XOC4250
SE +/- 0.00, N = 3
5.03
3900XStock
SE +/- 0.01, N = 3
3.75
3900XOC4250
SE +/- 0.00, N = 3
3.66
7700KStock
SE +/- 0.00, N = 3
3.85
7700K_5GHz
SE +/- 0.00, N = 3
3.81
7900XStock
SE +/- 0.01, N = 3
2.44
7900XOC4300
SE +/- 0.01, N = 3
2.43
8700KStock
SE +/- 0.00, N = 3
4.10
8700K_5GHz
SE +/- 0.00, N = 3
4.04
9900KStock
SE +/- 0.00, N = 3
5.64
9900K_5GHz
SE +/- 0.00, N = 3
5.80
2600XStock
SE +/- 0.01, N = 3
4.54
2600X42GHz
SE +/- 0.02, N = 3
4.44
3600XStock
SE +/- 0.01, N = 3
4.90
3600X_43GHz
SE +/- 0.01, N = 3
5.18
3400GStock
SE +/- 0.02, N = 3
5.39
3400G_4175
SE +/- 0.01, N = 3
4.99
1.305
2.61
3.915
5.22
6.525
1. (F9X) gfortran options: -O3 -march=native -funroll-loops -fopenmp

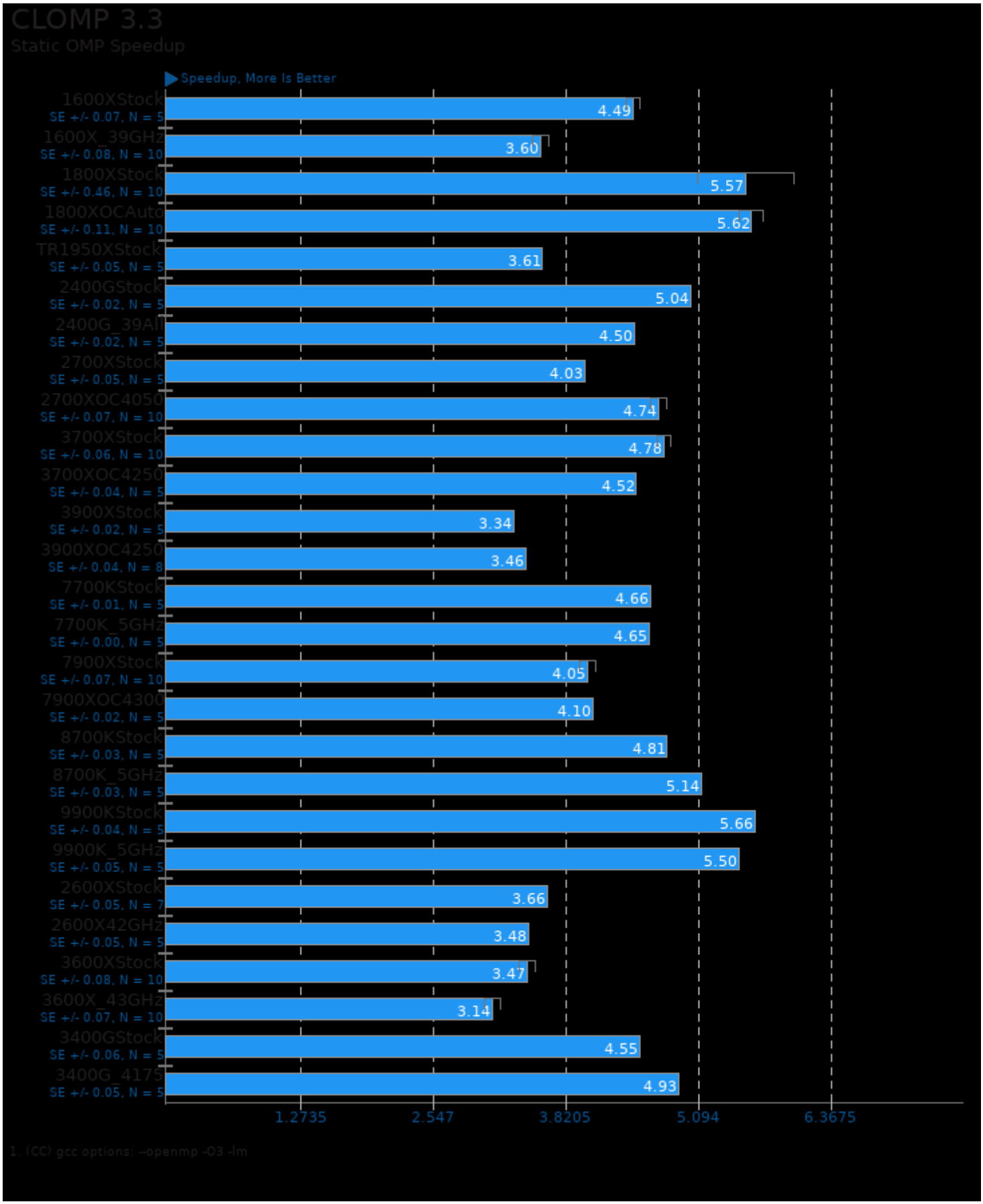
xdacputestsep2019



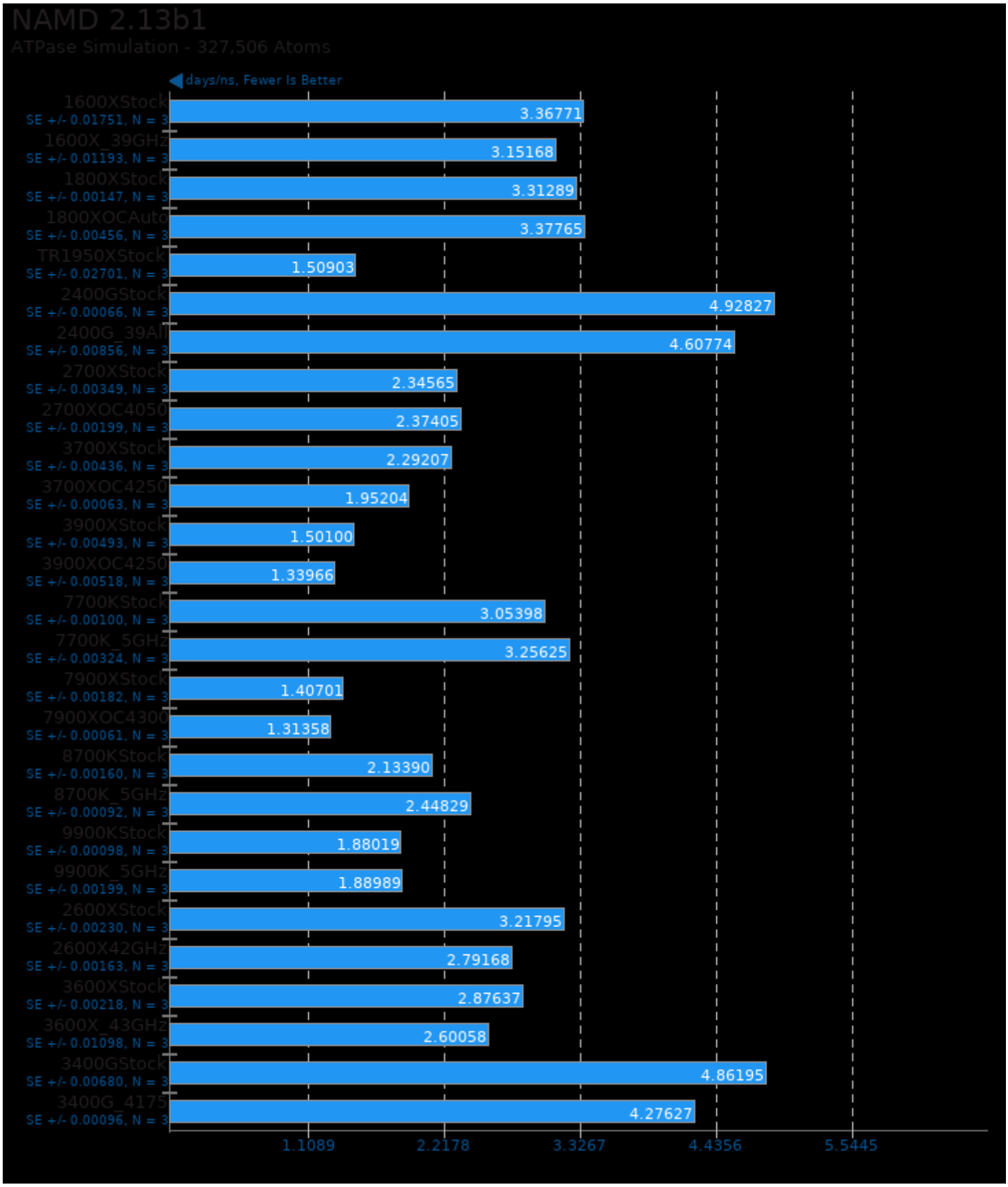
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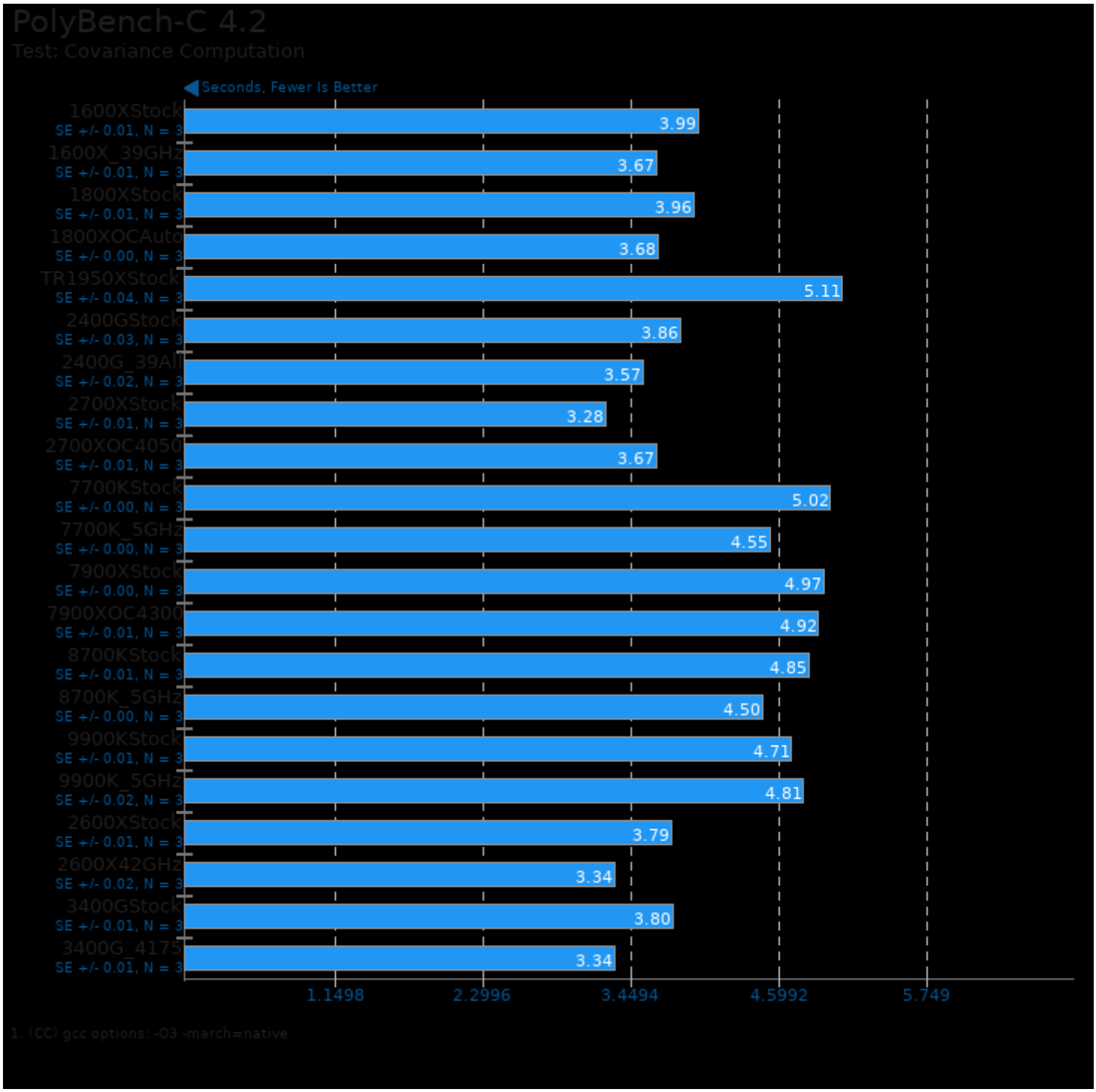
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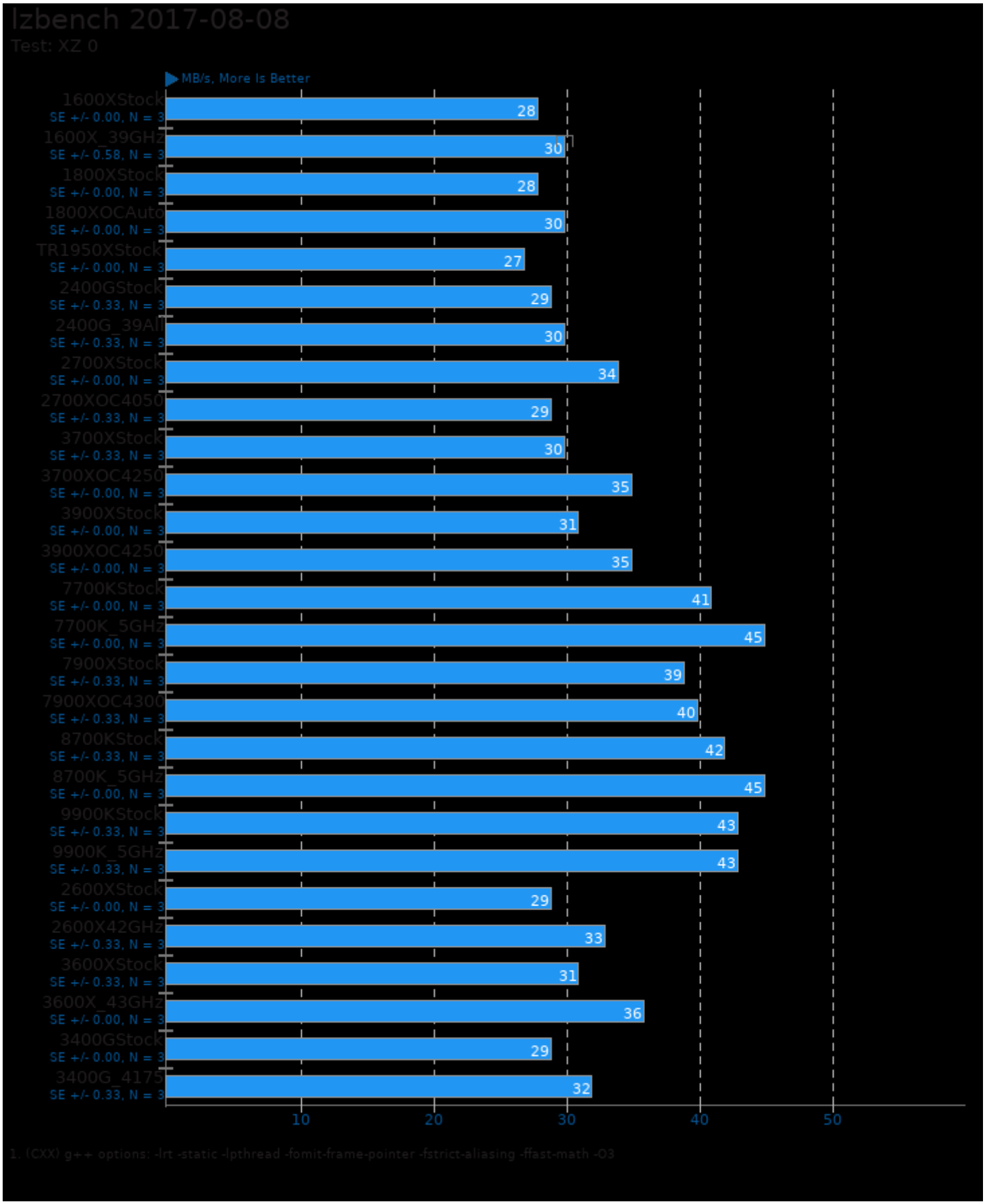
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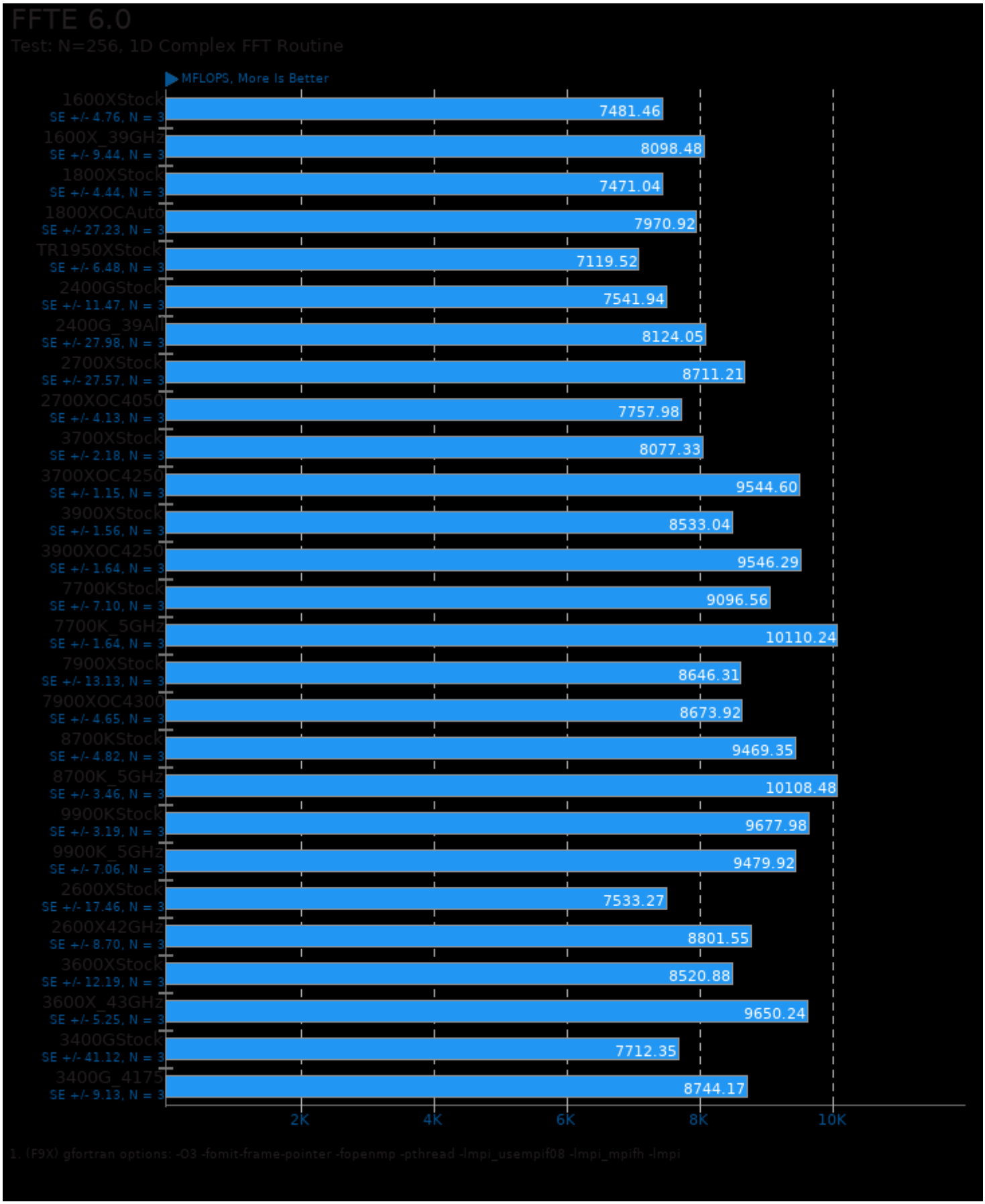


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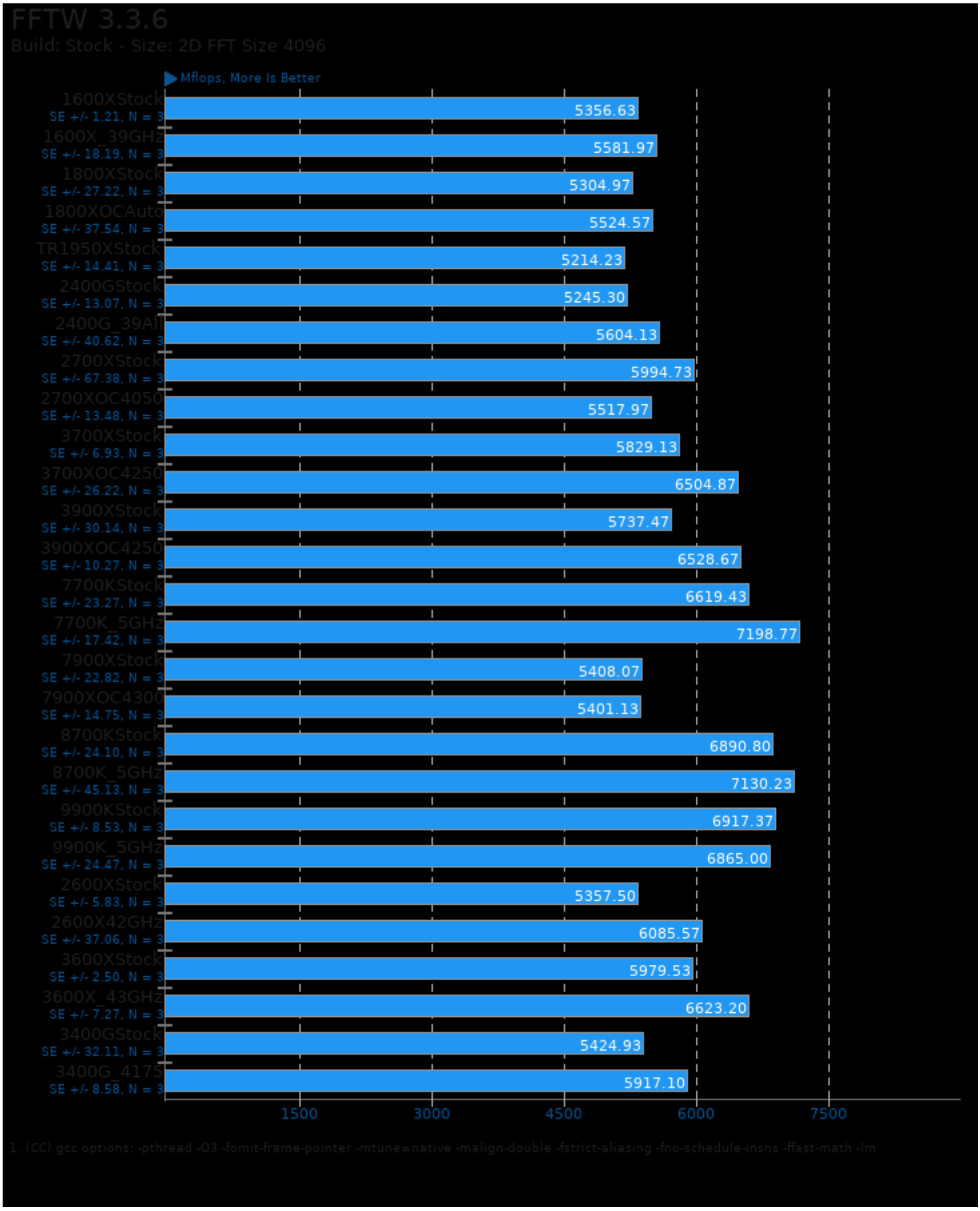


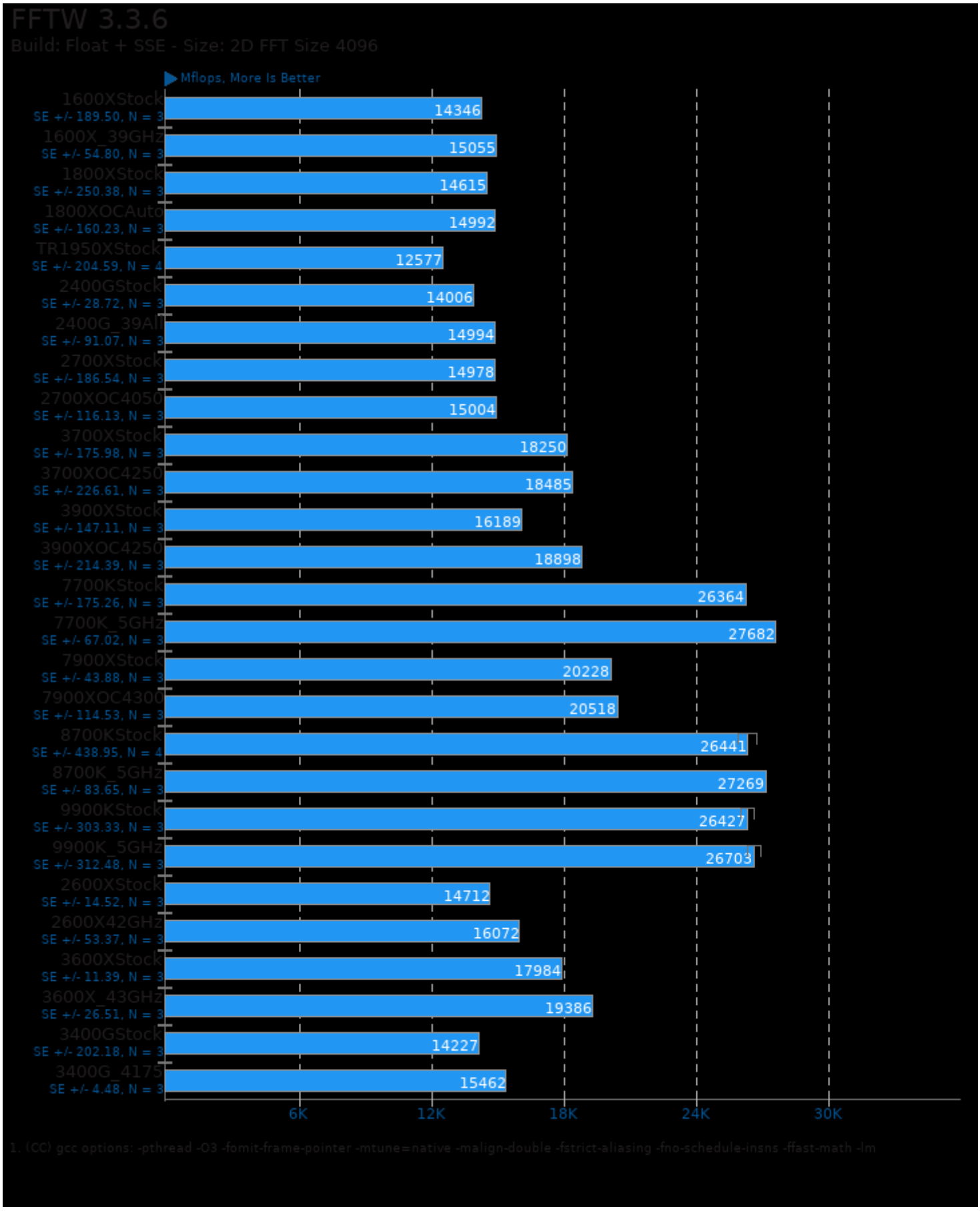
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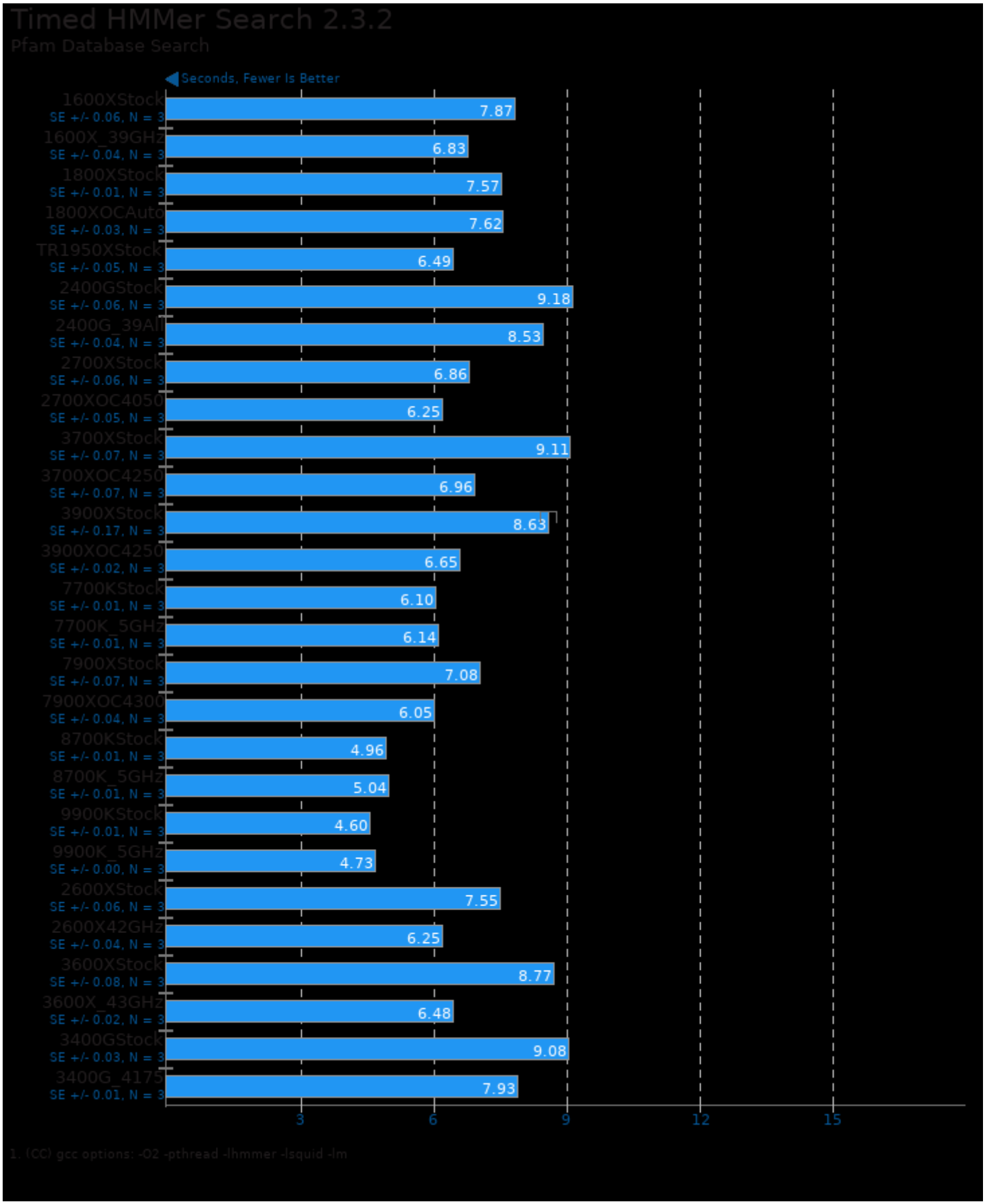


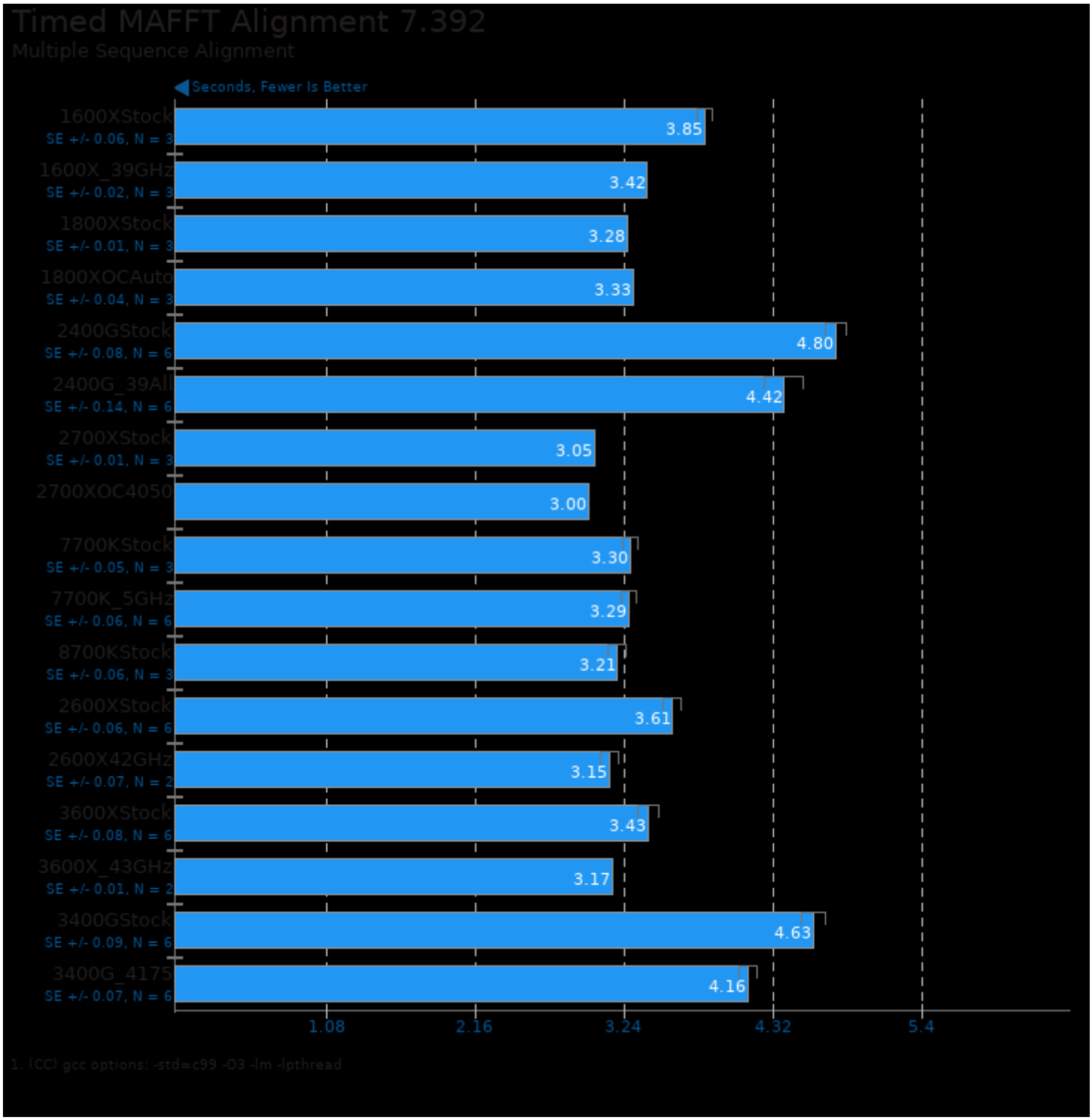

FFTE 6.0
Test: N=256, 1D Complex FFT Routine
MFLOPS, More Is Better
1600XStock
SE +/- 4.76, N = 3
7481.46
1600X_39GHz
SE +/- 9.44, N = 3
8098.48
1800XStock
SE +/- 4.44, N = 3
7471.04
1800XOCAuto
SE +/- 27.23, N = 3
7970.92
TR1950XStock
SE +/- 6.48, N = 3
7119.52
2400GStock
SE +/- 11.47, N = 3
7541.94
2400G_39All
SE +/- 27.98, N = 3
8124.05
2700XStock
SE +/- 27.57, N = 3
8711.21
2700XOC4050
SE +/- 4.13, N = 3
7757.98
3700XStock
SE +/- 2.18, N = 3
8077.33
3700XOC4250
SE +/- 1.15, N = 3
9544.60
3900XStock
SE +/- 1.56, N = 3
8533.04
3900XOC4250
SE +/- 1.64, N = 3
9546.29
7700KStock
SE +/- 7.10, N = 3
9096.56
7700K_5GHz
SE +/- 1.64, N = 3
10110.24
7900XStock
SE +/- 13.13, N = 3
8646.31
7900XOC4300
SE +/- 4.65, N = 3
8673.92
8700KStock
SE +/- 4.82, N = 3
9469.35
8700K_5GHz
SE +/- 3.46, N = 3
10108.48
9900KStock
SE +/- 3.19, N = 3
9677.98
9900K_5GHz
SE +/- 7.06, N = 3
9479.92
2600XStock
SE +/- 17.46, N = 3
7533.27
2600X42GHz
SE +/- 8.70, N = 3
8801.55
3600XStock
SE +/- 12.19, N = 3
8520.88
3600X_43GHz
SE +/- 5.25, N = 3
9650.24
3400GStock
SE +/- 41.12, N = 3
7712.35
3400G_4175
SE +/- 9.13, N = 3
8744.17
2K
4K
6K
8K
10K
1. (F9X) gfortran options: -O3 -fomit-frame-pointer -fopenmp -pthread -lmpi_usempif08 -lmpi_mpifh -lmpi

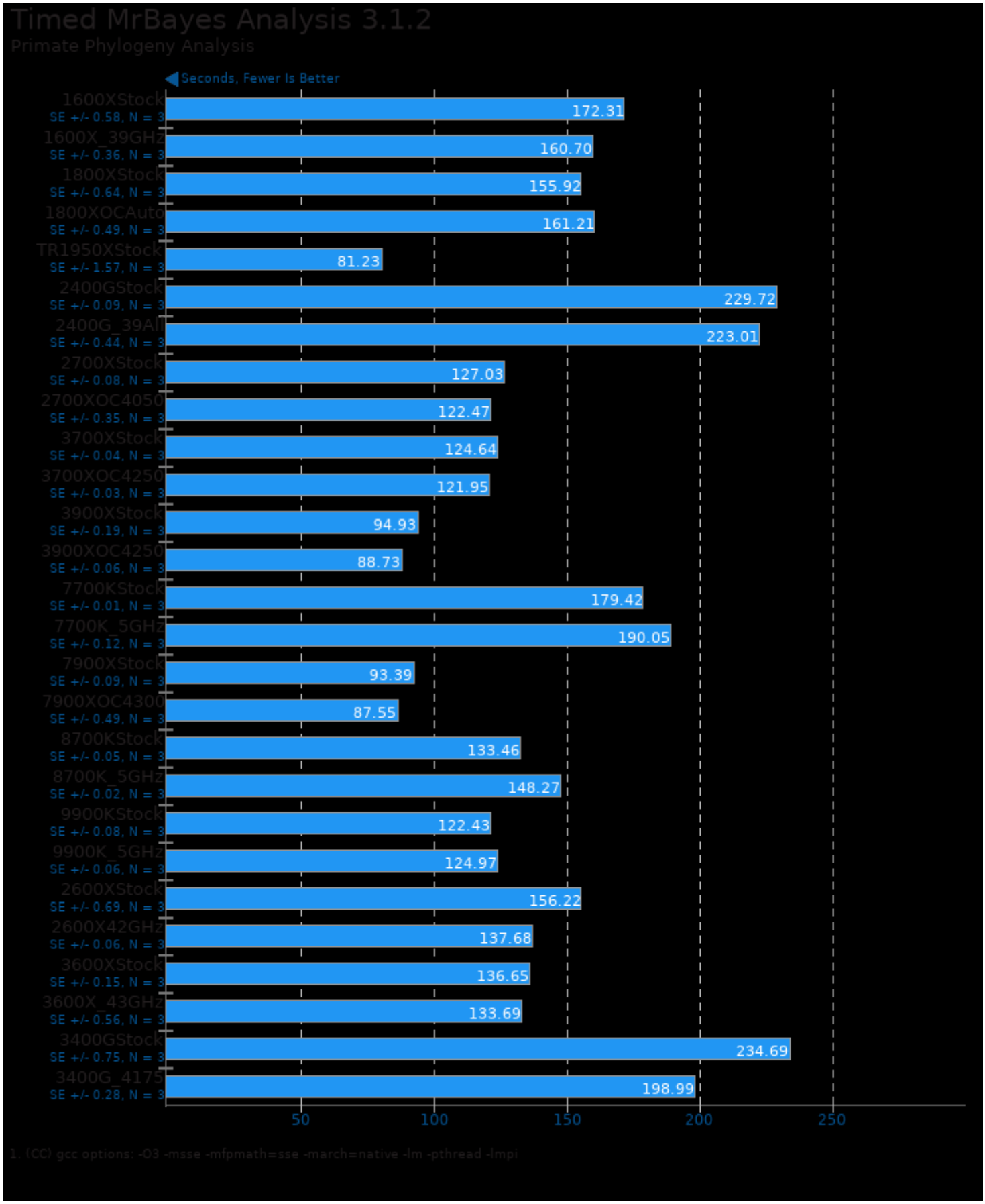
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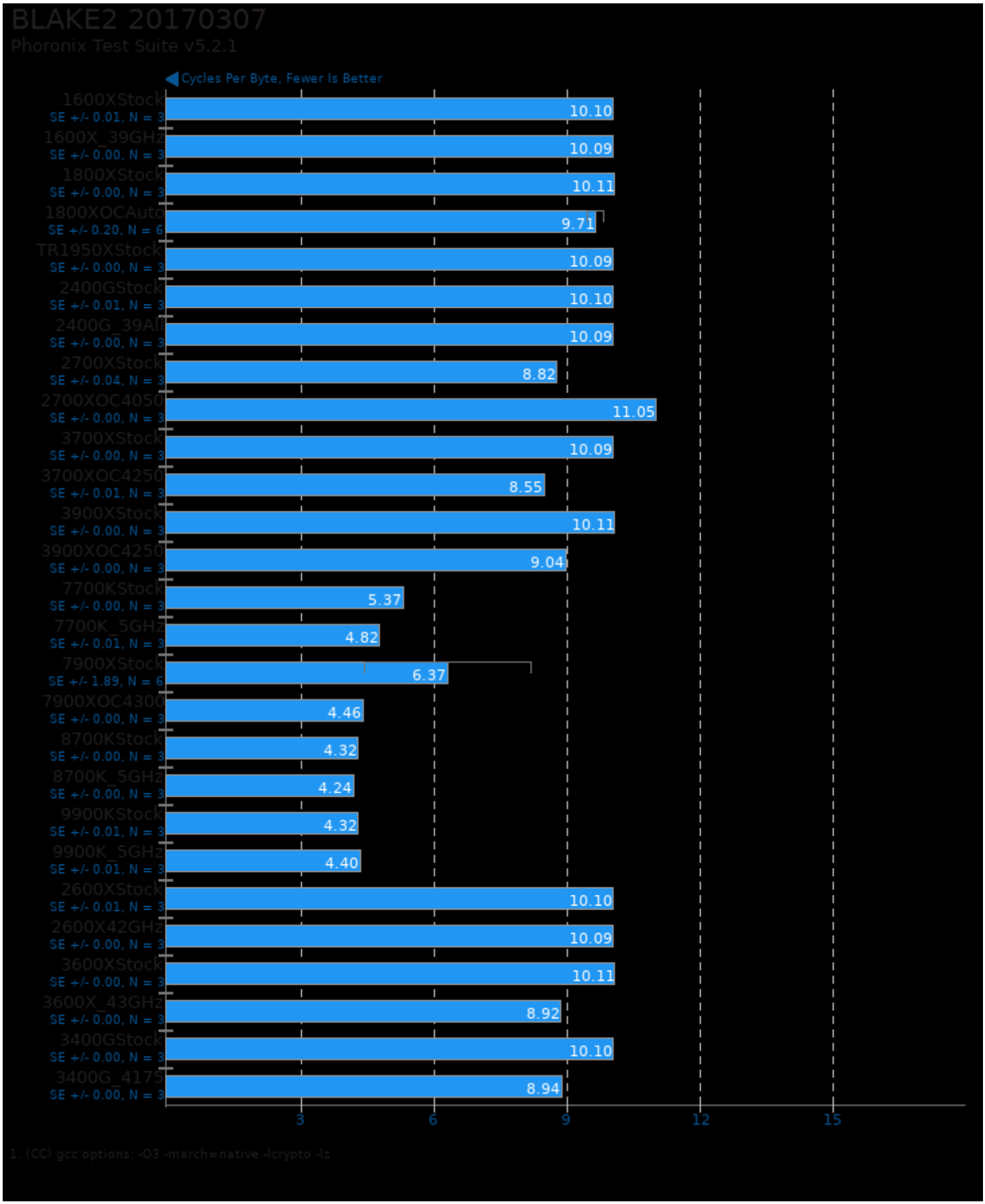


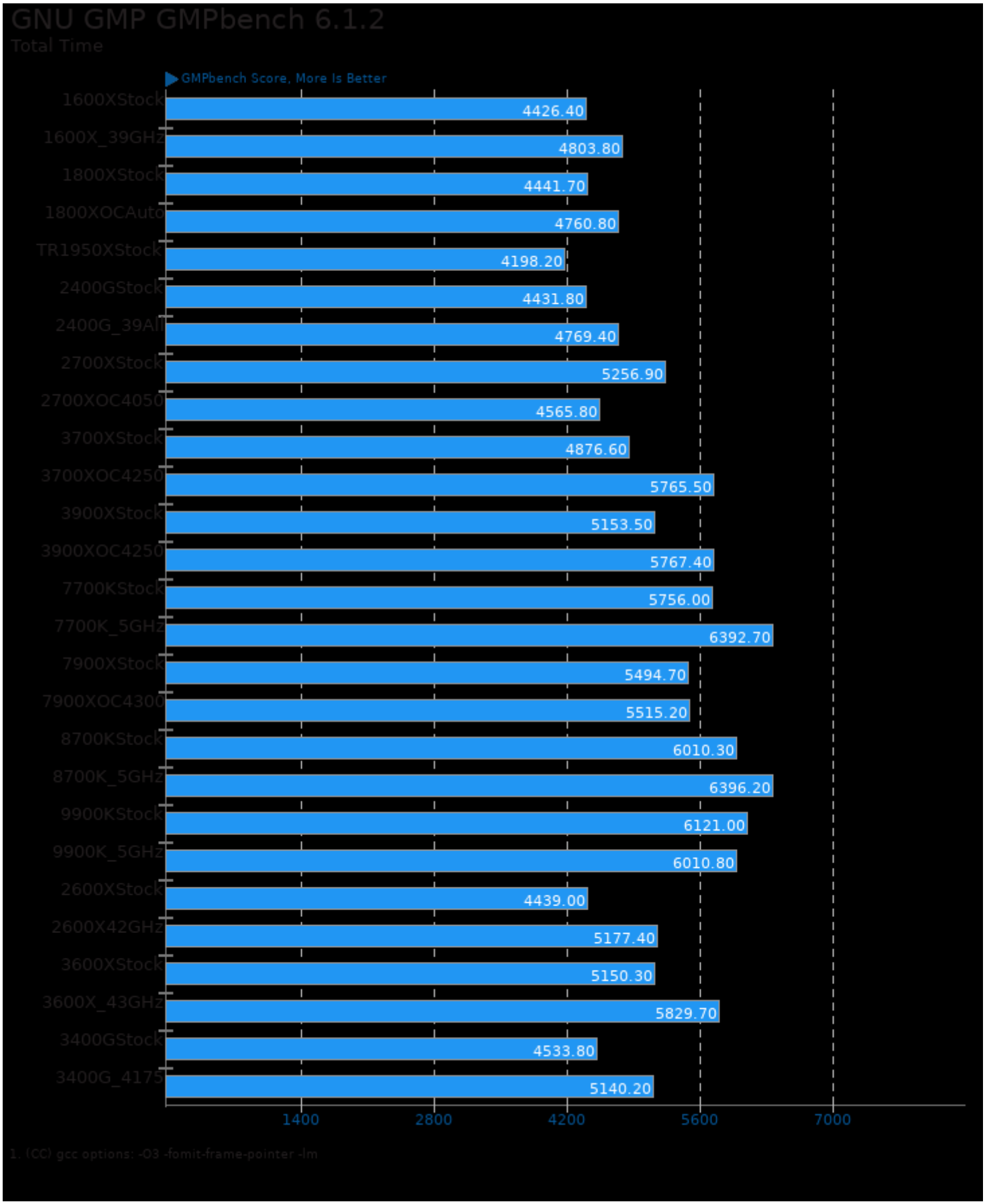

FFTW 3.3.6
Build: Float + SSE - Size: 2D FFT Size 4096
Mflops, More Is Better
1600XStock
SE +/- 189.50, N = 3
14346
1600X_39GHz
SE +/- 54.80, N = 3
15055
1800XStock
SE +/- 250.38, N = 3
14615
1800XOCAuto
SE +/- 160.23, N = 3
14992
TR1950XStock
SE +/- 204.59, N = 4
12577
2400GStock
SE +/- 28.72, N = 3
14006
2400G_39AM
SE +/- 91.07, N = 3
14994
2700XStock
SE +/- 186.54, N = 3
14978
2700XOC4050
SE +/- 116.13, N = 3
15004
3700XStock
SE +/- 175.98, N = 3
18250
3700XOC4250
SE +/- 226.61, N = 3
18485
3900XStock
SE +/- 147.11, N = 3
16189
3900XOC4250
SE +/- 214.39, N = 3
18898
7700KStock
SE +/- 175.26, N = 3
26364
7700K_5GHz
SE +/- 67.02, N = 3
27682
7900XStock
SE +/- 43.88, N = 3
20228
7900XOC4300
SE +/- 114.53, N = 3
20518
8700KStock
SE +/- 438.95, N = 4
26441
8700K_5GHz
SE +/- 83.65, N = 3
27269
9900KStock
SE +/- 303.33, N = 3
26427
9900K_5GHz
SE +/- 312.48, N = 3
26703
2600XStock
SE +/- 14.52, N = 3
14712
2600X42GHz
SE +/- 53.37, N = 3
16072
3600XStock
SE +/- 11.39, N = 3
17984
3600X_43GHz
SE +/- 26.51, N = 3
19386
3400GStock
SE +/- 202.18, N = 3
14227
3400G_4175
SE +/- 4.48, N = 3
15462
6K
12K
18K
24K
30K
1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm


Timed HMMer Search 2.3.2
Pfam Database Search
Seconds, Fewer Is Better
1600XStock
SE +/- 0.06, N = 3
7.87
1600X_39GHz
SE +/- 0.04, N = 3
6.83
1800XStock
SE +/- 0.01, N = 3
7.57
1800XOCAuto
SE +/- 0.03, N = 3
7.62
TR1950XStock
SE +/- 0.05, N = 3
6.49
2400GStock
SE +/- 0.06, N = 3
9.18
2400G_39AM
SE +/- 0.04, N = 3
8.53
2700XStock
SE +/- 0.06, N = 3
6.86
2700XOC4050
SE +/- 0.05, N = 3
6.25
3700XStock
SE +/- 0.07, N = 3
9.11
3700XOC4250
SE +/- 0.07, N = 3
6.96
3900XStock
SE +/- 0.17, N = 3
8.63
3900XOC4250
SE +/- 0.02, N = 3
6.65
7700KStock
SE +/- 0.01, N = 3
6.10
7700K_5GHz
SE +/- 0.01, N = 3
6.14
7900XStock
SE +/- 0.07, N = 3
7.08
7900XOC4300
SE +/- 0.04, N = 3
6.05
8700KStock
SE +/- 0.01, N = 3
4.96
8700K_5GHz
SE +/- 0.01, N = 3
5.04
9900KStock
SE +/- 0.01, N = 3
4.60
9900K_5GHz
SE +/- 0.00, N = 3
4.73
2600XStock
SE +/- 0.06, N = 3
7.55
2600X42GHz
SE +/- 0.04, N = 3
6.25
3600XStock
SE +/- 0.08, N = 3
8.77
3600X_43GHz
SE +/- 0.02, N = 3
6.48
3400GStock
SE +/- 0.03, N = 3
9.08
3400G_4175
SE +/- 0.01, N = 3
7.93
3
6
9
12
15
1. (CC) gcc options: -O2 -pthread -lhmmer -lsquid -lm

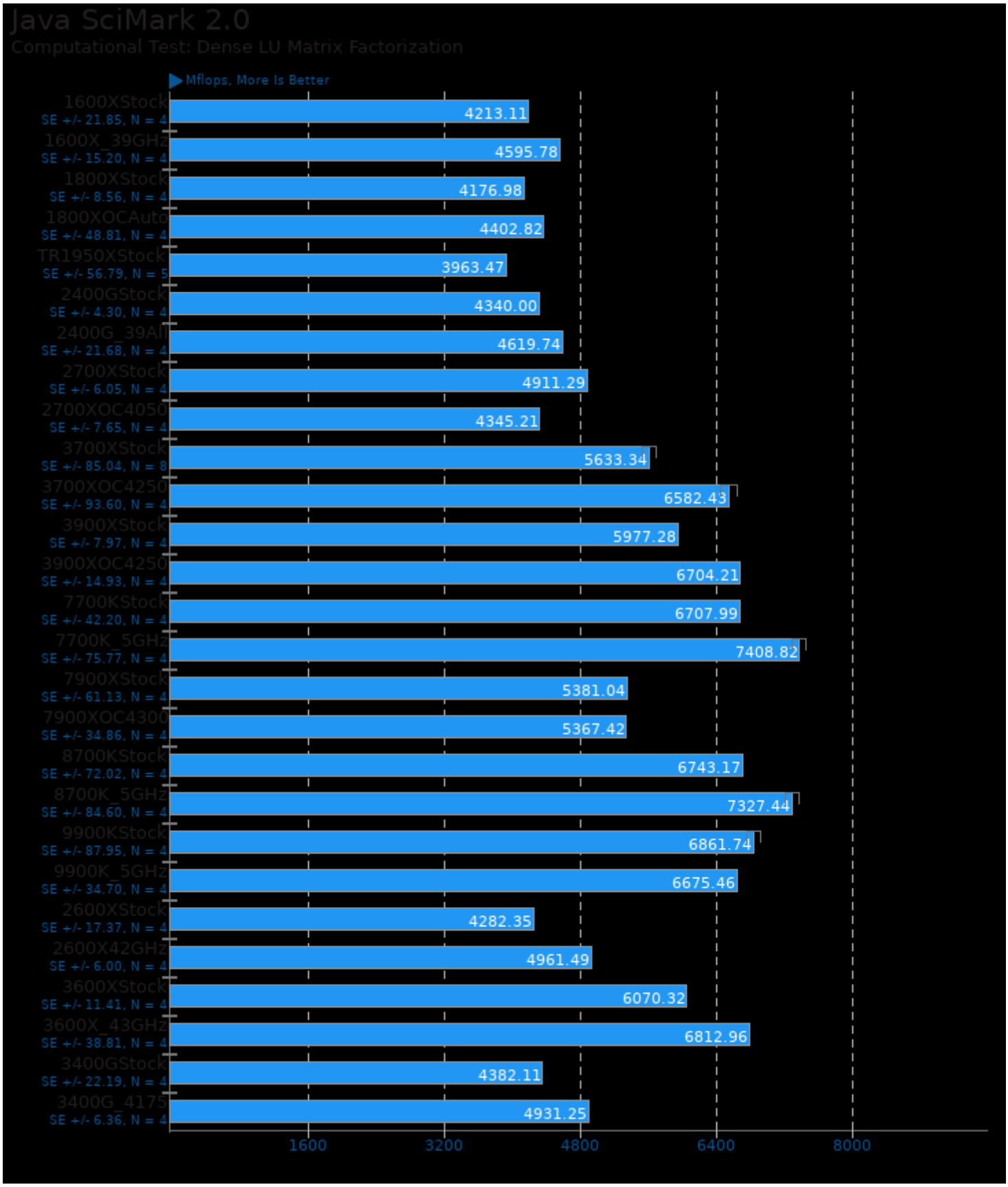

Timed MAFFT Alignment 7.392
Multiple Sequence Alignment
Seconds, Fewer Is Better
1600XStock
SE +/- 0.06, N = 3
3.85
1600X_39GHz
SE +/- 0.02, N = 3
3.42
1800XStock
SE +/- 0.01, N = 3
3.28
1800XOCAuto
SE +/- 0.04, N = 3
3.33
2400GStock
SE +/- 0.08, N = 6
4.80
2400G_39All
SE +/- 0.14, N = 6
4.42
2700XStock
SE +/- 0.01, N = 3
3.05
2700XOC4050
3.00
7700KStock
SE +/- 0.05, N = 3
3.30
7700K_5GHz
SE +/- 0.06, N = 6
3.29
8700KStock
SE +/- 0.06, N = 3
3.21
2600XStock
SE +/- 0.06, N = 6
3.61
2600X42GHz
SE +/- 0.07, N = 2
3.15
3600XStock
SE +/- 0.08, N = 6
3.43
3600X_43GHz
SE +/- 0.01, N = 2
3.17
3400GStock
SE +/- 0.09, N = 6
4.63
3400G_4175
SE +/- 0.07, N = 6
4.16
1.08
2.16
3.24
4.32
5.4
1. (CC) gcc options: -std=c99 -O3 -lm -lpthread


Timed MrBayes Analysis 3.1.2
Primate Phylogeny Analysis
Seconds, Fewer Is Better
1600XStock
SE +/- 0.58, N = 3
172.31
1600X_39GHz
SE +/- 0.36, N = 3
160.70
1800XStock
SE +/- 0.64, N = 3
155.92
1800XOCAuto
SE +/- 0.49, N = 3
161.21
TR1950XStock
SE +/- 1.57, N = 3
81.23
2400GStock
SE +/- 0.09, N = 3
229.72
2400G_39AM
SE +/- 0.44, N = 3
223.01
2700XStock
SE +/- 0.08, N = 3
127.03
2700XOC4050
SE +/- 0.35, N = 3
122.47
3700XStock
SE +/- 0.04, N = 3
124.64
3700XOC4250
SE +/- 0.03, N = 3
121.95
3900XStock
SE +/- 0.19, N = 3
94.93
3900XOC4250
SE +/- 0.06, N = 3
88.73
7700KStock
SE +/- 0.01, N = 3
179.42
7700K_5GHz
SE +/- 0.12, N = 3
190.05
7900XStock
SE +/- 0.09, N = 3
93.39
7900XOC4300
SE +/- 0.49, N = 3
87.55
8700KStock
SE +/- 0.05, N = 3
133.46
8700K_5GHz
SE +/- 0.02, N = 3
148.27
9900KStock
SE +/- 0.08, N = 3
122.43
9900K_5GHz
SE +/- 0.06, N = 3
124.97
2600XStock
SE +/- 0.69, N = 3
156.22
2600X42GHz
SE +/- 0.06, N = 3
137.68
3600XStock
SE +/- 0.15, N = 3
136.65
3600X_43GHz
SE +/- 0.56, N = 3
133.69
3400GStock
SE +/- 0.75, N = 3
234.69
3400G_4175
SE +/- 0.28, N = 3
198.99
50
100
150
200
250
1. (CC) gcc options: -O3 -msse -mfpmath=sse -march=native -lm -pthread -lmpi

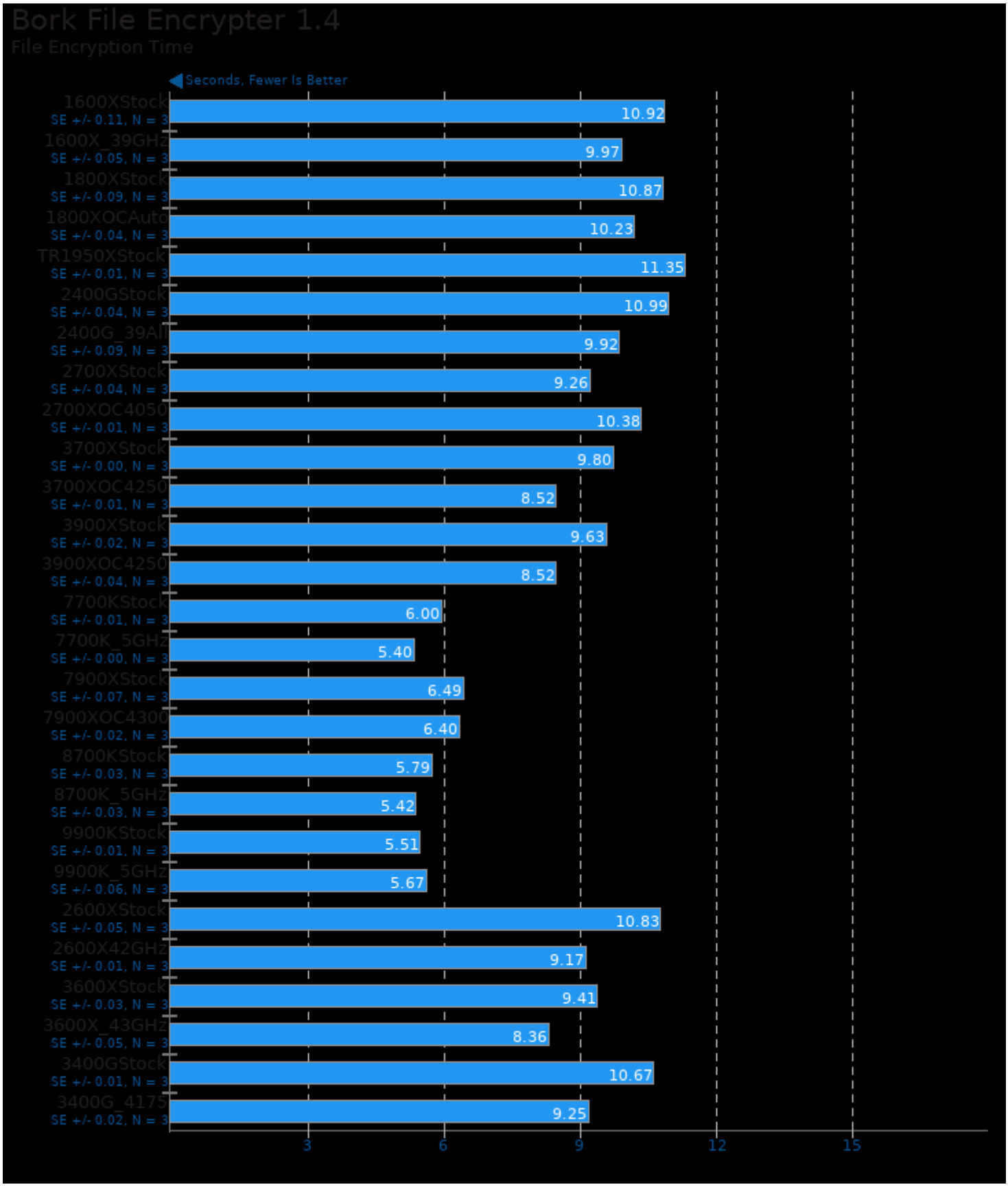

BLAKE2 20170307
Phoronix Test Suite v5.2.1
Cycles Per Byte, Fewer Is Better
1600XStock
SE +/- 0.01, N = 3
10.10
1600X_39GHz
SE +/- 0.00, N = 3
10.09
1800XStock
SE +/- 0.00, N = 3
10.11
1800XOCAuto
SE +/- 0.20, N = 6
9.71
TR1950XStock
SE +/- 0.00, N = 3
10.09
2400GStock
SE +/- 0.01, N = 3
10.10
2400G_39All
SE +/- 0.00, N = 3
10.09
2700XStock
SE +/- 0.04, N = 3
8.82
2700XOC4050
SE +/- 0.00, N = 3
11.05
3700XStock
SE +/- 0.00, N = 3
10.09
3700XOC4250
SE +/- 0.01, N = 3
8.55
3900XStock
SE +/- 0.00, N = 3
10.11
3900XOC4250
SE +/- 0.00, N = 3
9.04
7700KStock
SE +/- 0.00, N = 3
5.37
7700K_5GHz
SE +/- 0.01, N = 3
4.82
7900XStock
SE +/- 1.89, N = 6
6.37
7900XOC4300
SE +/- 0.00, N = 3
4.46
8700KStock
SE +/- 0.00, N = 3
4.32
8700K_5GHz
SE +/- 0.00, N = 3
4.24
9900KStock
SE +/- 0.01, N = 3
4.32
9900K_5GHz
SE +/- 0.01, N = 3
4.40
2600XStock
SE +/- 0.01, N = 3
10.10
2600X42GHz
SE +/- 0.00, N = 3
10.09
3600XStock
SE +/- 0.00, N = 3
10.11
3600X_43GHz
SE +/- 0.00, N = 3
8.92
3400GStock
SE +/- 0.00, N = 3
10.10
3400G_4175
SE +/- 0.00, N = 3
8.94
3
6
9
12
15
1. (CC) gcc options: -O3 -march=native -lcrypto -lz


GNU GMP GMPbench 6.1.2
Total Time
GMPbench Score, More Is Better
1600XStock 4426.40
1600X_39GHz 4803.80
1800XStock 4441.70
1800XOCAuto 4760.80
TR1950XStock 4198.20
2400GStock 4431.80
2400G_39All 4769.40
2700XStock 5256.90
2700XOC4050 4565.80
3700XStock 4876.60
3700XOC4250 5765.50
3900XStock 5153.50
3900XOC4250 5767.40
7700KStock 5756.00
7700K_5GHz 6392.70
7900XStock 5494.70
7900XOC4300 5515.20
8700KStock 6010.30
8700K_5GHz 6396.20
9900KStock 6121.00
9900K_5GHz 6010.80
2600XStock 4439.00
2600X42GHz 5177.40
3600XStock 5150.30
3600X_43GHz 5829.70
3400GStock 4533.80
3400G_4175 5140.20
1400
2800
4200
5600
7000
1. (CC) gcc options: -O3 -fomit-frame-pointer -lm

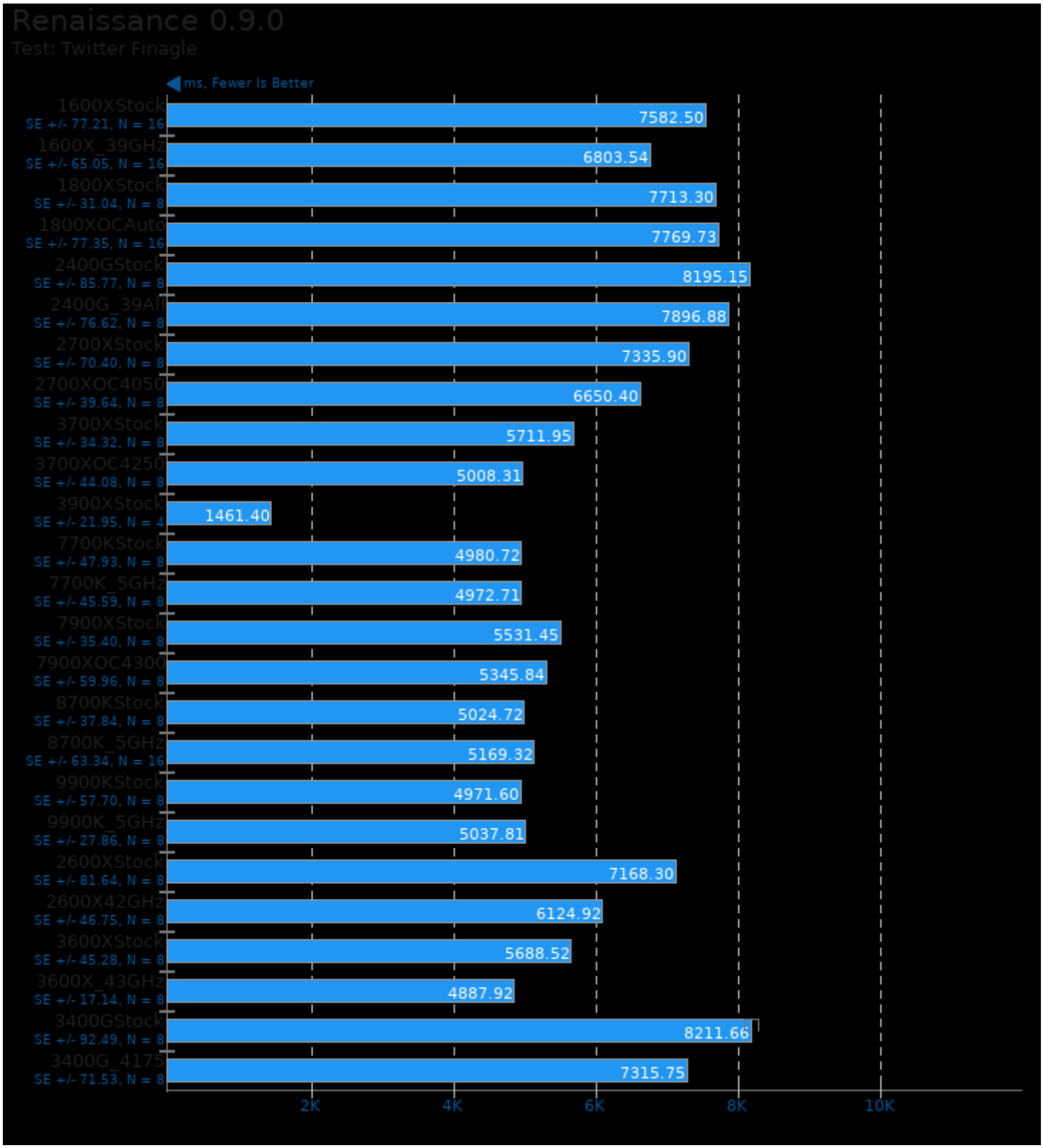
xdacputestsep2019



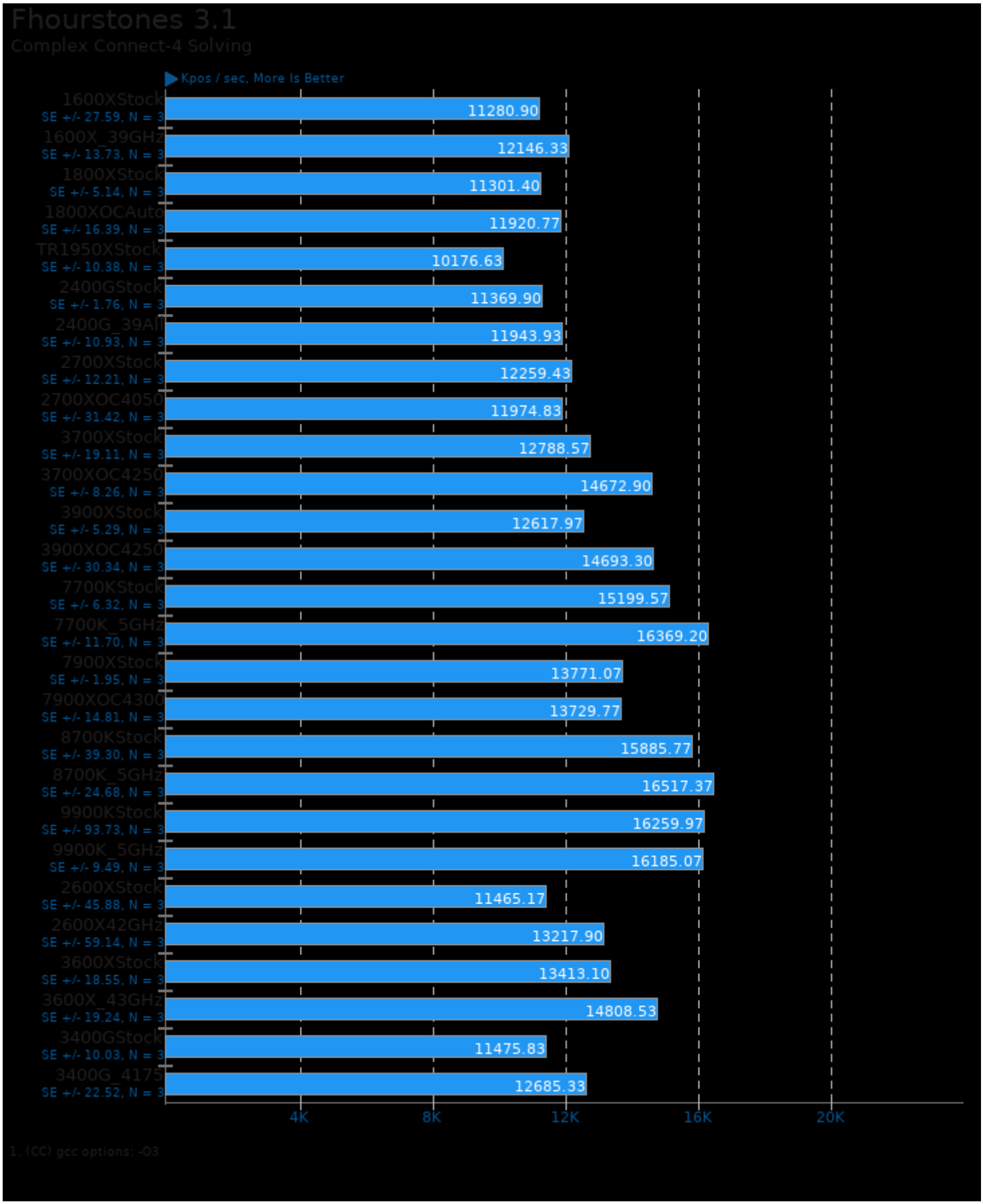
xdacputestsep2019



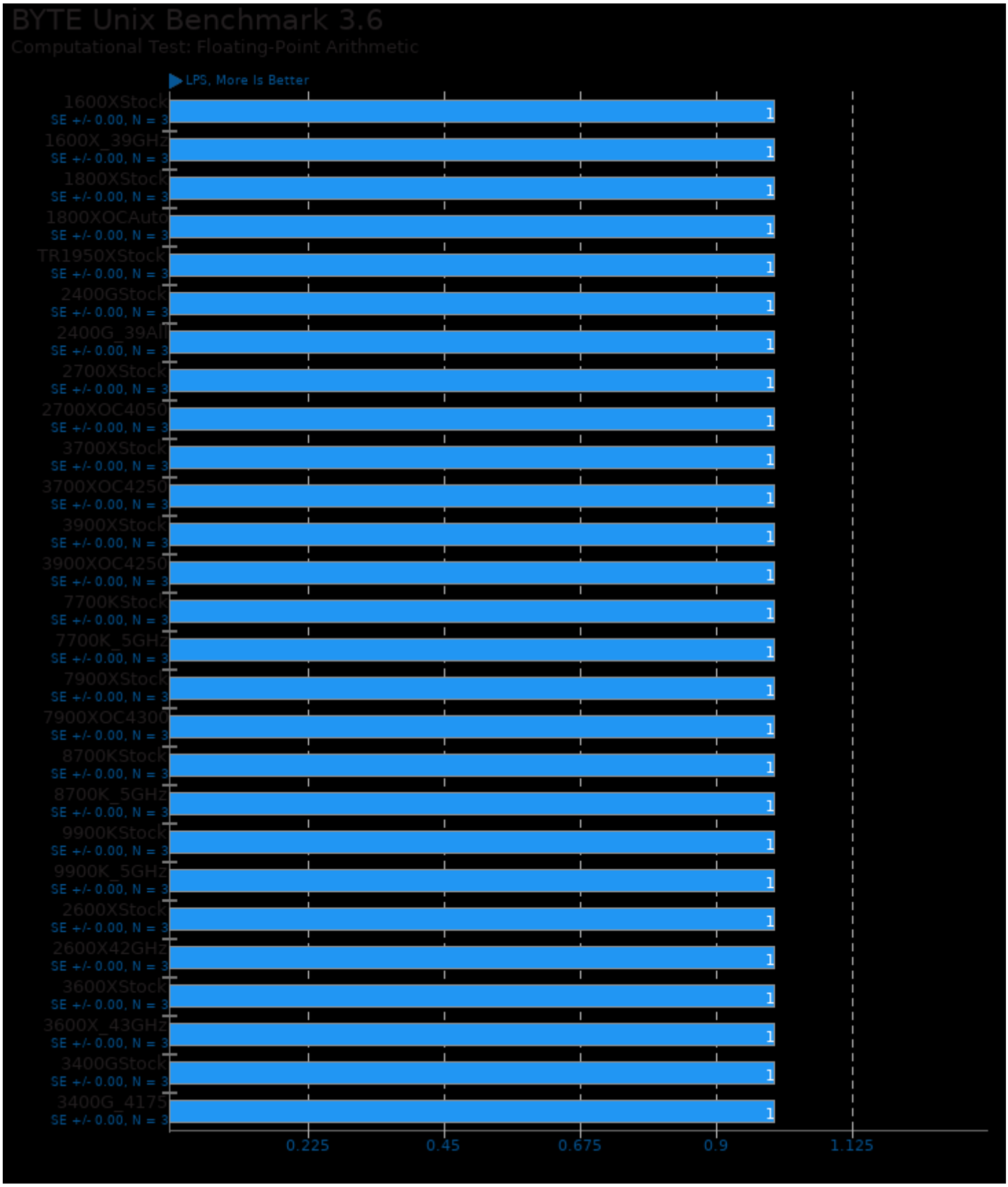
xdacputestsep2019



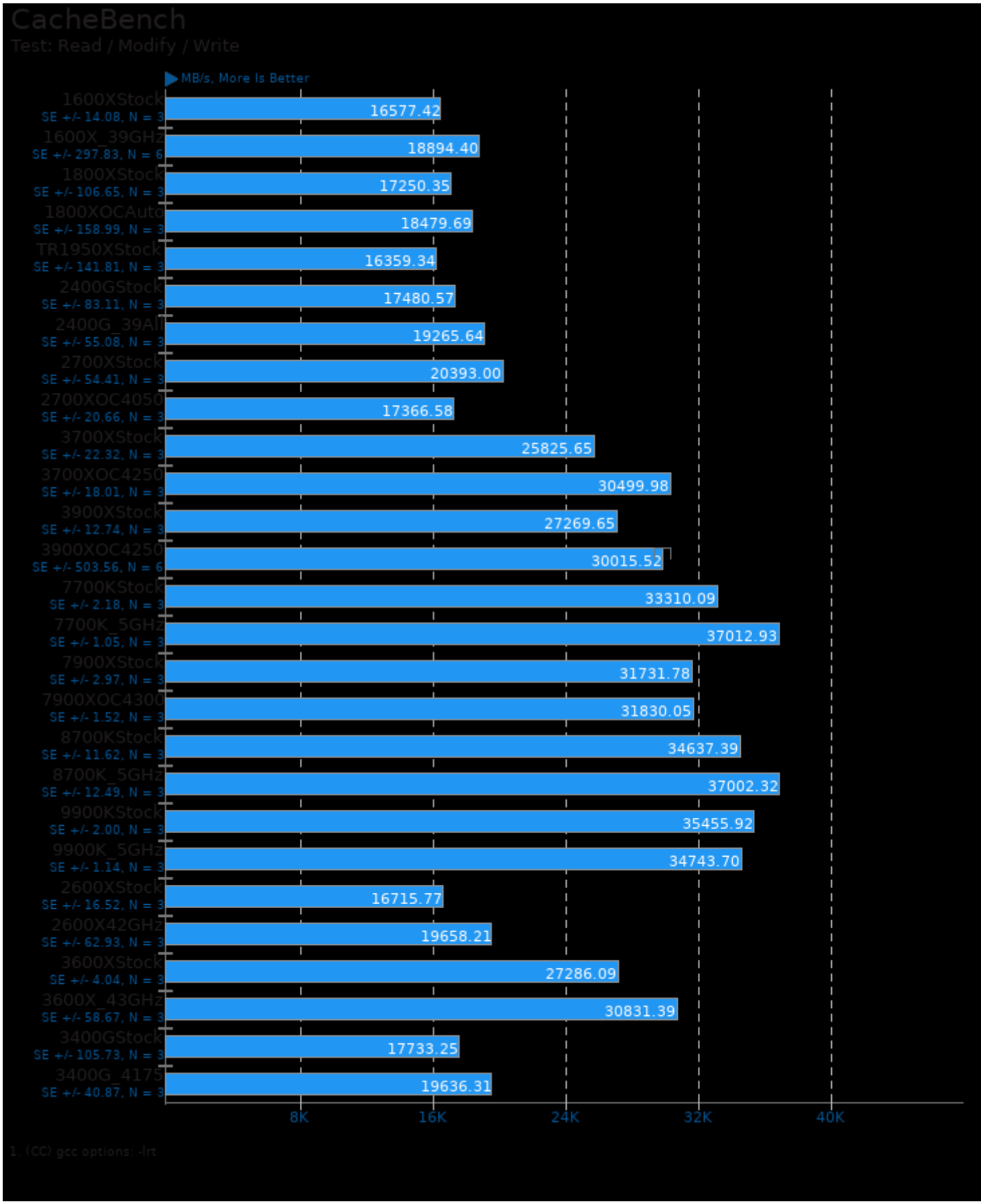
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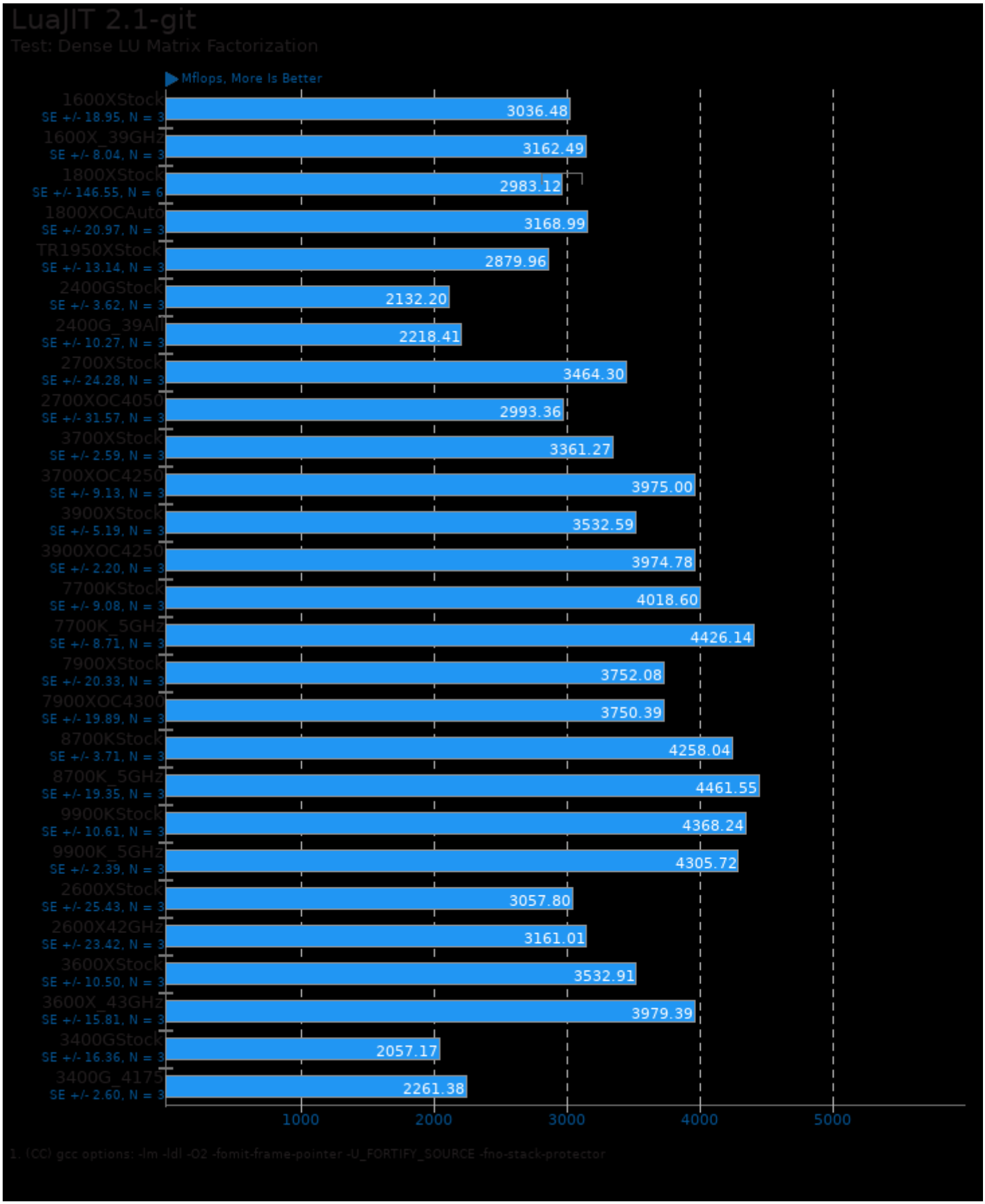


xdacputestsep2019

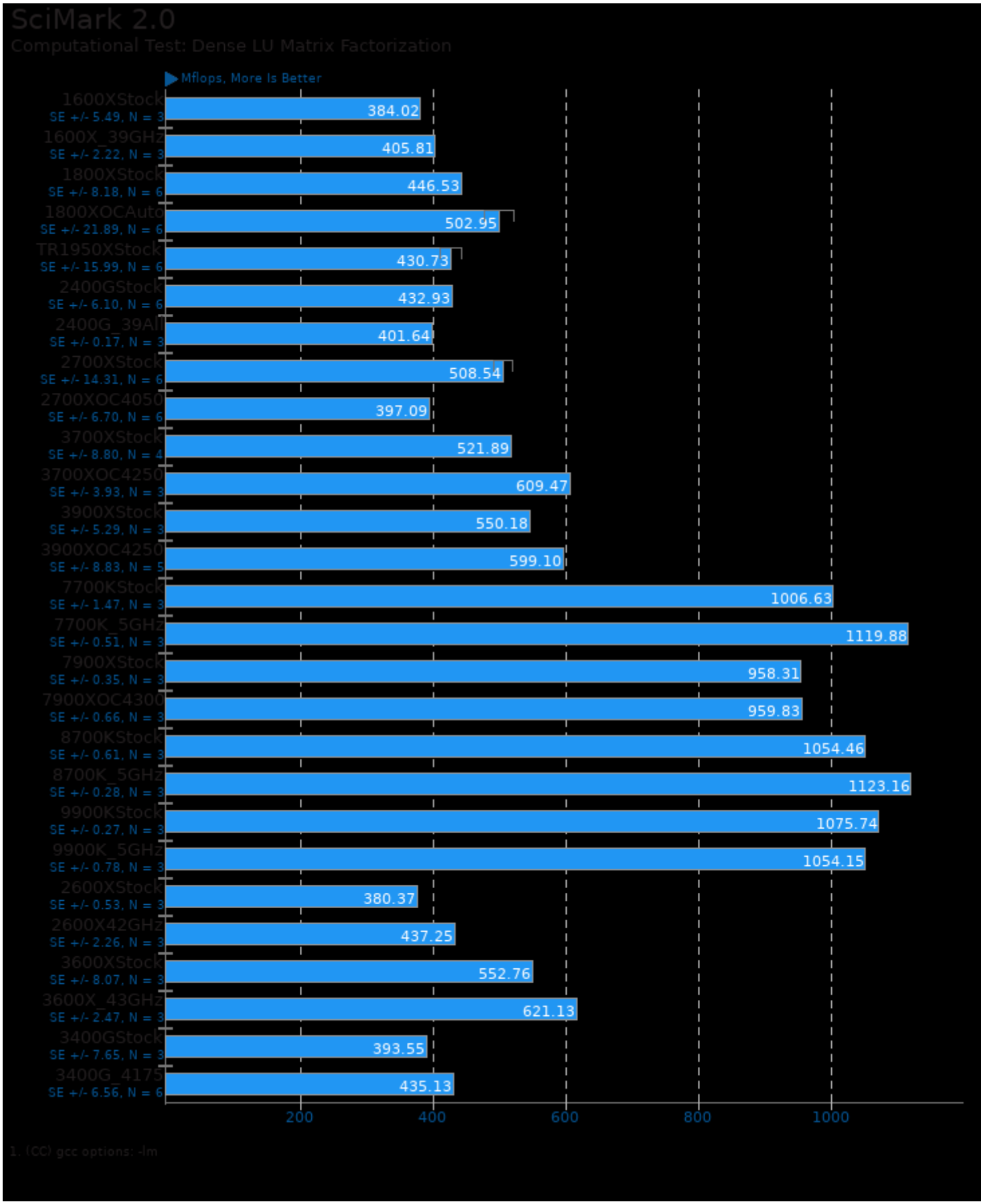


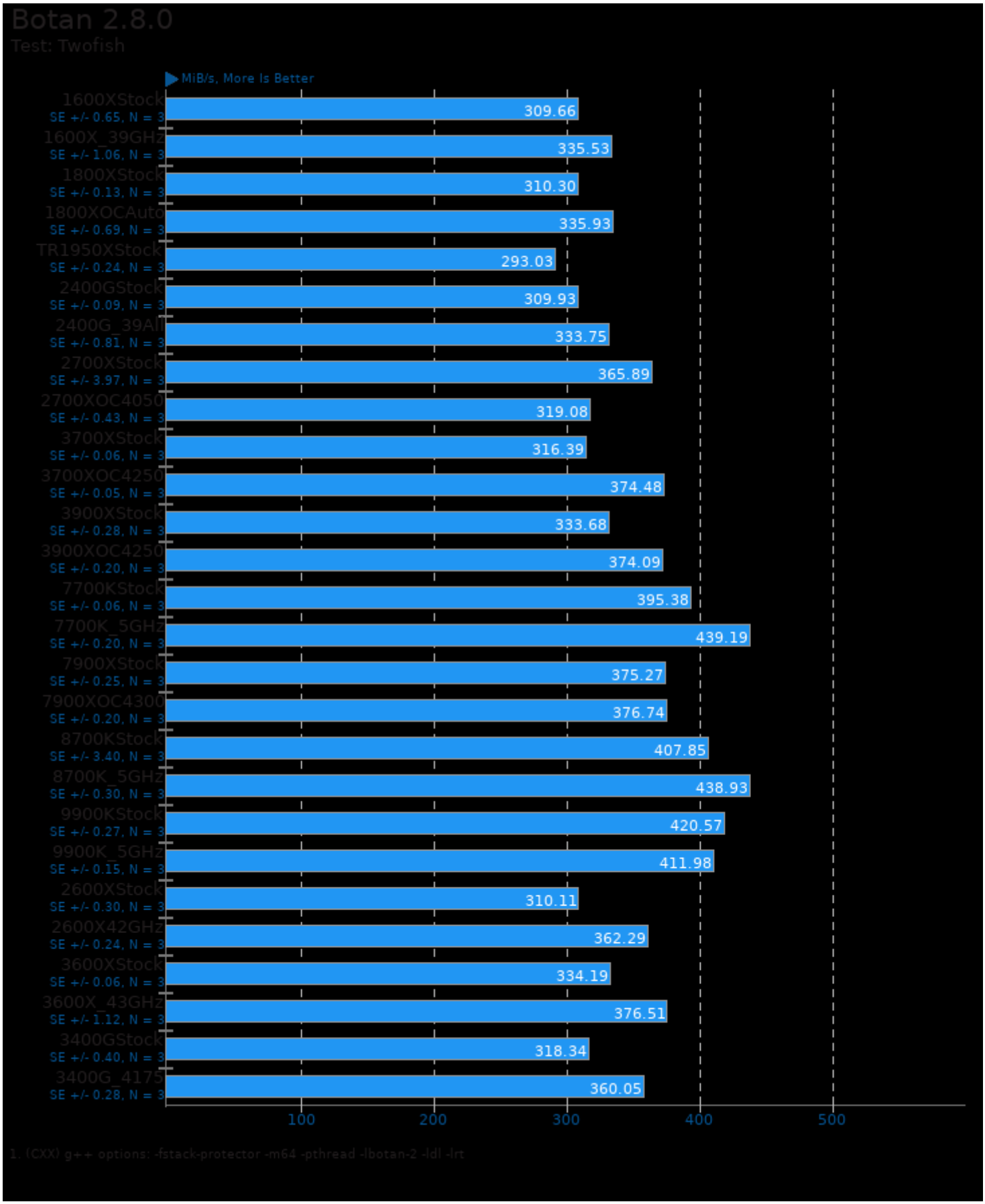
xdacputestsep2019



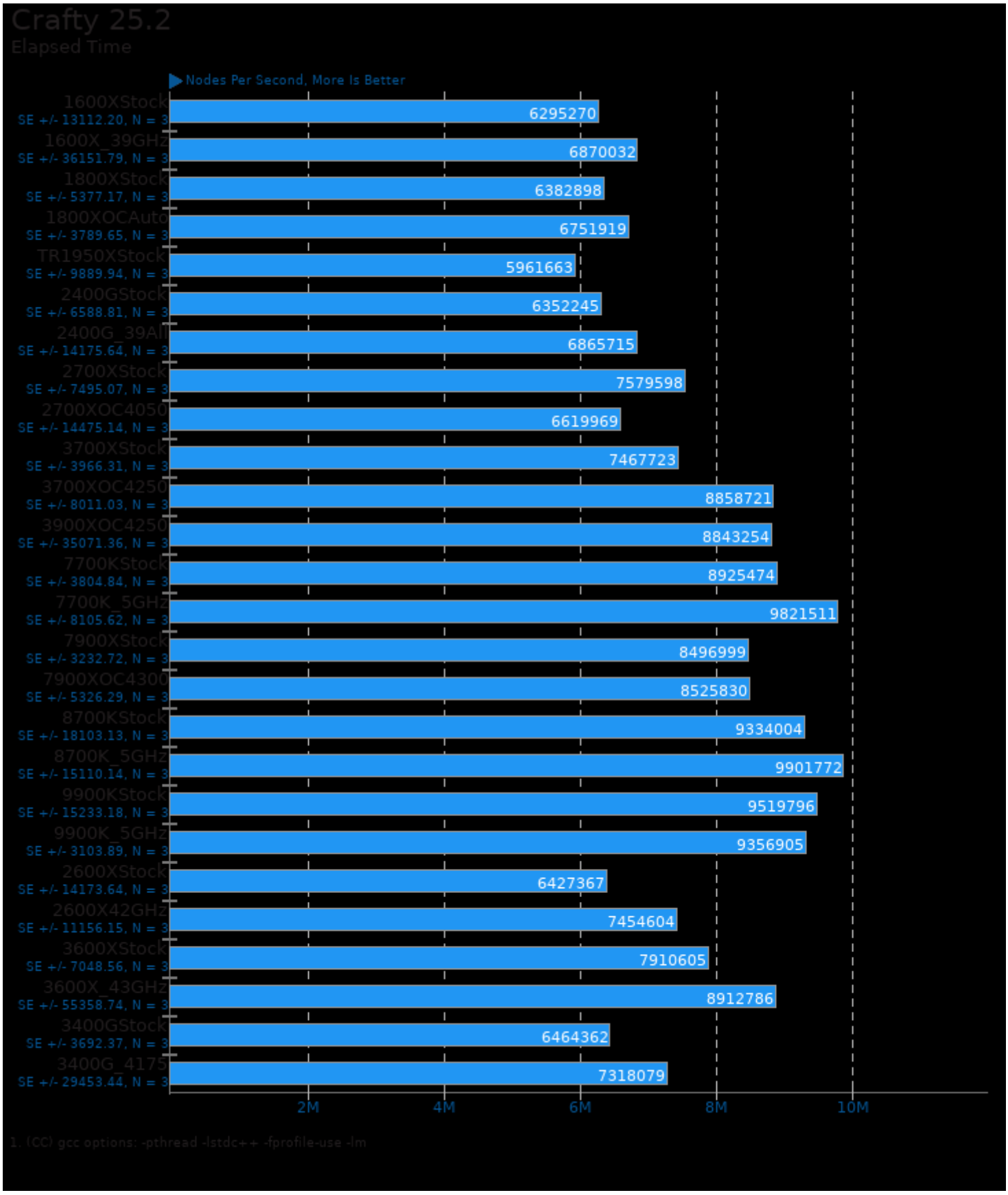

LuaJIT 2.1-git
Test: Dense LU Matrix Factorization
Mflops, More Is Better
1600XStock
SE +/- 18.95, N = 3
3036.48
1600X_39GHz
SE +/- 8.04, N = 3
3162.49
1800XStock
SE +/- 146.55, N = 6
2983.12
1800XOCAuto
SE +/- 20.97, N = 3
3168.99
TR1950XStock
SE +/- 13.14, N = 3
2879.96
2400GStock
SE +/- 3.62, N = 3
2132.20
2400G_39AM
SE +/- 10.27, N = 3
2218.41
2700XStock
SE +/- 24.28, N = 3
3464.30
2700XOC4050
SE +/- 31.57, N = 3
2993.36
3700XStock
SE +/- 2.59, N = 3
3361.27
3700XOC4250
SE +/- 9.13, N = 3
3975.00
3900XStock
SE +/- 5.19, N = 3
3532.59
3900XOC4250
SE +/- 2.20, N = 3
3974.78
7700KStock
SE +/- 9.08, N = 3
4018.60
7700K_5GHz
SE +/- 8.71, N = 3
4426.14
7900XStock
SE +/- 20.33, N = 3
3752.08
7900XOC4300
SE +/- 19.89, N = 3
3750.39
8700KStock
SE +/- 3.71, N = 3
4258.04
8700K_5GHz
SE +/- 19.35, N = 3
4461.55
9900KStock
SE +/- 10.61, N = 3
4368.24
9900K_5GHz
SE +/- 2.39, N = 3
4305.72
2600XStock
SE +/- 25.43, N = 3
3057.80
2600X42GHz
SE +/- 23.42, N = 3
3161.01
3600XStock
SE +/- 10.50, N = 3
3532.91
3600X_43GHz
SE +/- 15.81, N = 3
3979.39
3400GStock
SE +/- 16.36, N = 3
2057.17
3400G_4175
SE +/- 2.60, N = 3
2261.38
1000
2000
3000
4000
5000
1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

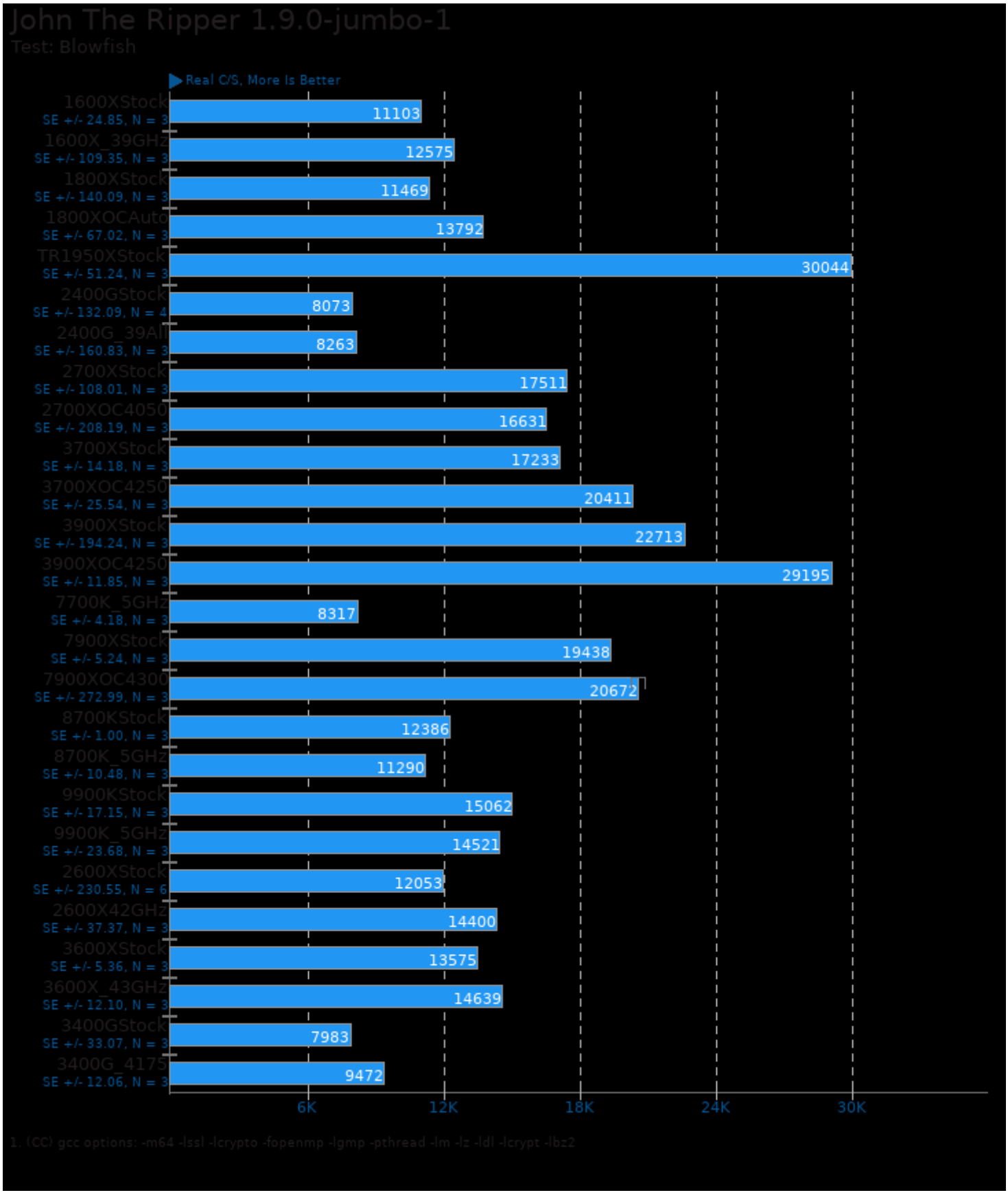
xdacputestsep2019



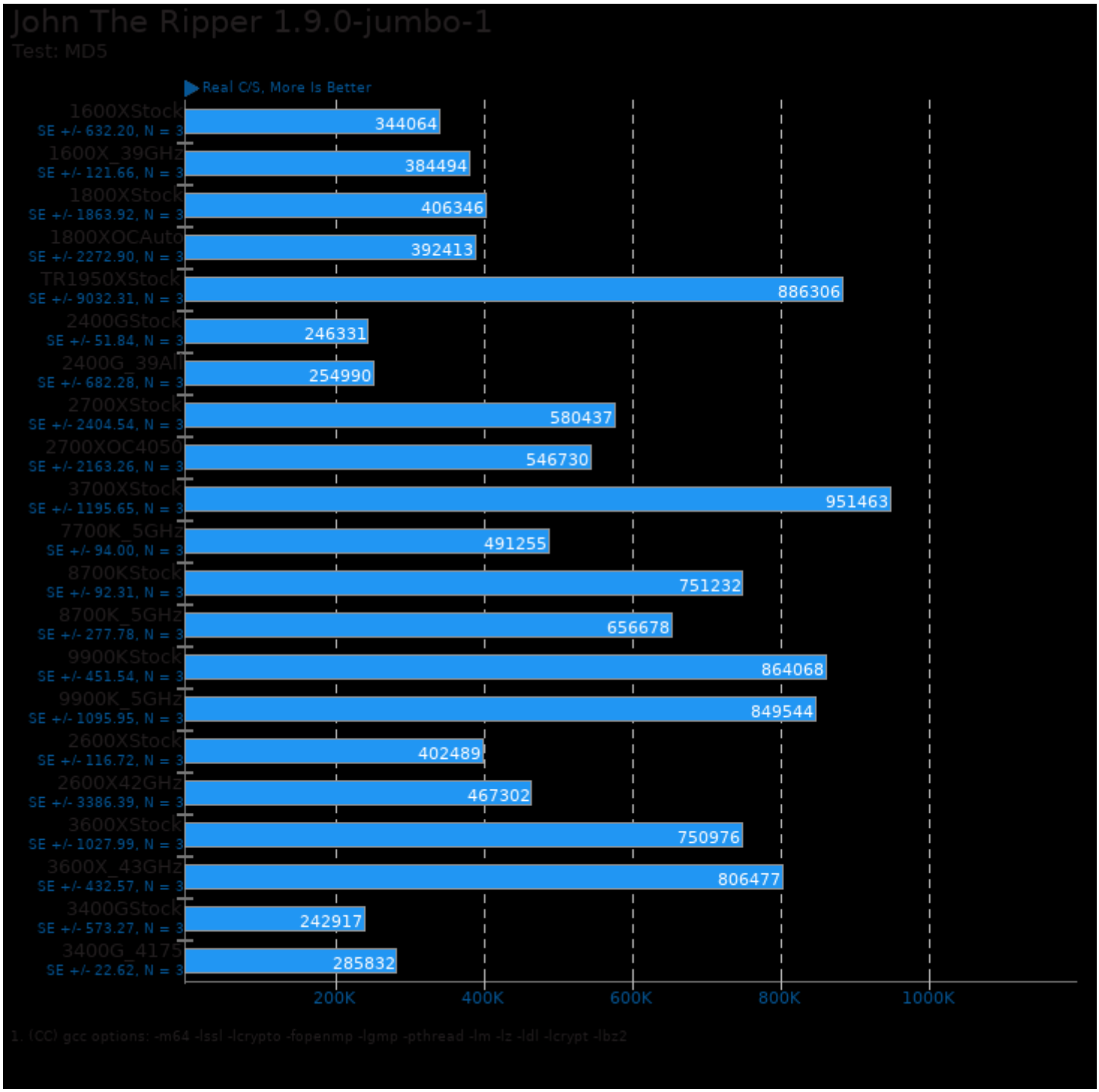

Botan 2.8.0
Test: Twofish
MiB/s, More Is Better
1600XStock
SE +/- 0.65, N = 3
309.66
1600X_39GHz
SE +/- 1.06, N = 3
335.53
1800XStock
SE +/- 0.13, N = 3
310.30
1800XOCAuto
SE +/- 0.69, N = 3
335.93
TR1950XStock
SE +/- 0.24, N = 3
293.03
2400GStock
SE +/- 0.09, N = 3
309.93
2400G_39All
SE +/- 0.81, N = 3
333.75
2700XStock
SE +/- 3.97, N = 3
365.89
2700XOC4050
SE +/- 0.43, N = 3
319.08
3700XStock
SE +/- 0.06, N = 3
316.39
3700XOC4250
SE +/- 0.05, N = 3
374.48
3900XStock
SE +/- 0.28, N = 3
333.68
3900XOC4250
SE +/- 0.20, N = 3
374.09
7700KStock
SE +/- 0.06, N = 3
395.38
7700K_5GHz
SE +/- 0.20, N = 3
439.19
7900XStock
SE +/- 0.25, N = 3
375.27
7900XOC4300
SE +/- 0.20, N = 3
376.74
8700KStock
SE +/- 3.40, N = 3
407.85
8700K_5GHz
SE +/- 0.30, N = 3
438.93
9900KStock
SE +/- 0.27, N = 3
420.57
9900K_5GHz
SE +/- 0.15, N = 3
411.98
2600XStock
SE +/- 0.30, N = 3
310.11
2600X42GHz
SE +/- 0.24, N = 3
362.29
3600XStock
SE +/- 0.06, N = 3
334.19
3600X_43GHz
SE +/- 1.12, N = 3
376.51
3400GStock
SE +/- 0.40, N = 3
318.34
3400G_4175
SE +/- 0.28, N = 3
360.05
100
200
300
400
500
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

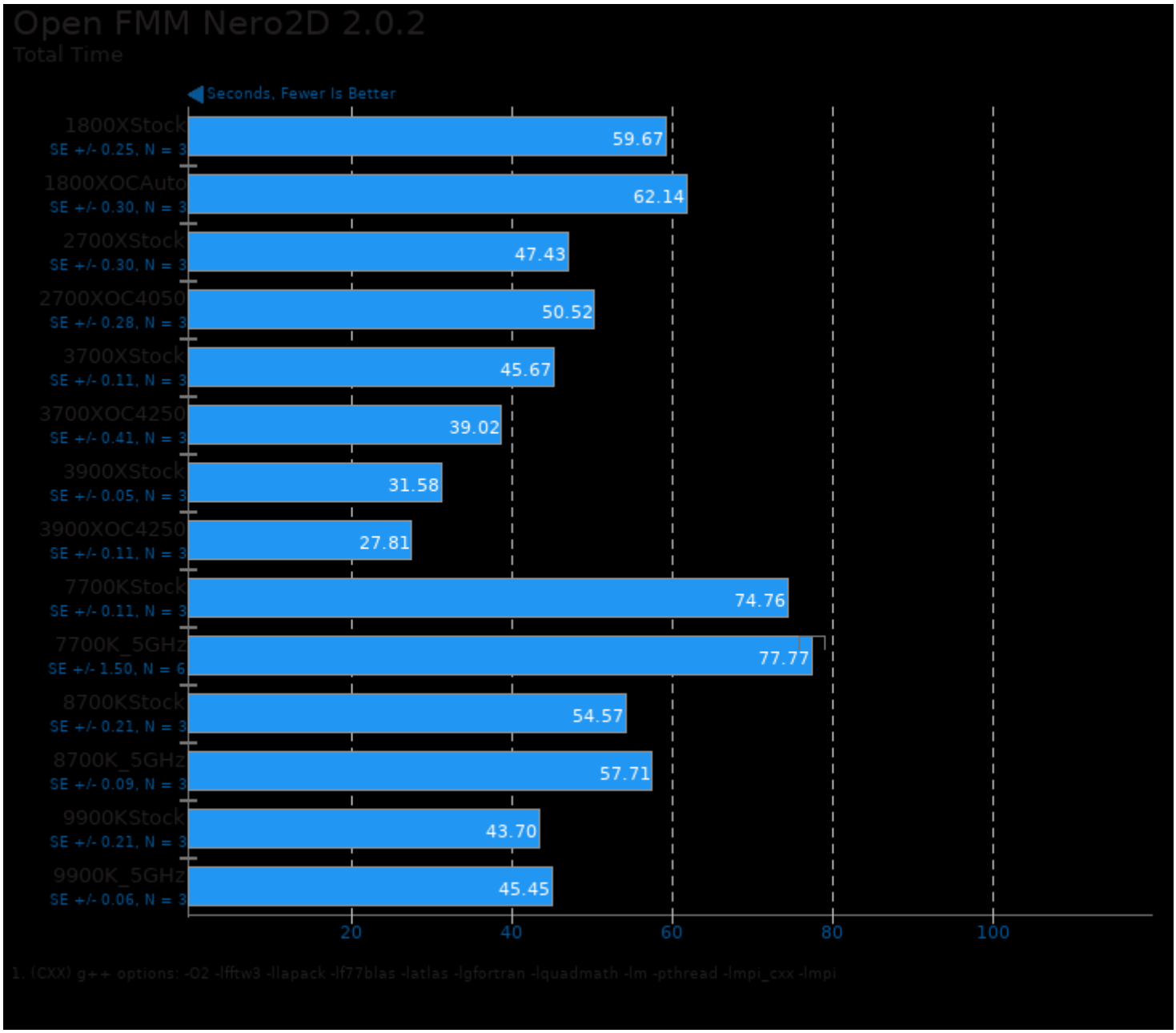
xdacputestsep2019



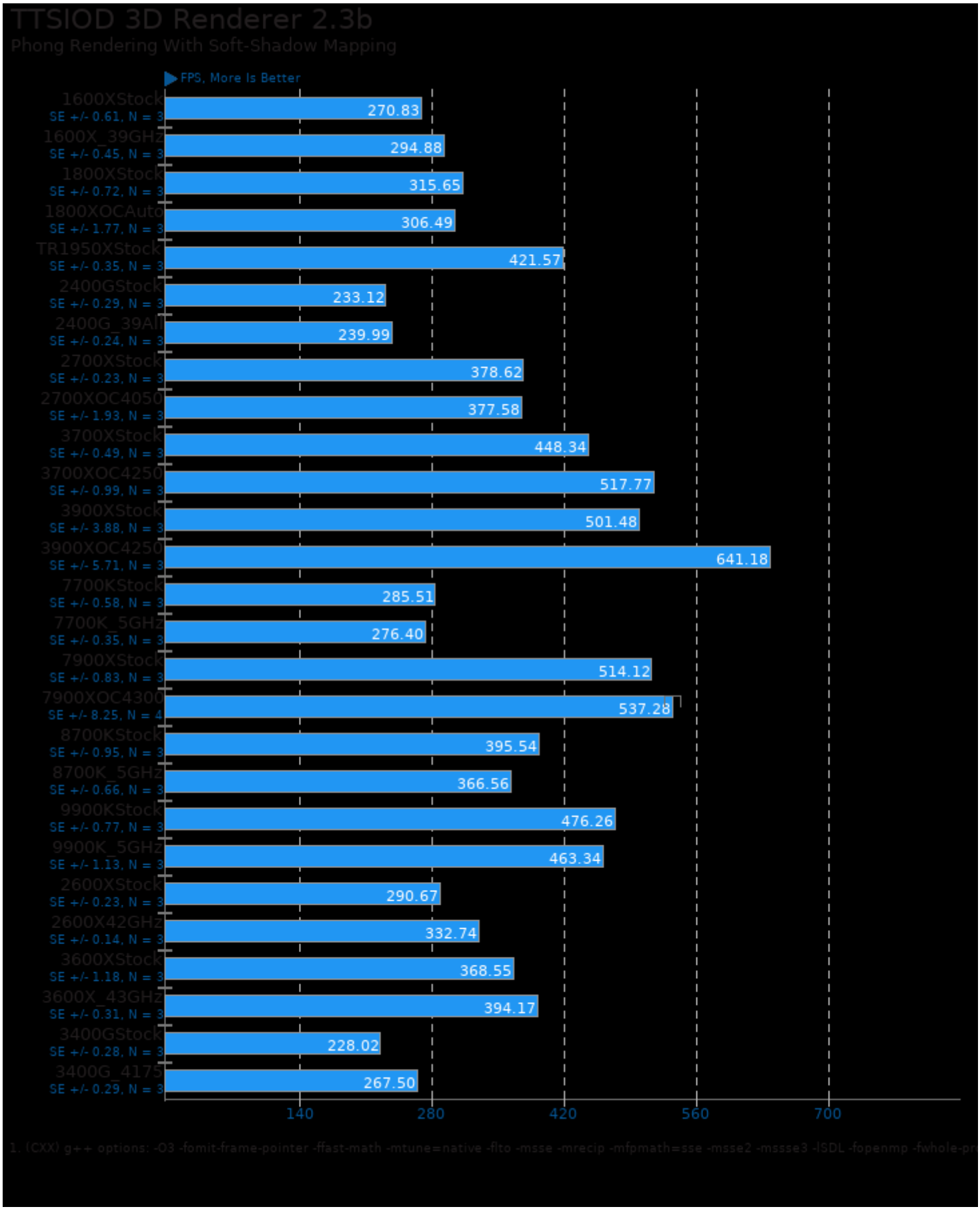

John The Ripper 1.9.0-jumbo-1
Test: Blowfish
Real C/S, More Is Better
1600XStock
SE +/- 24.85, N = 3
11103
1600X_39GHz
SE +/- 109.35, N = 3
12575
1800XStock
SE +/- 140.09, N = 3
11469
1800XOCAuto
SE +/- 67.02, N = 3
13792
TR1950XStock
SE +/- 51.24, N = 3
30044
2400GStock
SE +/- 132.09, N = 4
8073
2400G_39AM
SE +/- 160.83, N = 3
8263
2700XStock
SE +/- 108.01, N = 3
17511
2700XOC4050
SE +/- 208.19, N = 3
16631
3700XStock
SE +/- 14.18, N = 3
17233
3700XOC4250
SE +/- 25.54, N = 3
20411
3900XStock
SE +/- 194.24, N = 3
22713
3900XOC4250
SE +/- 11.85, N = 3
29195
7700K_5GHz
SE +/- 4.18, N = 3
8317
7900XStock
SE +/- 5.24, N = 3
19438
7900XOC4300
SE +/- 272.99, N = 3
20672
8700KStock
SE +/- 1.00, N = 3
12386
8700K_5GHz
SE +/- 10.48, N = 3
11290
9900KStock
SE +/- 17.15, N = 3
15062
9900K_5GHz
SE +/- 23.68, N = 3
14521
2600XStock
SE +/- 230.55, N = 6
12053
2600X42GHz
SE +/- 37.37, N = 3
14400
3600XStock
SE +/- 5.36, N = 3
13575
3600X_43GHz
SE +/- 12.10, N = 3
14639
3400GStock
SE +/- 33.07, N = 3
7983
3400G_4175
SE +/- 12.06, N = 3
9472
6K
12K
18K
24K
30K
1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -lgmp -pthread -lm -lz -ldl -lcrypt -lbz2

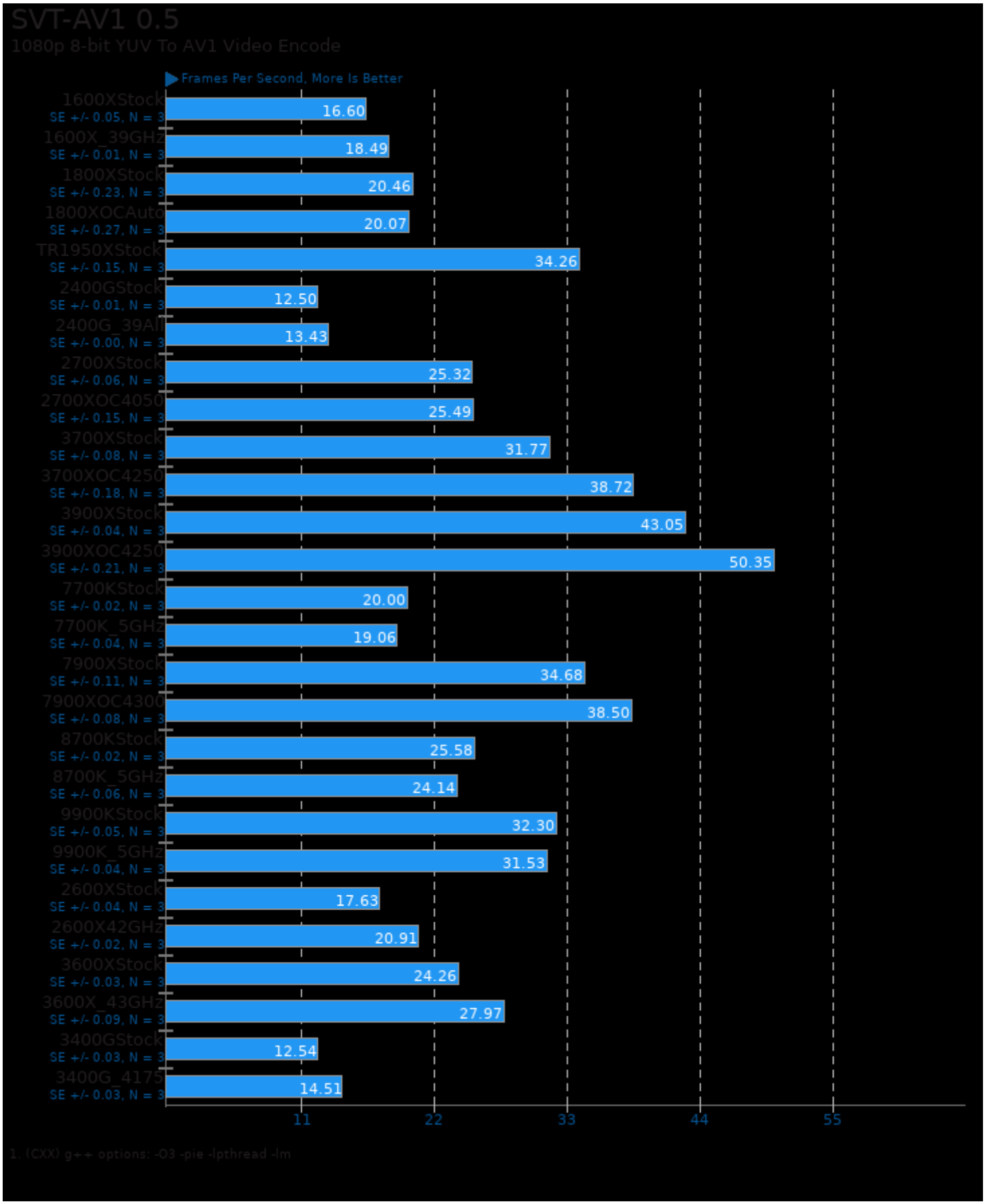
xdacputestsep2019



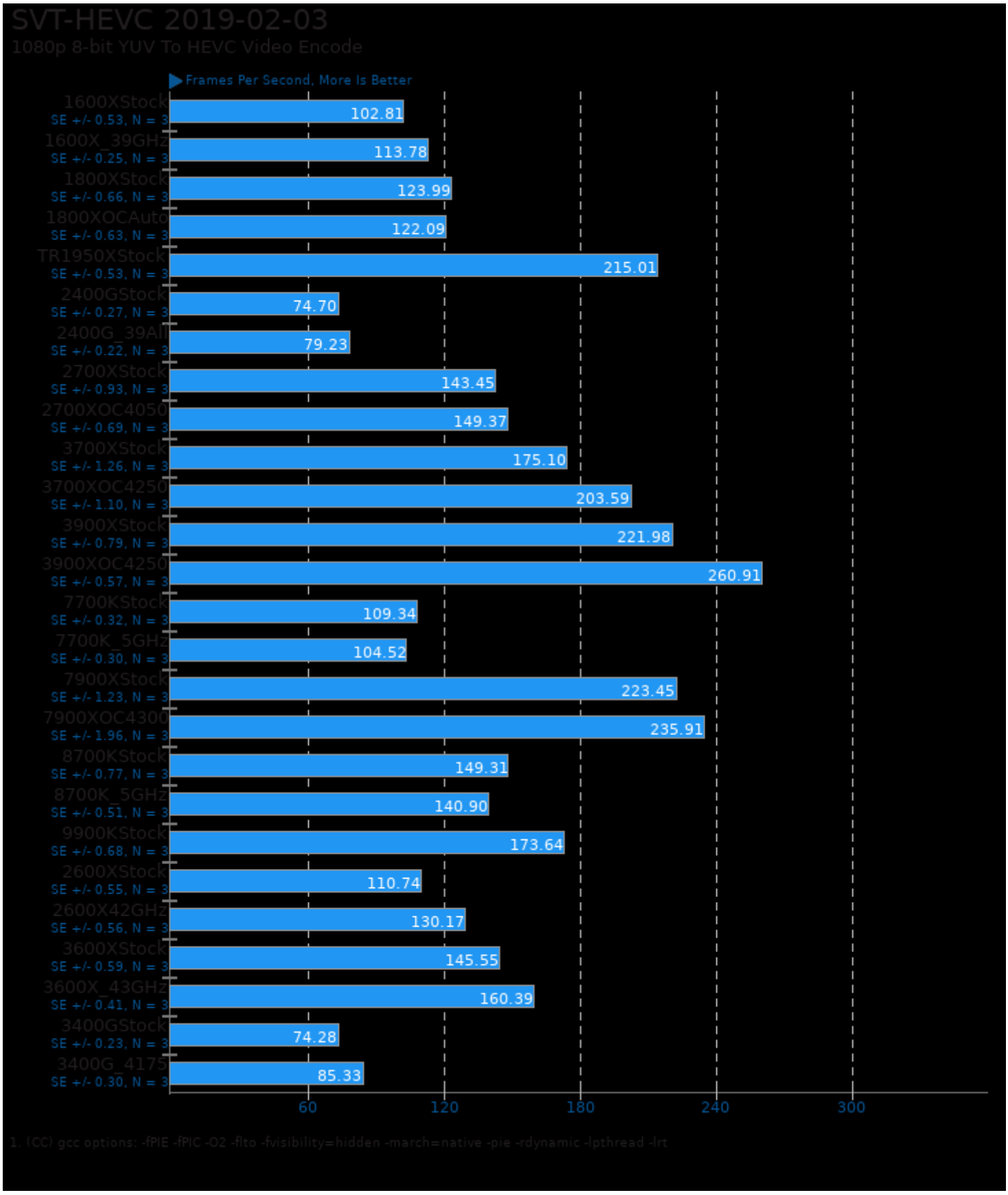

Open FMM Nero2D 2.0.2
Total Time
Seconds, Fewer Is Better
1800XStock
SE +/- 0.25, N = 3
59.67
1800XOCAuto
SE +/- 0.30, N = 3
62.14
2700XStock
SE +/- 0.30, N = 3
47.43
2700XOC4050
SE +/- 0.28, N = 3
50.52
3700XStock
SE +/- 0.11, N = 3
45.67
3700XOC4250
SE +/- 0.41, N = 3
39.02
3900XStock
SE +/- 0.05, N = 3
31.58
3900XOC4250
SE +/- 0.11, N = 3
27.81
7700KStock
SE +/- 0.11, N = 3
74.76
7700K_5GHz
SE +/- 1.50, N = 6
77.77
8700KStock
SE +/- 0.21, N = 3
54.57
8700K_5GHz
SE +/- 0.09, N = 3
57.71
9900KStock
SE +/- 0.21, N = 3
43.70
9900K_5GHz
SE +/- 0.06, N = 3
45.45
20
40
60
80
100
1. (CXX) g++ options: -O2 -lfftw3 -llapack -lf77blas -latlas -lgfortran -lquadmath -lm -pthread -lmpi_cxx -lmpi

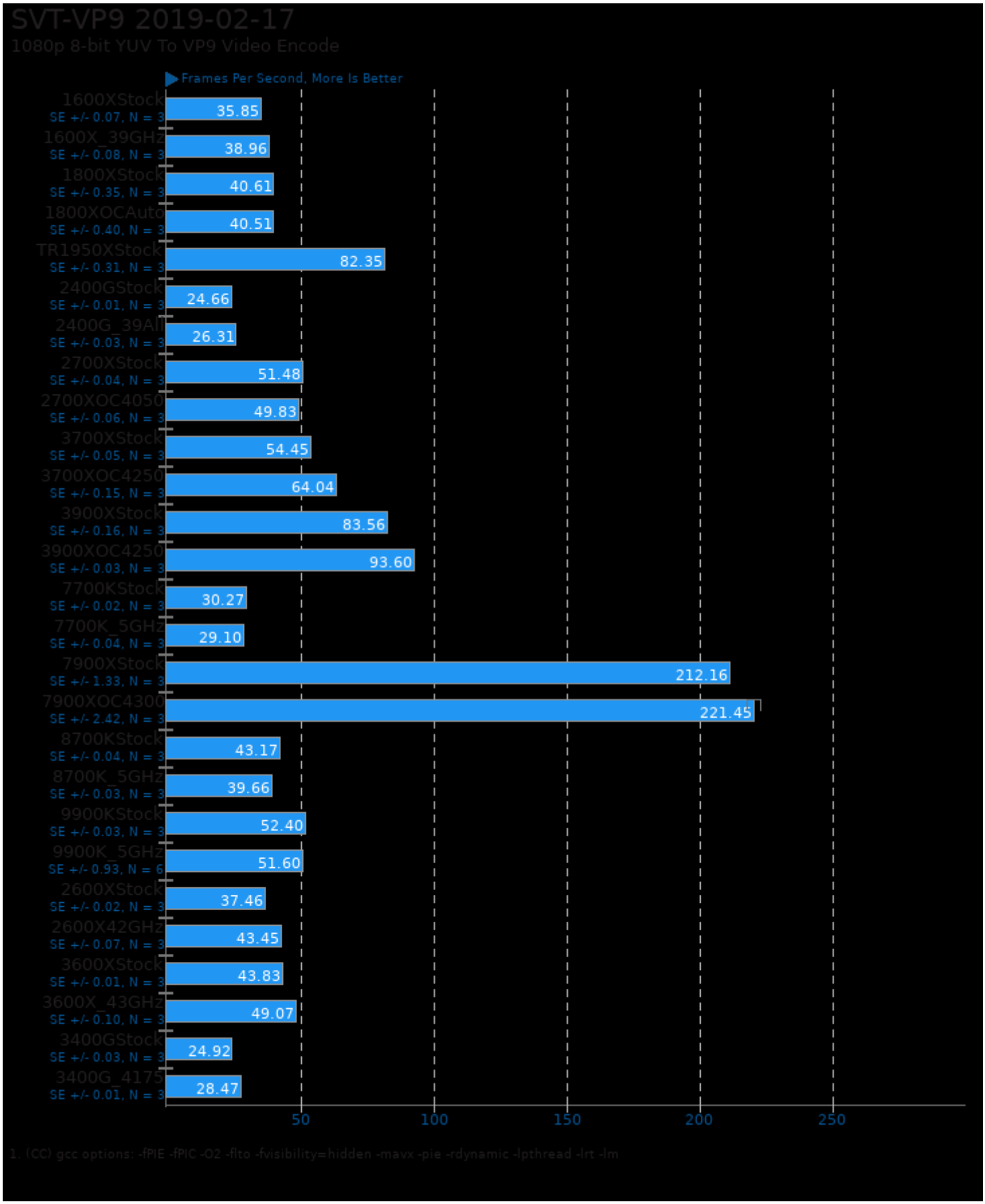
xdacputestsep2019

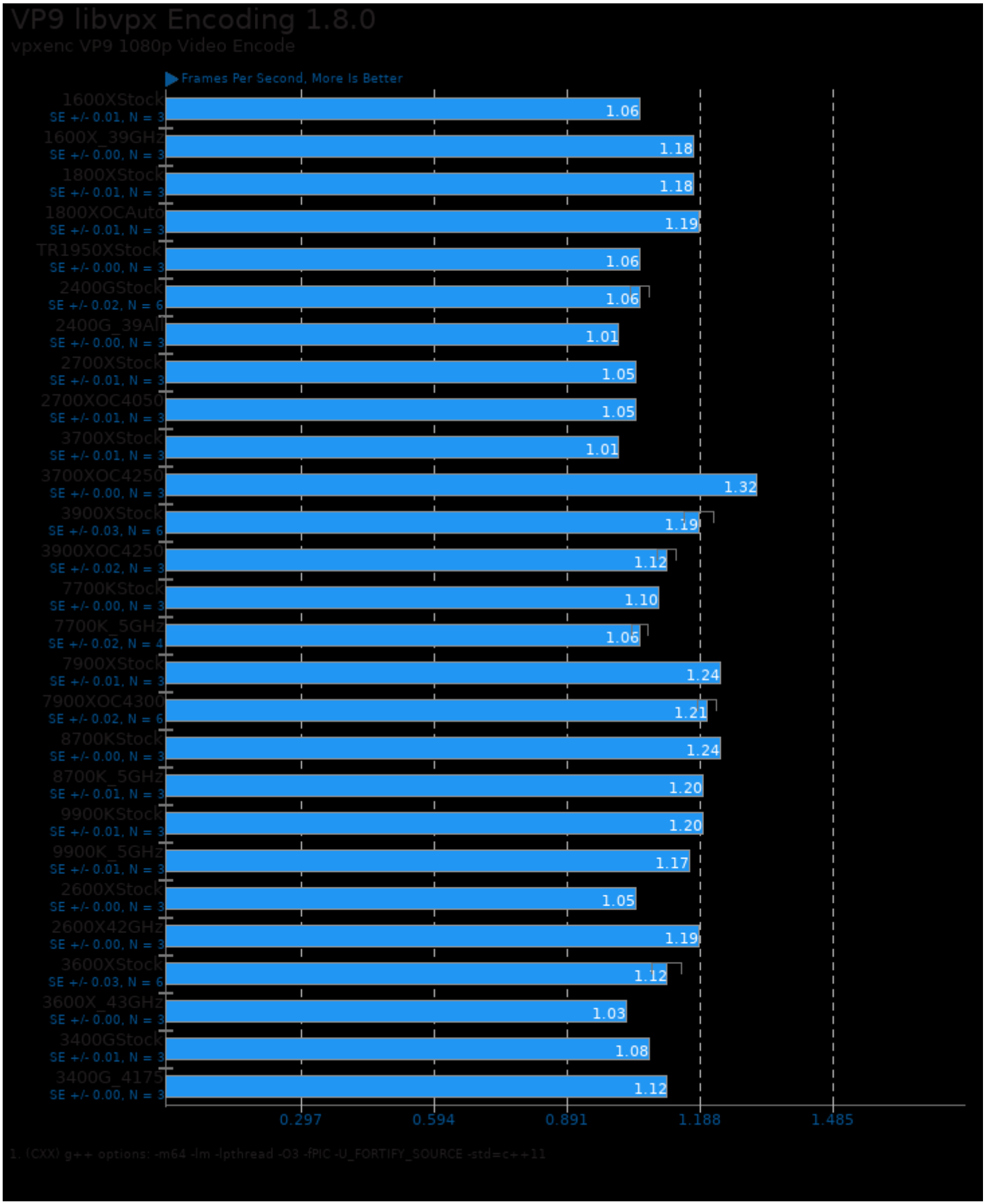


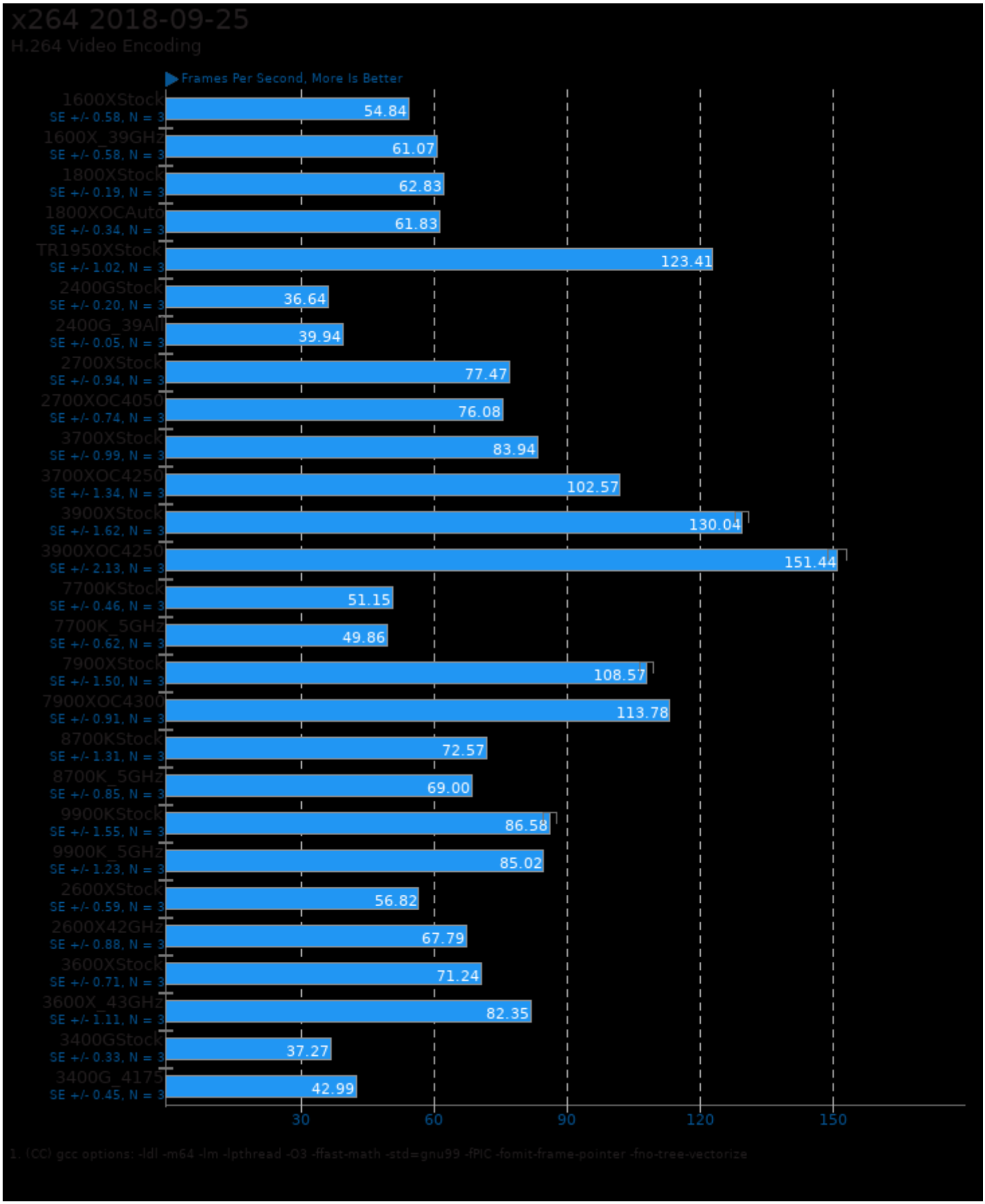

SVT-AV1 0.5
1080p 8-bit YUV To AV1 Video Encode
Frames Per Second, More Is Better
1600XStock
SE +/- 0.05, N = 3
16.60
1600X_39GHz
SE +/- 0.01, N = 3
18.49
1800XStock
SE +/- 0.23, N = 3
20.46
1800XOCAuto
SE +/- 0.27, N = 3
20.07
TR1950XStock
SE +/- 0.15, N = 3
34.26
2400GStock
SE +/- 0.01, N = 3
12.50
2400G_39Al
SE +/- 0.00, N = 3
13.43
2700XStock
SE +/- 0.06, N = 3
25.32
2700XOC4050
SE +/- 0.15, N = 3
25.49
3700XStock
SE +/- 0.08, N = 3
31.77
3700XOC4250
SE +/- 0.18, N = 3
38.72
3900XStock
SE +/- 0.04, N = 3
43.05
3900XOC4250
SE +/- 0.21, N = 3
50.35
7700KStock
SE +/- 0.02, N = 3
20.00
7700K_5GHz
SE +/- 0.04, N = 3
19.06
7900XStock
SE +/- 0.11, N = 3
34.68
7900XOC4300
SE +/- 0.08, N = 3
38.50
8700KStock
SE +/- 0.02, N = 3
25.58
8700K_5GHz
SE +/- 0.06, N = 3
24.14
9900KStock
SE +/- 0.05, N = 3
32.30
9900K_5GHz
SE +/- 0.04, N = 3
31.53
2600XStock
SE +/- 0.04, N = 3
17.63
2600X42GHz
SE +/- 0.02, N = 3
20.91
3600XStock
SE +/- 0.03, N = 3
24.26
3600X_43GHz
SE +/- 0.09, N = 3
27.97
3400GStock
SE +/- 0.03, N = 3
12.54
3400G_4175
SE +/- 0.03, N = 3
14.51
11
22
33
44
55
1. (CXX) g++ options: -O3 -pie -lpthread -lm

xdacputestsep2019

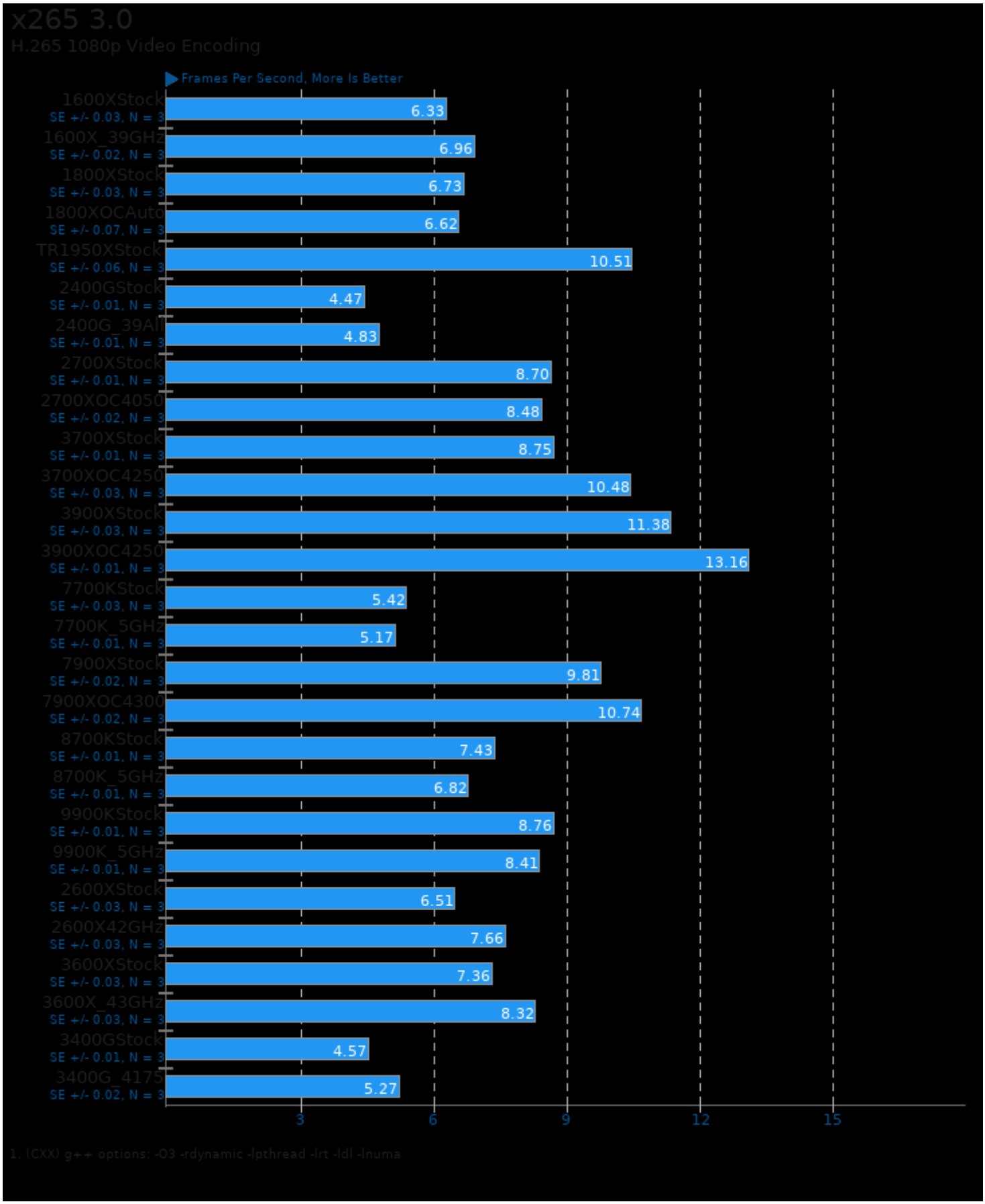


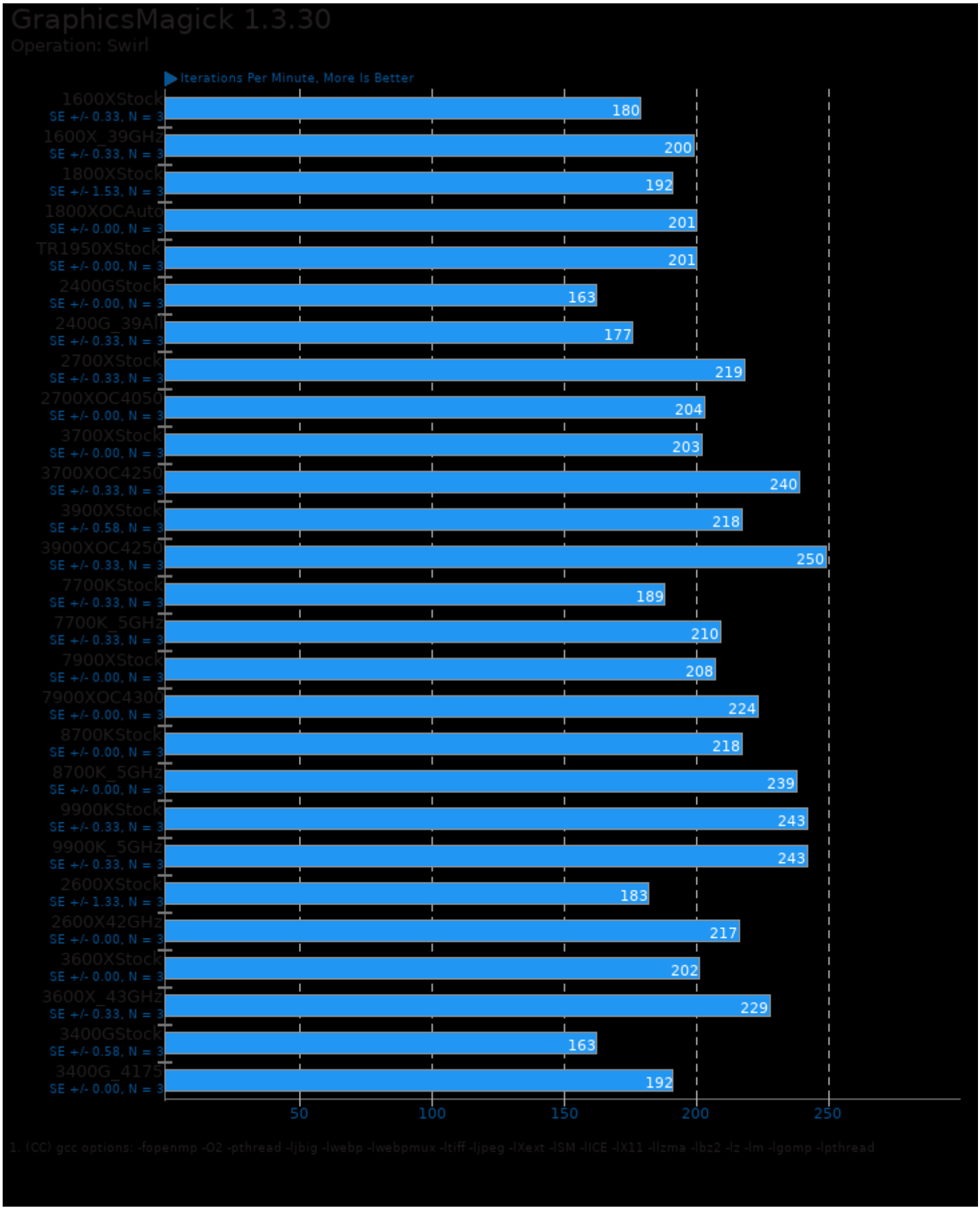

SVT-VP9 2019-02-17
1080p 8-bit YUV To VP9 Video Encode
Frames Per Second, More Is Better
1600XStock
SE +/- 0.07, N = 3
35.85
1600X_39GHz
SE +/- 0.08, N = 3
38.96
1800XStock
SE +/- 0.35, N = 3
40.61
1800XOCAuto
SE +/- 0.40, N = 3
40.51
TR1950XStock
SE +/- 0.31, N = 3
82.35
2400GStock
SE +/- 0.01, N = 3
24.66
2400G_39AM
SE +/- 0.03, N = 3
26.31
2700XStock
SE +/- 0.04, N = 3
51.48
2700XOC4050
SE +/- 0.06, N = 3
49.83
3700XStock
SE +/- 0.05, N = 3
54.45
3700XOC4250
SE +/- 0.15, N = 3
64.04
3900XStock
SE +/- 0.16, N = 3
83.56
3900XOC4250
SE +/- 0.03, N = 3
93.60
7700KStock
SE +/- 0.02, N = 3
30.27
7700K_5GHz
SE +/- 0.04, N = 3
29.10
7900XStock
SE +/- 1.33, N = 3
212.16
7900XOC4300
SE +/- 2.42, N = 3
221.45
8700KStock
SE +/- 0.04, N = 3
43.17
8700K_5GHz
SE +/- 0.03, N = 3
39.66
9900KStock
SE +/- 0.03, N = 3
52.40
9900K_5GHz
SE +/- 0.93, N = 6
51.60
2600XStock
SE +/- 0.02, N = 3
37.46
2600X42GHz
SE +/- 0.07, N = 3
43.45
3600XStock
SE +/- 0.01, N = 3
43.83
3600X_43GHz
SE +/- 0.10, N = 3
49.07
3400GStock
SE +/- 0.03, N = 3
24.92
3400G_4175
SE +/- 0.01, N = 3
28.47
50
100
150
200
250
1. (CC) gcc options: -fPIE -fPIC -O2 -flto -fvisibility=hidden -mavx -pie -rdynamic -lpthread -lrt -lm

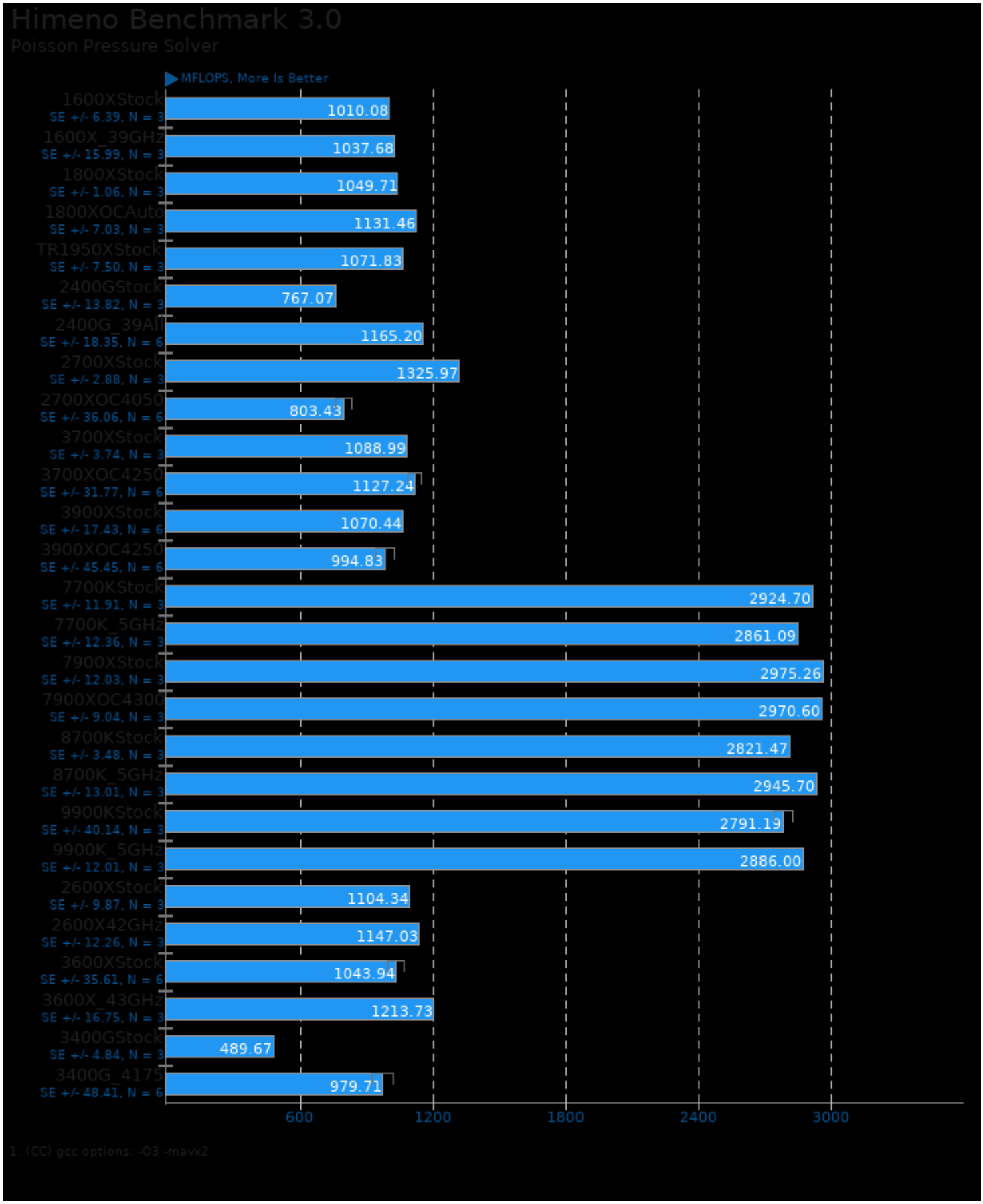

VP9 libvpx Encoding 1.8.0
vpxenc VP9 1080p Video Encode
Frames Per Second, More Is Better
1600XStock
SE +/- 0.01, N = 3
1.06
1600X_39GHz
SE +/- 0.00, N = 3
1.18
1800XStock
SE +/- 0.01, N = 3
1.18
1800XOCAuto
SE +/- 0.01, N = 3
1.19
TR1950XStock
SE +/- 0.00, N = 3
1.06
2400GStock
SE +/- 0.02, N = 6
1.06
2400G_39Alt
SE +/- 0.00, N = 3
1.01
2700XStock
SE +/- 0.01, N = 3
1.05
2700XOC4050
SE +/- 0.01, N = 3
1.05
3700XStock
SE +/- 0.01, N = 3
1.01
3700XOC4250
SE +/- 0.00, N = 3
1.32
3900XStock
SE +/- 0.03, N = 6
1.19
3900XOC4250
SE +/- 0.02, N = 3
1.12
7700KStock
SE +/- 0.00, N = 3
1.10
7700K_5GHz
SE +/- 0.02, N = 4
1.06
7900XStock
SE +/- 0.01, N = 3
1.24
7900XOC4300
SE +/- 0.02, N = 6
1.21
8700KStock
SE +/- 0.00, N = 3
1.24
8700K_5GHz
SE +/- 0.01, N = 3
1.20
9900KStock
SE +/- 0.01, N = 3
1.20
9900K_5GHz
SE +/- 0.01, N = 3
1.17
2600XStock
SE +/- 0.00, N = 3
1.05
2600X42GHz
SE +/- 0.00, N = 3
1.19
3600XStock
SE +/- 0.03, N = 6
1.12
3600X_43GHz
SE +/- 0.00, N = 3
1.03
3400GStock
SE +/- 0.01, N = 3
1.08
3400G_4175
SE +/- 0.00, N = 3
1.12
0.297
0.594
0.891
1.188
1.485
1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=c++11

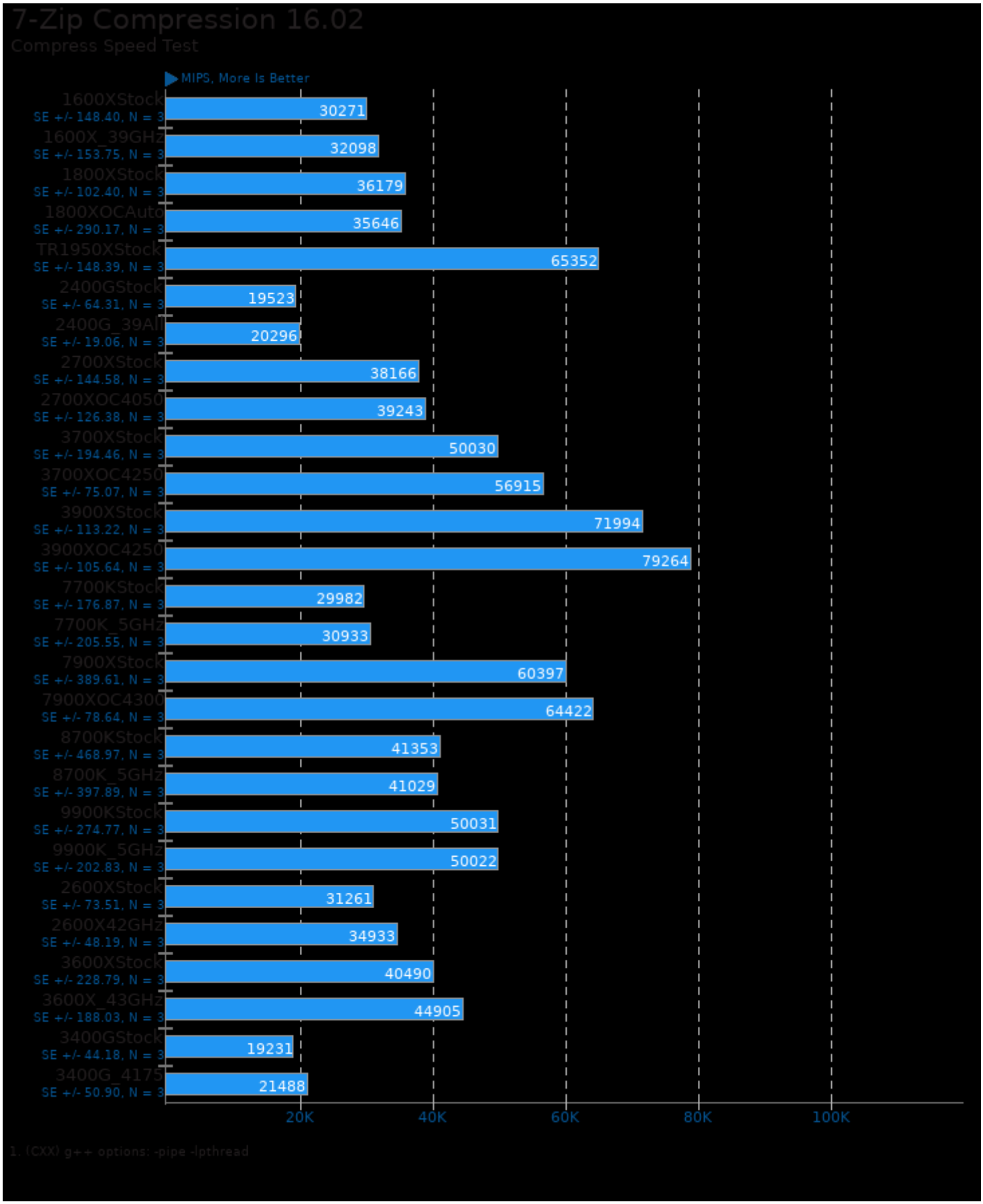

x264 2018-09-25
H.264 Video Encoding
Frames Per Second, More Is Better
1600XStock
SE +/- 0.58, N = 3
54.84
1600X_39GHz
SE +/- 0.58, N = 3
61.07
1800XStock
SE +/- 0.19, N = 3
62.83
1800XOCAuto
SE +/- 0.34, N = 3
61.83
TR1950XStock
SE +/- 1.02, N = 3
123.41
2400GStock
SE +/- 0.20, N = 3
36.64
2400G_39All
SE +/- 0.05, N = 3
39.94
2700XStock
SE +/- 0.94, N = 3
77.47
2700XOC4050
SE +/- 0.74, N = 3
76.08
3700XStock
SE +/- 0.99, N = 3
83.94
3700XOC4250
SE +/- 1.34, N = 3
102.57
3900XStock
SE +/- 1.62, N = 3
130.04
3900XOC4250
SE +/- 2.13, N = 3
151.44
7700KStock
SE +/- 0.46, N = 3
51.15
7700K_5GHz
SE +/- 0.62, N = 3
49.86
7900XStock
SE +/- 1.50, N = 3
108.57
7900XOC4300
SE +/- 0.91, N = 3
113.78
8700KStock
SE +/- 1.31, N = 3
72.57
8700K_5GHz
SE +/- 0.85, N = 3
69.00
9900KStock
SE +/- 1.55, N = 3
86.58
9900K_5GHz
SE +/- 1.23, N = 3
85.02
2600XStock
SE +/- 0.59, N = 3
56.82
2600X42GHz
SE +/- 0.88, N = 3
67.79
3600XStock
SE +/- 0.71, N = 3
71.24
3600X_43GHz
SE +/- 1.11, N = 3
82.35
3400GStock
SE +/- 0.33, N = 3
37.27
3400G_4175
SE +/- 0.45, N = 3
42.99
30
60
90
120
150
1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fPIC -fomit-frame-pointer -fno-tree-vectorize

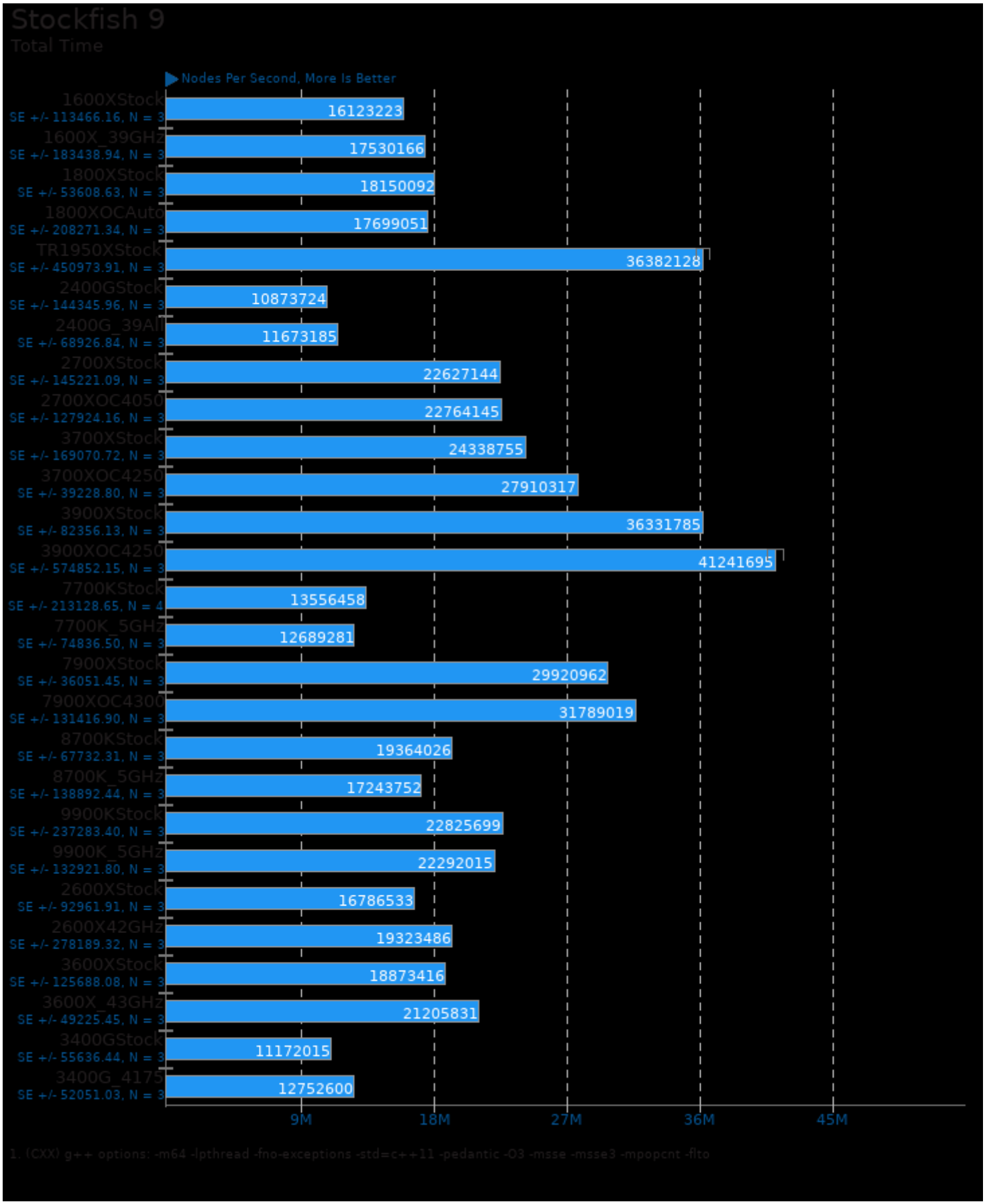
xdacputestsep2019



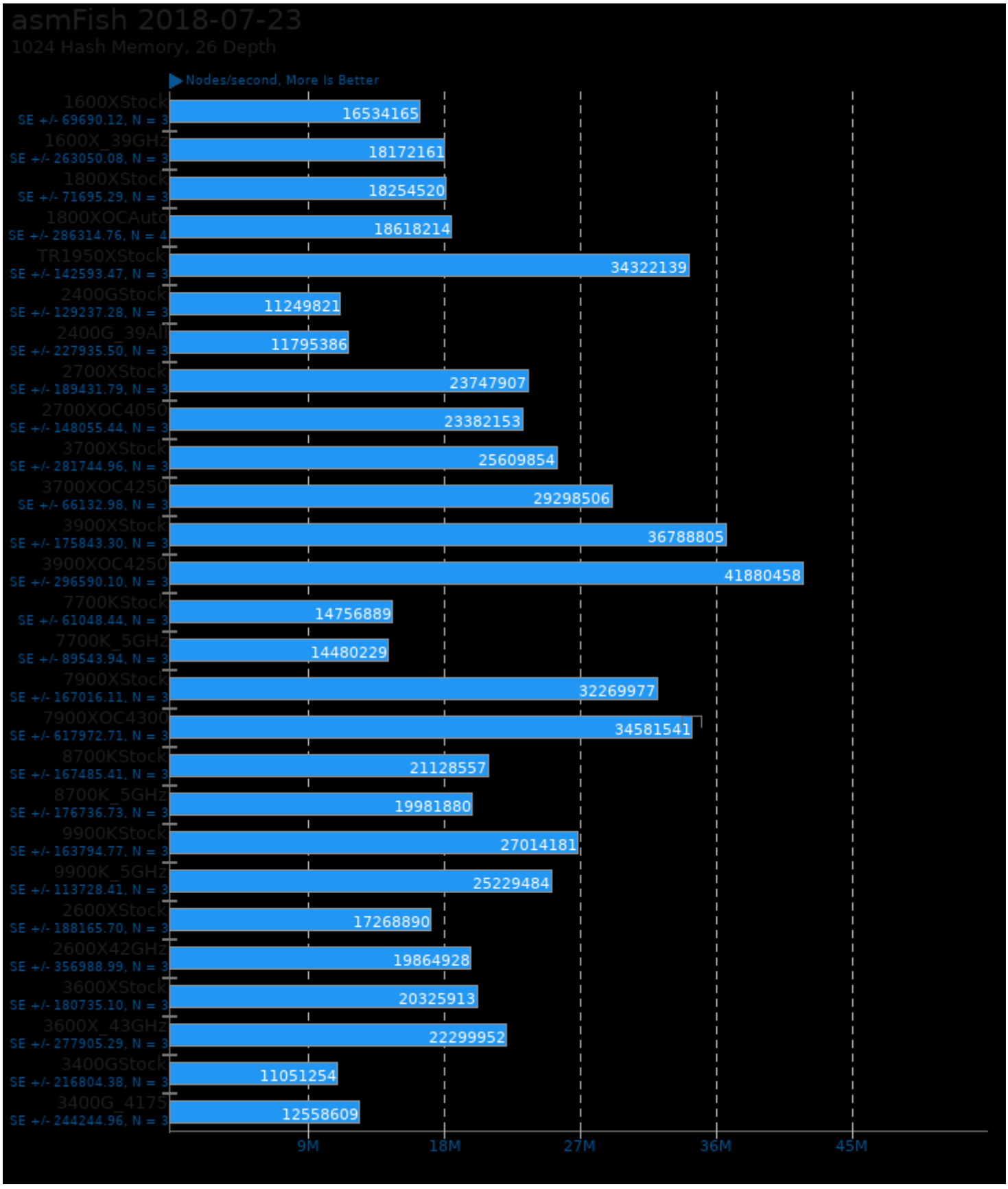

GraphicsMagick 1.3.30
Operation: Swirl
Iterations Per Minute, More Is Better
1600XStock
SE +/- 0.33, N = 3
180
1600X_39GHz
SE +/- 0.33, N = 3
200
1800XStock
SE +/- 1.53, N = 3
192
1800XOCAuto
SE +/- 0.00, N = 3
201
TR1950XStock
SE +/- 0.00, N = 3
201
2400GStock
SE +/- 0.00, N = 3
163
2400G_39AM
SE +/- 0.33, N = 3
177
2700XStock
SE +/- 0.33, N = 3
219
2700XOC4050
SE +/- 0.00, N = 3
204
3700XStock
SE +/- 0.00, N = 3
203
3700XOC4250
SE +/- 0.33, N = 3
240
3900XStock
SE +/- 0.58, N = 3
218
3900XOC4250
SE +/- 0.33, N = 3
250
7700KStock
SE +/- 0.33, N = 3
189
7700K_5GHz
SE +/- 0.33, N = 3
210
7900XStock
SE +/- 0.00, N = 3
208
7900XOC4300
SE +/- 0.00, N = 3
224
8700KStock
SE +/- 0.00, N = 3
218
8700K_5GHz
SE +/- 0.00, N = 3
239
9900KStock
SE +/- 0.33, N = 3
243
9900K_5GHz
SE +/- 0.33, N = 3
243
2600XStock
SE +/- 1.33, N = 3
183
2600X42GHz
SE +/- 0.00, N = 3
217
3600XStock
SE +/- 0.00, N = 3
202
3600X_43GHz
SE +/- 0.33, N = 3
229
3400GStock
SE +/- 0.58, N = 3
163
3400G_4175
SE +/- 0.00, N = 3
192
50
100
150
200
250
1. (CC) gcc options: -fopenmp -O2 -pthread -ljbig -lwebp -lwebpmux -ltiff -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lz -lm -lgomp -lpthread


Himeno Benchmark 3.0
Poisson Pressure Solver
MFLOPS, More Is Better
1600XStock
SE +/- 6.39, N = 3
1010.08
1600X_39GHz
SE +/- 15.99, N = 3
1037.68
1800XStock
SE +/- 1.06, N = 3
1049.71
1800XOCAuto
SE +/- 7.03, N = 3
1131.46
TR1950XStock
SE +/- 7.50, N = 3
1071.83
2400GStock
SE +/- 13.82, N = 3
767.07
2400G_39All
SE +/- 18.35, N = 6
1165.20
2700XStock
SE +/- 2.88, N = 3
1325.97
2700XOC4050
SE +/- 36.06, N = 6
803.43
3700XStock
SE +/- 3.74, N = 3
1088.99
3700XOC4250
SE +/- 31.77, N = 6
1127.24
3900XStock
SE +/- 17.43, N = 6
1070.44
3900XOC4250
SE +/- 45.45, N = 6
994.83
7700KStock
SE +/- 11.91, N = 3
2924.70
7700K_5GHz
SE +/- 12.36, N = 3
2861.09
7900XStock
SE +/- 12.03, N = 3
2975.26
7900XOC4300
SE +/- 9.04, N = 3
2970.60
8700KStock
SE +/- 3.48, N = 3
2821.47
8700K_5GHz
SE +/- 13.01, N = 3
2945.70
9900KStock
SE +/- 40.14, N = 3
2791.19
9900K_5GHz
SE +/- 12.01, N = 3
2886.00
2600XStock
SE +/- 9.87, N = 3
1104.34
2600X42GHz
SE +/- 12.26, N = 3
1147.03
3600XStock
SE +/- 35.61, N = 6
1043.94
3600X_43GHz
SE +/- 16.75, N = 3
1213.73
3400GStock
SE +/- 4.84, N = 3
489.67
3400G_4175
SE +/- 48.41, N = 6
979.71
600
1200
1800
2400
3000
1. (CC) gcc options: -O3 -mavx2

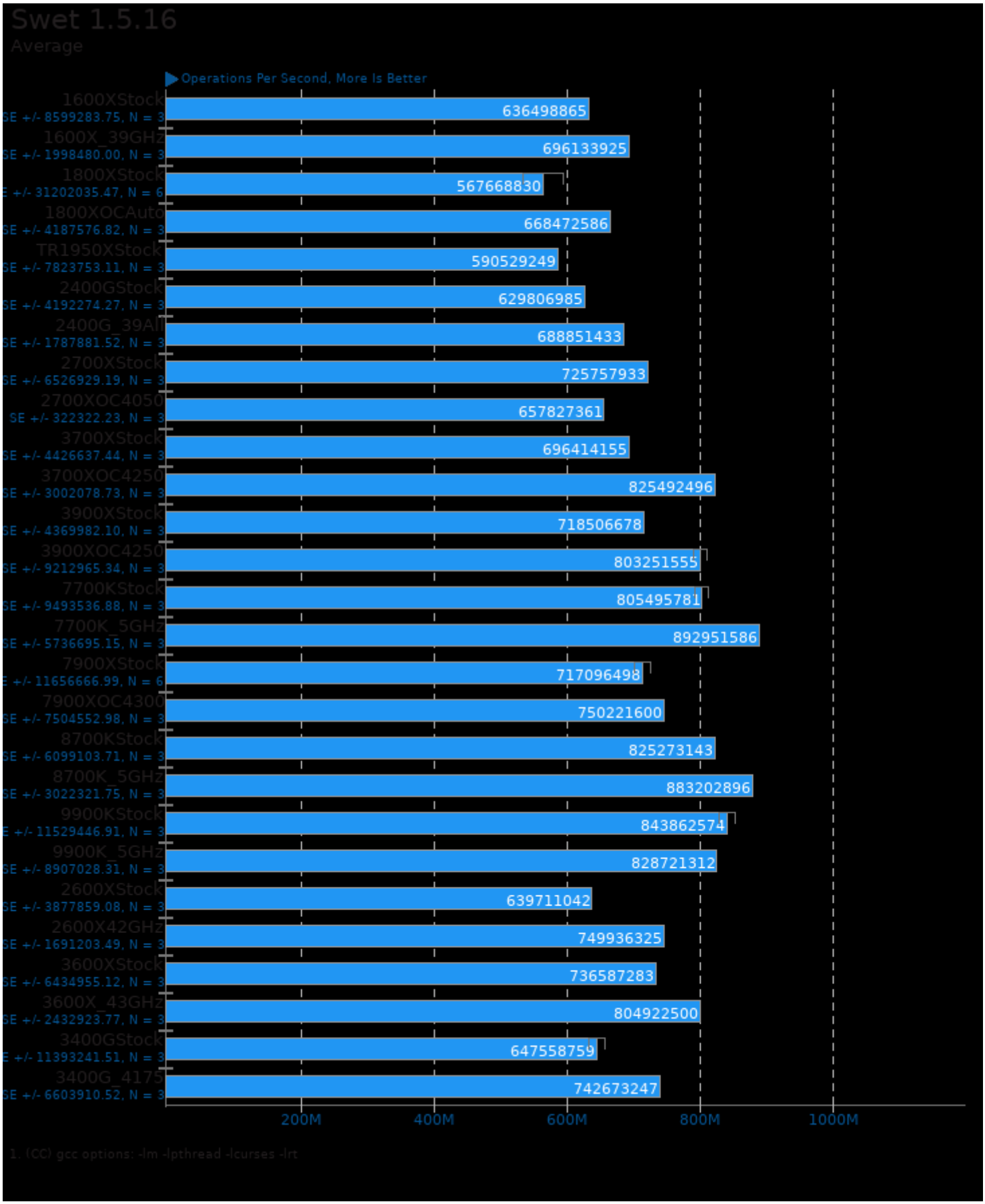

7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
1600XStock
SE +/- 148.40, N = 3
30271
1600X_39GHz
SE +/- 153.75, N = 3
32098
1800XStock
SE +/- 102.40, N = 3
36179
1800XOCAuto
SE +/- 290.17, N = 3
35646
TR1950XStock
SE +/- 148.39, N = 3
65352
2400GStock
SE +/- 64.31, N = 3
19523
2400G_39Alt
SE +/- 19.06, N = 3
20296
2700XStock
SE +/- 144.58, N = 3
38166
2700XOC4050
SE +/- 126.38, N = 3
39243
3700XStock
SE +/- 194.46, N = 3
50030
3700XOC4250
SE +/- 75.07, N = 3
56915
3900XStock
SE +/- 113.22, N = 3
71994
3900XOC4250
SE +/- 105.64, N = 3
79264
7700KStock
SE +/- 176.87, N = 3
29982
7700K_5GHz
SE +/- 205.55, N = 3
30933
7900XStock
SE +/- 389.61, N = 3
60397
7900XOC4300
SE +/- 78.64, N = 3
64422
8700KStock
SE +/- 468.97, N = 3
41353
8700K_5GHz
SE +/- 397.89, N = 3
41029
9900KStock
SE +/- 274.77, N = 3
50031
9900K_5GHz
SE +/- 202.83, N = 3
50022
2600XStock
SE +/- 73.51, N = 3
31261
2600X42GHz
SE +/- 48.19, N = 3
34933
3600XStock
SE +/- 228.79, N = 3
40490
3600X_43GHz
SE +/- 188.03, N = 3
44905
3400GStock
SE +/- 44.18, N = 3
19231
3400G_4175
SE +/- 50.90, N = 3
21488
20K
40K
60K
80K
100K
1. (CXX) g++ options: -pipe -lpthread


Stockfish 9
Total Time
Nodes Per Second, More Is Better
1600XStock
SE +/- 113466.16, N = 3
16123223
1600X_39GHz
SE +/- 183438.94, N = 3
17530166
1800XStock
SE +/- 53608.63, N = 3
18150092
1800XOCAuto
SE +/- 208271.34, N = 3
17699051
TR1950XStock
SE +/- 450973.91, N = 3
36382128
2400GStock
SE +/- 144345.96, N = 3
10873724
2400G_39AM
SE +/- 68926.84, N = 3
11673185
2700XStock
SE +/- 145221.09, N = 3
22627144
2700XOC4050
SE +/- 127924.16, N = 3
22764145
3700XStock
SE +/- 169070.72, N = 3
24338755
3700XOC4250
SE +/- 39228.80, N = 3
27910317
3900XStock
SE +/- 82356.13, N = 3
36331785
3900XOC4250
SE +/- 574852.15, N = 3
41241695
7700KStock
SE +/- 213128.65, N = 4
13556458
7700K_5GHz
SE +/- 74836.50, N = 3
12689281
7900XStock
SE +/- 36051.45, N = 3
29920962
7900XOC4300
SE +/- 131416.90, N = 3
31789019
8700KStock
SE +/- 67732.31, N = 3
19364026
8700K_5GHz
SE +/- 138892.44, N = 3
17243752
9900KStock
SE +/- 237283.40, N = 3
22825699
9900K_5GHz
SE +/- 132921.80, N = 3
22292015
2600XStock
SE +/- 92961.91, N = 3
16786533
2600X42GHz
SE +/- 278189.32, N = 3
19323486
3600XStock
SE +/- 125688.08, N = 3
18873416
3600X_43GHz
SE +/- 49225.45, N = 3
21205831
3400GStock
SE +/- 55636.44, N = 3
11172015
3400G_4175
SE +/- 52051.03, N = 3
12752600
9M
18M
27M
36M
45M
1. (CXX) g++ options: -m64 -lpthread -fno-exceptions -std=c++11 -pedantic -O3 -msse -msse3 -mpopcnt -flto

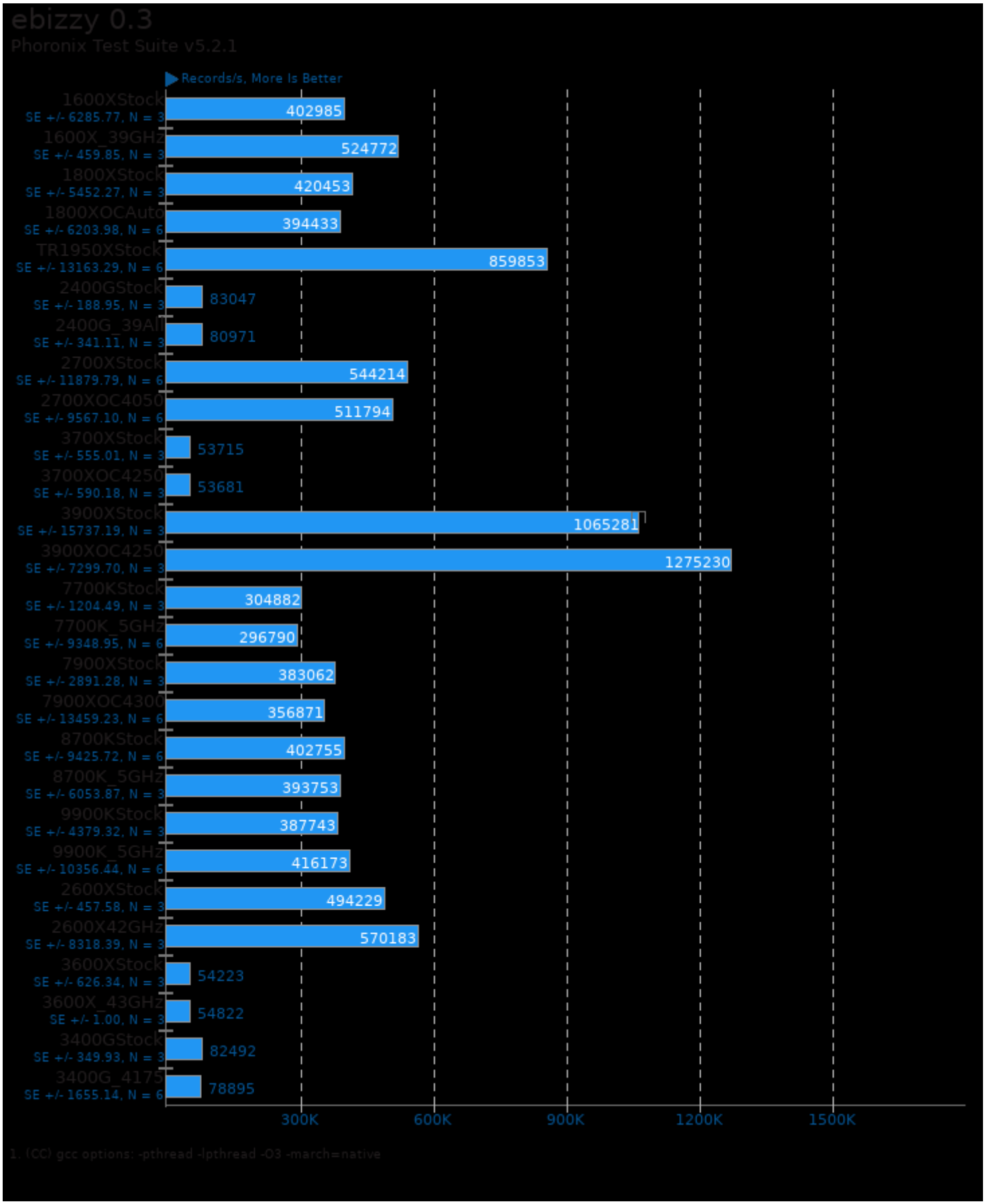
xdacputestsep2019

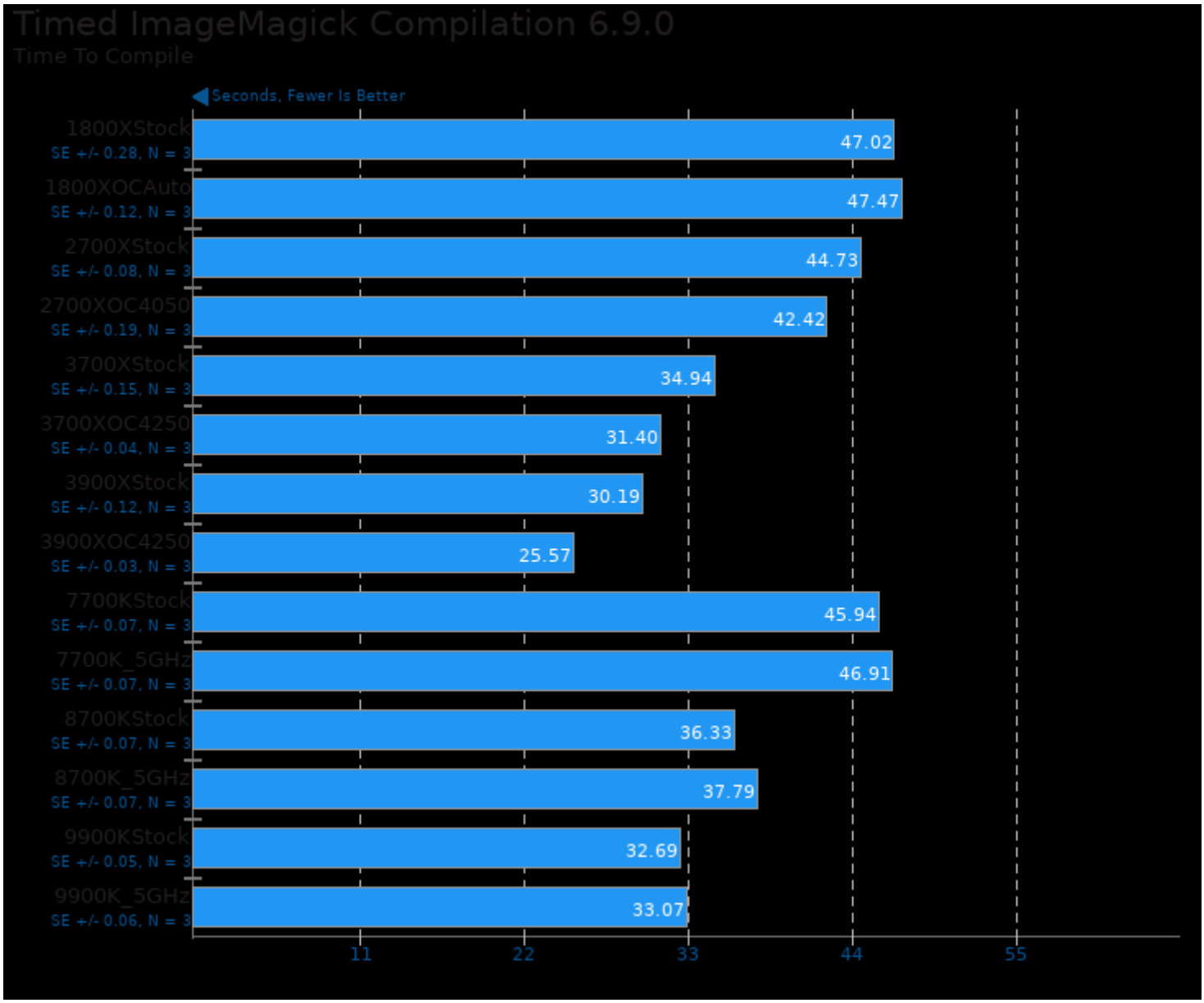


xdacputestsep2019

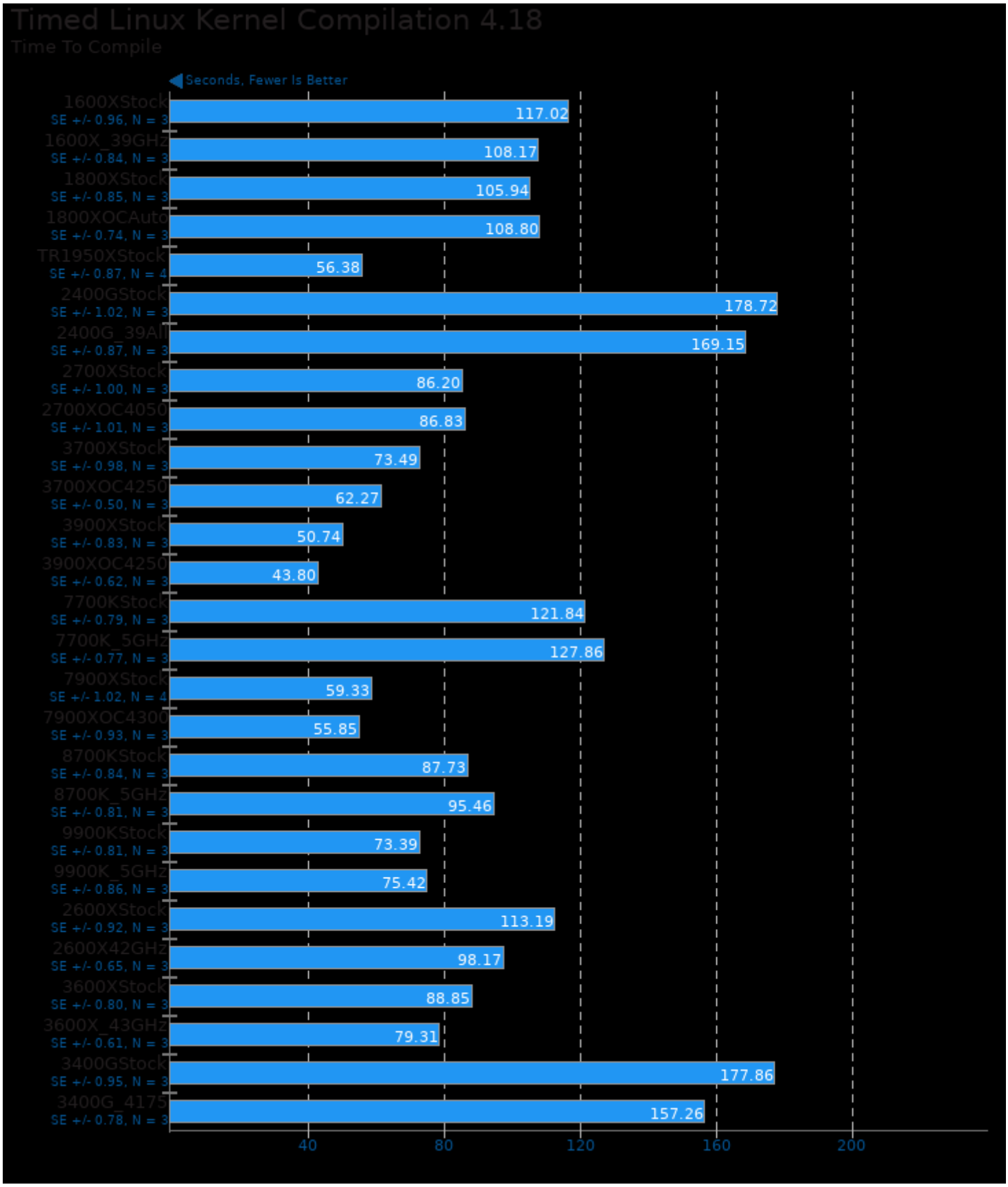


xdacputestsep2019

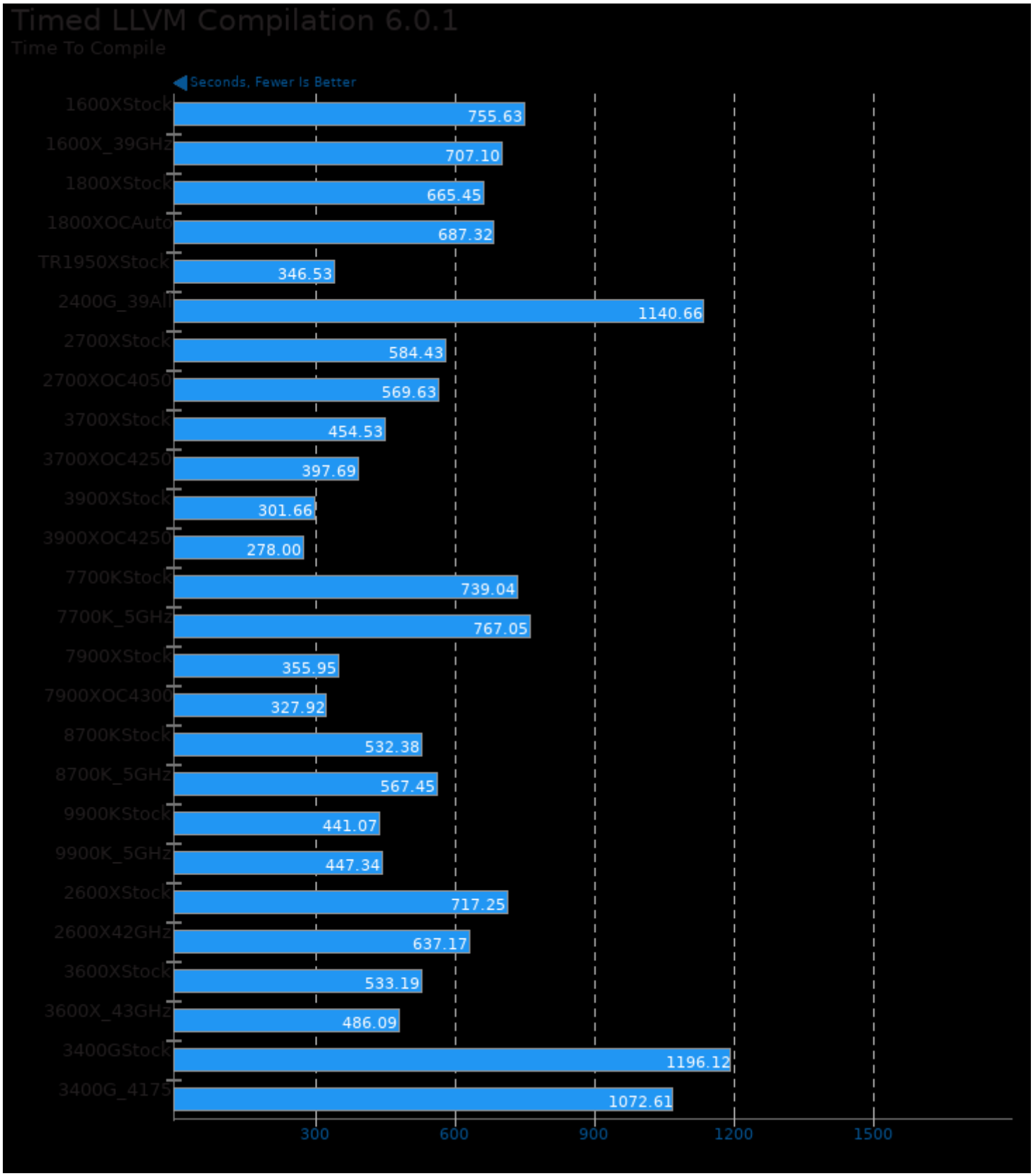



Timed ImageMagick Compilation 6.9.0
Time To Compile
Seconds, Fewer Is Better
1800XStock
SE +/- 0.28, N = 3
47.02
1800XOCAuto
SE +/- 0.12, N = 3
47.47
2700XStock
SE +/- 0.08, N = 3
44.73
2700XOC4050
SE +/- 0.19, N = 3
42.42
3700XStock
SE +/- 0.15, N = 3
34.94
3700XOC4250
SE +/- 0.04, N = 3
31.40
3900XStock
SE +/- 0.12, N = 3
30.19
3900XOC4250
SE +/- 0.03, N = 3
25.57
7700KStock
SE +/- 0.07, N = 3
45.94
7700K_5GHz
SE +/- 0.07, N = 3
46.91
8700KStock
SE +/- 0.07, N = 3
36.33
8700K_5GHz
SE +/- 0.07, N = 3
37.79
9900KStock
SE +/- 0.05, N = 3
32.69
9900K_5GHz
SE +/- 0.06, N = 3
33.07
11
22
33
44
55

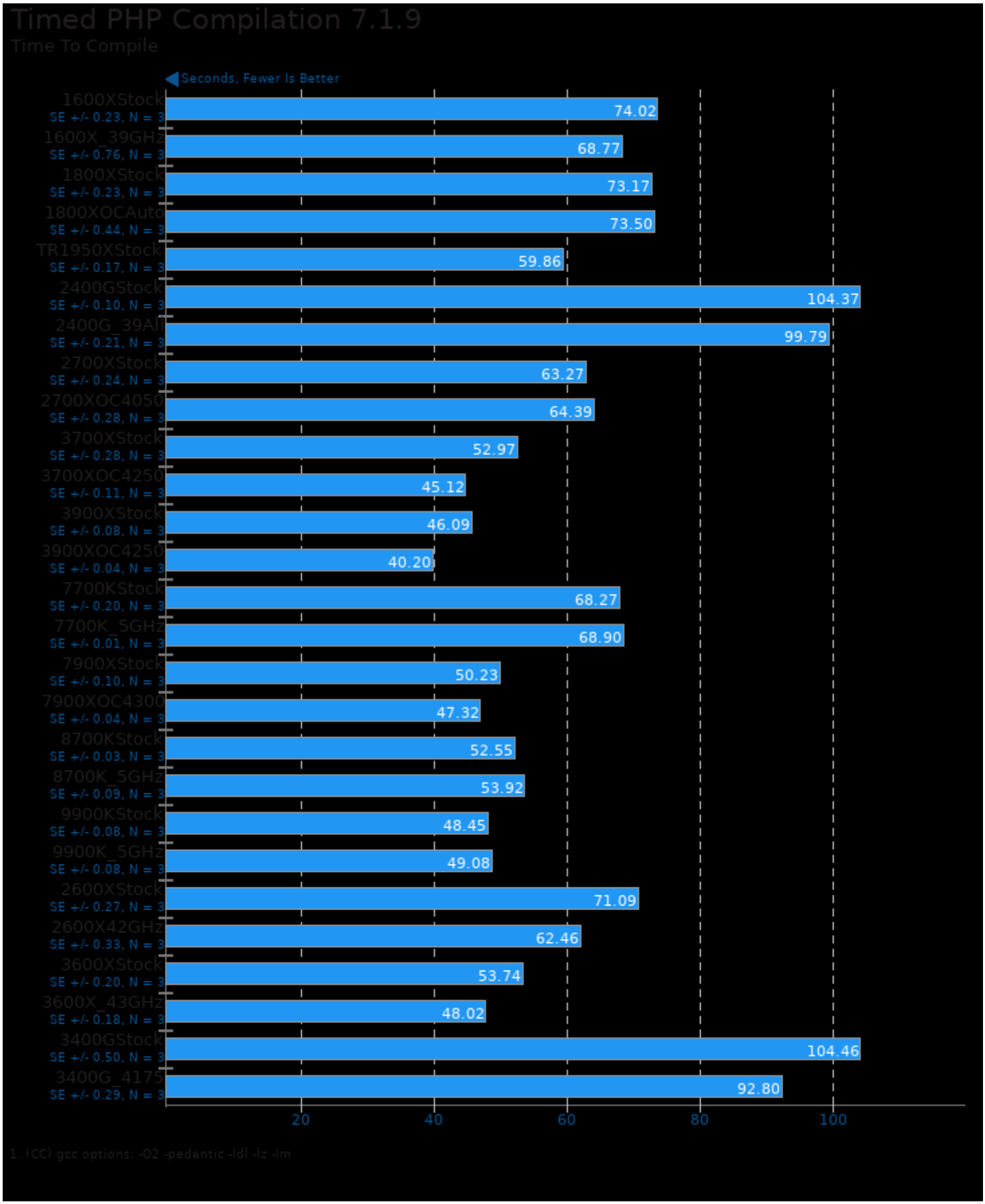
xdacputestsep2019

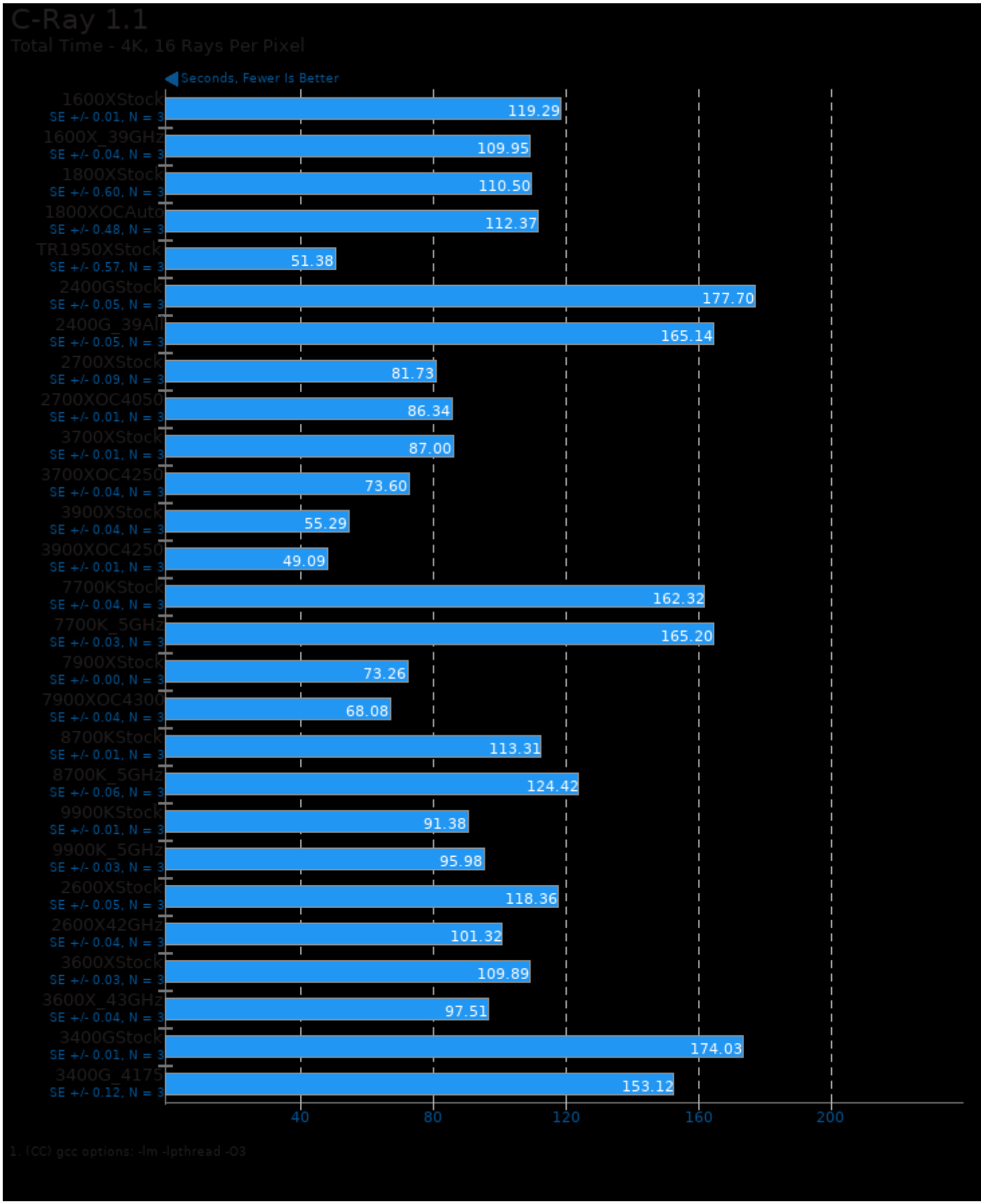


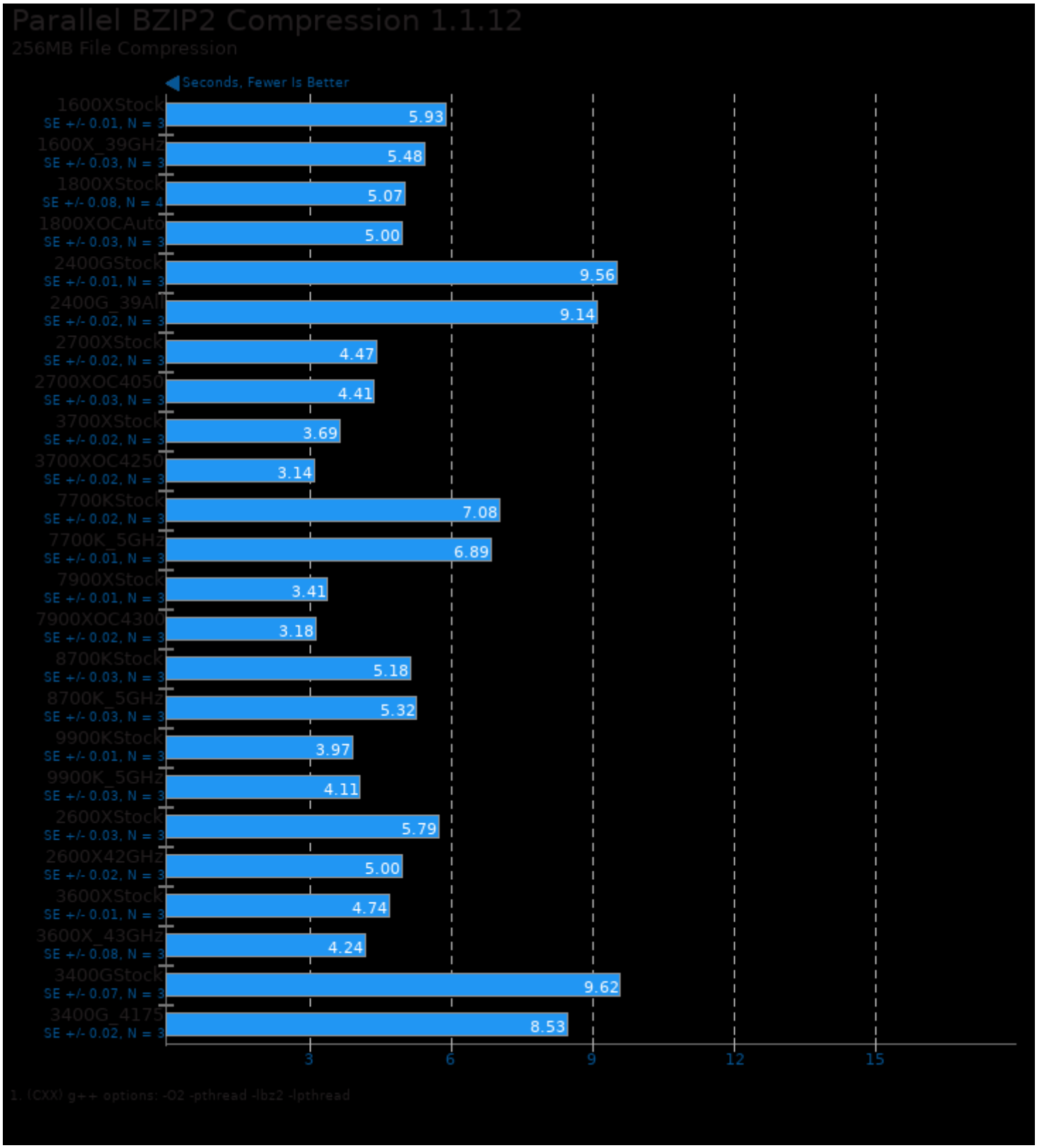
xdacputestsep2019

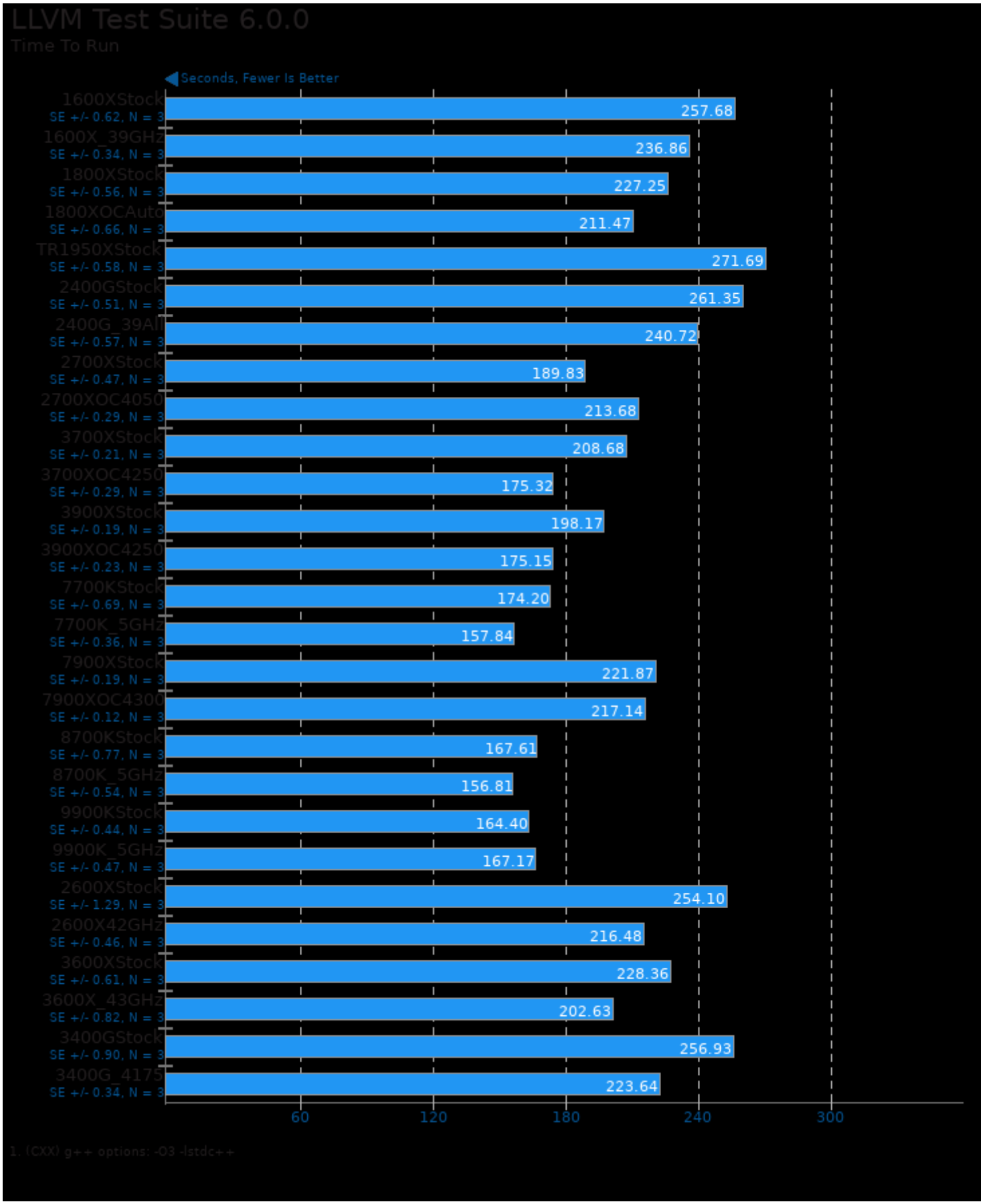


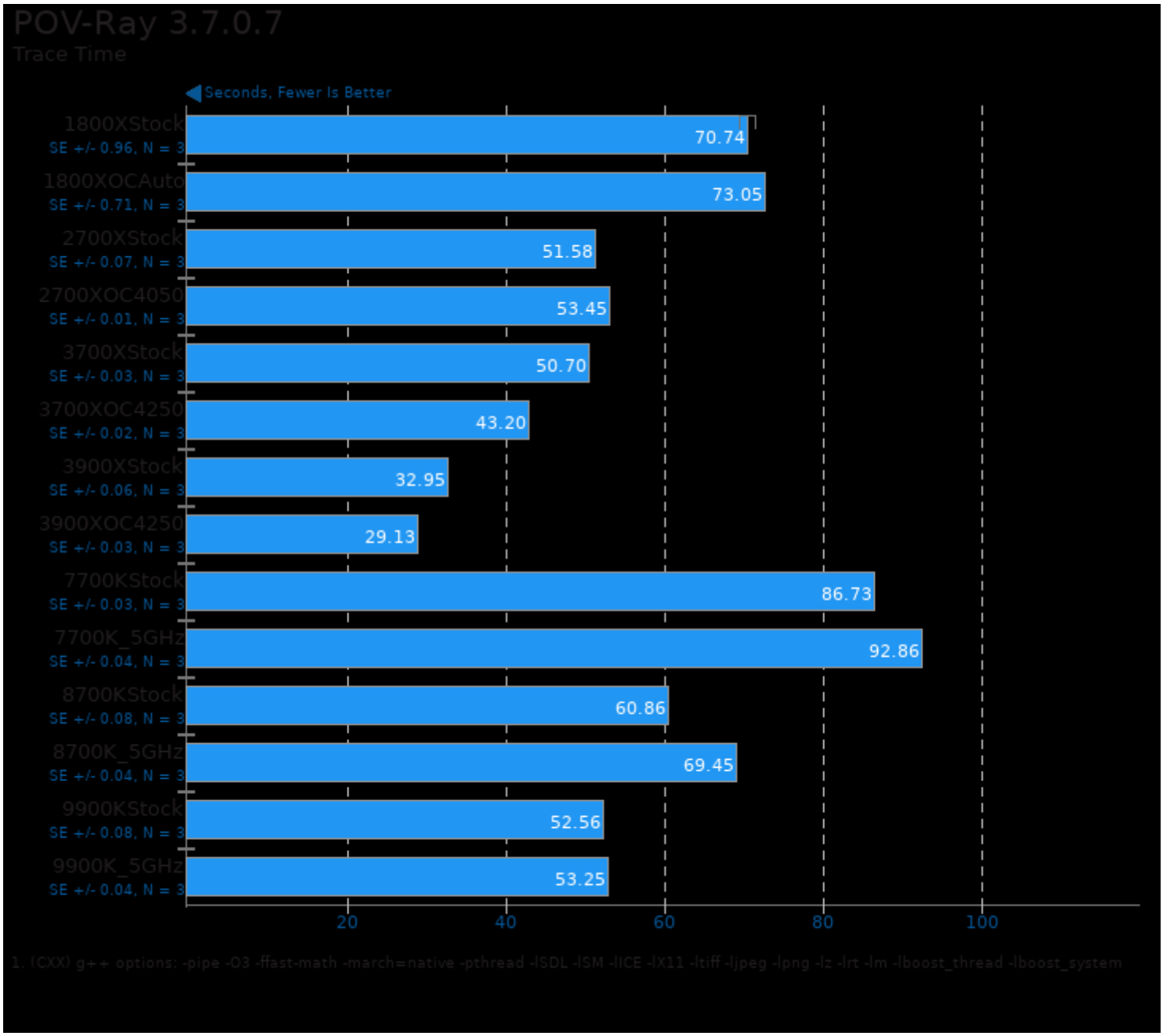
xdacputestsep2019

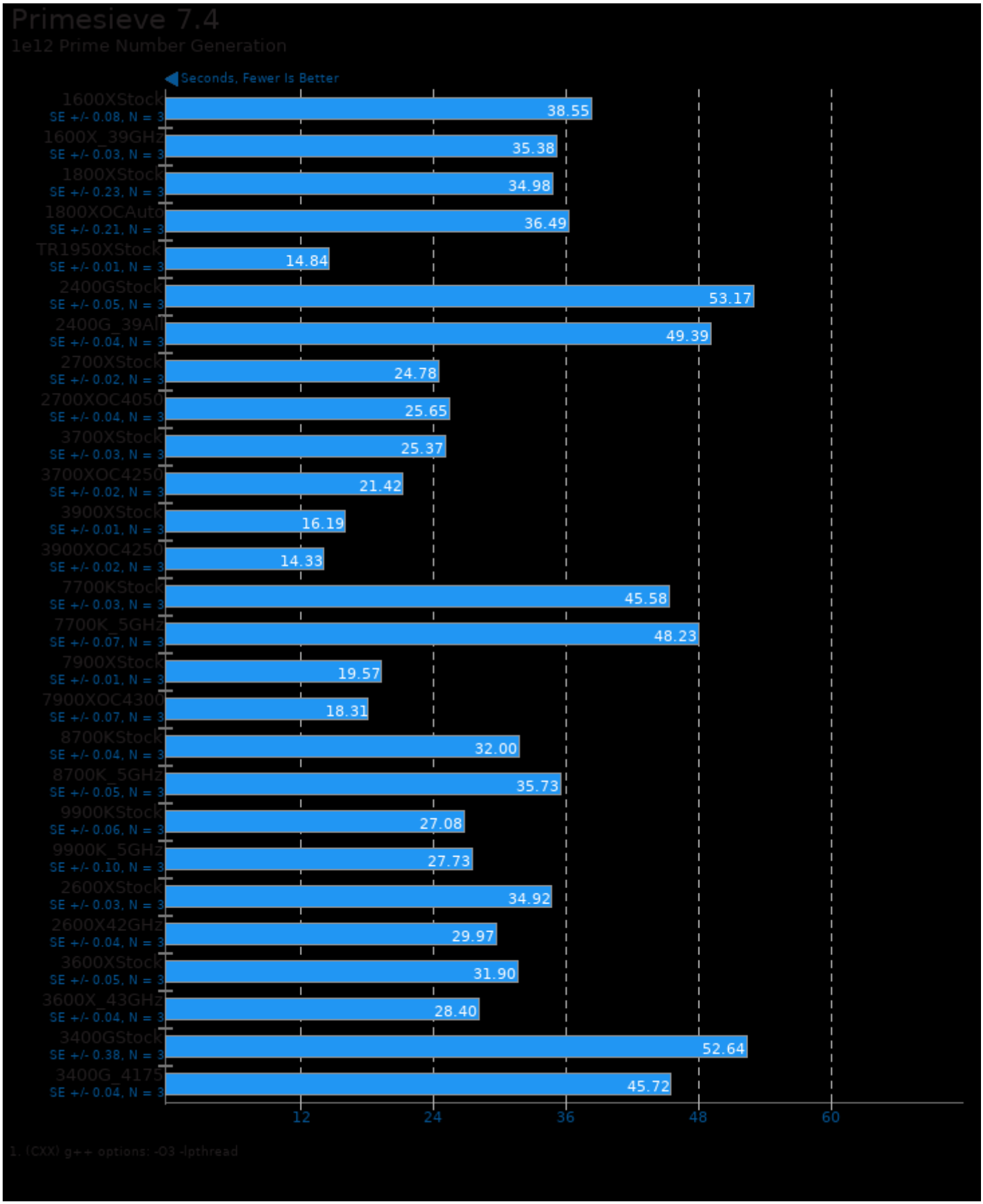



C-Ray 1.1
Total Time - 4K, 16 Rays Per Pixel
Seconds, Fewer Is Better
1600XStock
SE +/- 0.01, N = 3
119.29
1600X_39GHz
SE +/- 0.04, N = 3
109.95
1800XStock
SE +/- 0.60, N = 3
110.50
1800XOCAuto
SE +/- 0.48, N = 3
112.37
TR1950XStock
SE +/- 0.57, N = 3
51.38
2400GStock
SE +/- 0.05, N = 3
177.70
2400G_39AM
SE +/- 0.05, N = 3
165.14
2700XStock
SE +/- 0.09, N = 3
81.73
2700XOC4050
SE +/- 0.01, N = 3
86.34
3700XStock
SE +/- 0.01, N = 3
87.00
3700XOC4250
SE +/- 0.04, N = 3
73.60
3900XStock
SE +/- 0.04, N = 3
55.29
3900XOC4250
SE +/- 0.01, N = 3
49.09
7700KStock
SE +/- 0.04, N = 3
162.32
7700K_5GHz
SE +/- 0.03, N = 3
165.20
7900XStock
SE +/- 0.00, N = 3
73.26
7900XOC4300
SE +/- 0.04, N = 3
68.08
8700KStock
SE +/- 0.01, N = 3
113.31
8700K_5GHz
SE +/- 0.06, N = 3
124.42
9900KStock
SE +/- 0.01, N = 3
91.38
9900K_5GHz
SE +/- 0.03, N = 3
95.98
2600XStock
SE +/- 0.05, N = 3
118.36
2600X42GHz
SE +/- 0.04, N = 3
101.32
3600XStock
SE +/- 0.03, N = 3
109.89
3600X_43GHz
SE +/- 0.04, N = 3
97.51
3400GStock
SE +/- 0.01, N = 3
174.03
3400G_4175
SE +/- 0.12, N = 3
153.12
40
80
120
160
200
1. (CC) gcc options: -lm -lpthread -O3

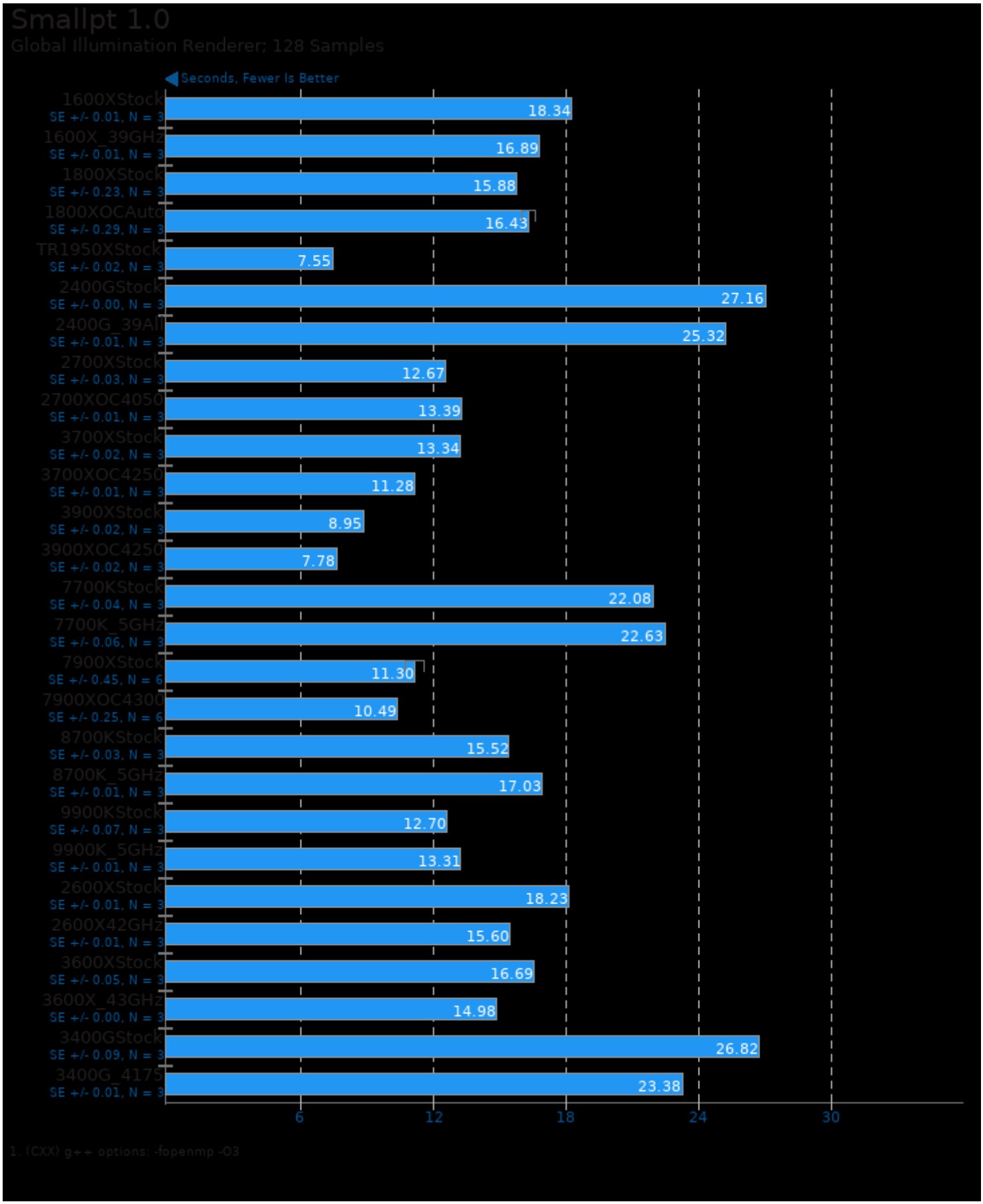

Parallel BZIP2 Compression 1.1.12
256MB File Compression
Seconds, Fewer Is Better
1600XStock
SE +/- 0.01, N = 3
5.93
1600X_39GHz
SE +/- 0.03, N = 3
5.48
1800XStock
SE +/- 0.08, N = 4
5.07
1800XOCAuto
SE +/- 0.03, N = 3
5.00
2400GStock
SE +/- 0.01, N = 3
9.56
2400G_39Al
SE +/- 0.02, N = 3
9.14
2700XStock
SE +/- 0.02, N = 3
4.47
2700XOC4050
SE +/- 0.03, N = 3
4.41
3700XStock
SE +/- 0.02, N = 3
3.69
3700XOC4250
SE +/- 0.02, N = 3
3.14
7700KStock
SE +/- 0.02, N = 3
7.08
7700K_5GHz
SE +/- 0.01, N = 3
6.89
7900XStock
SE +/- 0.01, N = 3
3.41
7900XOC4300
SE +/- 0.02, N = 3
3.18
8700KStock
SE +/- 0.03, N = 3
5.18
8700K_5GHz
SE +/- 0.03, N = 3
5.32
9900KStock
SE +/- 0.01, N = 3
3.97
9900K_5GHz
SE +/- 0.03, N = 3
4.11
2600XStock
SE +/- 0.03, N = 3
5.79
2600X42GHz
SE +/- 0.02, N = 3
5.00
3600XStock
SE +/- 0.01, N = 3
4.74
3600X_43GHz
SE +/- 0.08, N = 3
4.24
3400GStock
SE +/- 0.07, N = 3
9.62
3400G_4175
SE +/- 0.02, N = 3
8.53
3
6
9
12
15
1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread


LLVM Test Suite 6.0.0
Time To Run
Seconds, Fewer Is Better
1600XStock
SE +/- 0.62, N = 3
257.68
1600X_39GHz
SE +/- 0.34, N = 3
236.86
1800XStock
SE +/- 0.56, N = 3
227.25
1800XOCAuto
SE +/- 0.66, N = 3
211.47
TR1950XStock
SE +/- 0.58, N = 3
271.69
2400GStock
SE +/- 0.51, N = 3
261.35
2400G_39AM
SE +/- 0.57, N = 3
240.72
2700XStock
SE +/- 0.47, N = 3
189.83
2700XOC4050
SE +/- 0.29, N = 3
213.68
3700XStock
SE +/- 0.21, N = 3
208.68
3700XOC4250
SE +/- 0.29, N = 3
175.32
3900XStock
SE +/- 0.19, N = 3
198.17
3900XOC4250
SE +/- 0.23, N = 3
175.15
7700KStock
SE +/- 0.69, N = 3
174.20
7700K_5GHz
SE +/- 0.36, N = 3
157.84
7900XStock
SE +/- 0.19, N = 3
221.87
7900XOC4300
SE +/- 0.12, N = 3
217.14
8700KStock
SE +/- 0.77, N = 3
167.61
8700K_5GHz
SE +/- 0.54, N = 3
156.81
9900KStock
SE +/- 0.44, N = 3
164.40
9900K_5GHz
SE +/- 0.47, N = 3
167.17
2600XStock
SE +/- 1.29, N = 3
254.10
2600X42GHz
SE +/- 0.46, N = 3
216.48
3600XStock
SE +/- 0.61, N = 3
228.36
3600X_43GHz
SE +/- 0.82, N = 3
202.63
3400GStock
SE +/- 0.90, N = 3
256.93
3400G_4175
SE +/- 0.34, N = 3
223.64
60
120
180
240
300
1: (CXX) g++ options: -O3 -lstdc++

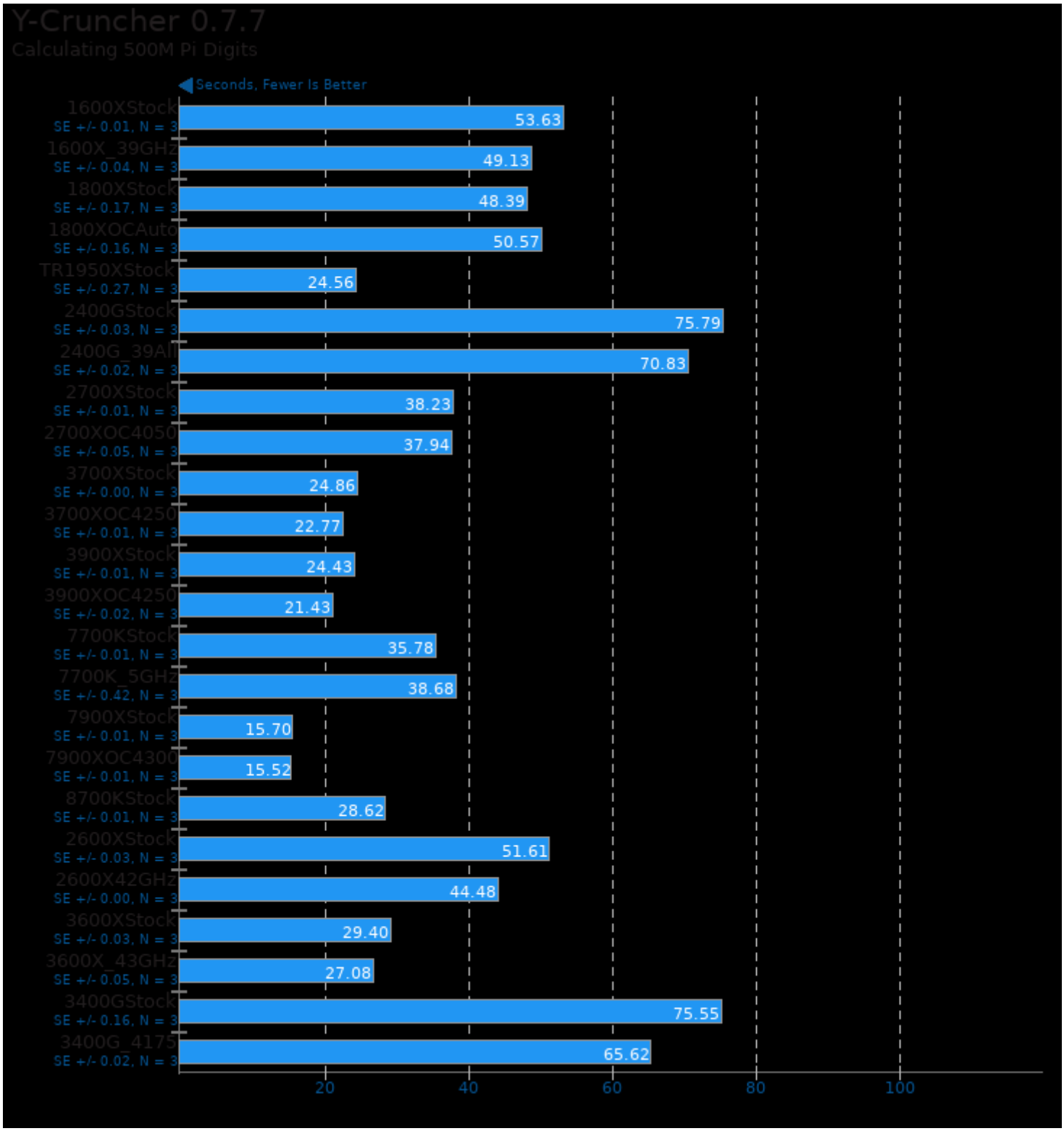

POV-Ray 3.7.0.7
Trace Time
Seconds, Fewer Is Better
1800XStock
SE +/- 0.96, N = 3
70.74
1800XOCAuto
SE +/- 0.71, N = 3
73.05
2700XStock
SE +/- 0.07, N = 3
51.58
2700XOC4050
SE +/- 0.01, N = 3
53.45
3700XStock
SE +/- 0.03, N = 3
50.70
3700XOC4250
SE +/- 0.02, N = 3
43.20
3900XStock
SE +/- 0.06, N = 3
32.95
3900XOC4250
SE +/- 0.03, N = 3
29.13
7700KStock
SE +/- 0.03, N = 3
86.73
7700K_5GHz
SE +/- 0.04, N = 3
92.86
8700KStock
SE +/- 0.08, N = 3
60.86
8700K_5GHz
SE +/- 0.04, N = 3
69.45
9900KStock
SE +/- 0.08, N = 3
52.56
9900K_5GHz
SE +/- 0.04, N = 3
53.25
20
40
60
80
100
1. (CXX) g++ options: -pipe -O3 -ffast-math -march=native -pthread -lSDL -lSM -lICE -lX11 -ltiff -ljpeg -lpng -lz -lrt -lm -lboost_thread -lboost_system

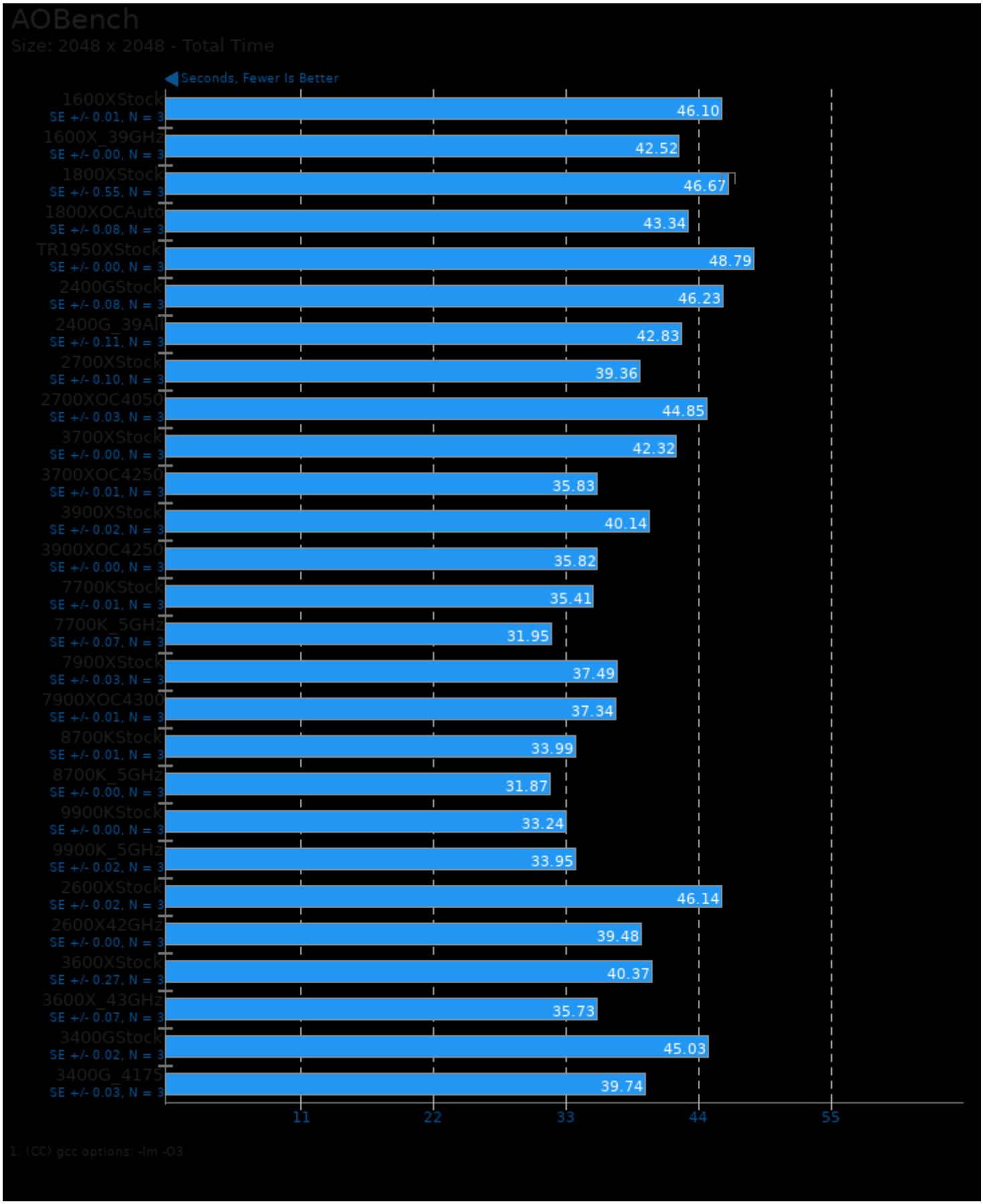

Primesieve 7.4
1e12 Prime Number Generation
Seconds, Fewer Is Better
1600XStock
SE +/- 0.08, N = 3
38.55
1600X_39GHz
SE +/- 0.03, N = 3
35.38
1800XStock
SE +/- 0.23, N = 3
34.98
1800XOCAuto
SE +/- 0.21, N = 3
36.49
TR1950XStock
SE +/- 0.01, N = 3
14.84
2400GStock
SE +/- 0.05, N = 3
53.17
2400G_39AM
SE +/- 0.04, N = 3
49.39
2700XStock
SE +/- 0.02, N = 3
24.78
2700XOC4050
SE +/- 0.04, N = 3
25.65
3700XStock
SE +/- 0.03, N = 3
25.37
3700XOC4250
SE +/- 0.02, N = 3
21.42
3900XStock
SE +/- 0.01, N = 3
16.19
3900XOC4250
SE +/- 0.02, N = 3
14.33
7700KStock
SE +/- 0.03, N = 3
45.58
7700K_5GHz
SE +/- 0.07, N = 3
48.23
7900XStock
SE +/- 0.01, N = 3
19.57
7900XOC4300
SE +/- 0.07, N = 3
18.31
8700KStock
SE +/- 0.04, N = 3
32.00
8700K_5GHz
SE +/- 0.05, N = 3
35.73
9900KStock
SE +/- 0.06, N = 3
27.08
9900K_5GHz
SE +/- 0.10, N = 3
27.73
2600XStock
SE +/- 0.03, N = 3
34.92
2600X42GHz
SE +/- 0.04, N = 3
29.97
3600XStock
SE +/- 0.05, N = 3
31.90
3600X_43GHz
SE +/- 0.04, N = 3
28.40
3400GStock
SE +/- 0.38, N = 3
52.64
3400G_4175
SE +/- 0.04, N = 3
45.72
12
24
36
48
60
1. (CXX) g++ options: -O3 -lpthread

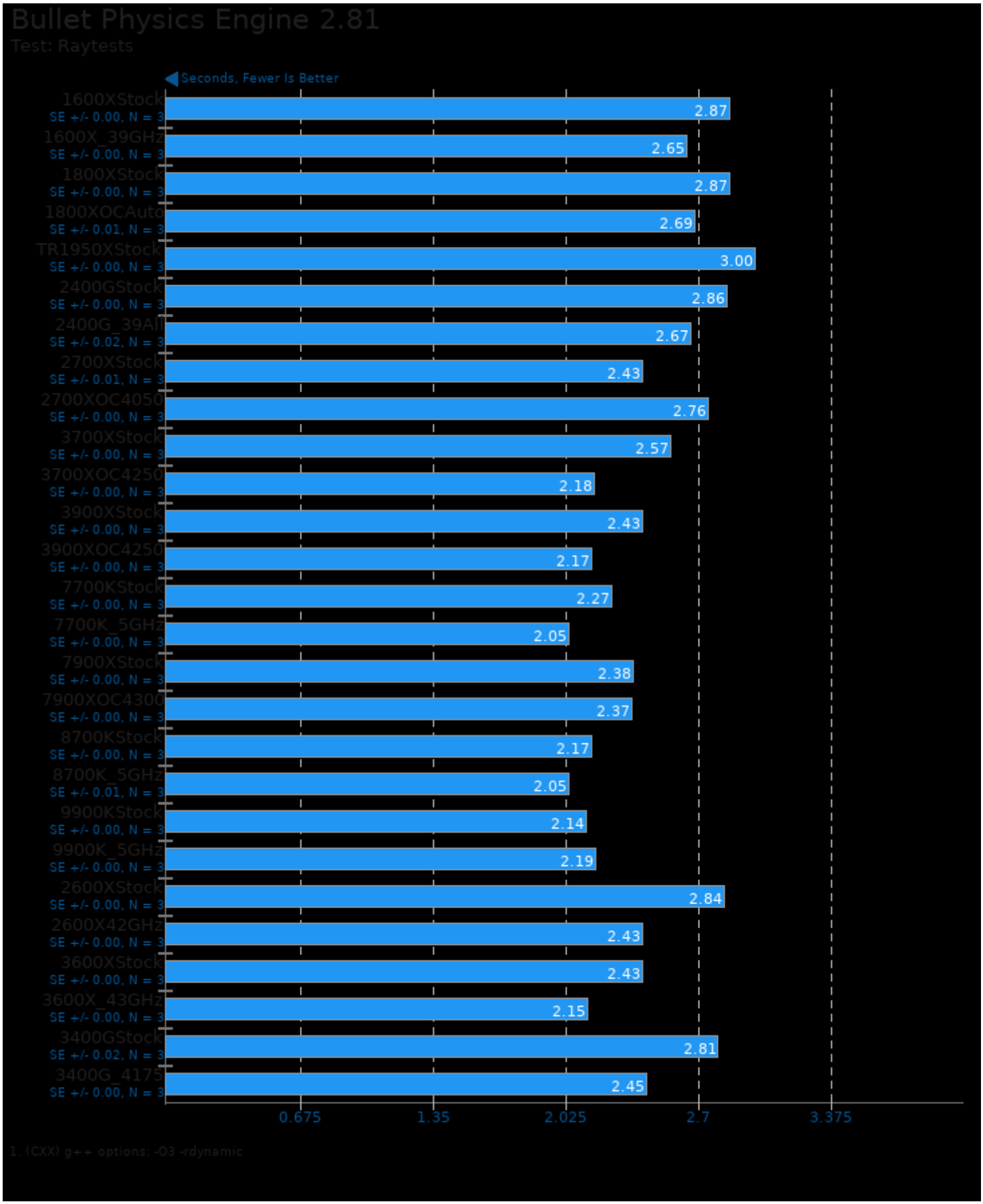
xdacputestsep2019



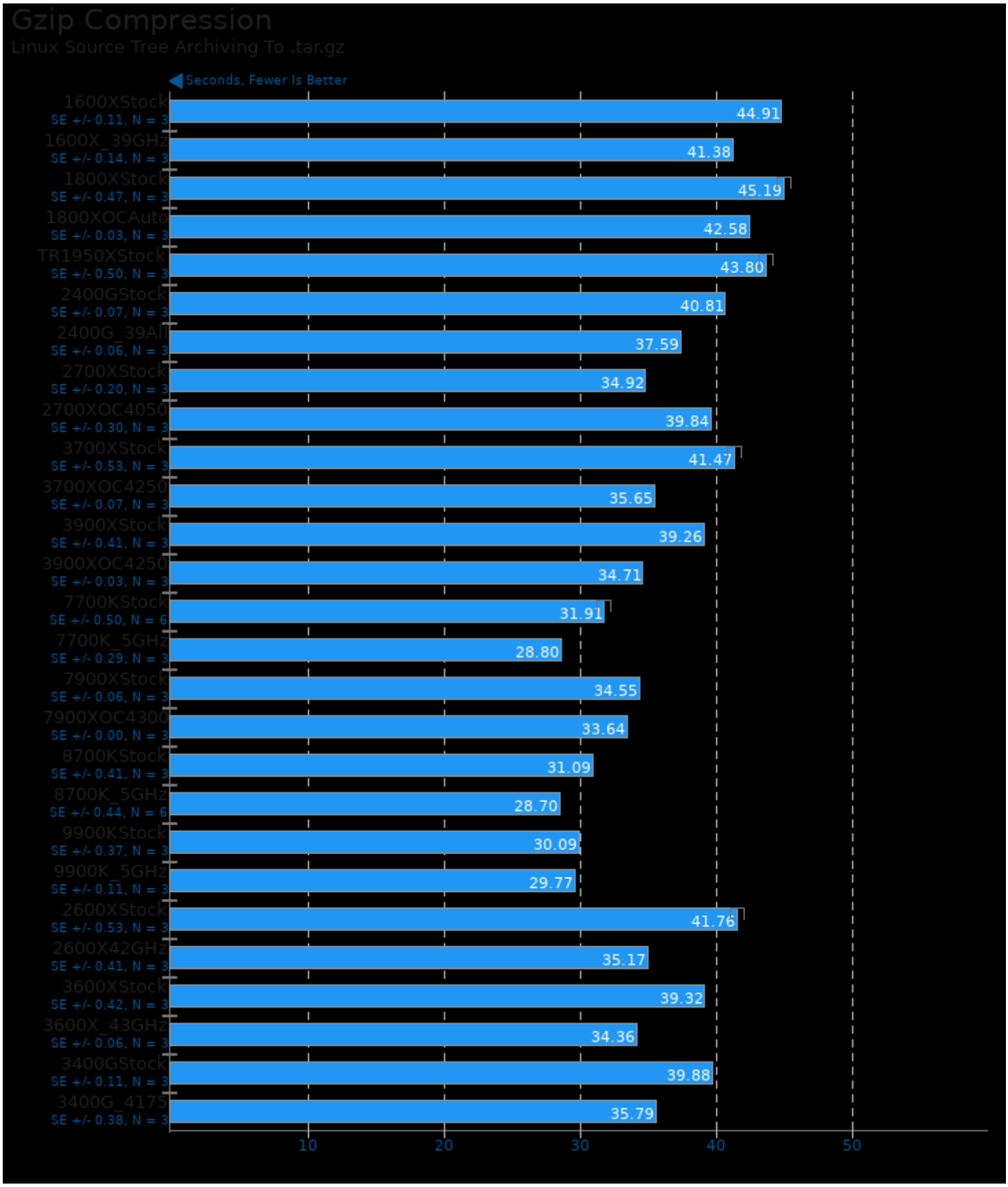
xdacputestsep2019



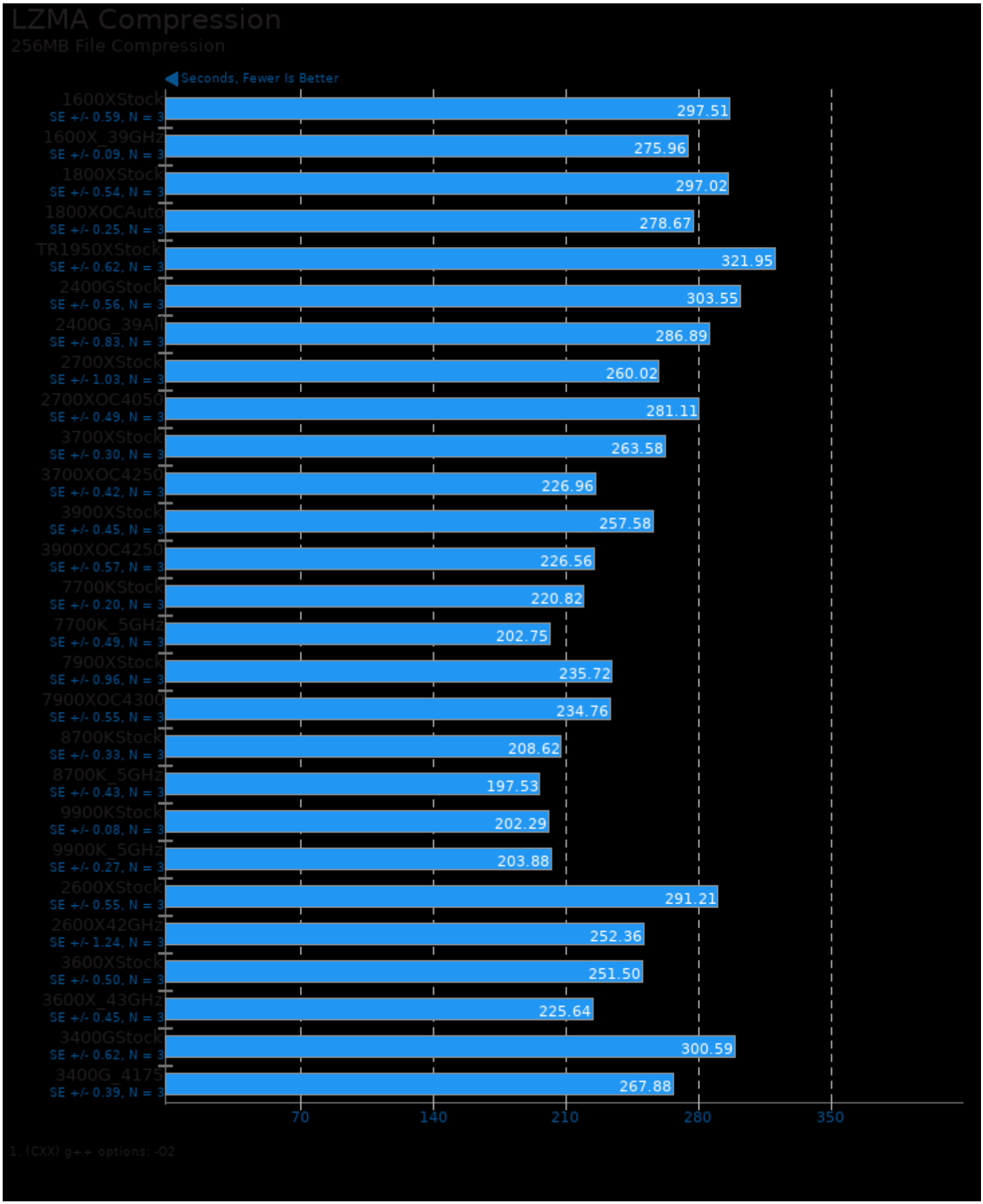

AOBench
Size: 2048 x 2048 - Total Time
Seconds, Fewer Is Better
1600XStock
SE +/- 0.01, N = 3
46.10
1600X_39GHz
SE +/- 0.00, N = 3
42.52
1800XStock
SE +/- 0.55, N = 3
46.67
1800XOCAuto
SE +/- 0.08, N = 3
43.34
TR1950XStock
SE +/- 0.00, N = 3
48.79
2400GStock
SE +/- 0.08, N = 3
46.23
2400G_39All
SE +/- 0.11, N = 3
42.83
2700XStock
SE +/- 0.10, N = 3
39.36
2700XOC4050
SE +/- 0.03, N = 3
44.85
3700XStock
SE +/- 0.00, N = 3
42.32
3700XOC4250
SE +/- 0.01, N = 3
35.83
3900XStock
SE +/- 0.02, N = 3
40.14
3900XOC4250
SE +/- 0.00, N = 3
35.82
7700KStock
SE +/- 0.01, N = 3
35.41
7700K_5GHz
SE +/- 0.07, N = 3
31.95
7900XStock
SE +/- 0.03, N = 3
37.49
7900XOC4300
SE +/- 0.01, N = 3
37.34
8700KStock
SE +/- 0.01, N = 3
33.99
8700K_5GHz
SE +/- 0.00, N = 3
31.87
9900KStock
SE +/- 0.00, N = 3
33.24
9900K_5GHz
SE +/- 0.02, N = 3
33.95
2600XStock
SE +/- 0.02, N = 3
46.14
2600X42GHz
SE +/- 0.00, N = 3
39.48
3600XStock
SE +/- 0.27, N = 3
40.37
3600X_43GHz
SE +/- 0.07, N = 3
35.73
3400GStock
SE +/- 0.02, N = 3
45.03
3400G_4175
SE +/- 0.03, N = 3
39.74
11
22
33
44
55
1. (CC) gcc options: -lm -O3

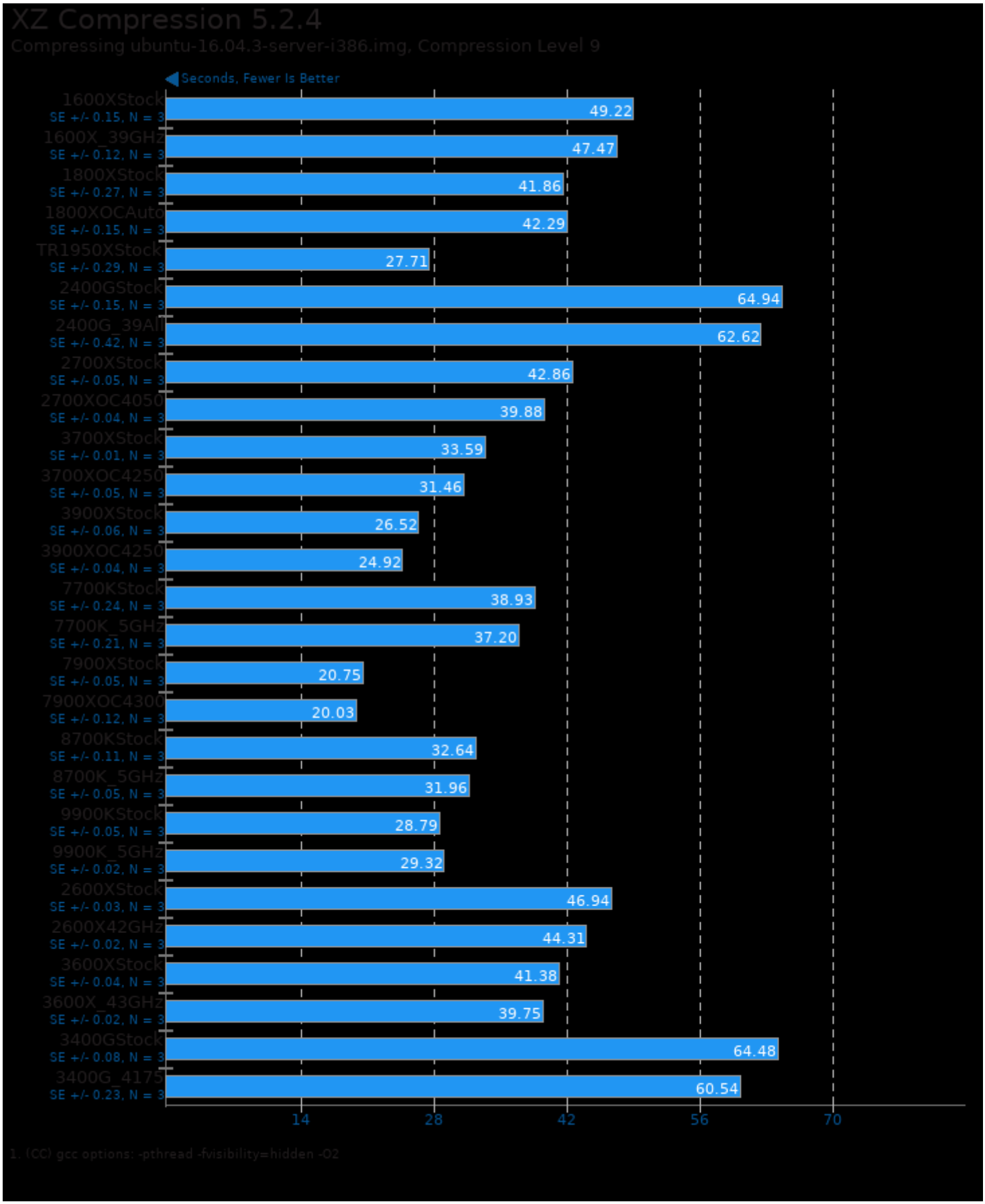

Bullet Physics Engine 2.81
Test: Raytests
Seconds, Fewer Is Better
1600XStock
SE +/- 0.00, N = 3
2.87
1600X_39GHz
SE +/- 0.00, N = 3
2.65
1800XStock
SE +/- 0.00, N = 3
2.87
1800XOCAuto
SE +/- 0.01, N = 3
2.69
TR1950XStock
SE +/- 0.00, N = 3
3.00
2400GStock
SE +/- 0.00, N = 3
2.86
2400G_39Alt
SE +/- 0.02, N = 3
2.67
2700XStock
SE +/- 0.01, N = 3
2.43
2700XOC4050
SE +/- 0.00, N = 3
2.76
3700XStock
SE +/- 0.00, N = 3
2.57
3700XOC4250
SE +/- 0.00, N = 3
2.18
3900XStock
SE +/- 0.00, N = 3
2.43
3900XOC4250
SE +/- 0.00, N = 3
2.17
7700KStock
SE +/- 0.00, N = 3
2.27
7700K_5GHz
SE +/- 0.00, N = 3
2.05
7900XStock
SE +/- 0.00, N = 3
2.38
7900XOC4300
SE +/- 0.00, N = 3
2.37
8700KStock
SE +/- 0.00, N = 3
2.17
8700K_5GHz
SE +/- 0.01, N = 3
2.05
9900KStock
SE +/- 0.00, N = 3
2.14
9900K_5GHz
SE +/- 0.00, N = 3
2.19
2600XStock
SE +/- 0.00, N = 3
2.84
2600X42GHz
SE +/- 0.00, N = 3
2.43
3600XStock
SE +/- 0.00, N = 3
2.43
3600X_43GHz
SE +/- 0.00, N = 3
2.15
3400GStock
SE +/- 0.02, N = 3
2.81
3400G_4175
SE +/- 0.00, N = 3
2.45
0.675
1.35
2.025
2.7
3.375
1. (CXX) g++ options: -O3 -rdynamic

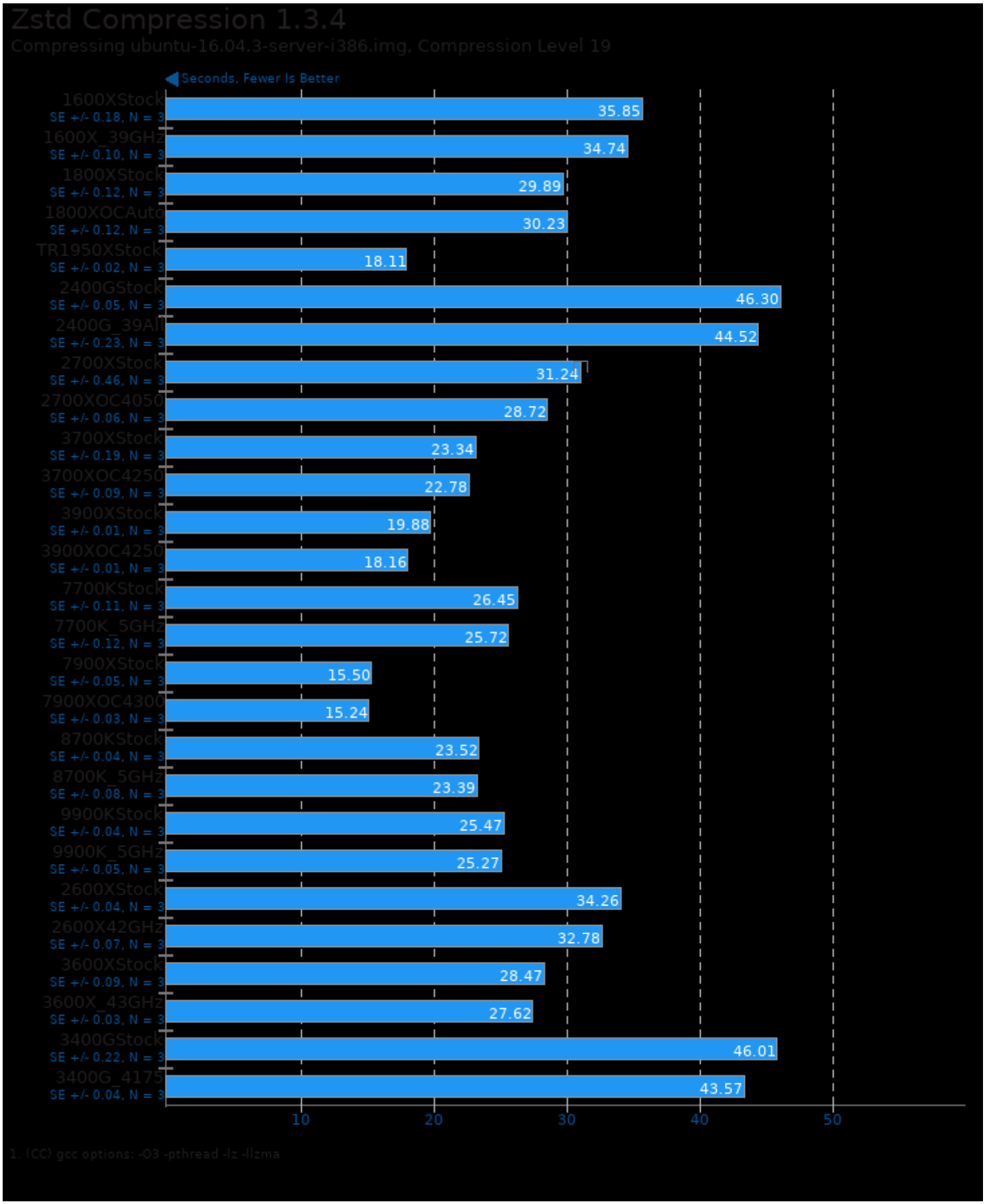
xdacputestsep2019



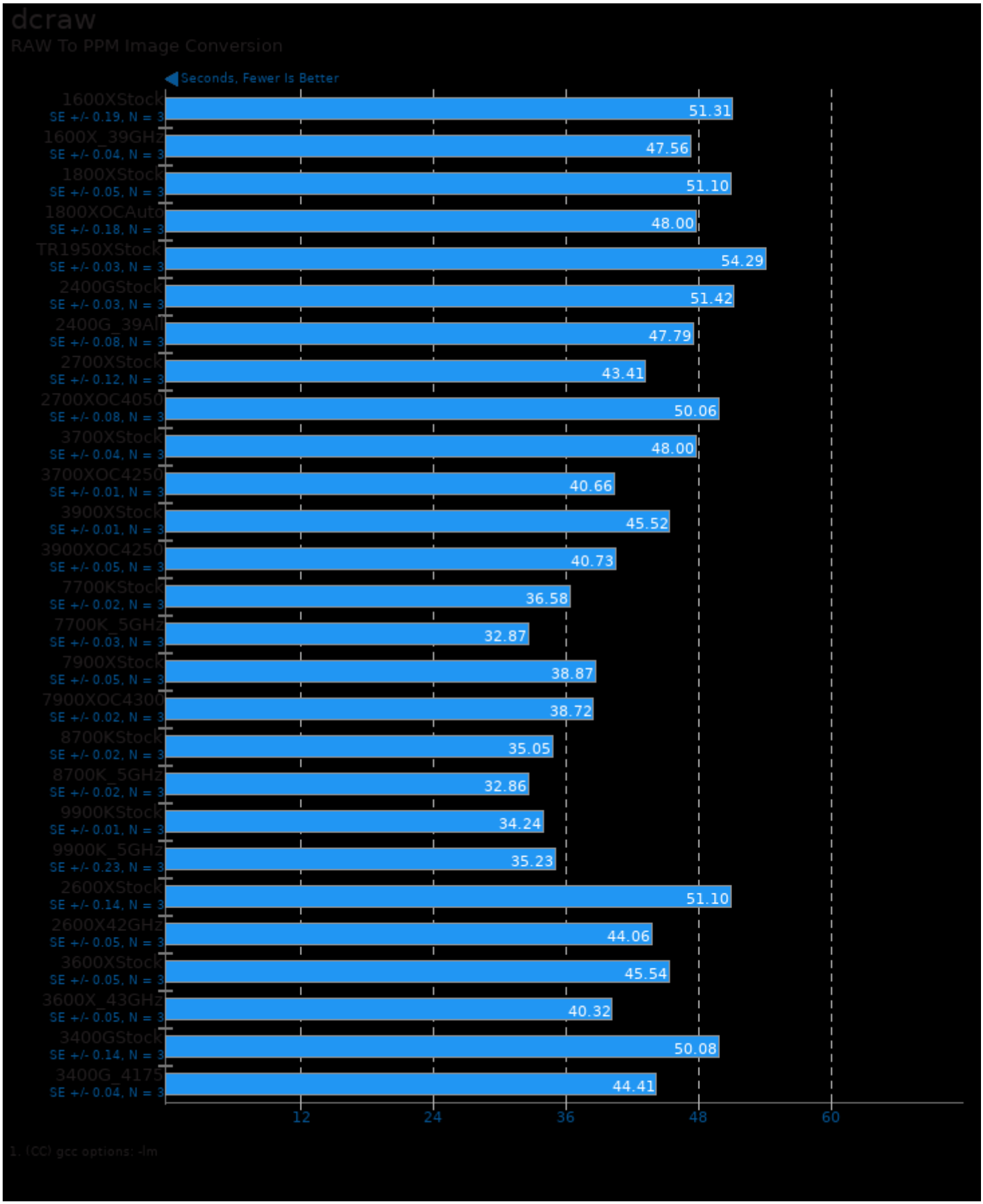
xdacputestsep2019

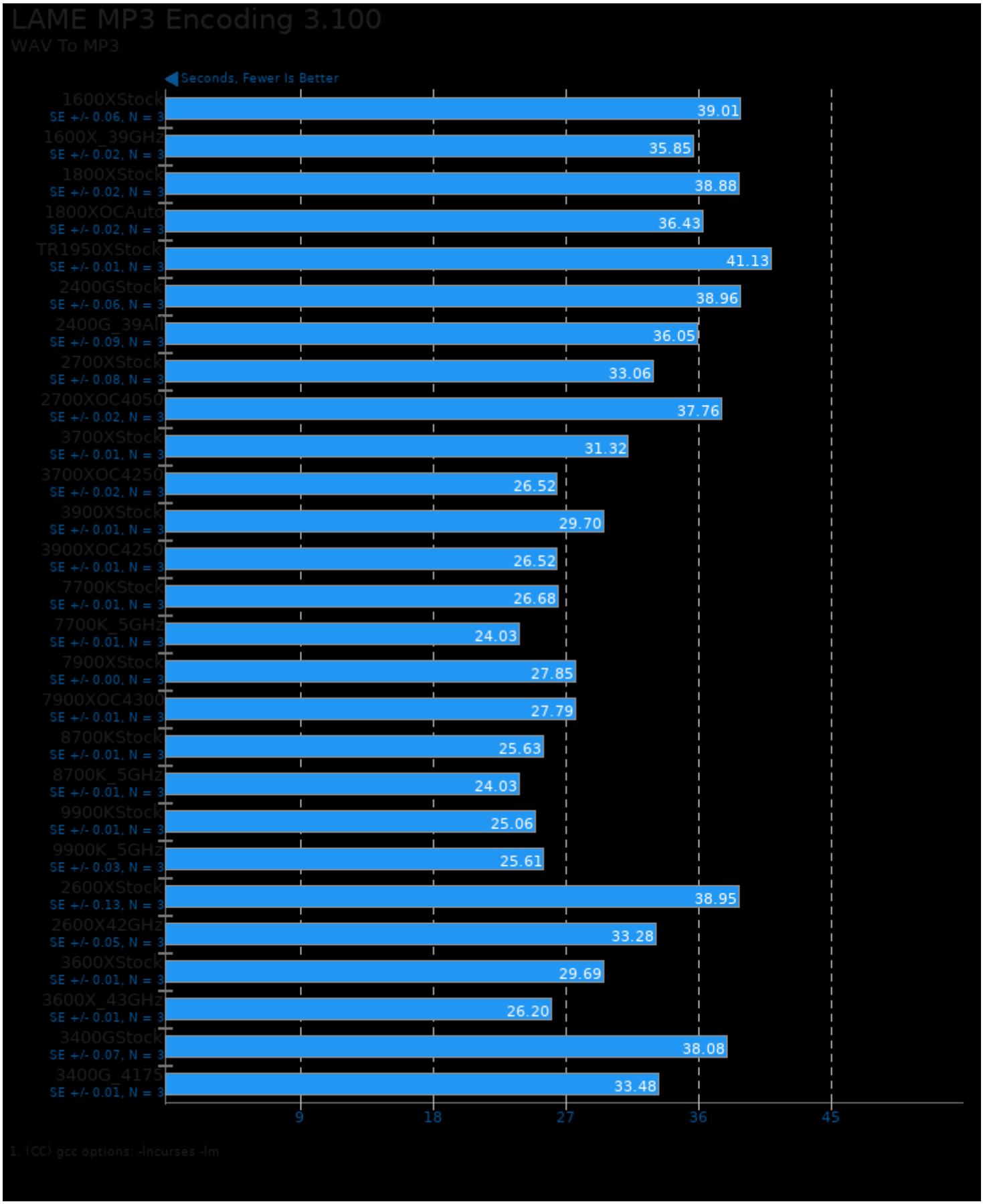


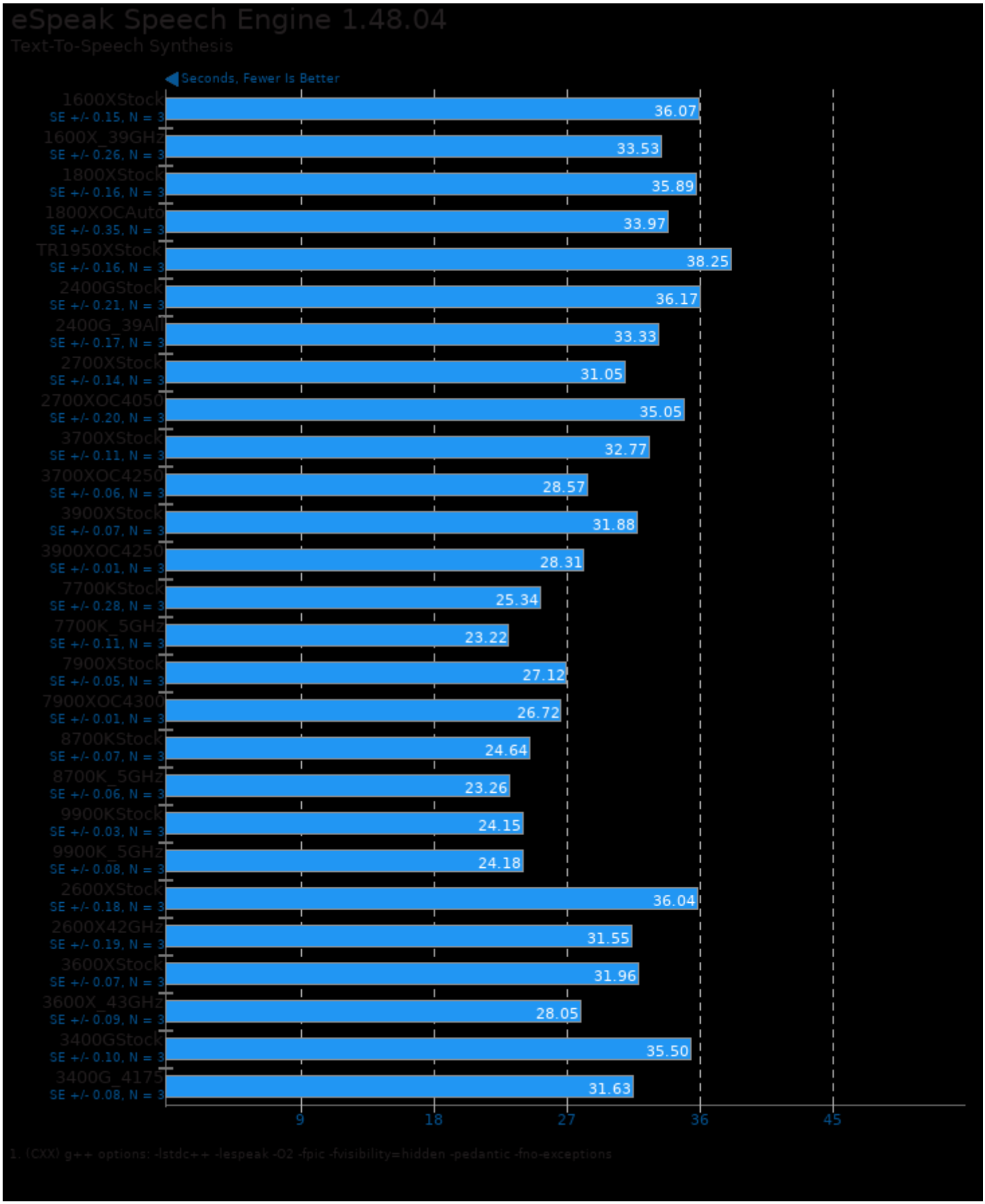

XZ Compression 5.2.4
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 9
Seconds, Fewer Is Better
1600XStock
SE +/- 0.15, N = 3
49.22
1600X_39GHz
SE +/- 0.12, N = 3
47.47
1800XStock
SE +/- 0.27, N = 3
41.86
1800XOCAuto
SE +/- 0.15, N = 3
42.29
TR1950XStock
SE +/- 0.29, N = 3
27.71
2400GStock
SE +/- 0.15, N = 3
64.94
2400G_39AM
SE +/- 0.42, N = 3
62.62
2700XStock
SE +/- 0.05, N = 3
42.86
2700XOC4050
SE +/- 0.04, N = 3
39.88
3700XStock
SE +/- 0.01, N = 3
33.59
3700XOC4250
SE +/- 0.05, N = 3
31.46
3900XStock
SE +/- 0.06, N = 3
26.52
3900XOC4250
SE +/- 0.04, N = 3
24.92
7700KStock
SE +/- 0.24, N = 3
38.93
7700K_5GHz
SE +/- 0.21, N = 3
37.20
7900XStock
SE +/- 0.05, N = 3
20.75
7900XOC4300
SE +/- 0.12, N = 3
20.03
8700KStock
SE +/- 0.11, N = 3
32.64
8700K_5GHz
SE +/- 0.05, N = 3
31.96
9900KStock
SE +/- 0.05, N = 3
28.79
9900K_5GHz
SE +/- 0.02, N = 3
29.32
2600XStock
SE +/- 0.03, N = 3
46.94
2600X42GHz
SE +/- 0.02, N = 3
44.31
3600XStock
SE +/- 0.04, N = 3
41.38
3600X_43GHz
SE +/- 0.02, N = 3
39.75
3400GStock
SE +/- 0.08, N = 3
64.48
3400G_4175
SE +/- 0.23, N = 3
60.54
14
28
42
56
70
1. (CC) gcc options: -pthread -fvisibility=hidden -O2

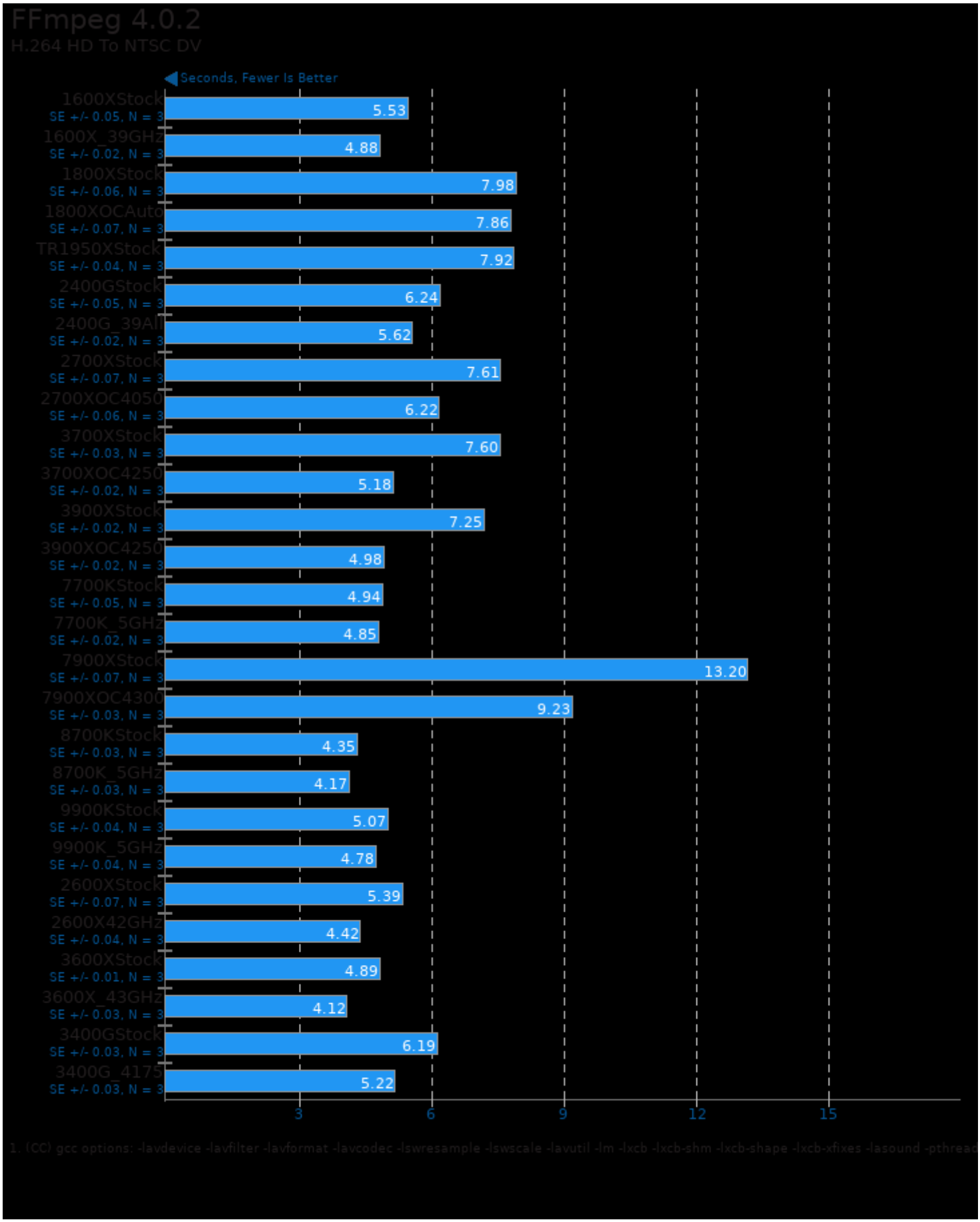

Zstd Compression 1.3.4
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 19
Seconds, Fewer Is Better
1600XStock
SE +/- 0.18, N = 3
35.85
1600X_39GHz
SE +/- 0.10, N = 3
34.74
1800XStock
SE +/- 0.12, N = 3
29.89
1800XOCAuto
SE +/- 0.12, N = 3
30.23
TR1950XStock
SE +/- 0.02, N = 3
18.11
2400GStock
SE +/- 0.05, N = 3
46.30
2400G_39AM
SE +/- 0.23, N = 3
44.52
2700XStock
SE +/- 0.46, N = 3
31.24
2700XOC4050
SE +/- 0.06, N = 3
28.72
3700XStock
SE +/- 0.19, N = 3
23.34
3700XOC4250
SE +/- 0.09, N = 3
22.78
3900XStock
SE +/- 0.01, N = 3
19.88
3900XOC4250
SE +/- 0.01, N = 3
18.16
7700KStock
SE +/- 0.11, N = 3
26.45
7700K_5GHz
SE +/- 0.12, N = 3
25.72
7900XStock
SE +/- 0.05, N = 3
15.50
7900XOC4300
SE +/- 0.03, N = 3
15.24
8700KStock
SE +/- 0.04, N = 3
23.52
8700K_5GHz
SE +/- 0.08, N = 3
23.39
9900KStock
SE +/- 0.04, N = 3
25.47
9900K_5GHz
SE +/- 0.05, N = 3
25.27
2600XStock
SE +/- 0.04, N = 3
34.26
2600X42GHz
SE +/- 0.07, N = 3
32.78
3600XStock
SE +/- 0.09, N = 3
28.47
3600X_43GHz
SE +/- 0.03, N = 3
27.62
3400GStock
SE +/- 0.22, N = 3
46.01
3400G_4175
SE +/- 0.04, N = 3
43.57
10
20
30
40
50
1. (CC) gcc options: -O3 -pthread -lz -llzma

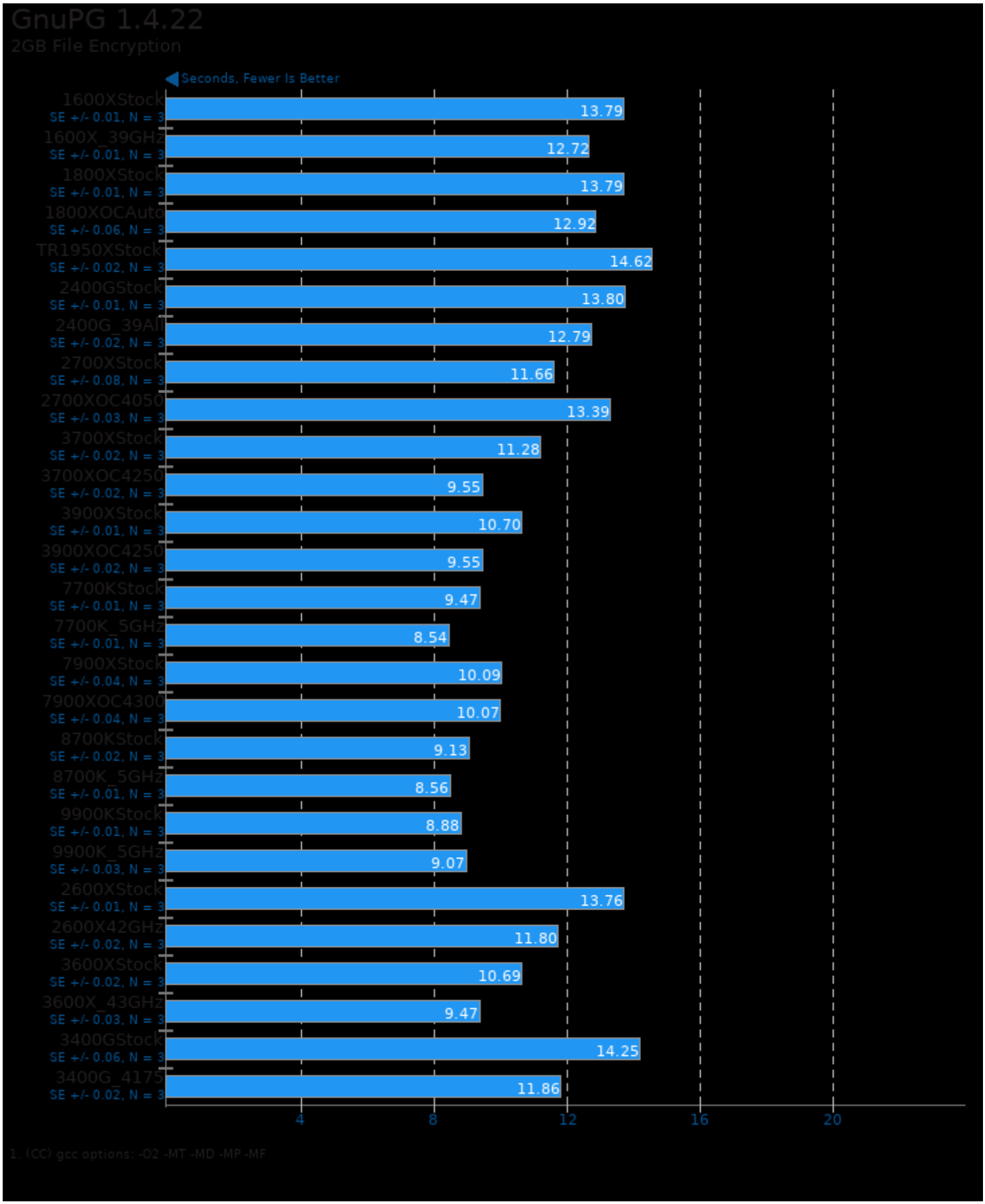
xdacputestsep2019



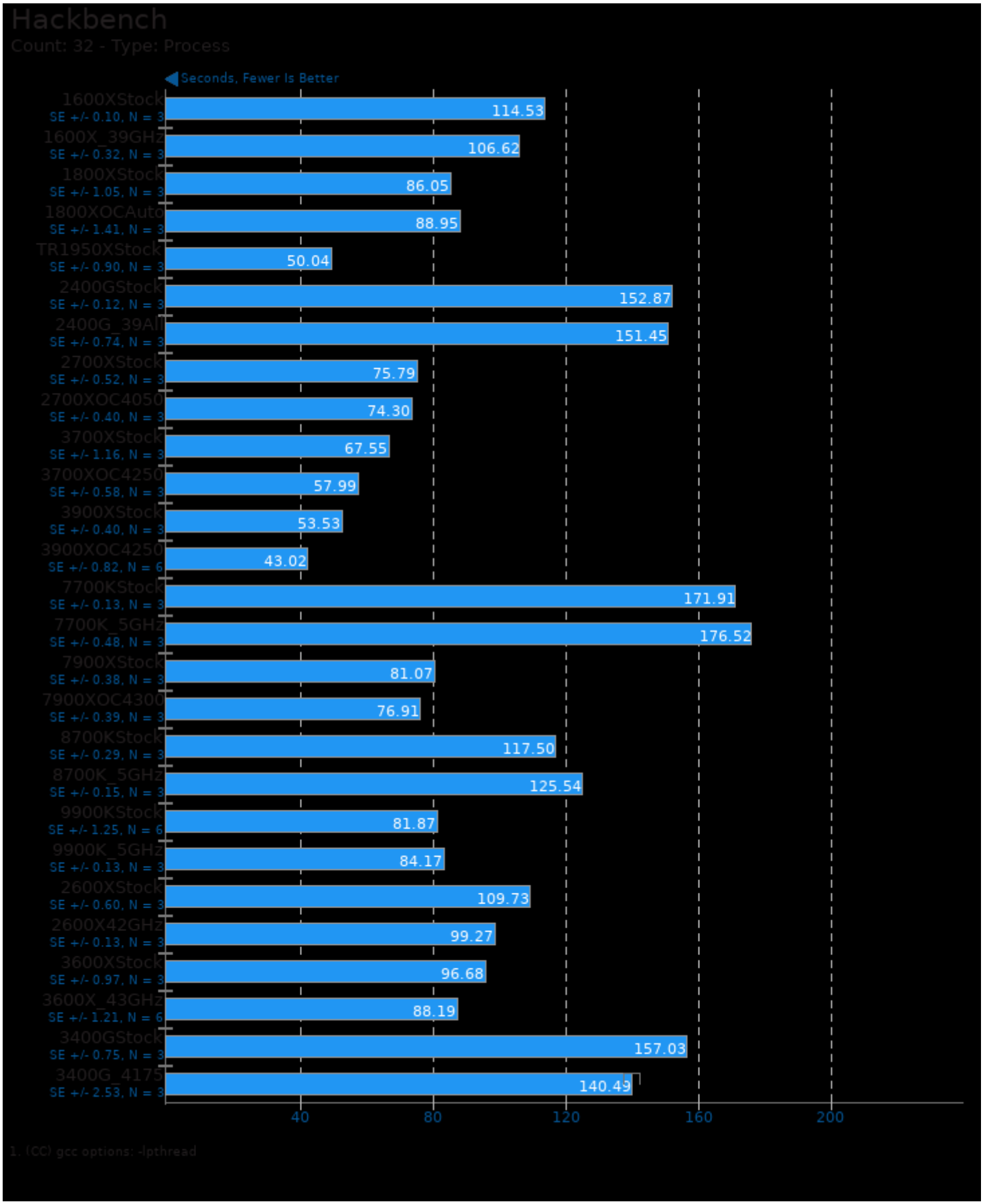

LAME MP3 Encoding 3.100
WAV To MP3
Seconds, Fewer Is Better
1600XStock
SE +/- 0.06, N = 3
39.01
1600X_39GHz
SE +/- 0.02, N = 3
35.85
1800XStock
SE +/- 0.02, N = 3
38.88
1800XOCAuto
SE +/- 0.02, N = 3
36.43
TR1950XStock
SE +/- 0.01, N = 3
41.13
2400GStock
SE +/- 0.06, N = 3
38.96
2400G_39AM
SE +/- 0.09, N = 3
36.05
2700XStock
SE +/- 0.08, N = 3
33.06
2700XOC4050
SE +/- 0.02, N = 3
37.76
3700XStock
SE +/- 0.01, N = 3
31.32
3700XOC4250
SE +/- 0.02, N = 3
26.52
3900XStock
SE +/- 0.01, N = 3
29.70
3900XOC4250
SE +/- 0.01, N = 3
26.52
7700KStock
SE +/- 0.01, N = 3
26.68
7700K_5GHz
SE +/- 0.01, N = 3
24.03
7900XStock
SE +/- 0.00, N = 3
27.85
7900XOC4300
SE +/- 0.01, N = 3
27.79
8700KStock
SE +/- 0.01, N = 3
25.63
8700K_5GHz
SE +/- 0.01, N = 3
24.03
9900KStock
SE +/- 0.01, N = 3
25.06
9900K_5GHz
SE +/- 0.03, N = 3
25.61
2600XStock
SE +/- 0.13, N = 3
38.95
2600X42GHz
SE +/- 0.05, N = 3
33.28
3600XStock
SE +/- 0.01, N = 3
29.69
3600X_43GHz
SE +/- 0.01, N = 3
26.20
3400GStock
SE +/- 0.07, N = 3
38.08
3400G_4175
SE +/- 0.01, N = 3
33.48
9
18
27
36
45
1. (CC) gcc options: -lncurses -lm


eSpeak Speech Engine 1.48.04
Text-To-Speech Synthesis
Seconds, Fewer Is Better
1600XStock
SE +/- 0.15, N = 3
36.07
1600X_39GHz
SE +/- 0.26, N = 3
33.53
1800XStock
SE +/- 0.16, N = 3
35.89
1800XOCAuto
SE +/- 0.35, N = 3
33.97
TR1950XStock
SE +/- 0.16, N = 3
38.25
2400GStock
SE +/- 0.21, N = 3
36.17
2400G_39All
SE +/- 0.17, N = 3
33.33
2700XStock
SE +/- 0.14, N = 3
31.05
2700XOC4050
SE +/- 0.20, N = 3
35.05
3700XStock
SE +/- 0.11, N = 3
32.77
3700XOC4250
SE +/- 0.06, N = 3
28.57
3900XStock
SE +/- 0.07, N = 3
31.88
3900XOC4250
SE +/- 0.01, N = 3
28.31
7700KStock
SE +/- 0.28, N = 3
25.34
7700K_5GHz
SE +/- 0.11, N = 3
23.22
7900XStock
SE +/- 0.05, N = 3
27.12
7900XOC4300
SE +/- 0.01, N = 3
26.72
8700KStock
SE +/- 0.07, N = 3
24.64
8700K_5GHz
SE +/- 0.06, N = 3
23.26
9900KStock
SE +/- 0.03, N = 3
24.15
9900K_5GHz
SE +/- 0.08, N = 3
24.18
2600XStock
SE +/- 0.18, N = 3
36.04
2600X42GHz
SE +/- 0.19, N = 3
31.55
3600XStock
SE +/- 0.07, N = 3
31.96
3600X_43GHz
SE +/- 0.09, N = 3
28.05
3400GStock
SE +/- 0.10, N = 3
35.50
3400G_4175
SE +/- 0.08, N = 3
31.63
9
18
27
36
45
1. (CXX) g++ options: -lstdc++ -lespeak -O2 -fpic -fvisibility=hidden -pedantic -fno-exceptions

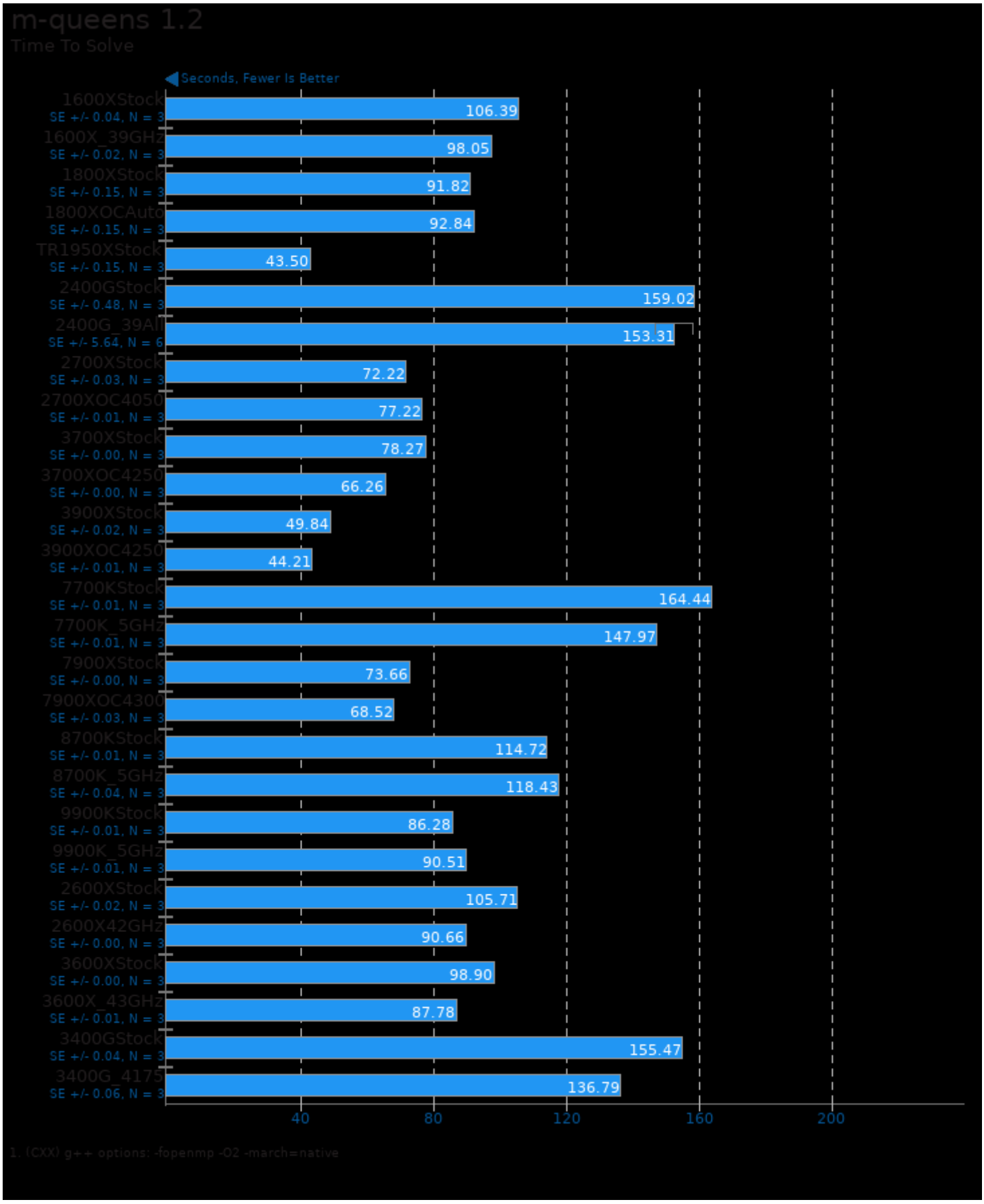

FFmpeg 4.0.2
H.264 HD To NTSC DV
Seconds, Fewer Is Better
1600XStock
SE +/- 0.05, N = 3
5.53
1600X_39GHz
SE +/- 0.02, N = 3
4.88
1800XStock
SE +/- 0.06, N = 3
7.98
1800XOCAuto
SE +/- 0.07, N = 3
7.86
TR1950XStock
SE +/- 0.04, N = 3
7.92
2400GStock
SE +/- 0.05, N = 3
6.24
2400G_39AM
SE +/- 0.02, N = 3
5.62
2700XStock
SE +/- 0.07, N = 3
7.61
2700XOC4050
SE +/- 0.06, N = 3
6.22
3700XStock
SE +/- 0.03, N = 3
7.60
3700XOC4250
SE +/- 0.02, N = 3
5.18
3900XStock
SE +/- 0.02, N = 3
7.25
3900XOC4250
SE +/- 0.02, N = 3
4.98
7700KStock
SE +/- 0.05, N = 3
4.94
7700K_5GHz
SE +/- 0.02, N = 3
4.85
7900XStock
SE +/- 0.07, N = 3
13.20
7900XOC4300
SE +/- 0.03, N = 3
9.23
8700KStock
SE +/- 0.03, N = 3
4.35
8700K_5GHz
SE +/- 0.03, N = 3
4.17
9900KStock
SE +/- 0.04, N = 3
5.07
9900K_5GHz
SE +/- 0.04, N = 3
4.78
2600XStock
SE +/- 0.07, N = 3
5.39
2600X42GHz
SE +/- 0.04, N = 3
4.42
3600XStock
SE +/- 0.01, N = 3
4.89
3600X_43GHz
SE +/- 0.03, N = 3
4.12
3400GStock
SE +/- 0.03, N = 3
6.19
3400G_4175
SE +/- 0.03, N = 3
5.22
3
6
9
12
15
1. (CC) gcc options: -lavdevice -lavfilter -lavformat -lavcodec -lswresample -lswscale -lavutil -lm -lxcb -lxcb-shm -lxcb-shape -lxcb-xfixes -lasound -pthread

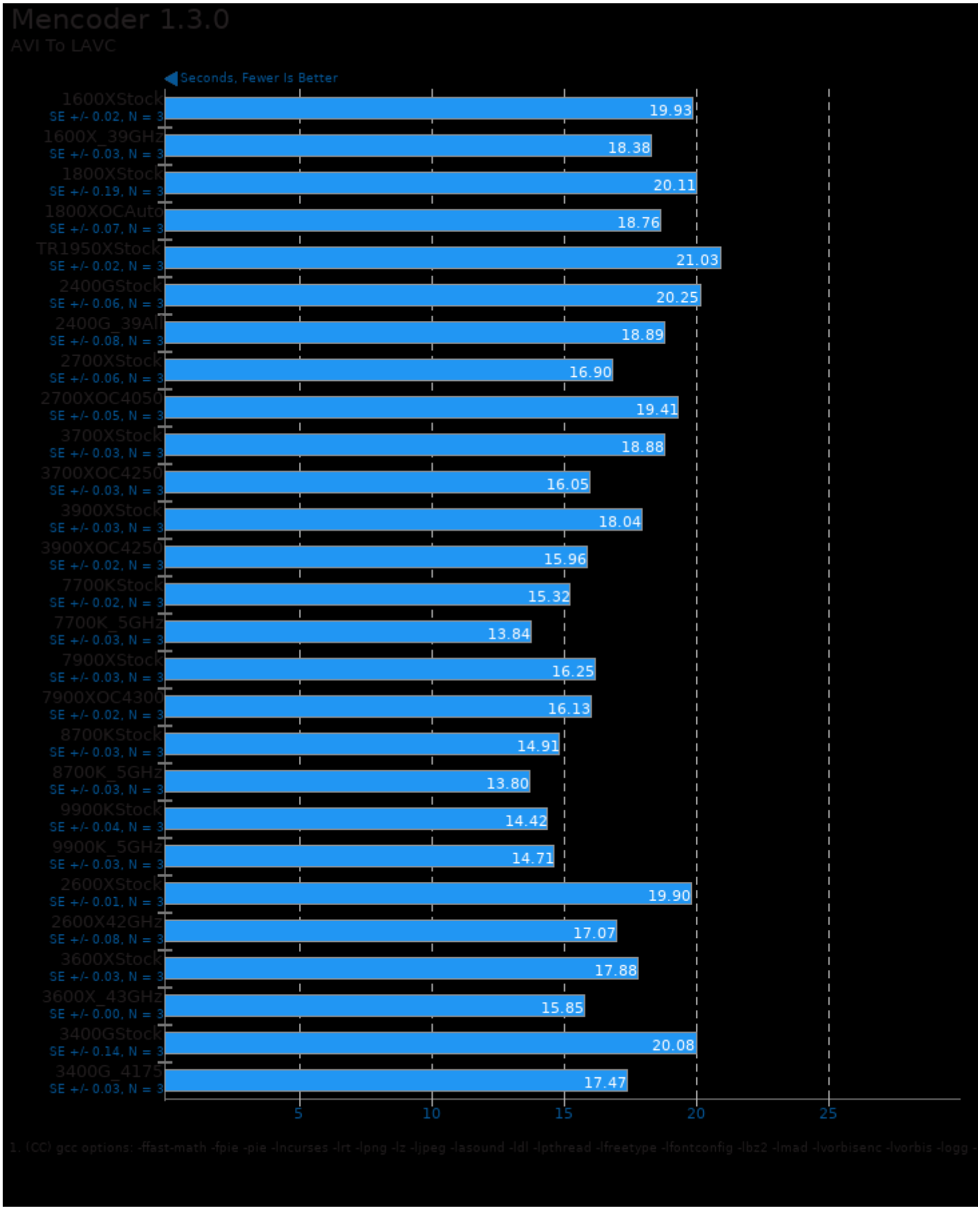

GnuPG 1.4.22
2GB File Encryption
Seconds, Fewer Is Better
1600XStock
SE +/- 0.01, N = 3
13.79
1600X_39GHz
SE +/- 0.01, N = 3
12.72
1800XStock
SE +/- 0.01, N = 3
13.79
1800XOCAuto
SE +/- 0.06, N = 3
12.92
TR1950XStock
SE +/- 0.02, N = 3
14.62
2400GStock
SE +/- 0.01, N = 3
13.80
2400G_39AM
SE +/- 0.02, N = 3
12.79
2700XStock
SE +/- 0.08, N = 3
11.66
2700XOC4050
SE +/- 0.03, N = 3
13.39
3700XStock
SE +/- 0.02, N = 3
11.28
3700XOC4250
SE +/- 0.02, N = 3
9.55
3900XStock
SE +/- 0.01, N = 3
10.70
3900XOC4250
SE +/- 0.02, N = 3
9.55
7700KStock
SE +/- 0.01, N = 3
9.47
7700K_5GHz
SE +/- 0.01, N = 3
8.54
7900XStock
SE +/- 0.04, N = 3
10.09
7900XOC4300
SE +/- 0.04, N = 3
10.07
8700KStock
SE +/- 0.02, N = 3
9.13
8700K_5GHz
SE +/- 0.01, N = 3
8.56
9900KStock
SE +/- 0.01, N = 3
8.88
9900K_5GHz
SE +/- 0.03, N = 3
9.07
2600XStock
SE +/- 0.01, N = 3
13.76
2600X42GHz
SE +/- 0.02, N = 3
11.80
3600XStock
SE +/- 0.02, N = 3
10.69
3600X_43GHz
SE +/- 0.03, N = 3
9.47
3400GStock
SE +/- 0.06, N = 3
14.25
3400G_4175
SE +/- 0.02, N = 3
11.86
4
8
12
16
20
1. (CC) gcc options: -O2 -MT -MD -MP -MF

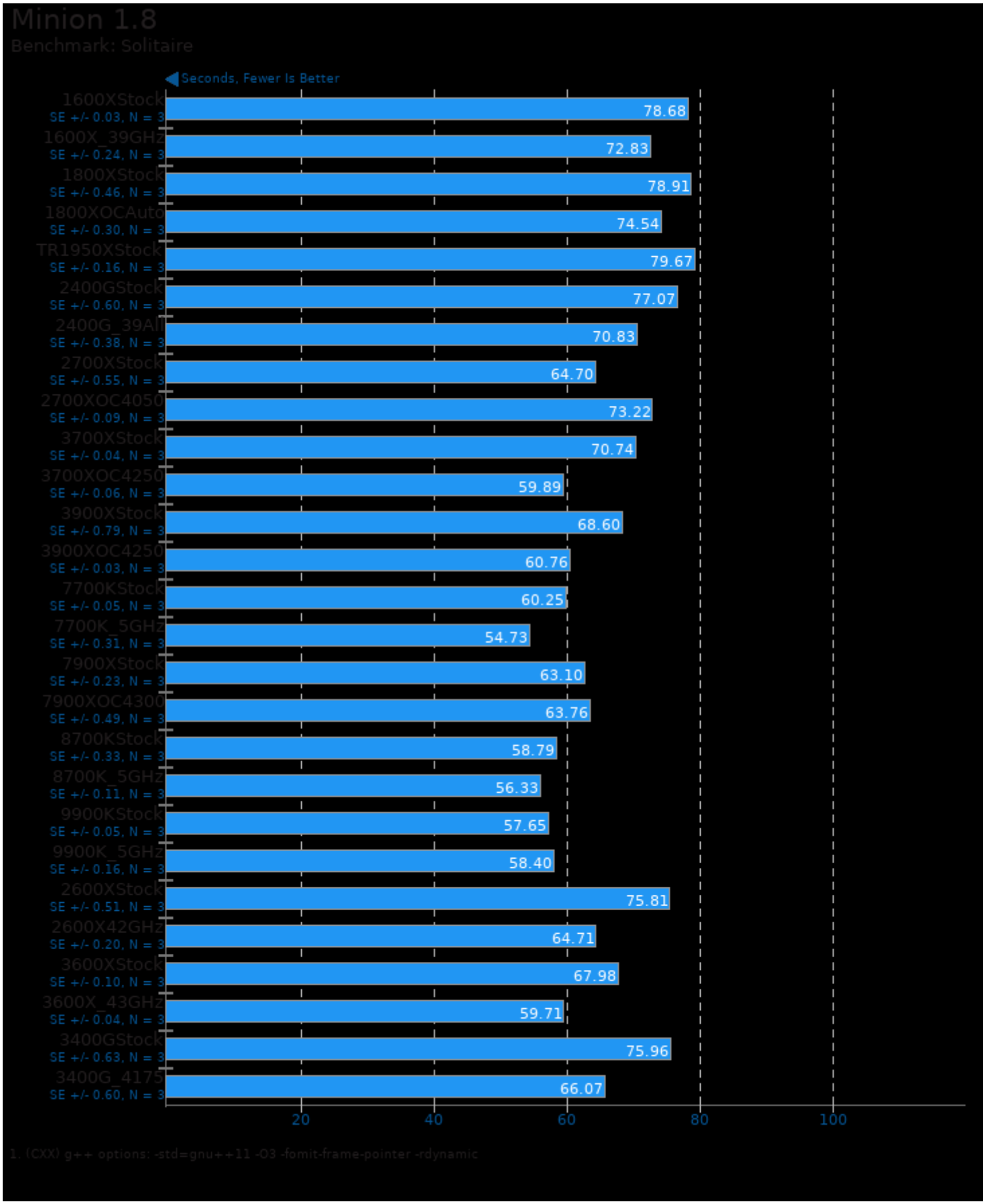
xdacputestsep2019

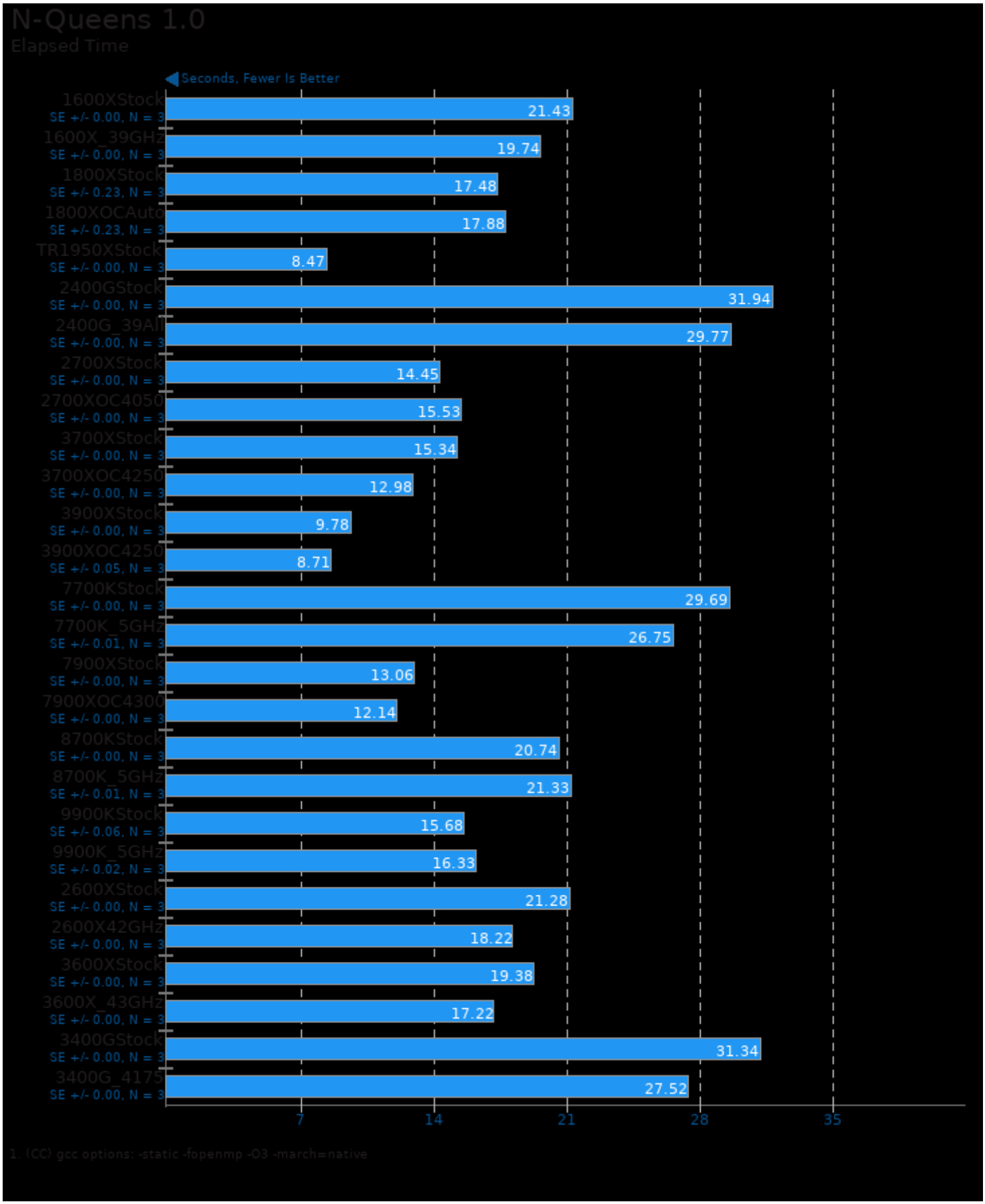


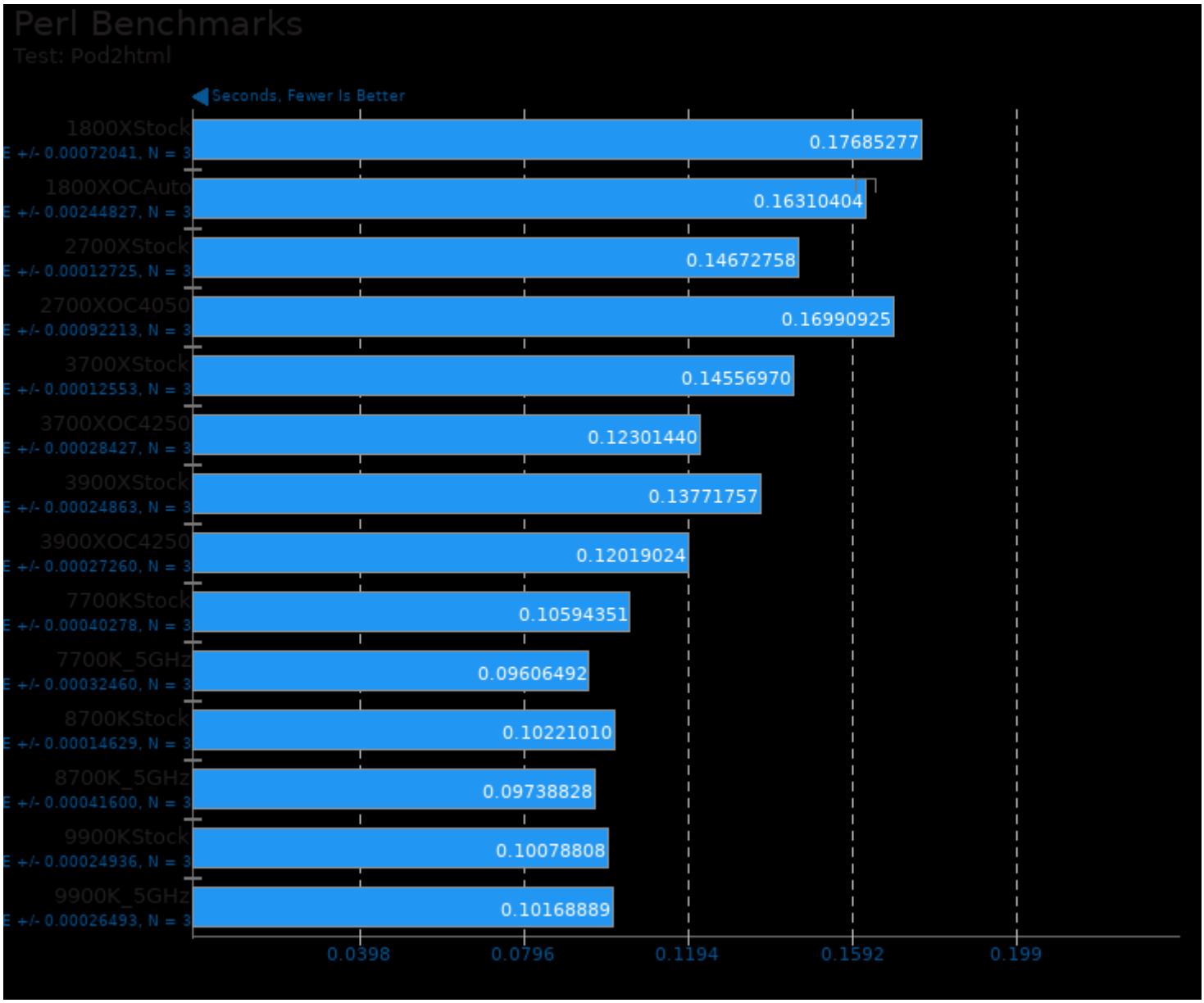
xdacputestsep2019



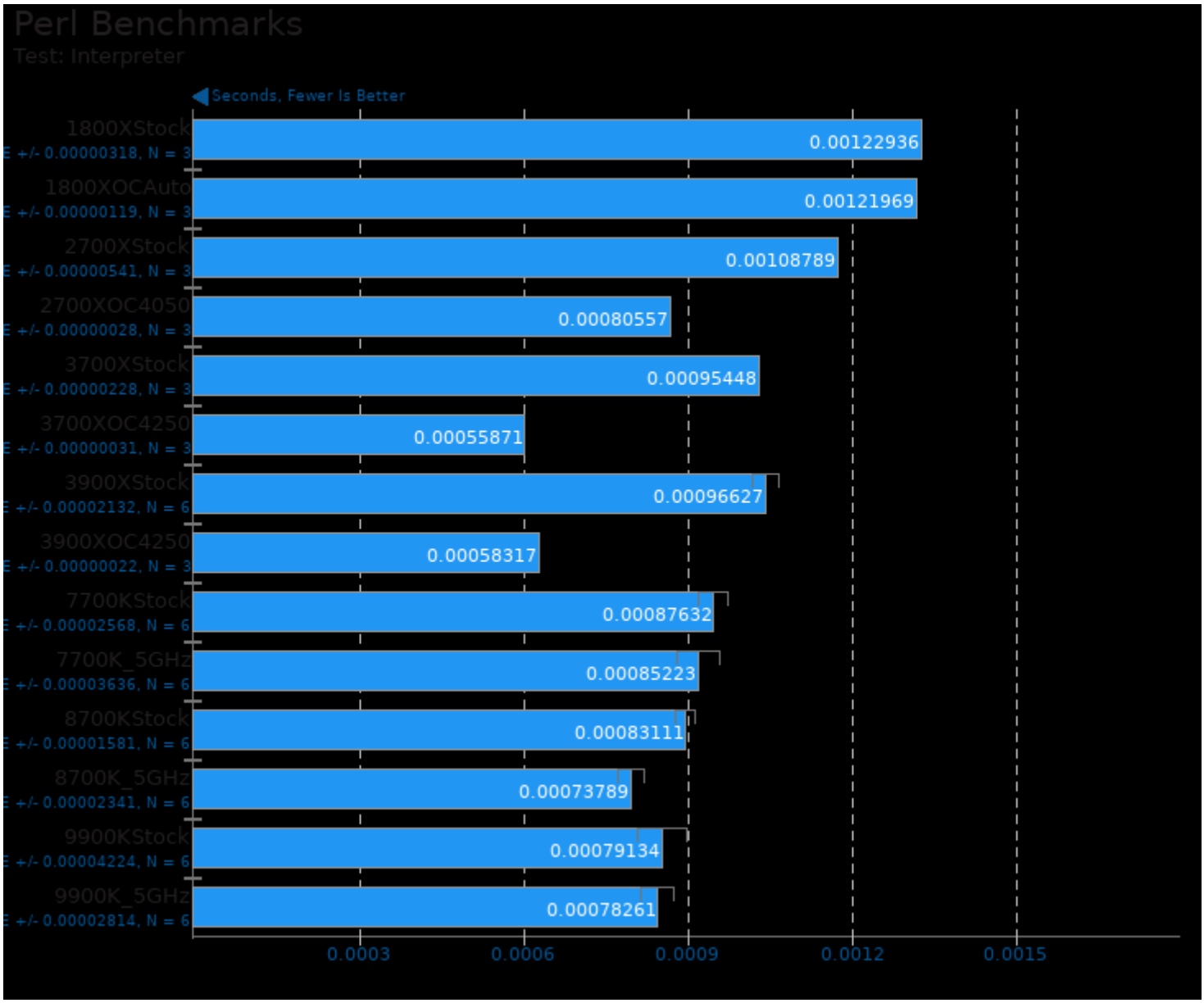

Mencoder 1.3.0
AVI To LAVC
Seconds, Fewer Is Better
1600XStock
SE +/- 0.02, N = 3
19.93
1600X_39GHz
SE +/- 0.03, N = 3
18.38
1800XStock
SE +/- 0.19, N = 3
20.11
1800XOCAuto
SE +/- 0.07, N = 3
18.76
TR1950XStock
SE +/- 0.02, N = 3
21.03
2400GStock
SE +/- 0.06, N = 3
20.25
2400G_39All
SE +/- 0.08, N = 3
18.89
2700XStock
SE +/- 0.06, N = 3
16.90
2700XOC4050
SE +/- 0.05, N = 3
19.41
3700XStock
SE +/- 0.03, N = 3
18.88
3700XOC4250
SE +/- 0.03, N = 3
16.05
3900XStock
SE +/- 0.03, N = 3
18.04
3900XOC4250
SE +/- 0.02, N = 3
15.96
7700KStock
SE +/- 0.02, N = 3
15.32
7700K_5GHz
SE +/- 0.03, N = 3
13.84
7900XStock
SE +/- 0.03, N = 3
16.25
7900XOC4300
SE +/- 0.02, N = 3
16.13
8700KStock
SE +/- 0.03, N = 3
14.91
8700K_5GHz
SE +/- 0.03, N = 3
13.80
9900KStock
SE +/- 0.04, N = 3
14.42
9900K_5GHz
SE +/- 0.03, N = 3
14.71
2600XStock
SE +/- 0.01, N = 3
19.90
2600X42GHz
SE +/- 0.08, N = 3
17.07
3600XStock
SE +/- 0.03, N = 3
17.88
3600X_43GHz
SE +/- 0.00, N = 3
15.85
3400GStock
SE +/- 0.14, N = 3
20.08
3400G_4175
SE +/- 0.03, N = 3
17.47
5
10
15
20
25
1. (CC) gcc options: -ffast-math -fpie -pie -lncurses -lrt -lpng -lz -ljpeg -lasound -ldl -lpthread -lfreetype -lfontconfig -lbz2 -lmad -lvorbisenc -lvorbis -logg

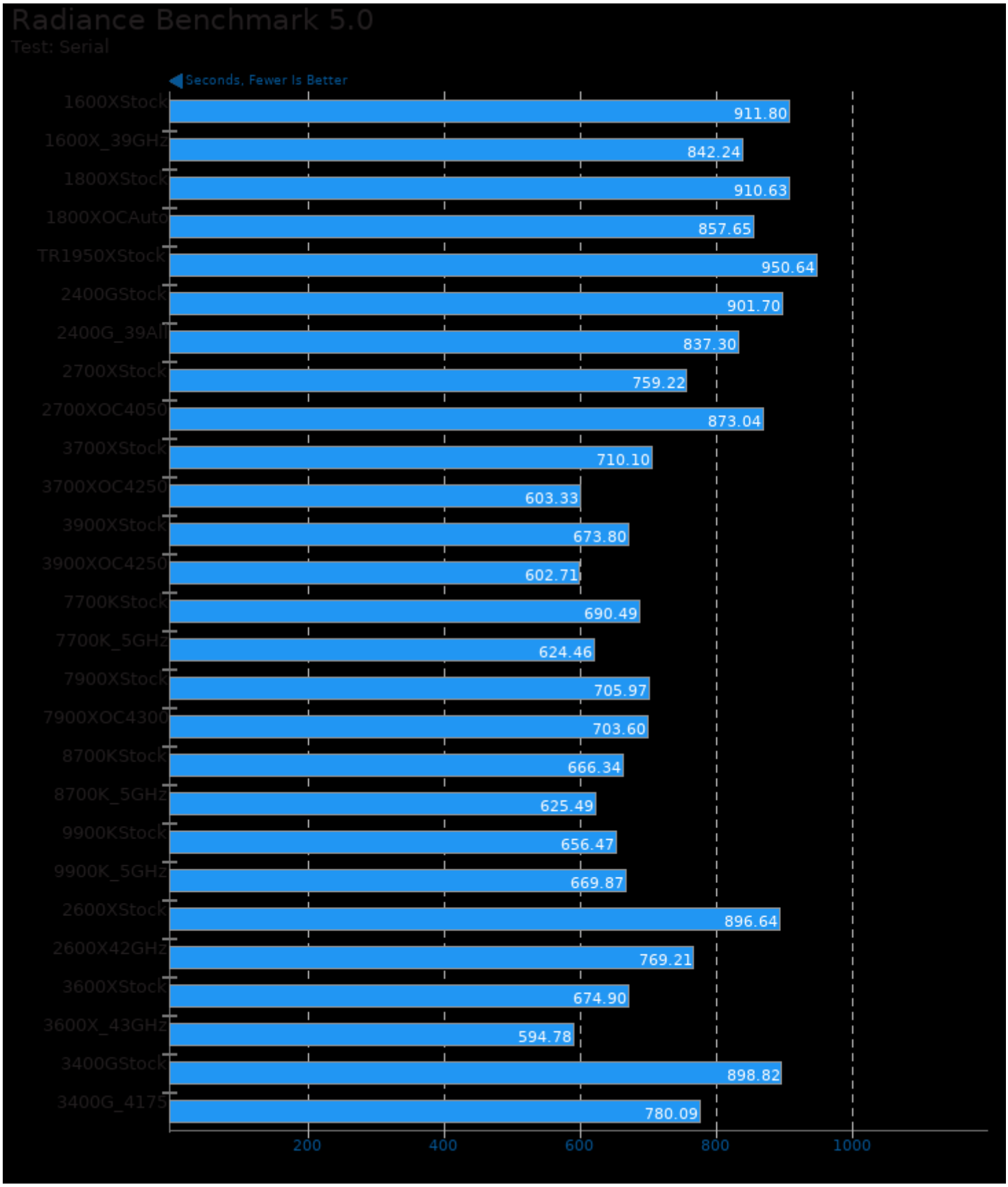

Minion 1.8
Benchmark: Solitaire
Seconds, Fewer Is Better
1600XStock
SE +/- 0.03, N = 3
78.68
1600X_39GHz
SE +/- 0.24, N = 3
72.83
1800XStock
SE +/- 0.46, N = 3
78.91
1800XOCAuto
SE +/- 0.30, N = 3
74.54
TR1950XStock
SE +/- 0.16, N = 3
79.67
2400GStock
SE +/- 0.60, N = 3
77.07
2400G_39Alt
SE +/- 0.38, N = 3
70.83
2700XStock
SE +/- 0.55, N = 3
64.70
2700XOC4050
SE +/- 0.09, N = 3
73.22
3700XStock
SE +/- 0.04, N = 3
70.74
3700XOC4250
SE +/- 0.06, N = 3
59.89
3900XStock
SE +/- 0.79, N = 3
68.60
3900XOC4250
SE +/- 0.03, N = 3
60.76
7700KStock
SE +/- 0.05, N = 3
60.25
7700K_5GHz
SE +/- 0.31, N = 3
54.73
7900XStock
SE +/- 0.23, N = 3
63.10
7900XOC4300
SE +/- 0.49, N = 3
63.76
8700KStock
SE +/- 0.33, N = 3
58.79
8700K_5GHz
SE +/- 0.11, N = 3
56.33
9900KStock
SE +/- 0.05, N = 3
57.65
9900K_5GHz
SE +/- 0.16, N = 3
58.40
2600XStock
SE +/- 0.51, N = 3
75.81
2600X42GHz
SE +/- 0.20, N = 3
64.71
3600XStock
SE +/- 0.10, N = 3
67.98
3600X_43GHz
SE +/- 0.04, N = 3
59.71
3400GStock
SE +/- 0.63, N = 3
75.96
3400G_4175
SE +/- 0.60, N = 3
66.07
20
40
60
80
100
1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic


N-Queens 1.0
Elapsed Time
Seconds, Fewer Is Better
1600XStock
SE +/- 0.00, N = 3
21.43
1600X_39GHz
SE +/- 0.00, N = 3
19.74
1800XStock
SE +/- 0.23, N = 3
17.48
1800XOCAuto
SE +/- 0.23, N = 3
17.88
TR1950XStock
SE +/- 0.00, N = 3
8.47
2400GStock
SE +/- 0.00, N = 3
31.94
2400G_39AM
SE +/- 0.00, N = 3
29.77
2700XStock
SE +/- 0.00, N = 3
14.45
2700XOC4050
SE +/- 0.00, N = 3
15.53
3700XStock
SE +/- 0.00, N = 3
15.34
3700XOC4250
SE +/- 0.00, N = 3
12.98
3900XStock
SE +/- 0.00, N = 3
9.78
3900XOC4250
SE +/- 0.05, N = 3
8.71
7700KStock
SE +/- 0.00, N = 3
29.69
7700K_5GHz
SE +/- 0.01, N = 3
26.75
7900XStock
SE +/- 0.00, N = 3
13.06
7900XOC4300
SE +/- 0.00, N = 3
12.14
8700KStock
SE +/- 0.00, N = 3
20.74
8700K_5GHz
SE +/- 0.01, N = 3
21.33
9900KStock
SE +/- 0.06, N = 3
15.68
9900K_5GHz
SE +/- 0.02, N = 3
16.33
2600XStock
SE +/- 0.00, N = 3
21.28
2600X42GHz
SE +/- 0.00, N = 3
18.22
3600XStock
SE +/- 0.00, N = 3
19.38
3600X_43GHz
SE +/- 0.00, N = 3
17.22
3400GStock
SE +/- 0.00, N = 3
31.34
3400G_4175
SE +/- 0.00, N = 3
27.52
7
14
21
28
35
1. (CC) gcc options: -static -fopenmp -O3 -march=native

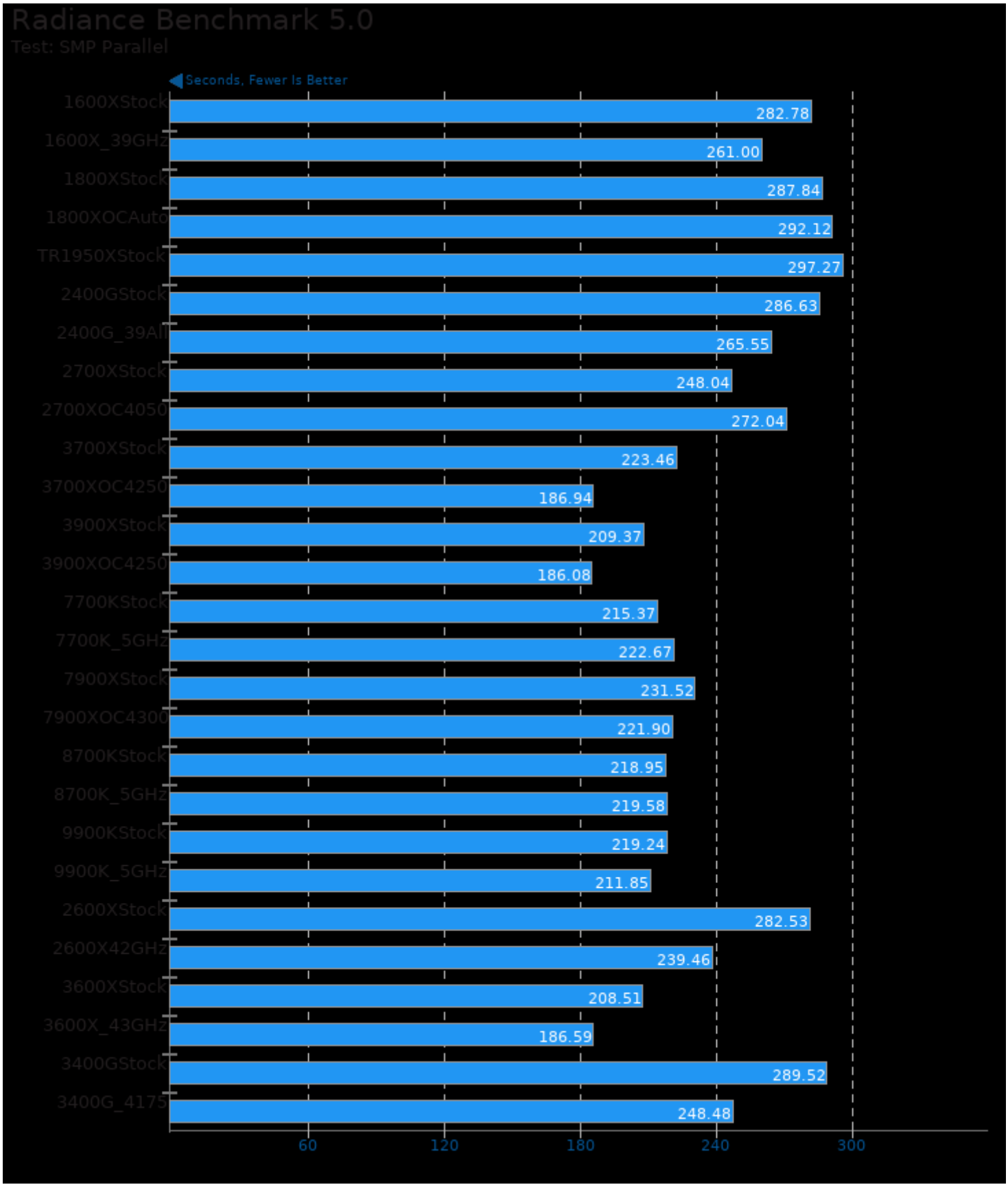

Perl Benchmarks
Test: Pod2html
Seconds, Fewer Is Better
1800XStock
E +/- 0.00072041, N = 3
0.17685277
1800XOCAuto
E +/- 0.00244827, N = 3
0.16310404
2700XStock
E +/- 0.00012725, N = 3
0.14672758
2700XOC4050
E +/- 0.00092213, N = 3
0.16990925
3700XStock
E +/- 0.00012553, N = 3
0.14556970
3700XOC4250
E +/- 0.00028427, N = 3
0.12301440
3900XStock
E +/- 0.00024863, N = 3
0.13771757
3900XOC4250
E +/- 0.00027260, N = 3
0.12019024
7700KStock
E +/- 0.00040278, N = 3
0.10594351
7700K_5GHz
E +/- 0.00032460, N = 3
0.09606492
8700KStock
E +/- 0.00014629, N = 3
0.10221010
8700K_5GHz
E +/- 0.00041600, N = 3
0.09738828
9900KStock
E +/- 0.00024936, N = 3
0.10078808
9900K_5GHz
E +/- 0.00026493, N = 3
0.10168889
0.0398
0.0796
0.1194
0.1592
0.199

xdacputestsep2019

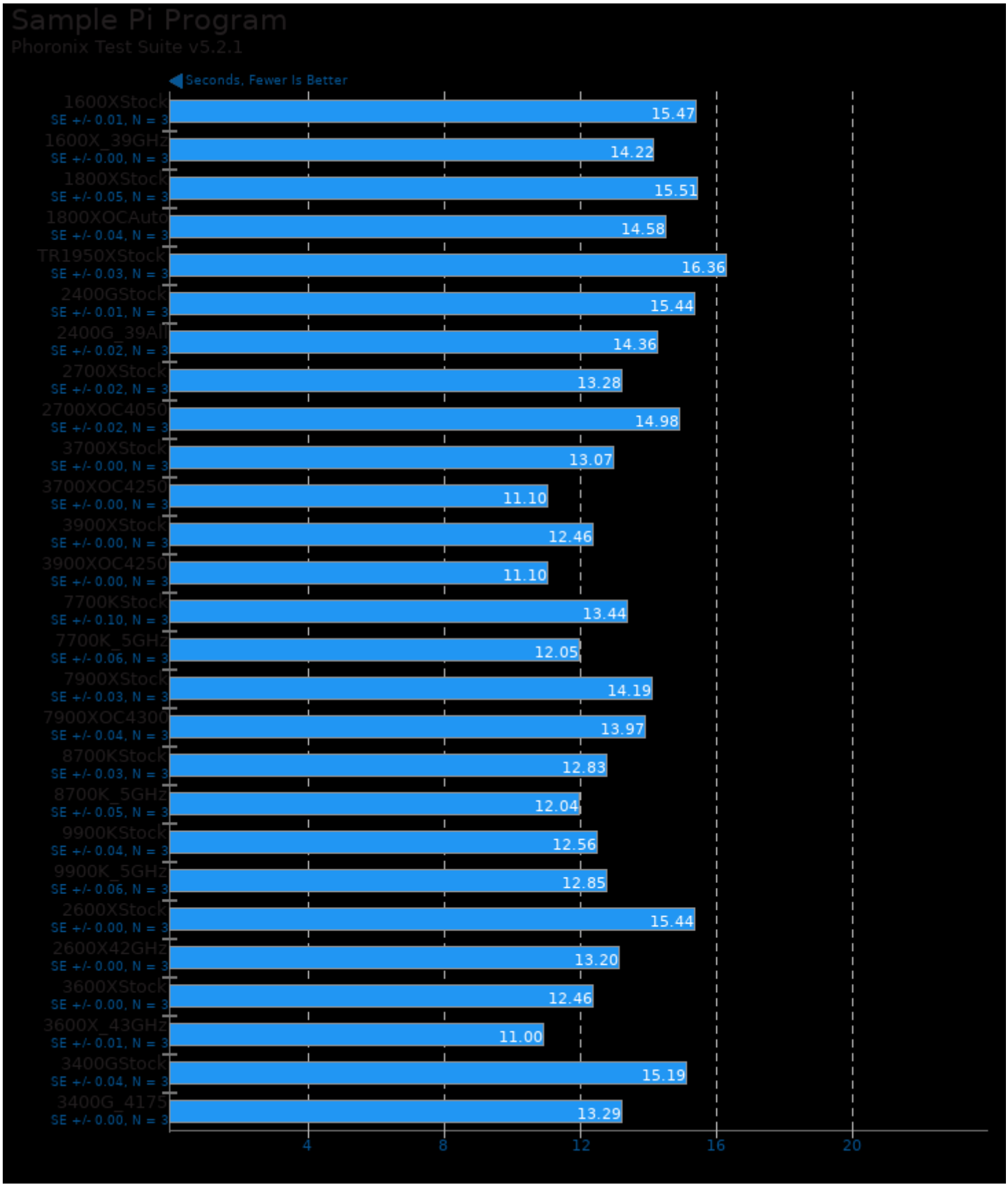


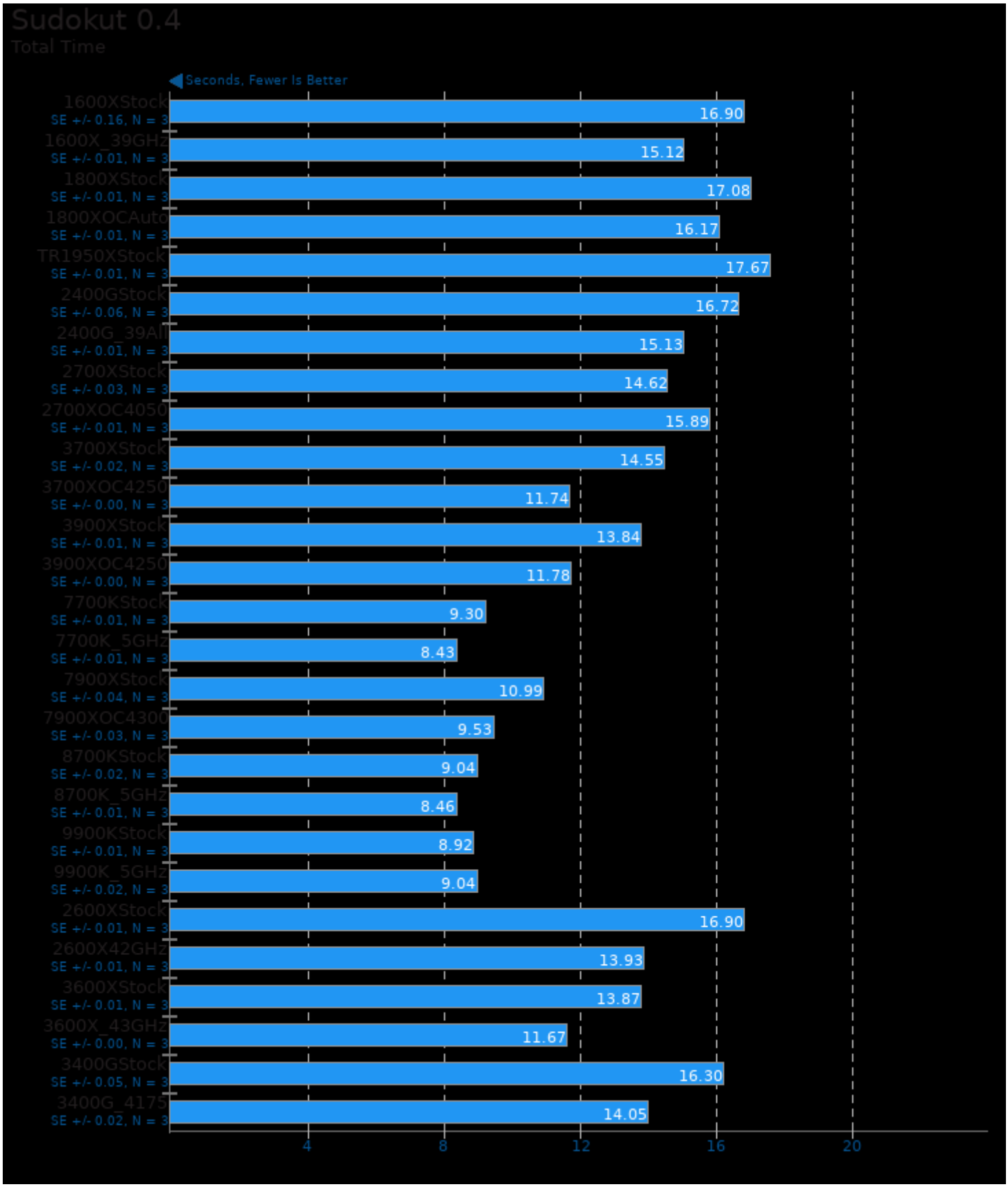

Radiance Benchmark 5.0
Test: Serial
Seconds, Fewer Is Better
1600XStock 911.80
1600X_39GHz 842.24
1800XStock 910.63
1800XOCAuto 857.65
TR1950XStock 950.64
2400GStock 901.70
2400G_39AM 837.30
2700XStock 759.22
2700XOC4050 873.04
3700XStock 710.10
3700XOC4250 603.33
3900XStock 673.80
3900XOC4250 602.71
7700KStock 690.49
7700K_5GHz 624.46
7900XStock 705.97
7900XOC4300 703.60
8700KStock 666.34
8700K_5GHz 625.49
9900KStock 656.47
9900K_5GHz 669.87
2600XStock 896.64
2600X42GHz 769.21
3600XStock 674.90
3600X_43GHz 594.78
3400GStock 898.82
3400G_4175 780.09
200
400
600
800
1000

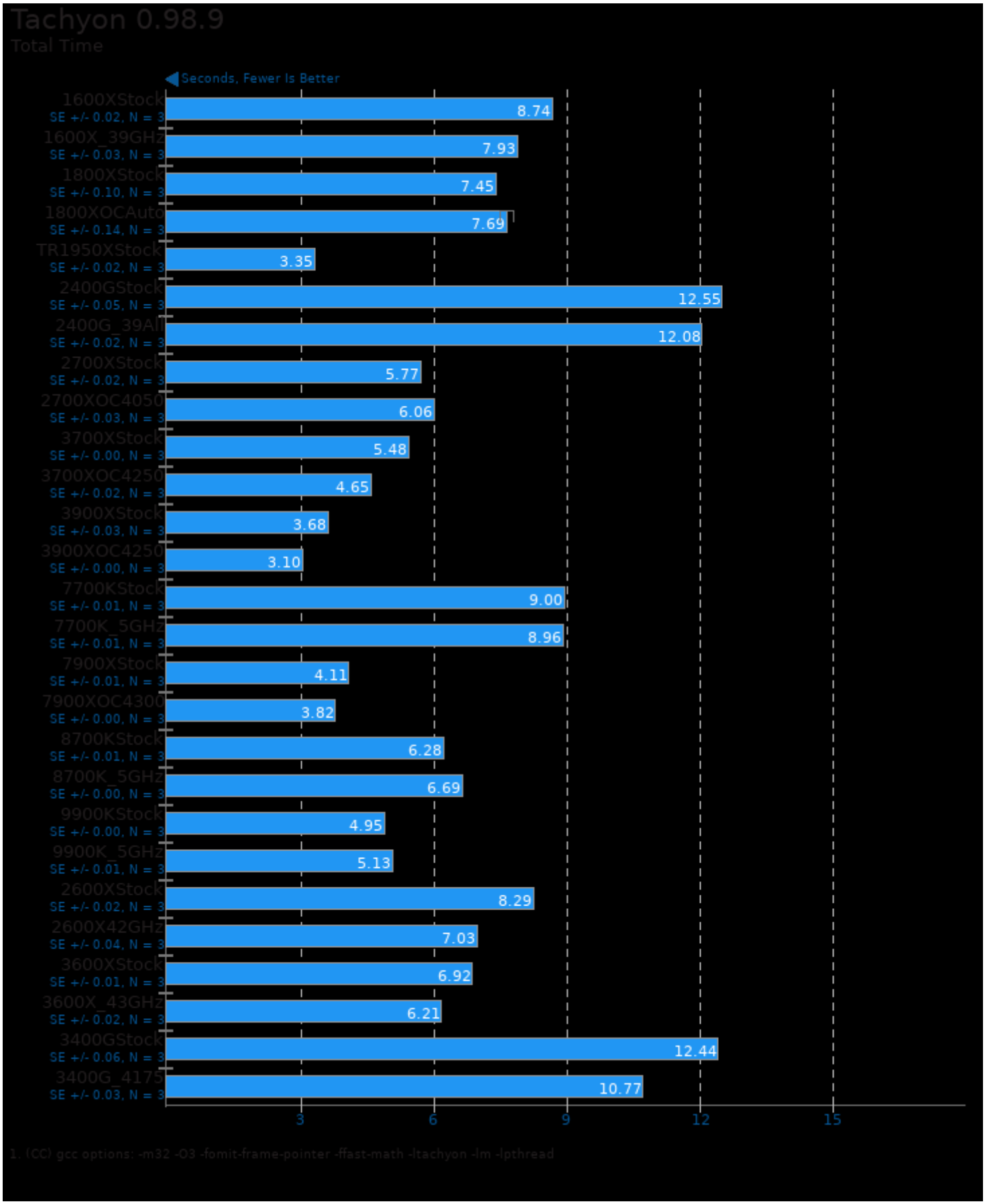
xdacputestsep2019

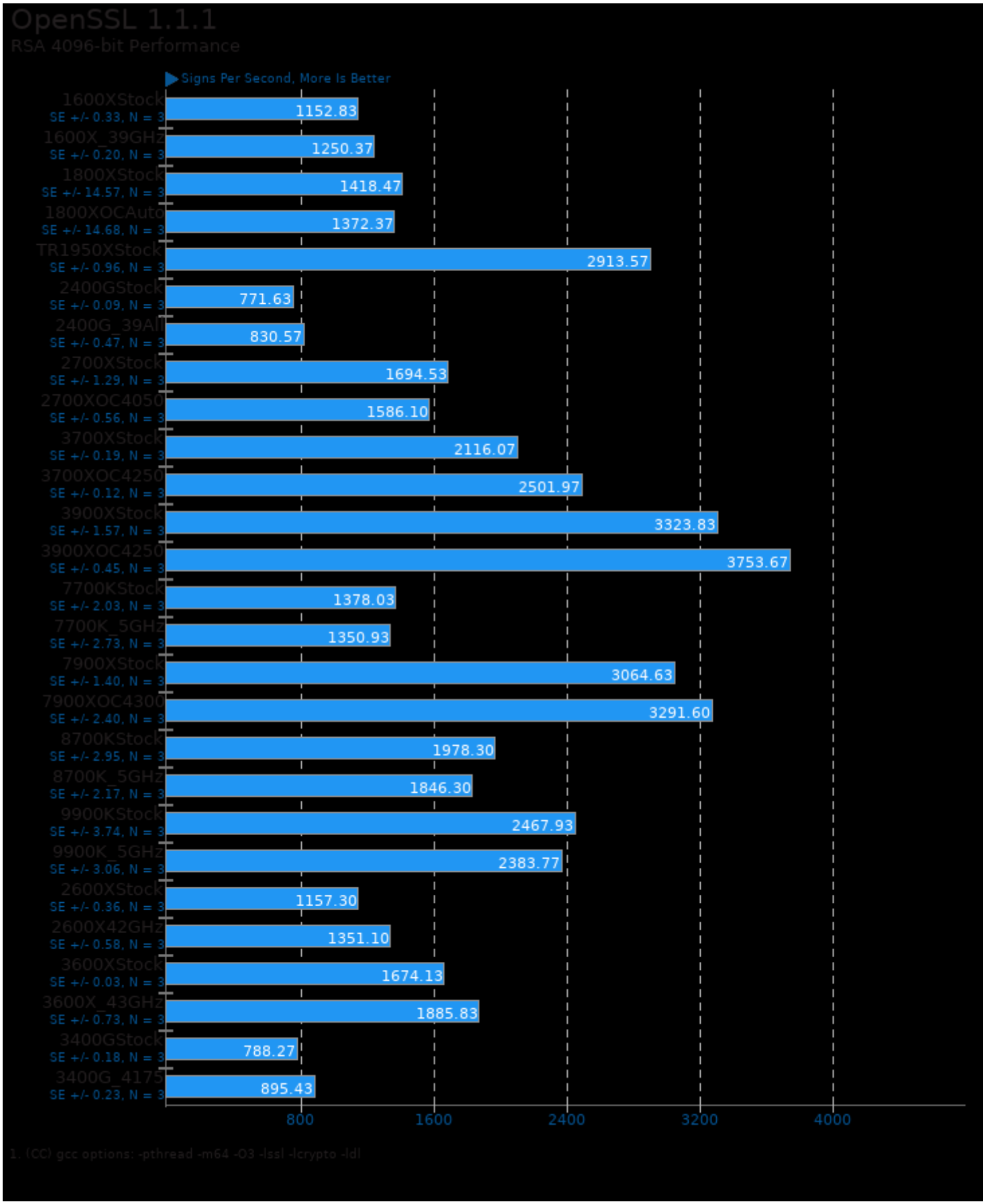


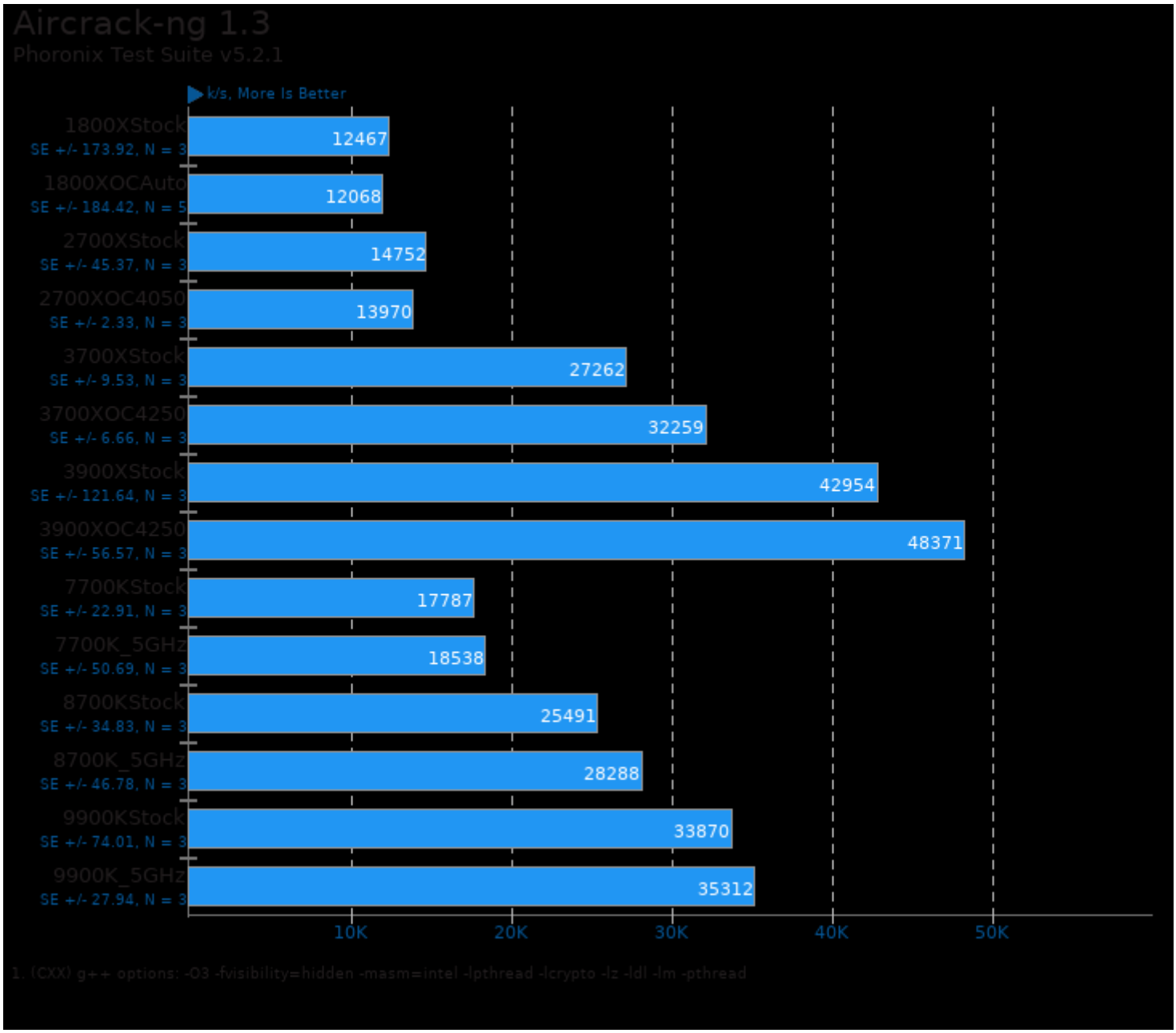
xdacputestsep2019



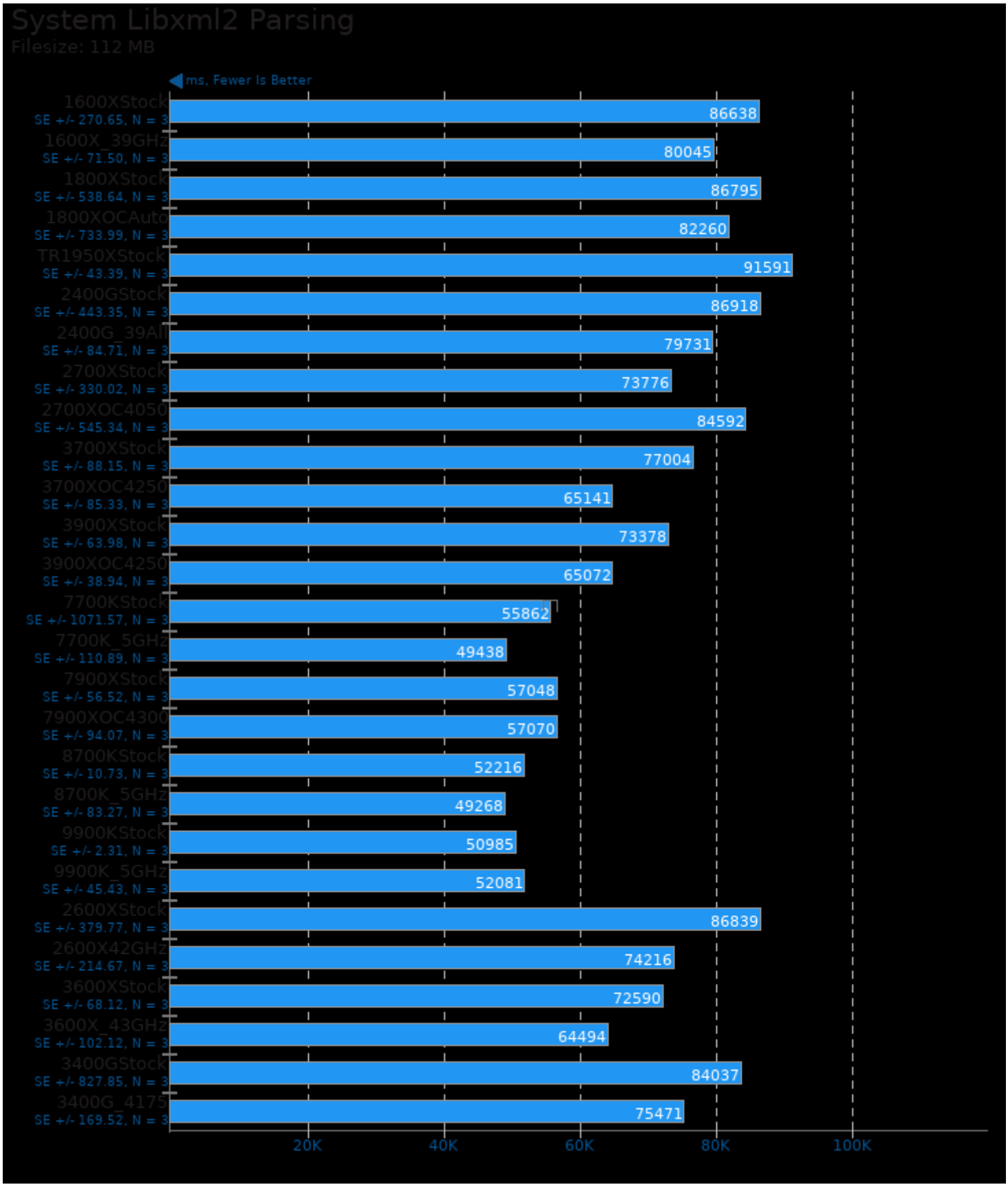

Sudokut 0.4
Total Time
Seconds, Fewer Is Better
1600XStock
SE +/- 0.16, N = 3
16.90
1600X_39GHz
SE +/- 0.01, N = 3
15.12
1800XStock
SE +/- 0.01, N = 3
17.08
1800XOCAuto
SE +/- 0.01, N = 3
16.17
TR1950XStock
SE +/- 0.01, N = 3
17.67
2400GStock
SE +/- 0.06, N = 3
16.72
2400G_39All
SE +/- 0.01, N = 3
15.13
2700XStock
SE +/- 0.03, N = 3
14.62
2700XOC4050
SE +/- 0.01, N = 3
15.89
3700XStock
SE +/- 0.02, N = 3
14.55
3700XOC4250
SE +/- 0.00, N = 3
11.74
3900XStock
SE +/- 0.01, N = 3
13.84
3900XOC4250
SE +/- 0.00, N = 3
11.78
7700KStock
SE +/- 0.01, N = 3
9.30
7700K_5GHz
SE +/- 0.01, N = 3
8.43
7900XStock
SE +/- 0.04, N = 3
10.99
7900XOC4300
SE +/- 0.03, N = 3
9.53
8700KStock
SE +/- 0.02, N = 3
9.04
8700K_5GHz
SE +/- 0.01, N = 3
8.46
9900KStock
SE +/- 0.01, N = 3
8.92
9900K_5GHz
SE +/- 0.02, N = 3
9.04
2600XStock
SE +/- 0.01, N = 3
16.90
2600X42GHz
SE +/- 0.01, N = 3
13.93
3600XStock
SE +/- 0.01, N = 3
13.87
3600X_43GHz
SE +/- 0.00, N = 3
11.67
3400GStock
SE +/- 0.05, N = 3
16.30
3400G_4175
SE +/- 0.02, N = 3
14.05
4
8
12
16
20


Tachyon 0.98.9
Total Time
Seconds, Fewer Is Better
1600XStock
SE +/- 0.02, N = 3
8.74
1600X_39GHz
SE +/- 0.03, N = 3
7.93
1800XStock
SE +/- 0.10, N = 3
7.45
1800XOCAuto
SE +/- 0.14, N = 3
7.69
TR1950XStock
SE +/- 0.02, N = 3
3.35
2400GStock
SE +/- 0.05, N = 3
12.55
2400G_39AM
SE +/- 0.02, N = 3
12.08
2700XStock
SE +/- 0.02, N = 3
5.77
2700XOC4050
SE +/- 0.03, N = 3
6.06
3700XStock
SE +/- 0.00, N = 3
5.48
3700XOC4250
SE +/- 0.02, N = 3
4.65
3900XStock
SE +/- 0.03, N = 3
3.68
3900XOC4250
SE +/- 0.00, N = 3
3.10
7700KStock
SE +/- 0.01, N = 3
9.00
7700K_5GHz
SE +/- 0.01, N = 3
8.96
7900XStock
SE +/- 0.01, N = 3
4.11
7900XOC4300
SE +/- 0.00, N = 3
3.82
8700KStock
SE +/- 0.01, N = 3
6.28
8700K_5GHz
SE +/- 0.00, N = 3
6.69
9900KStock
SE +/- 0.00, N = 3
4.95
9900K_5GHz
SE +/- 0.01, N = 3
5.13
2600XStock
SE +/- 0.02, N = 3
8.29
2600X42GHz
SE +/- 0.04, N = 3
7.03
3600XStock
SE +/- 0.01, N = 3
6.92
3600X_43GHz
SE +/- 0.02, N = 3
6.21
3400GStock
SE +/- 0.06, N = 3
12.44
3400G_4175
SE +/- 0.03, N = 3
10.77
3
6
9
12
15
1. (CC) gcc options: -m32 -O3 -fomit-frame-pointer -ffast-math -ltachyon -lm -lpthread

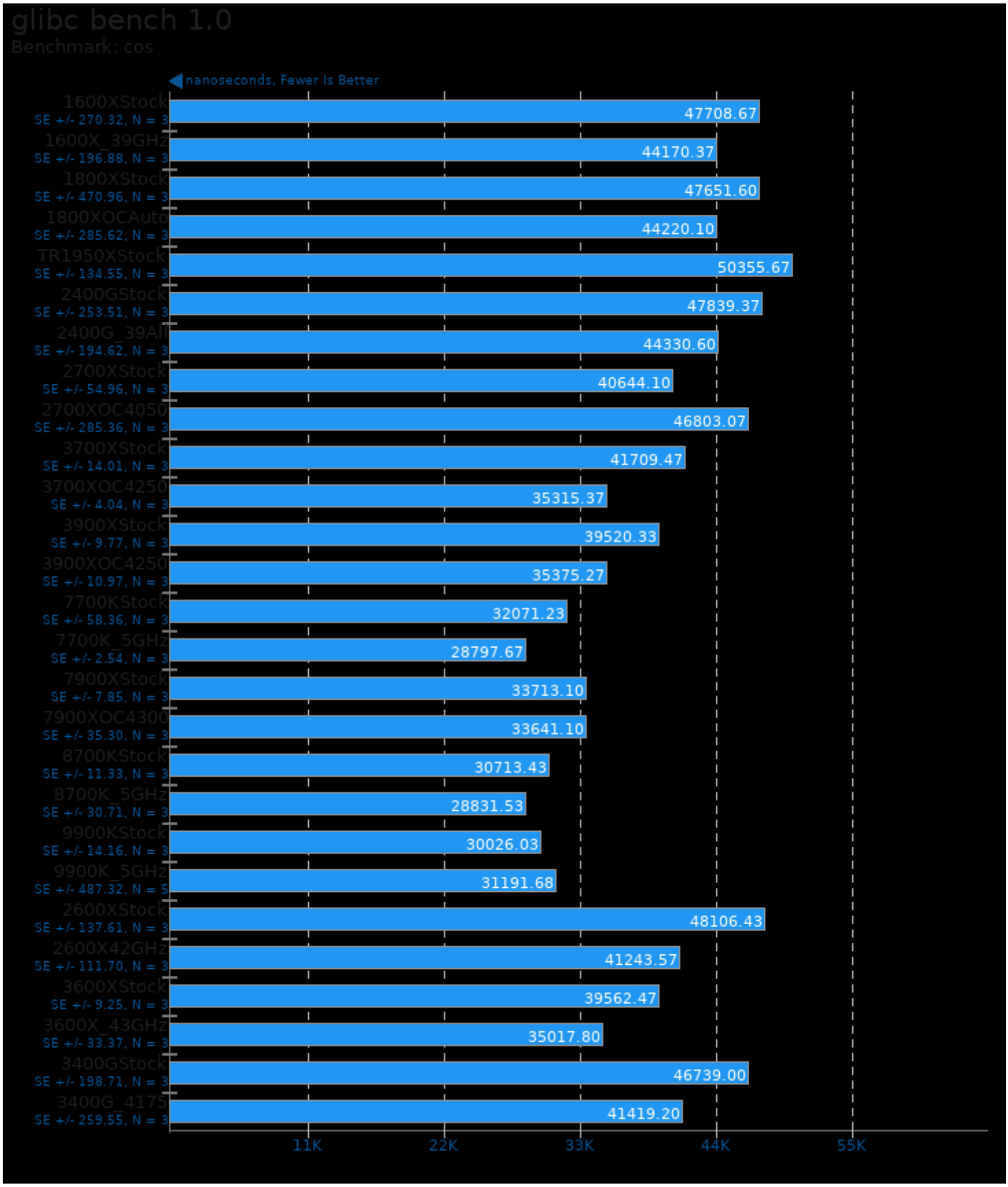

OpenSSL 1.1.1
RSA 4096-bit Performance
Signs Per Second, More Is Better
1600XStock
SE +/- 0.33, N = 3
1152.83
1600X_39GHz
SE +/- 0.20, N = 3
1250.37
1800XStock
SE +/- 14.57, N = 3
1418.47
1800XOCAuto
SE +/- 14.68, N = 3
1372.37
TR1950XStock
SE +/- 0.96, N = 3
2913.57
2400GStock
SE +/- 0.09, N = 3
771.63
2400G_39AM
SE +/- 0.47, N = 3
830.57
2700XStock
SE +/- 1.29, N = 3
1694.53
2700XOC4050
SE +/- 0.56, N = 3
1586.10
3700XStock
SE +/- 0.19, N = 3
2116.07
3700XOC4250
SE +/- 0.12, N = 3
2501.97
3900XStock
SE +/- 1.57, N = 3
3323.83
3900XOC4250
SE +/- 0.45, N = 3
3753.67
7700KStock
SE +/- 2.03, N = 3
1378.03
7700K_5GHz
SE +/- 2.73, N = 3
1350.93
7900XStock
SE +/- 1.40, N = 3
3064.63
7900XOC4300
SE +/- 2.40, N = 3
3291.60
8700KStock
SE +/- 2.95, N = 3
1978.30
8700K_5GHz
SE +/- 2.17, N = 3
1846.30
9900KStock
SE +/- 3.74, N = 3
2467.93
9900K_5GHz
SE +/- 3.06, N = 3
2383.77
2600XStock
SE +/- 0.36, N = 3
1157.30
2600X42GHz
SE +/- 0.58, N = 3
1351.10
3600XStock
SE +/- 0.03, N = 3
1674.13
3600X_43GHz
SE +/- 0.73, N = 3
1885.83
3400GStock
SE +/- 0.18, N = 3
788.27
3400G_4175
SE +/- 0.23, N = 3
895.43
800
1600
2400
3200
4000
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl


Aircrack-ng 1.3
Phoronix Test Suite v5.2.1
k/s, More Is Better
1800XStock
SE +/- 173.92, N = 3
12467
1800XOCAuto
SE +/- 184.42, N = 5
12068
2700XStock
SE +/- 45.37, N = 3
14752
2700XOC4050
SE +/- 2.33, N = 3
13970
3700XStock
SE +/- 9.53, N = 3
27262
3700XOC4250
SE +/- 6.66, N = 3
32259
3900XStock
SE +/- 121.64, N = 3
42954
3900XOC4250
SE +/- 56.57, N = 3
48371
7700KStock
SE +/- 22.91, N = 3
17787
7700K_5GHz
SE +/- 50.69, N = 3
18538
8700KStock
SE +/- 34.83, N = 3
25491
8700K_5GHz
SE +/- 46.78, N = 3
28288
9900KStock
SE +/- 74.01, N = 3
33870
9900K_5GHz
SE +/- 27.94, N = 3
35312
10K
20K
30K
40K
50K
1. (CXX) g++ options: -O3 -fvisibility=hidden -masm=intel -lpthread -lcrypto -lz -ldl -lm -pthread

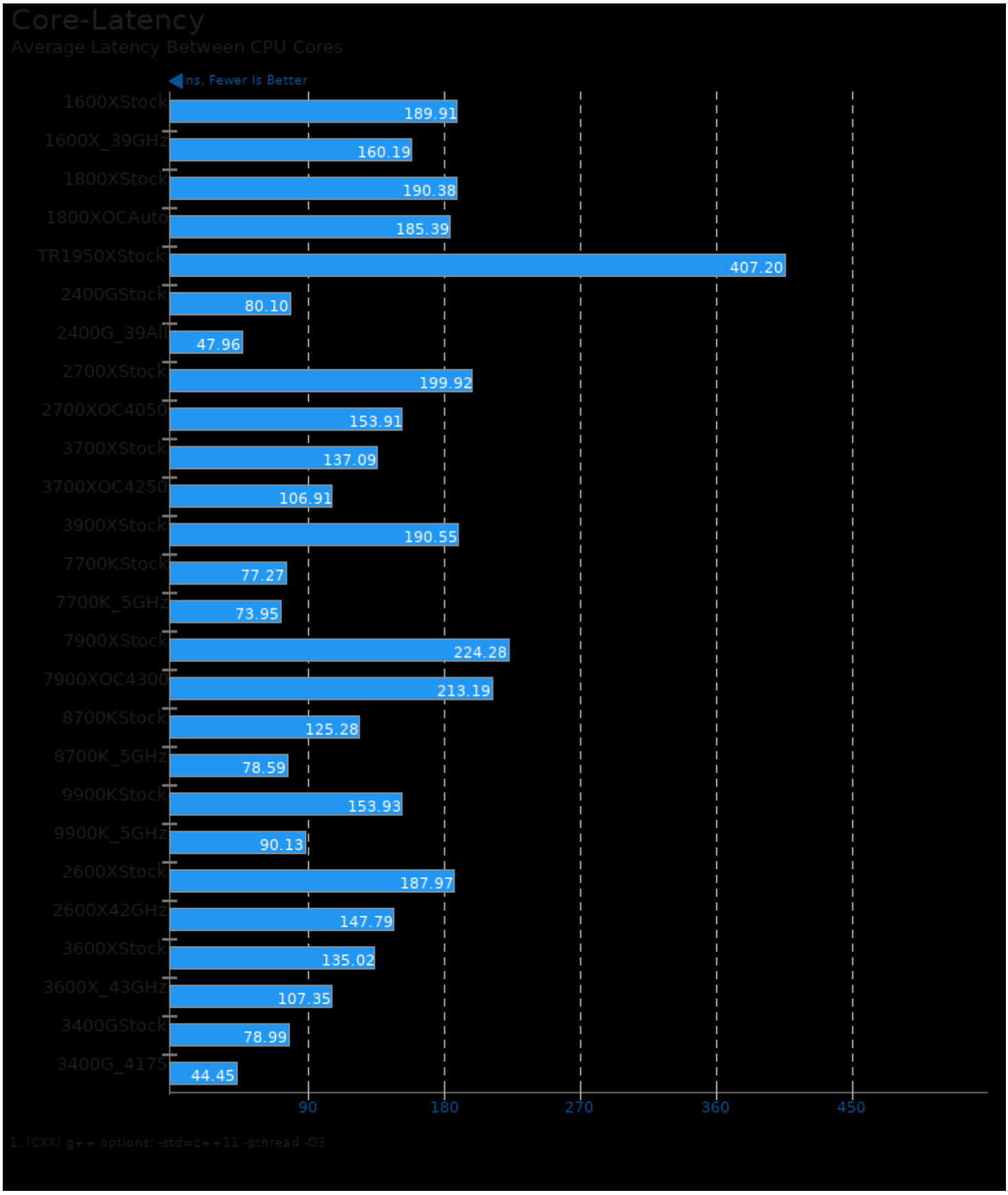
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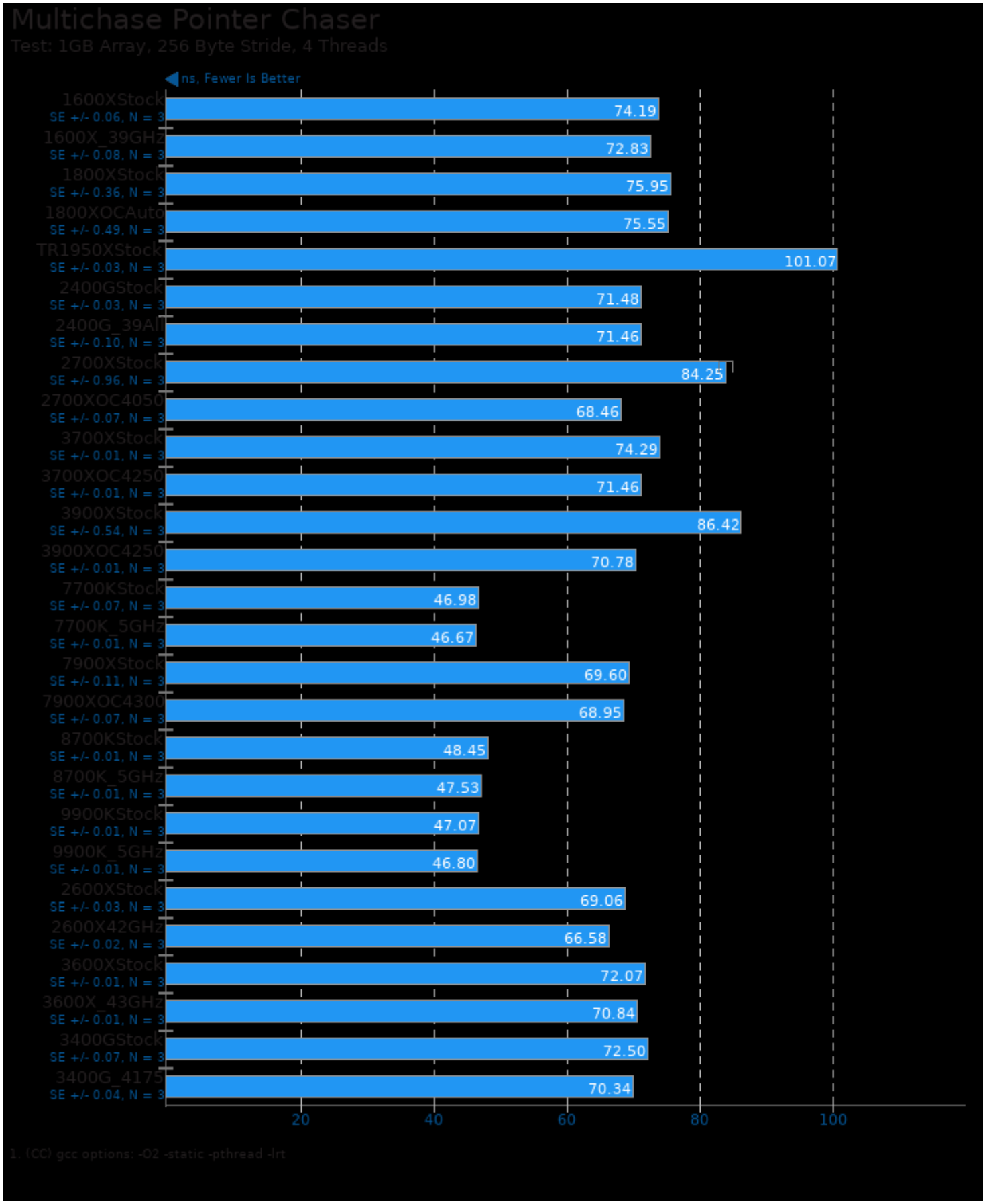


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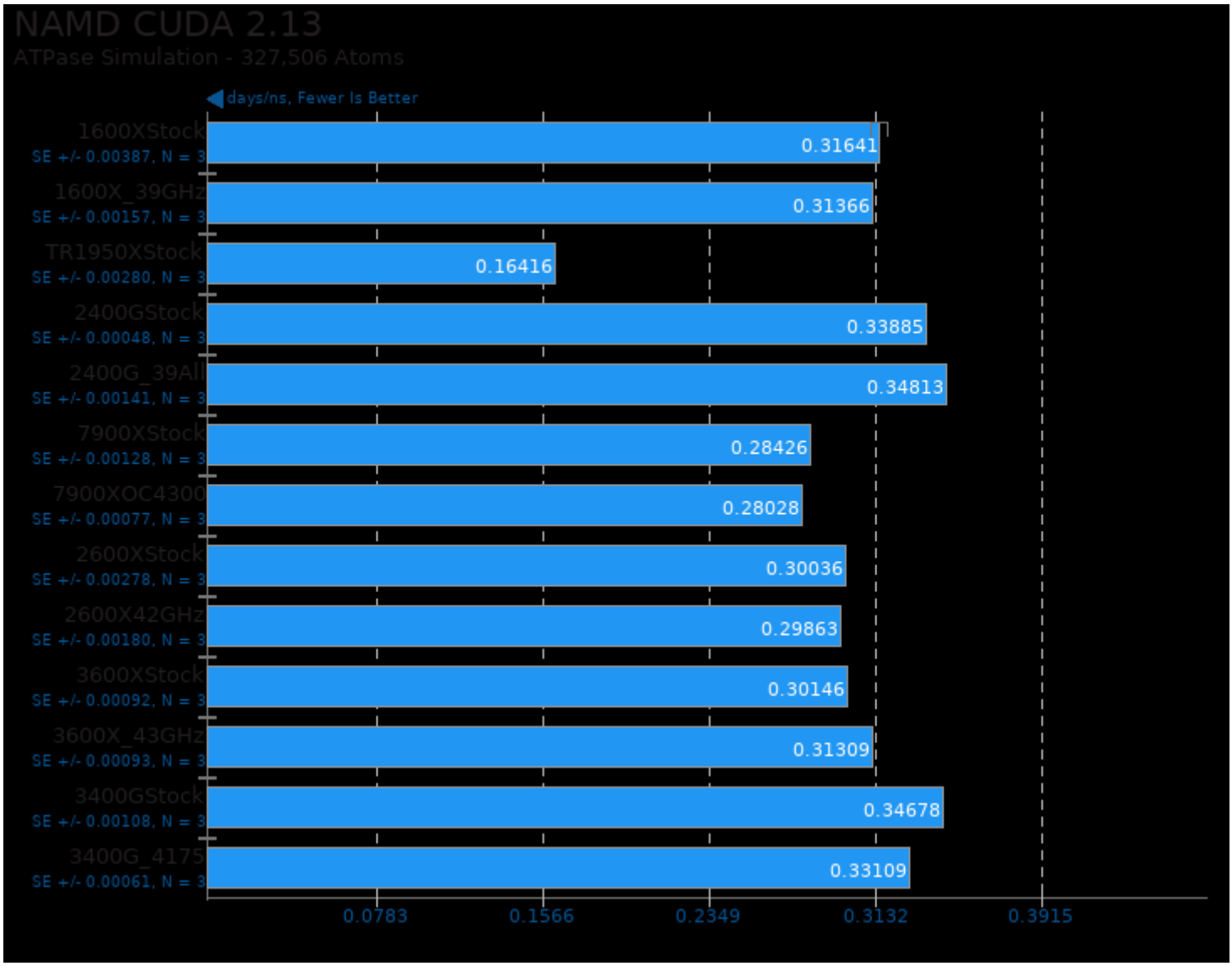


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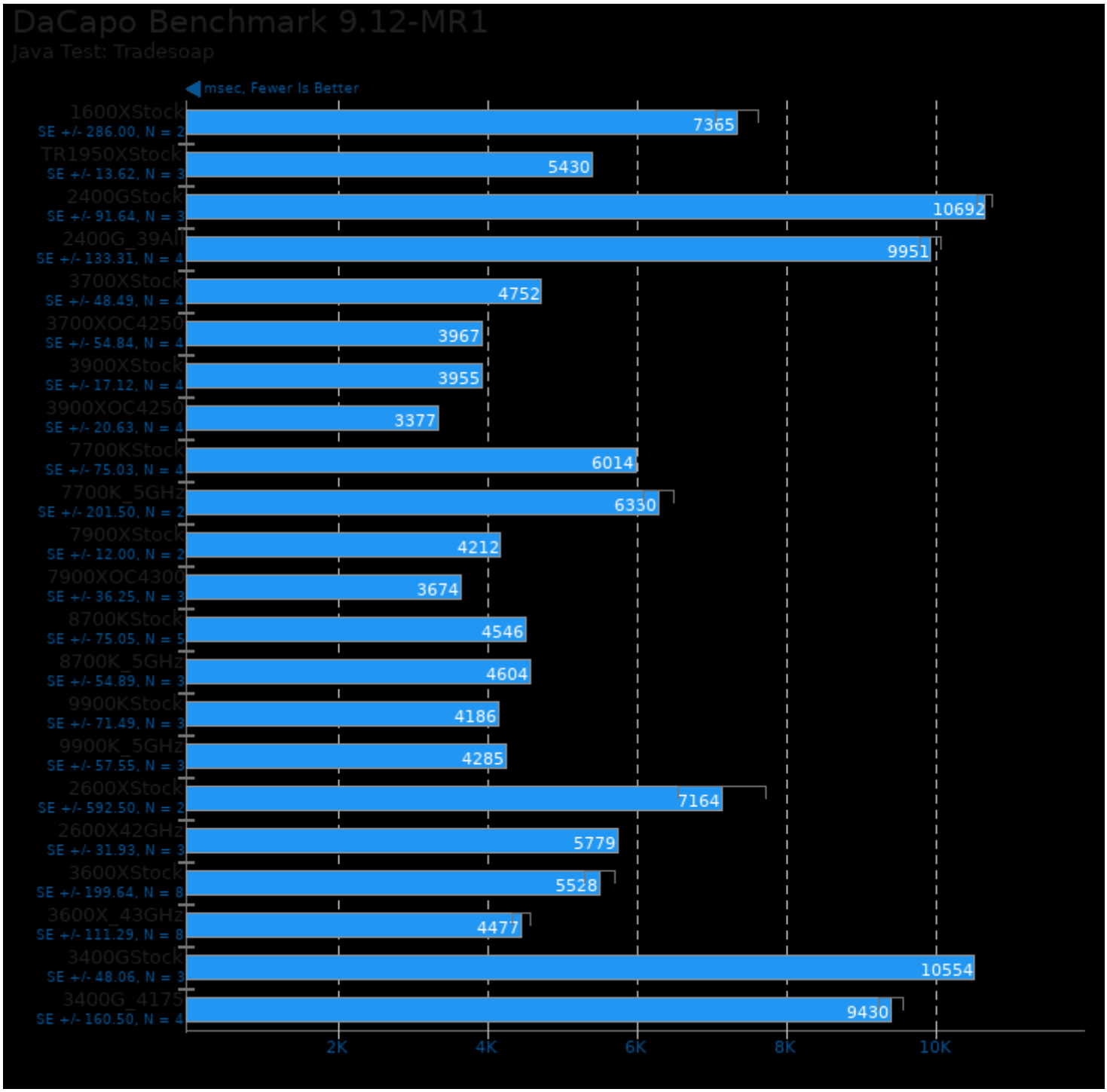



Multichase Pointer Chaser
Test: 1GB Array, 256 Byte Stride, 4 Threads
ns, Fewer Is Better
1600XStock
SE +/- 0.06, N = 3
74.19
1600X_39GHz
SE +/- 0.08, N = 3
72.83
1800XStock
SE +/- 0.36, N = 3
75.95
1800XOCAuto
SE +/- 0.49, N = 3
75.55
TR1950XStock
SE +/- 0.03, N = 3
101.07
2400GStock
SE +/- 0.03, N = 3
71.48
2400G_39AM
SE +/- 0.10, N = 3
71.46
2700XStock
SE +/- 0.96, N = 3
84.25
2700XOC4050
SE +/- 0.07, N = 3
68.46
3700XStock
SE +/- 0.01, N = 3
74.29
3700XOC4250
SE +/- 0.01, N = 3
71.46
3900XStock
SE +/- 0.54, N = 3
86.42
3900XOC4250
SE +/- 0.01, N = 3
70.78
7700KStock
SE +/- 0.07, N = 3
46.98
7700K_5GHz
SE +/- 0.01, N = 3
46.67
7900XStock
SE +/- 0.11, N = 3
69.60
7900XOC4300
SE +/- 0.07, N = 3
68.95
8700KStock
SE +/- 0.01, N = 3
48.45
8700K_5GHz
SE +/- 0.01, N = 3
47.53
9900KStock
SE +/- 0.01, N = 3
47.07
9900K_5GHz
SE +/- 0.01, N = 3
46.80
2600XStock
SE +/- 0.03, N = 3
69.06
2600X42GHz
SE +/- 0.02, N = 3
66.58
3600XStock
SE +/- 0.01, N = 3
72.07
3600X_43GHz
SE +/- 0.01, N = 3
70.84
3400GStock
SE +/- 0.07, N = 3
72.50
3400G_4175
SE +/- 0.04, N = 3
70.34
20
40
60
80
100
1. (CC) gcc options: -O2 -static -pthread -lrt

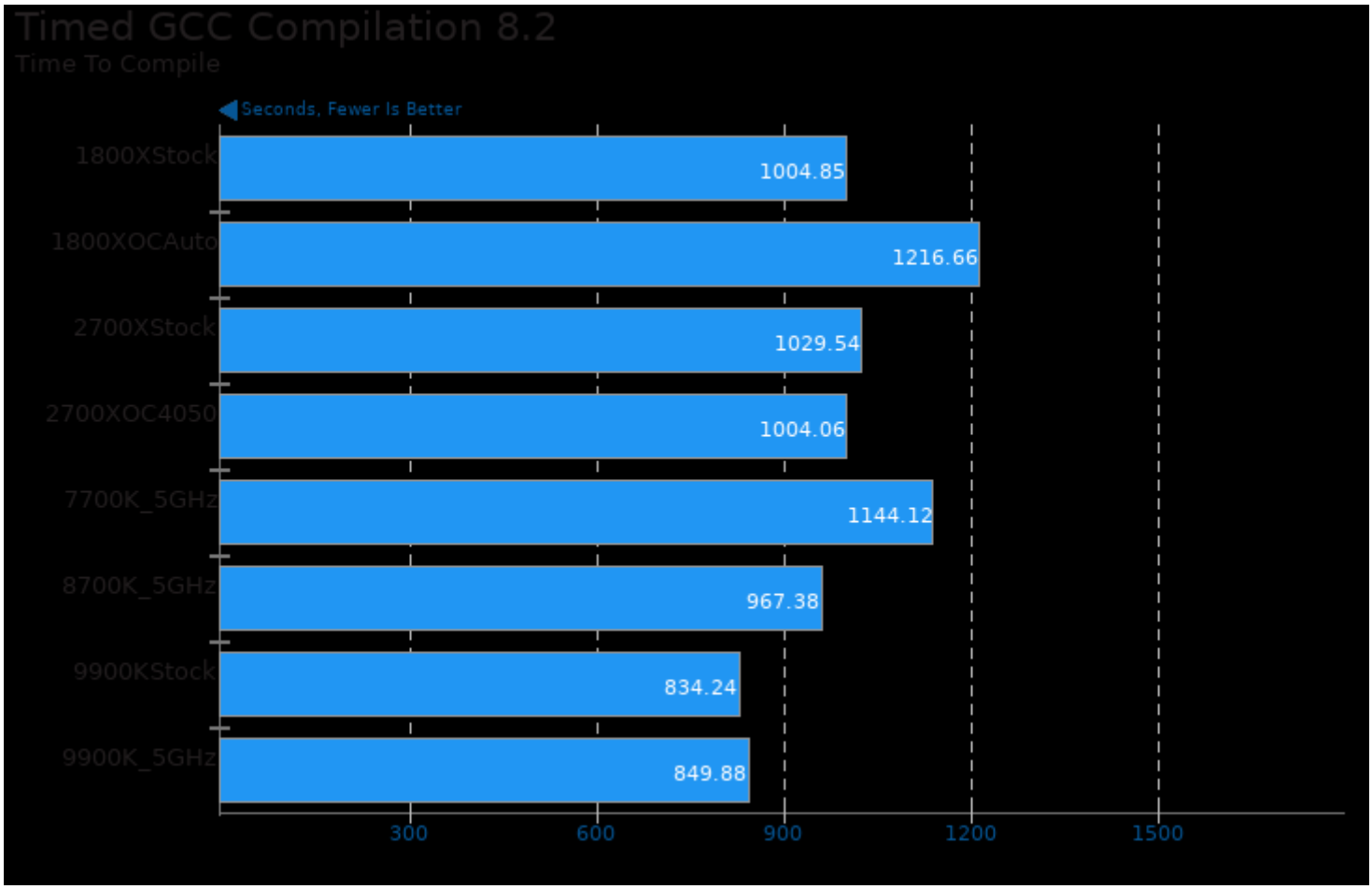
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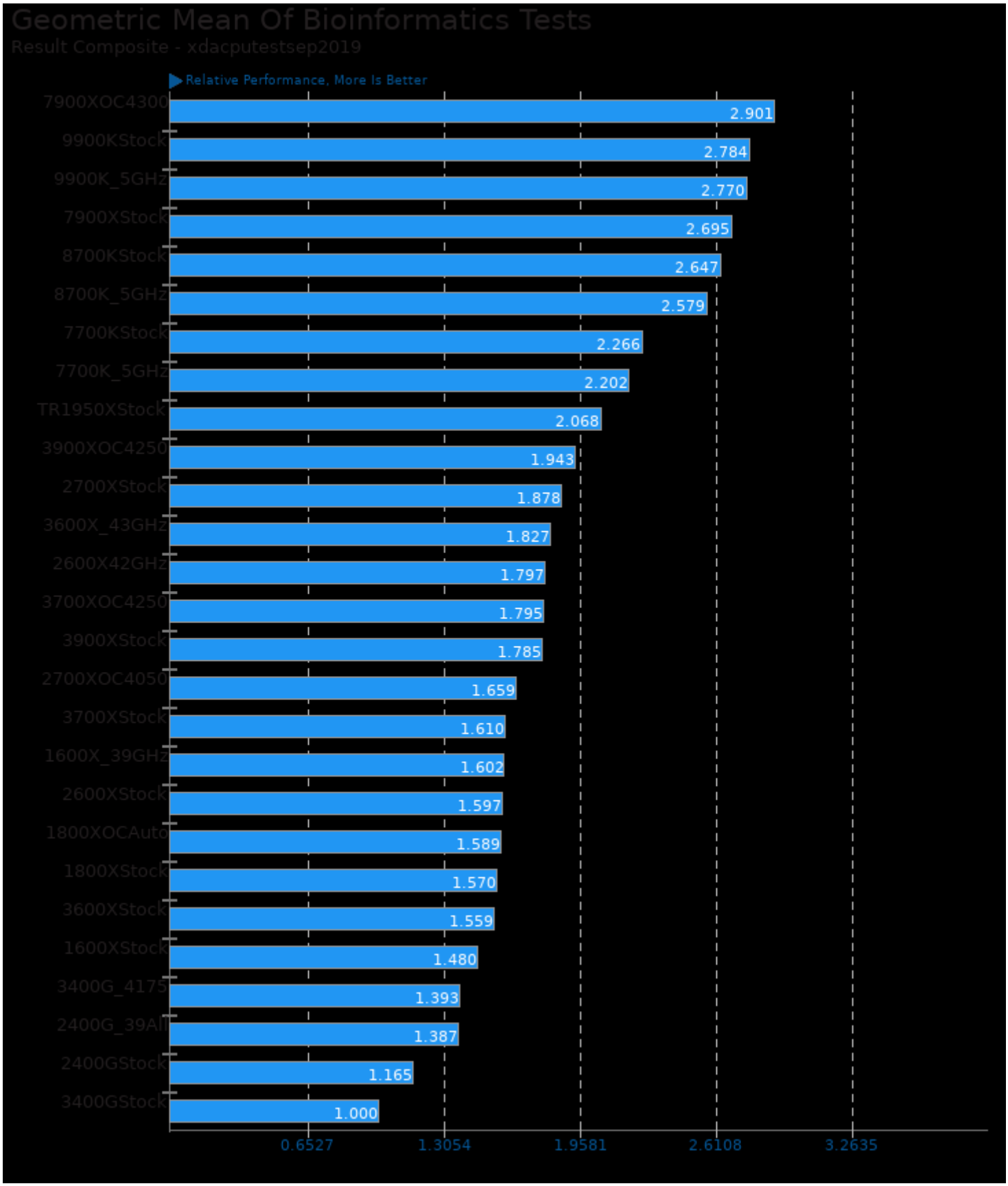


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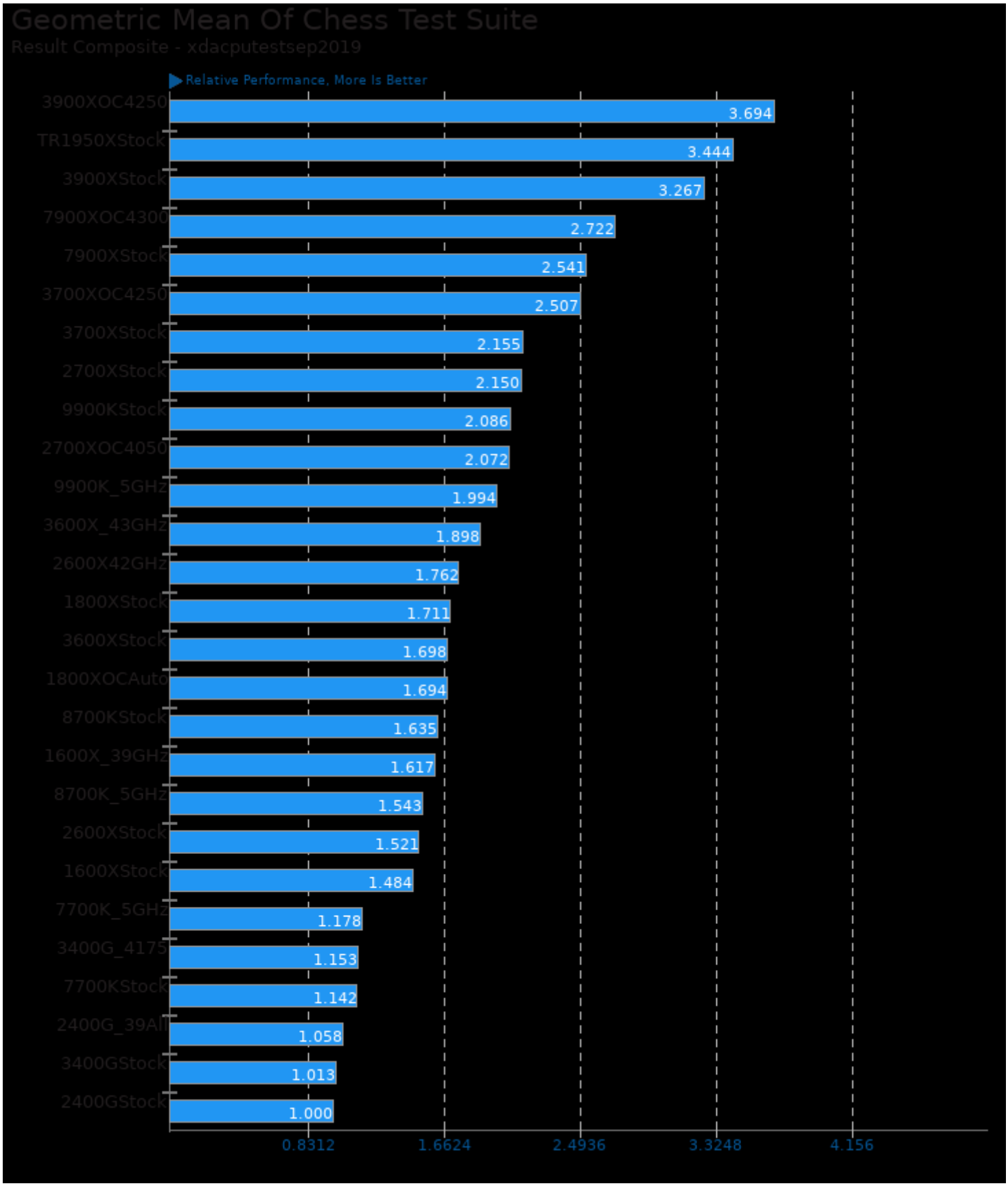
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These geometric means are based upon test groupings / test suites for this result file.

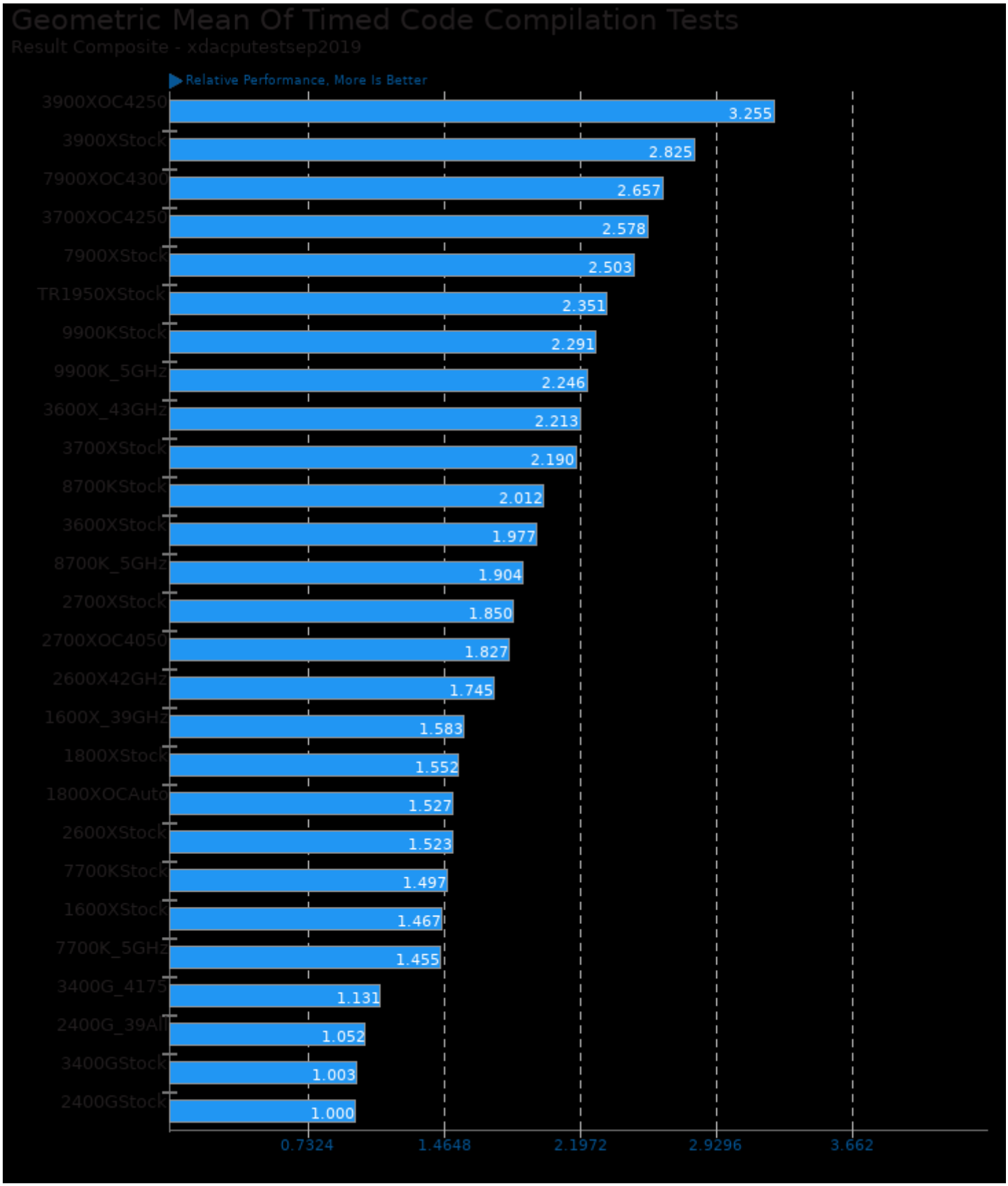


Geometric mean based upon tests: pts/himeno, pts/mrbayes, pts/hmmer and pts/mafft

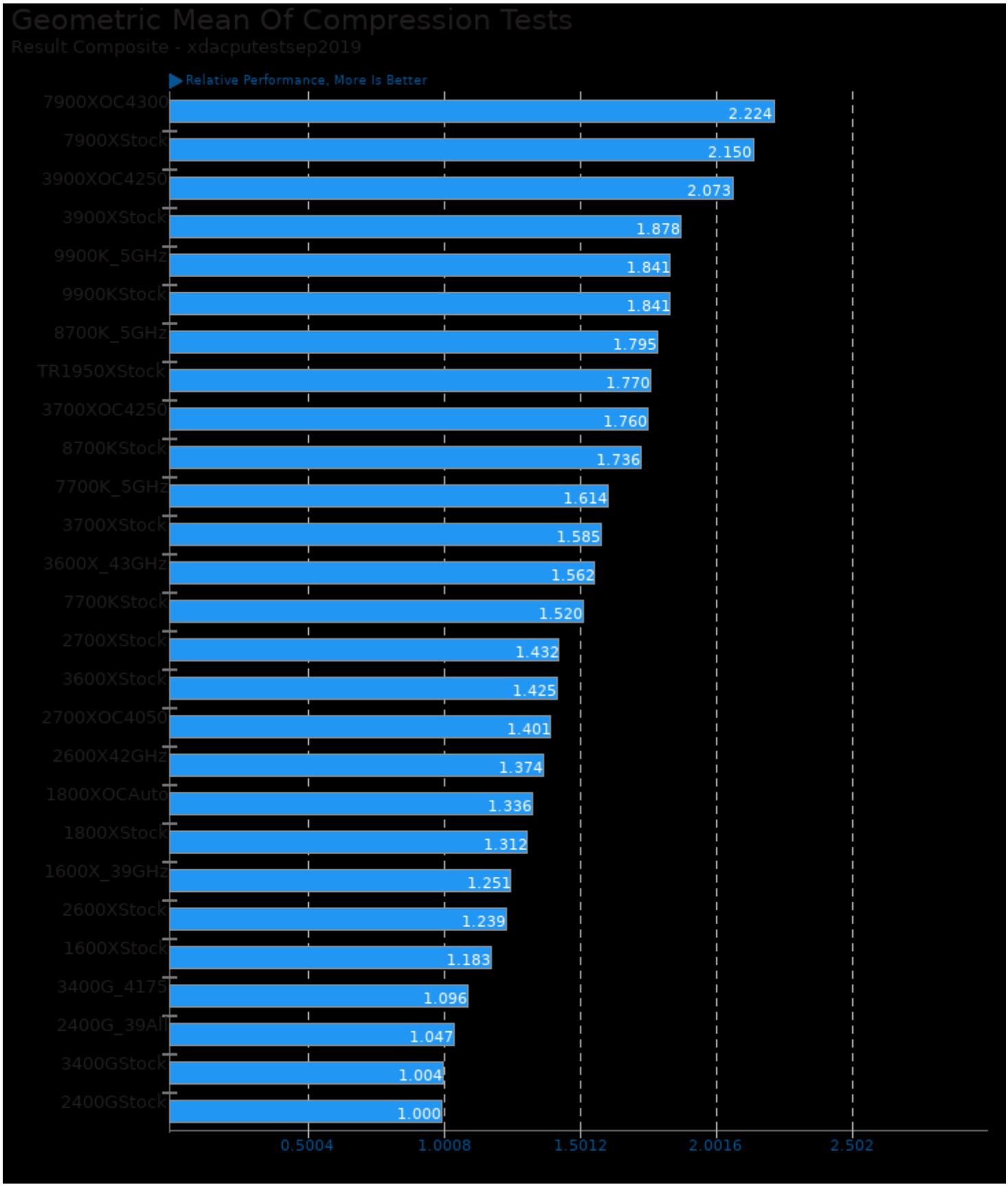
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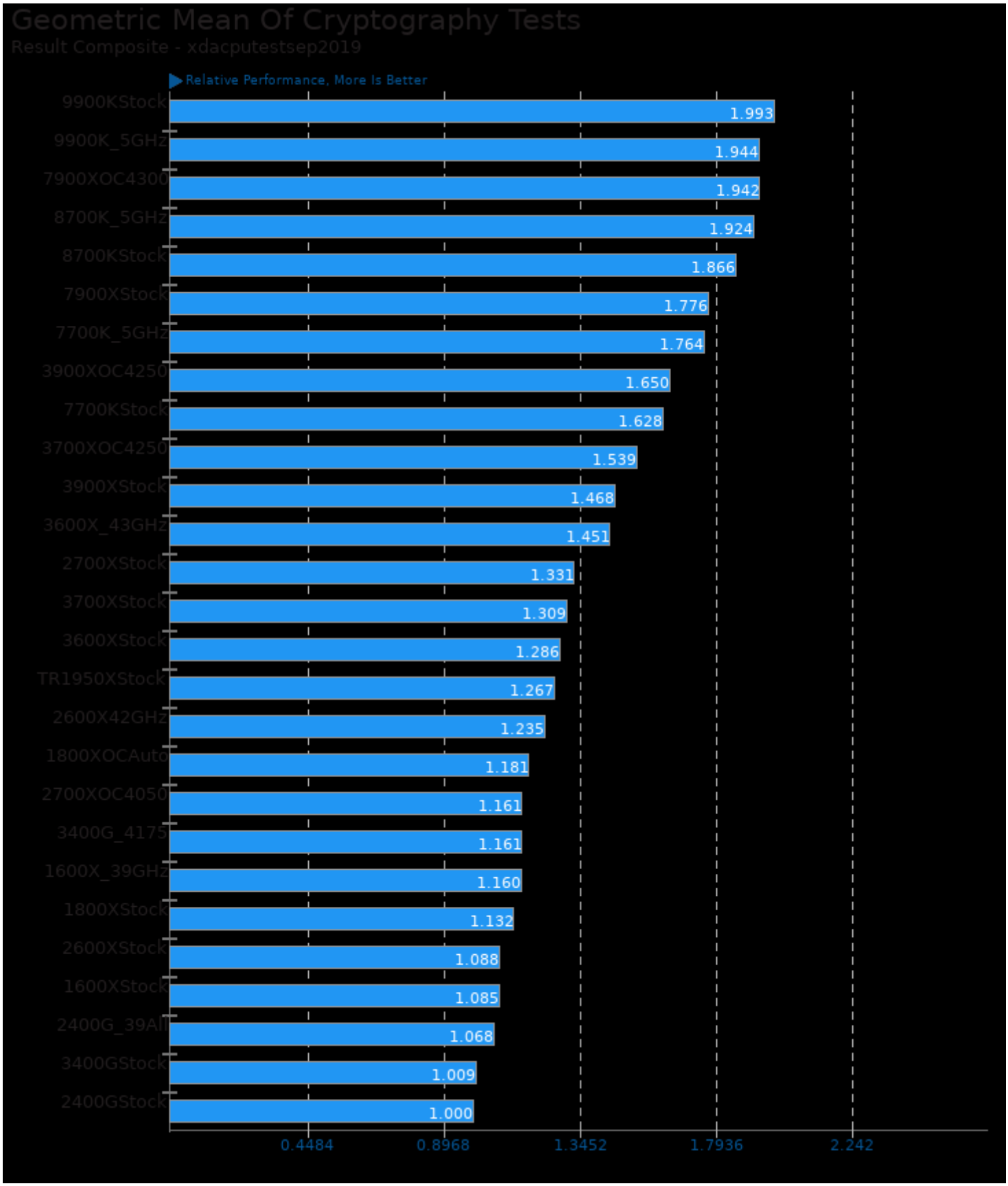
Geometric mean based upon tests: pts/crafty, pts/stockfish, pts/asmfish, pts/n-queens and pts/m-queens



Geometric mean based upon tests: pts/build-php, pts/build-linux-kernel, pts/build-imagemagick, pts/build-gcc and pts/build-llvm

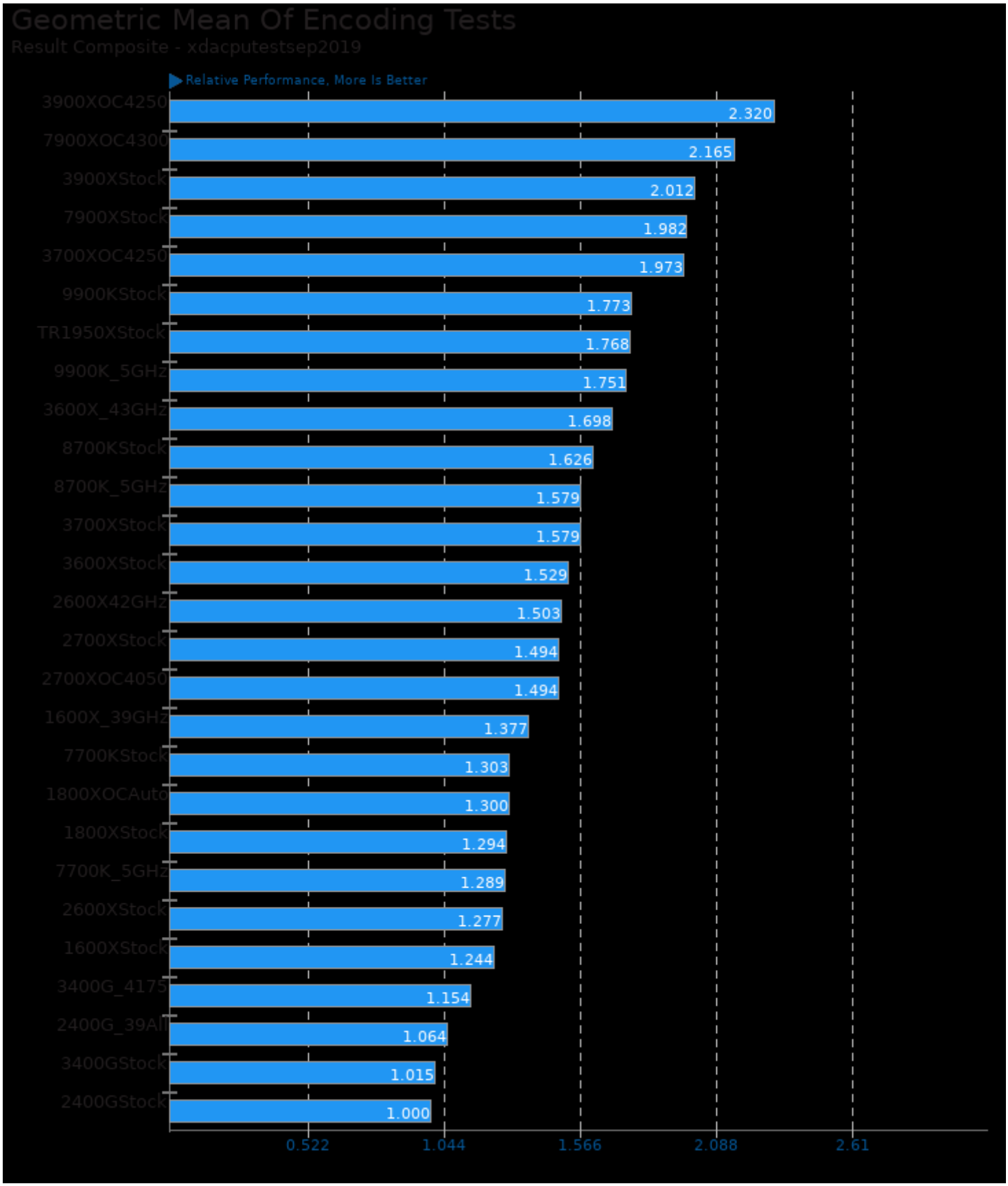


Geometric mean based upon tests: pts/compress-7zip, pts/compress-gzip, pts/compress-pbzip2, pts/compress-zstd, pts/compress-xz and pts/lzbench

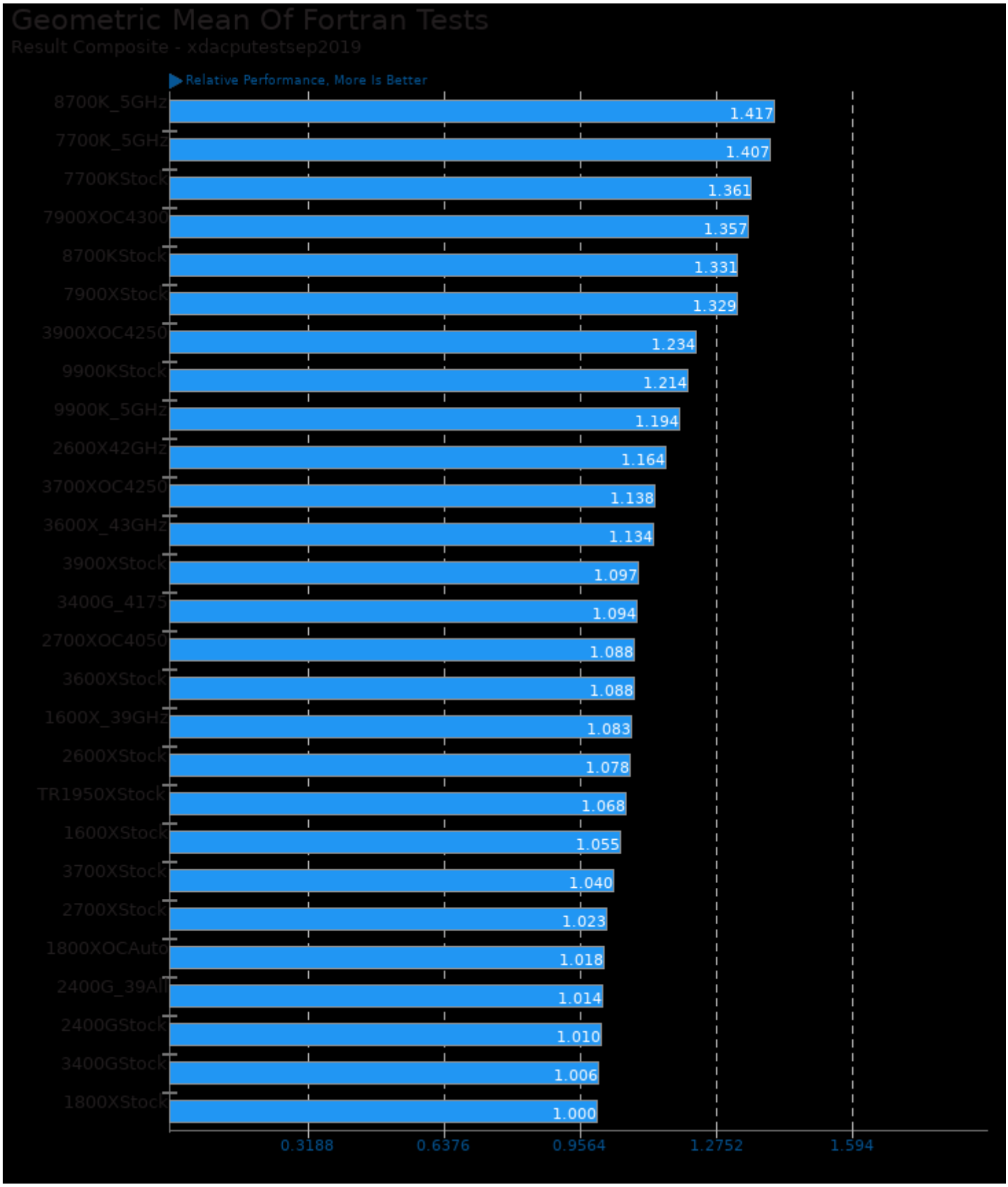


Geometric mean based upon tests: pts/gnupg, pts/openssl, pts/blake2, pts/john-the-ripper, pts/botan, pts/bork and pts/aircrack-ng

xdacputestsep2019

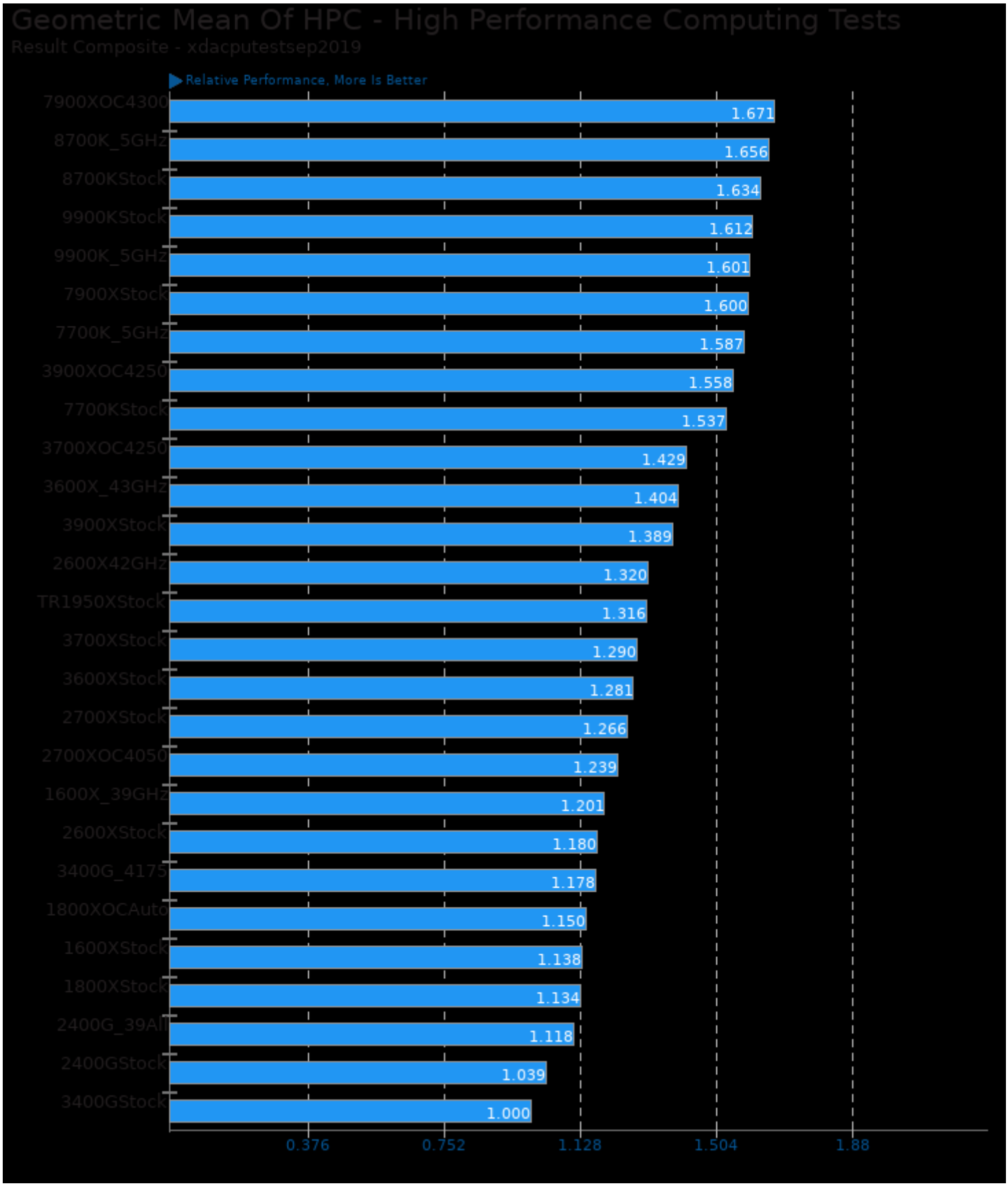


Geometric mean based upon tests: pts/encode-mp3, pts/svt-vp9, pts/svt-hevc, pts/x264, pts/x265, pts/ffmpeg, pts/vpxenc and pts/svt-av1



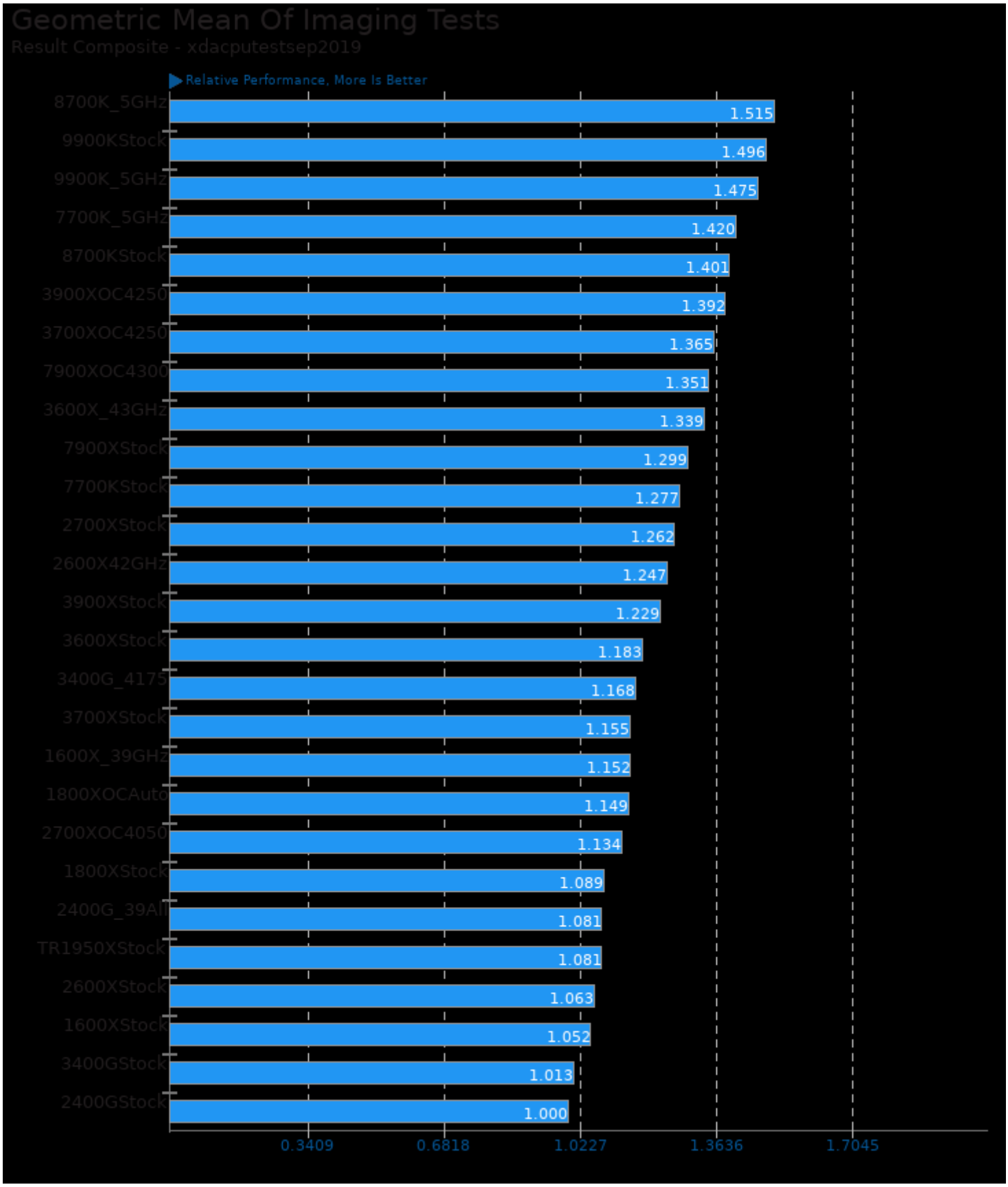
Geometric mean based upon tests: pts/npb, pts/cloverleaf, pts/hpcg, pts/ffte and pts/nero2d

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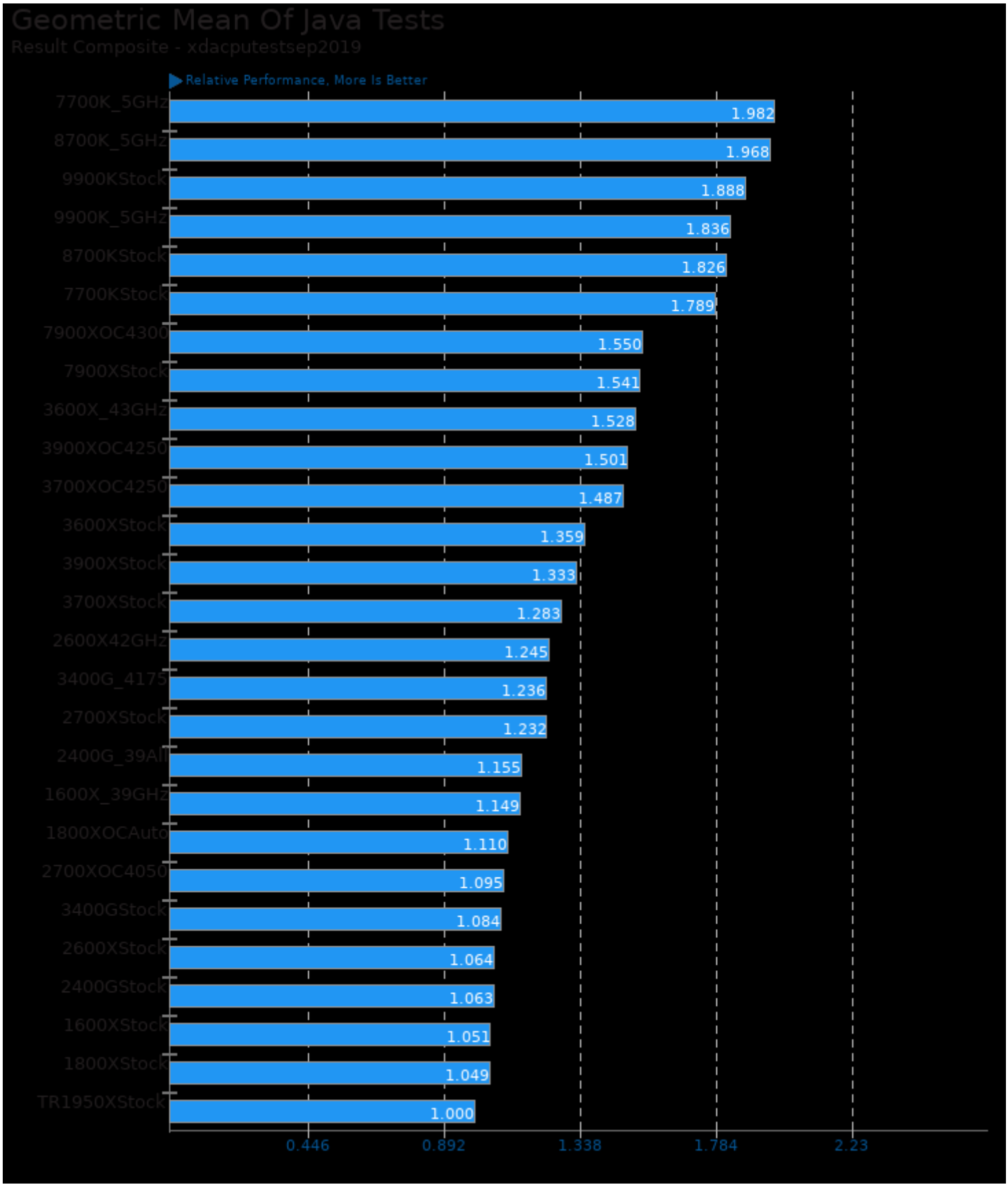
Geometric mean based upon tests: pts/npb, pts/hpcg, pts/ffte, pts/fftw, pts/namd, pts/cp2k, pts/cloverleaf, pts/himeno, pts/mrbayes, pts/hmmer and pts/mafft

xdacputestsep2019

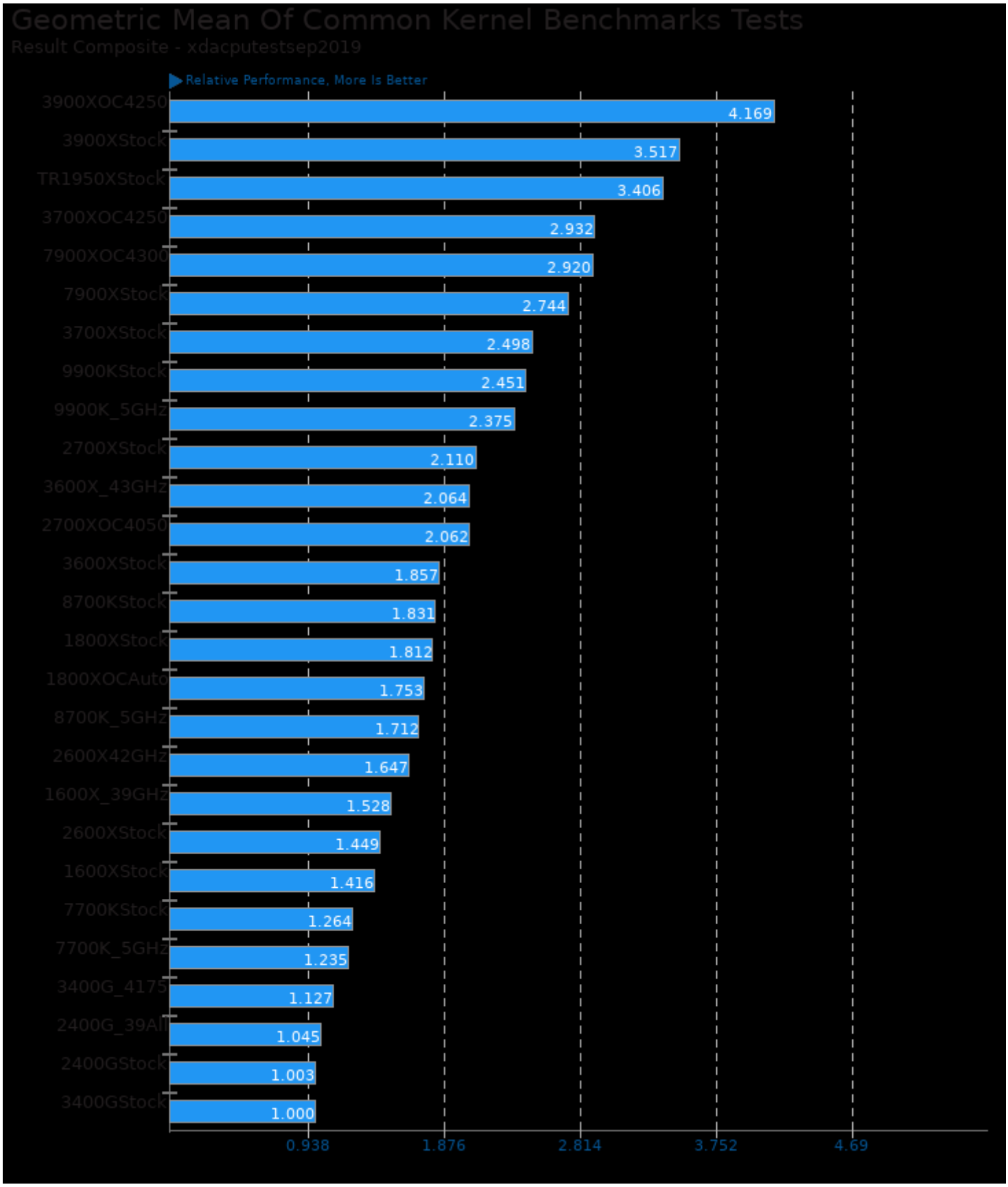


Geometric mean based upon tests: pts/graphics-magick and pts/dcraw

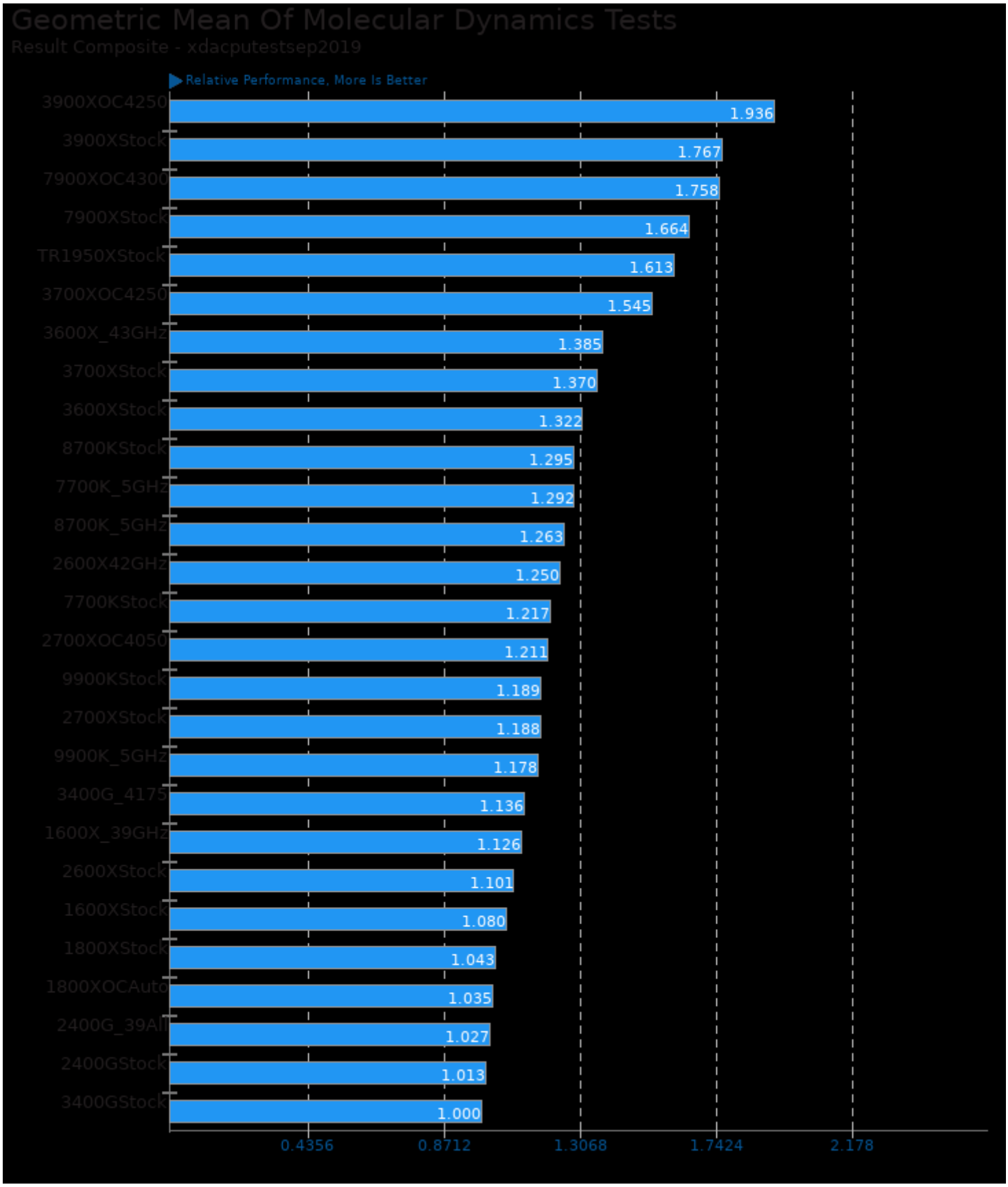
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Geometric mean based upon tests: pts/bork, pts/java-scimark2, pts/dacapobench and pts/renaissance

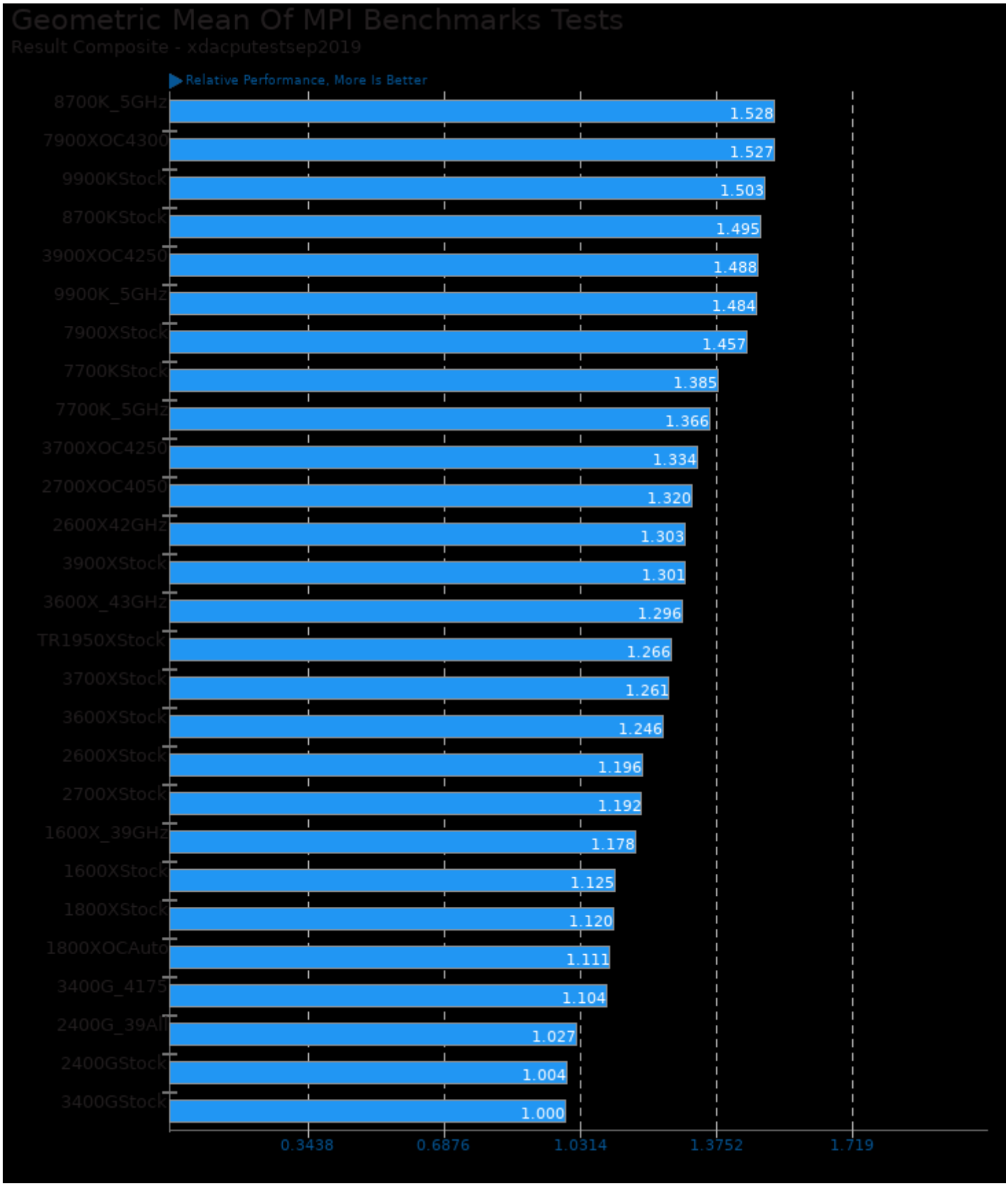


Geometric mean based upon tests: pts/openssl and pts/hackbench



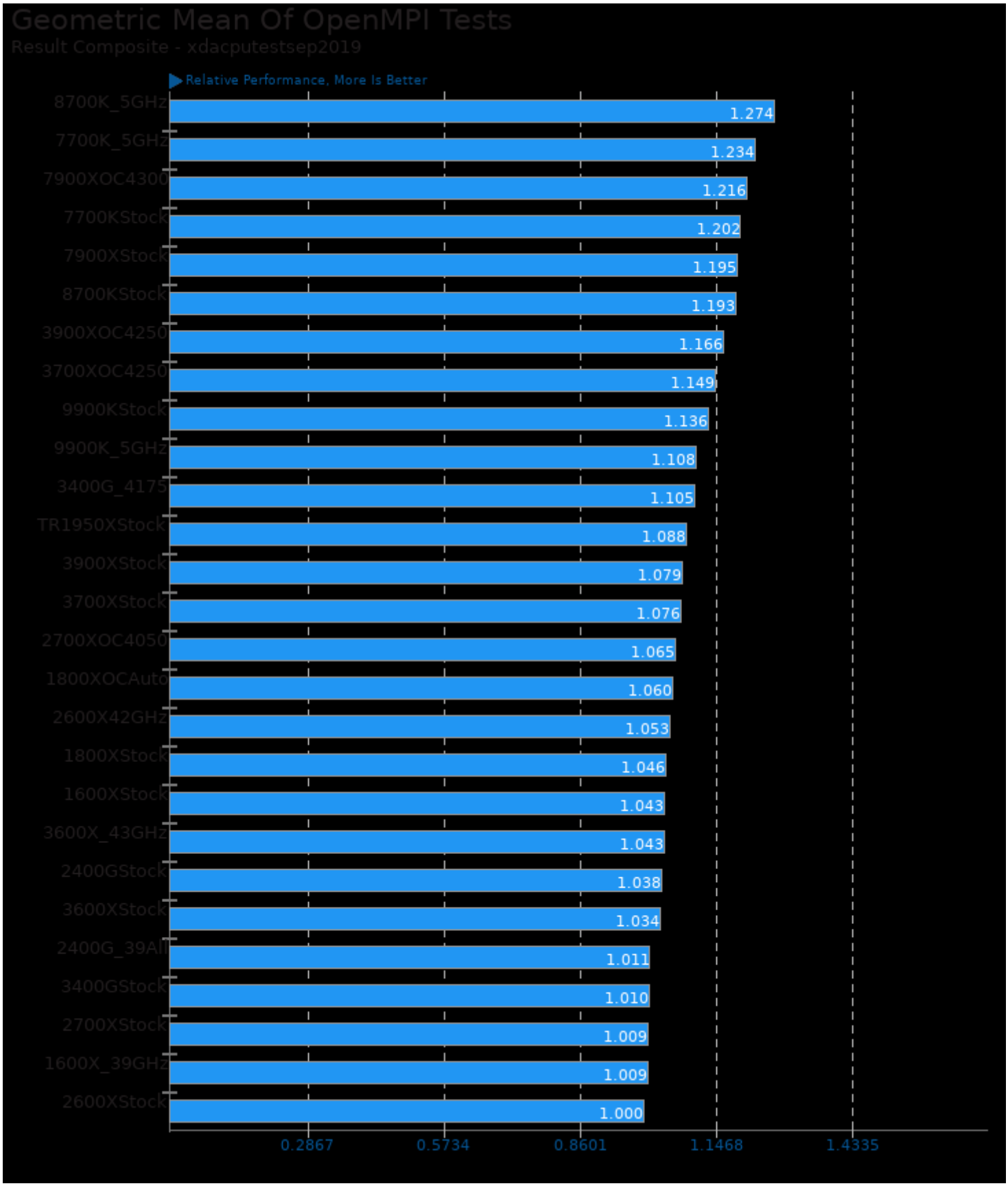
Geometric mean based upon tests: pts/namd, pts/cp2k and pts/cloverleaf

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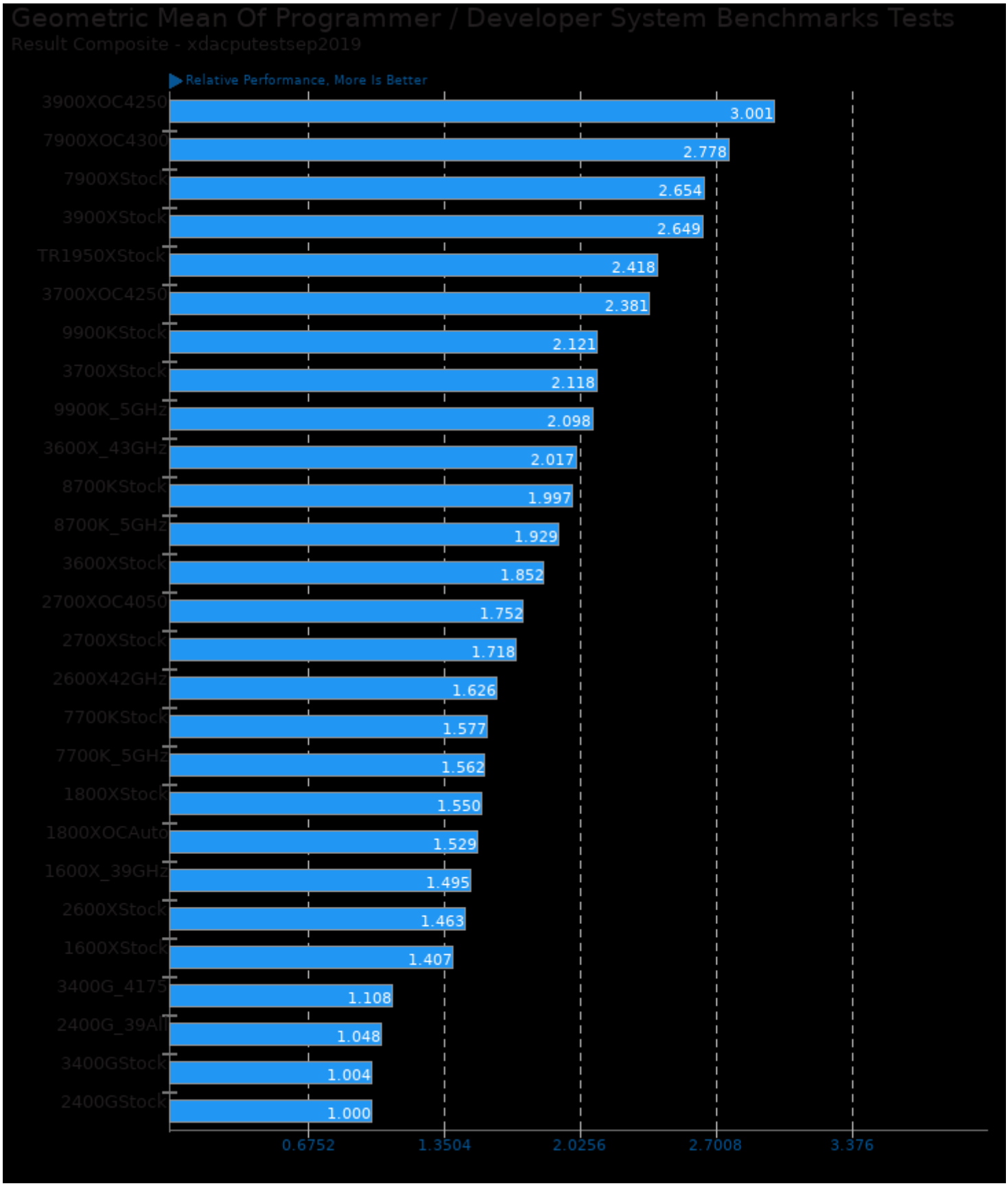
Geometric mean based upon tests: pts/nero2d, pts/hpcg, pts/mrbayes and pts/npb

xdacputestsep2019



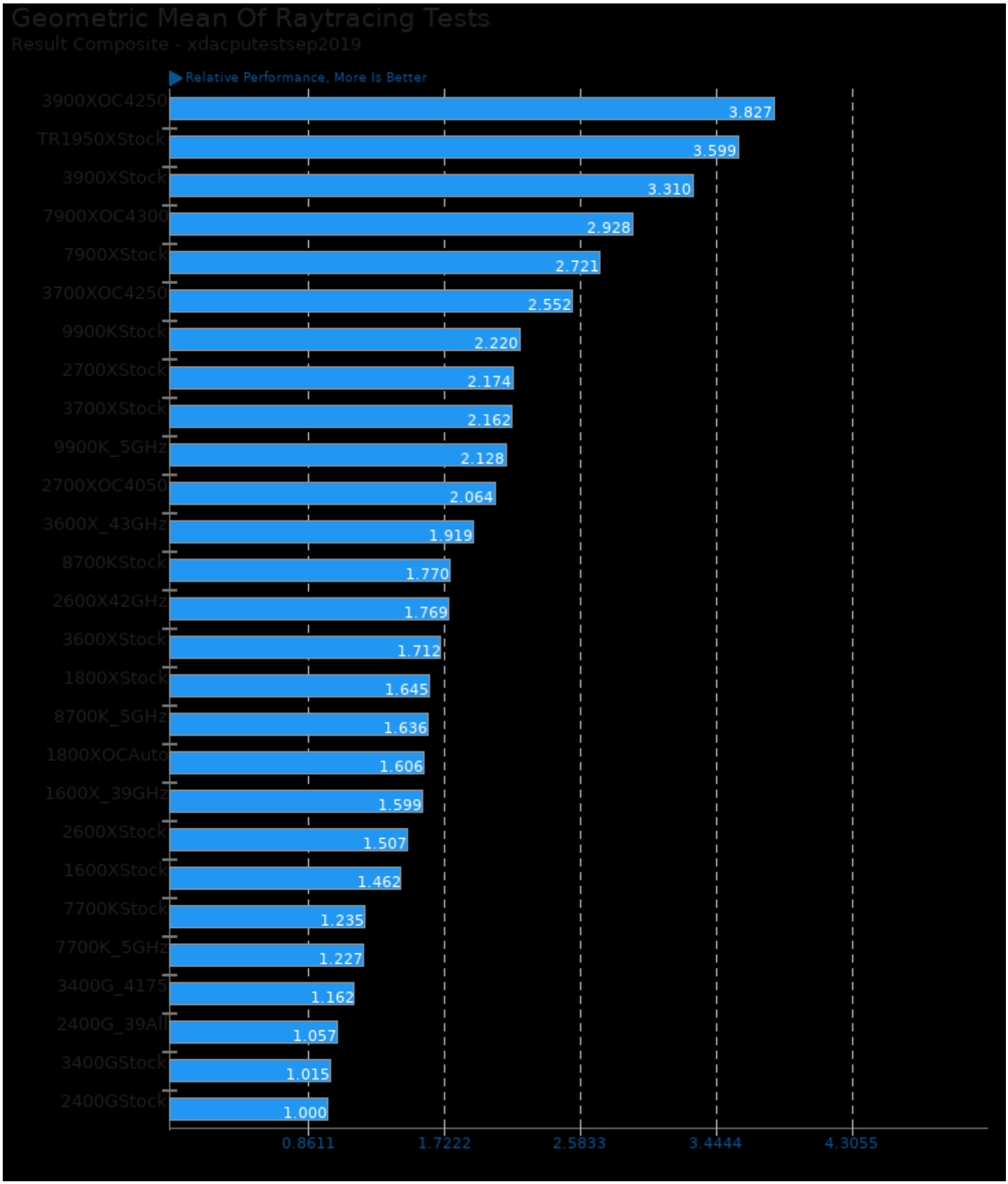
Geometric mean based upon tests: pts/npb, pts/cloverleaf, pts/clomp, pts/ffte and pts/nero2d

xdacputestsep2019



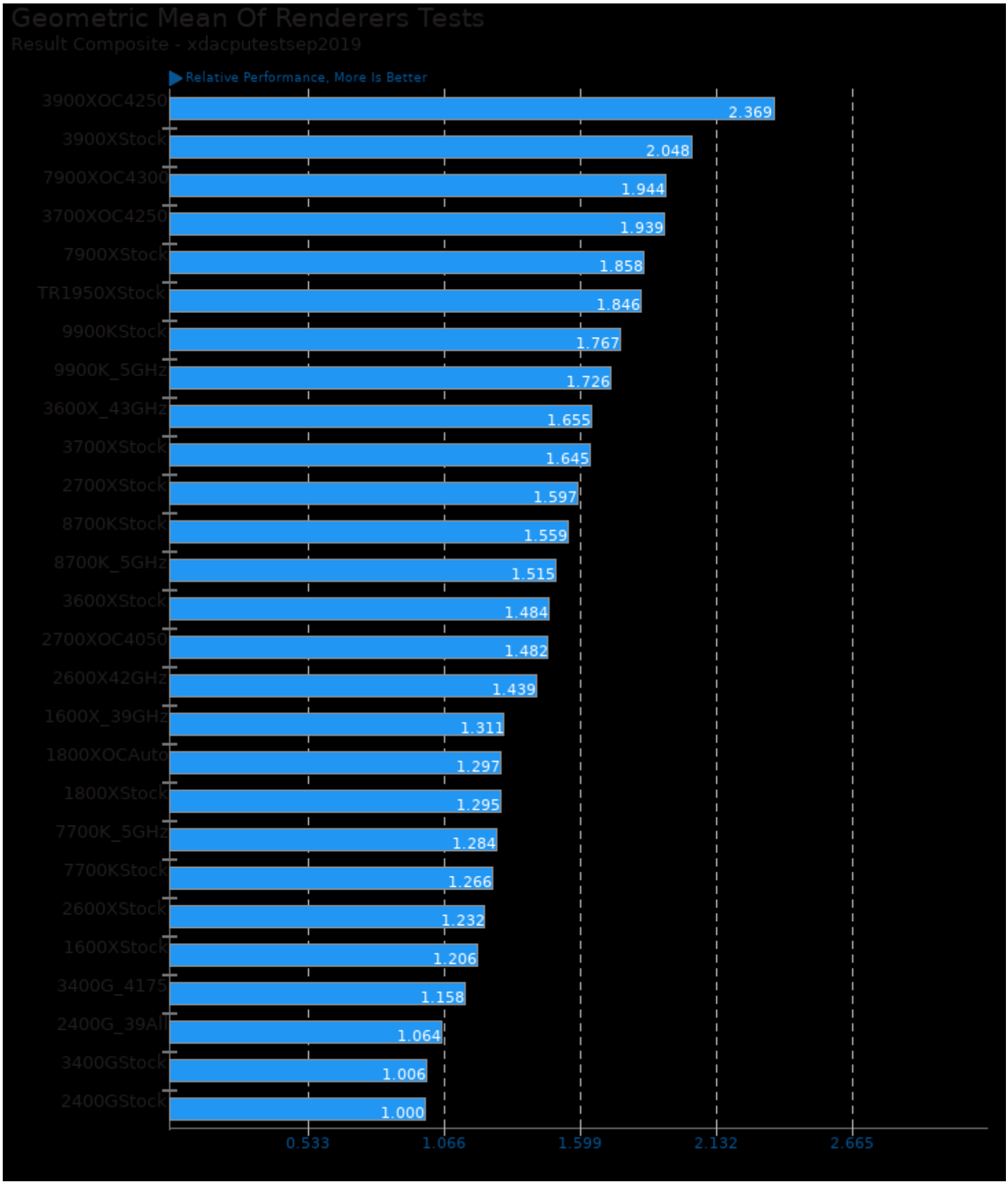
Geometric mean based upon tests: pts/compress-zstd, pts/build-php, pts/build-linux-kernel, pts/build-imagemagick, pts/build-gcc and pts/build-llvm

xdacputestsep2019



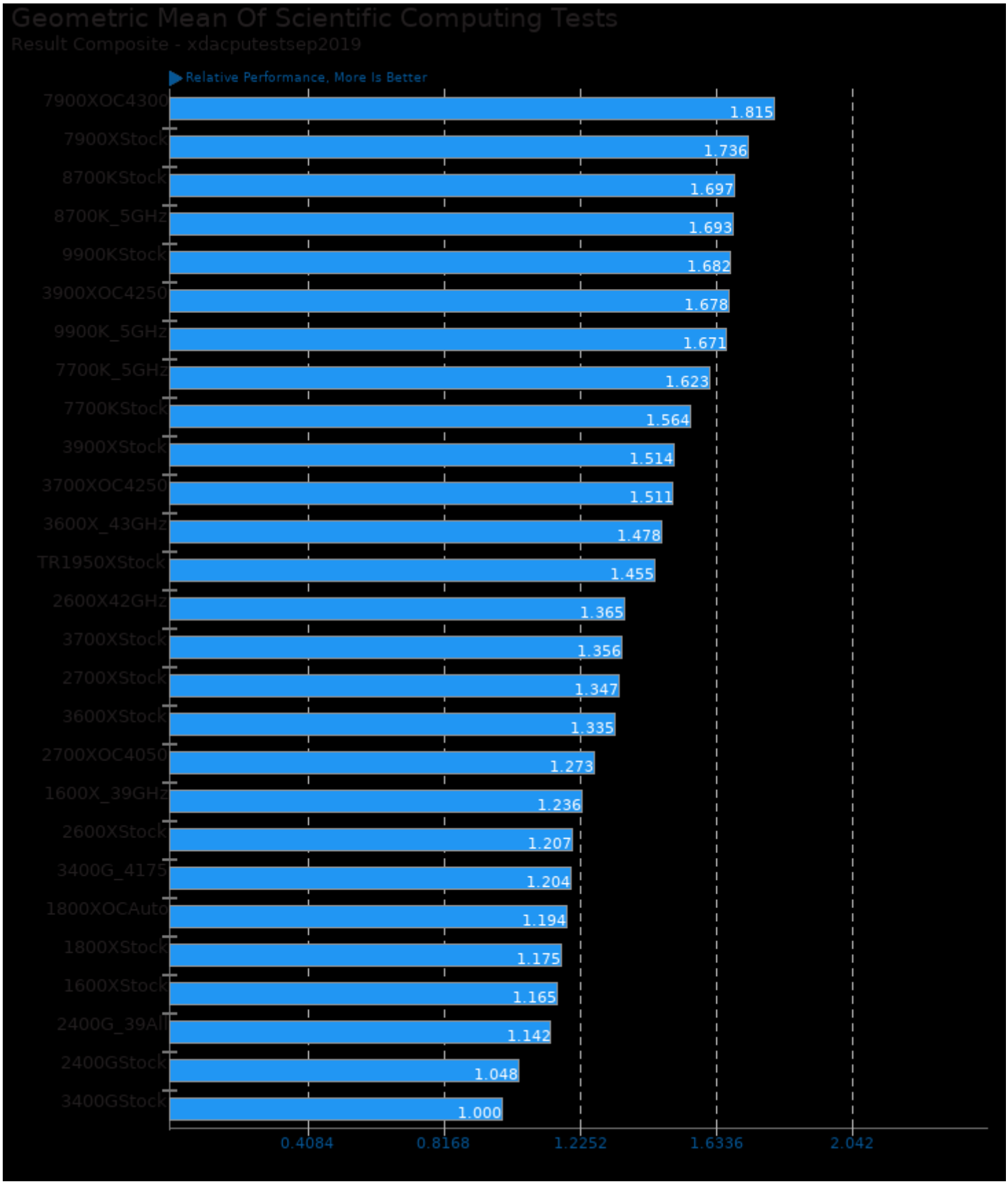
Geometric mean based upon tests: pts/c-ray, pts/tachyon and pts/povray

xdacputestsep2019



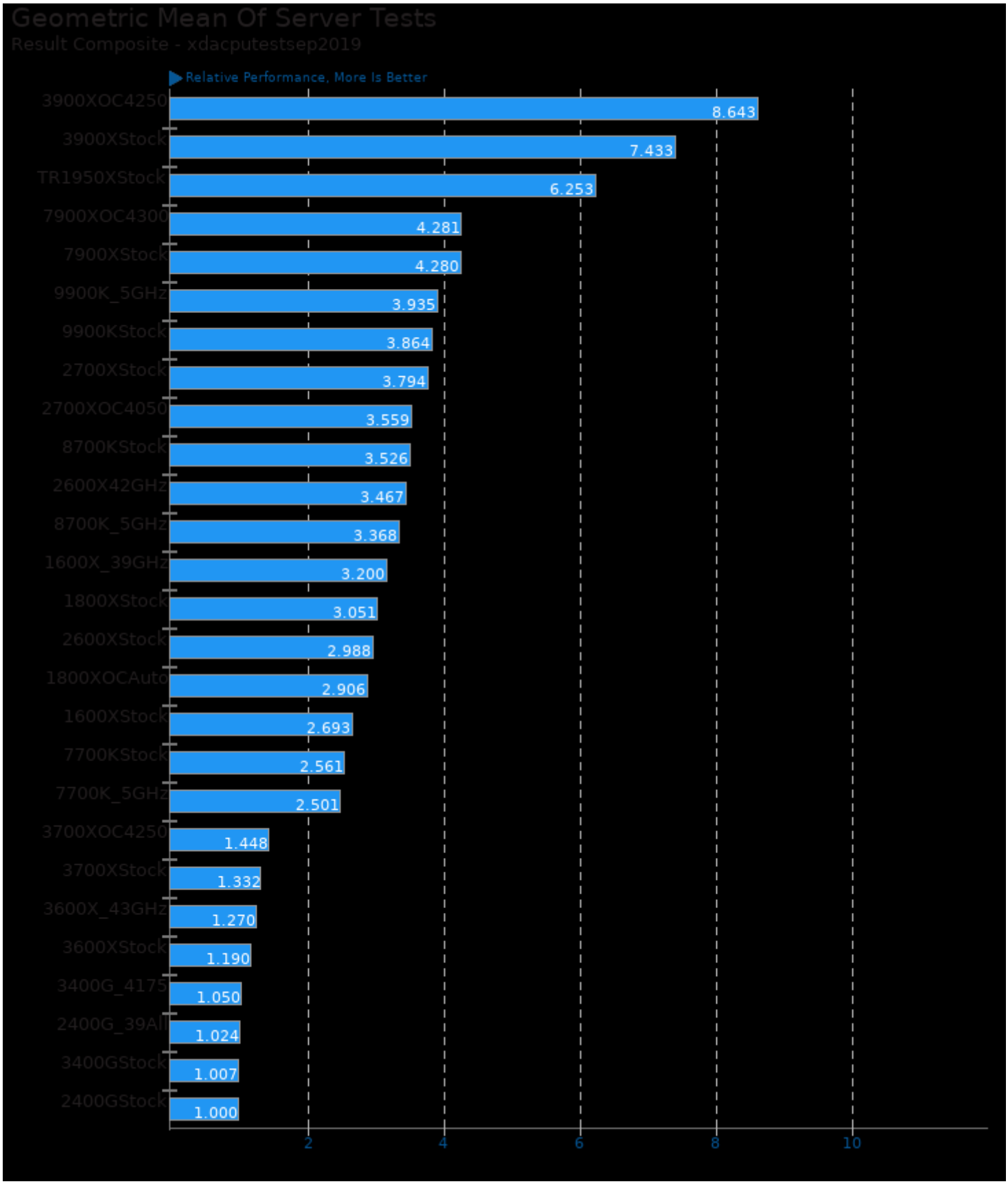
Geometric mean based upon tests: pts/c-ray, pts/tachyon, pts/povray, pts/radiance, pts/aobench, pts/smallpt and pts/ttsiod-renderer

xdacputestsep2019



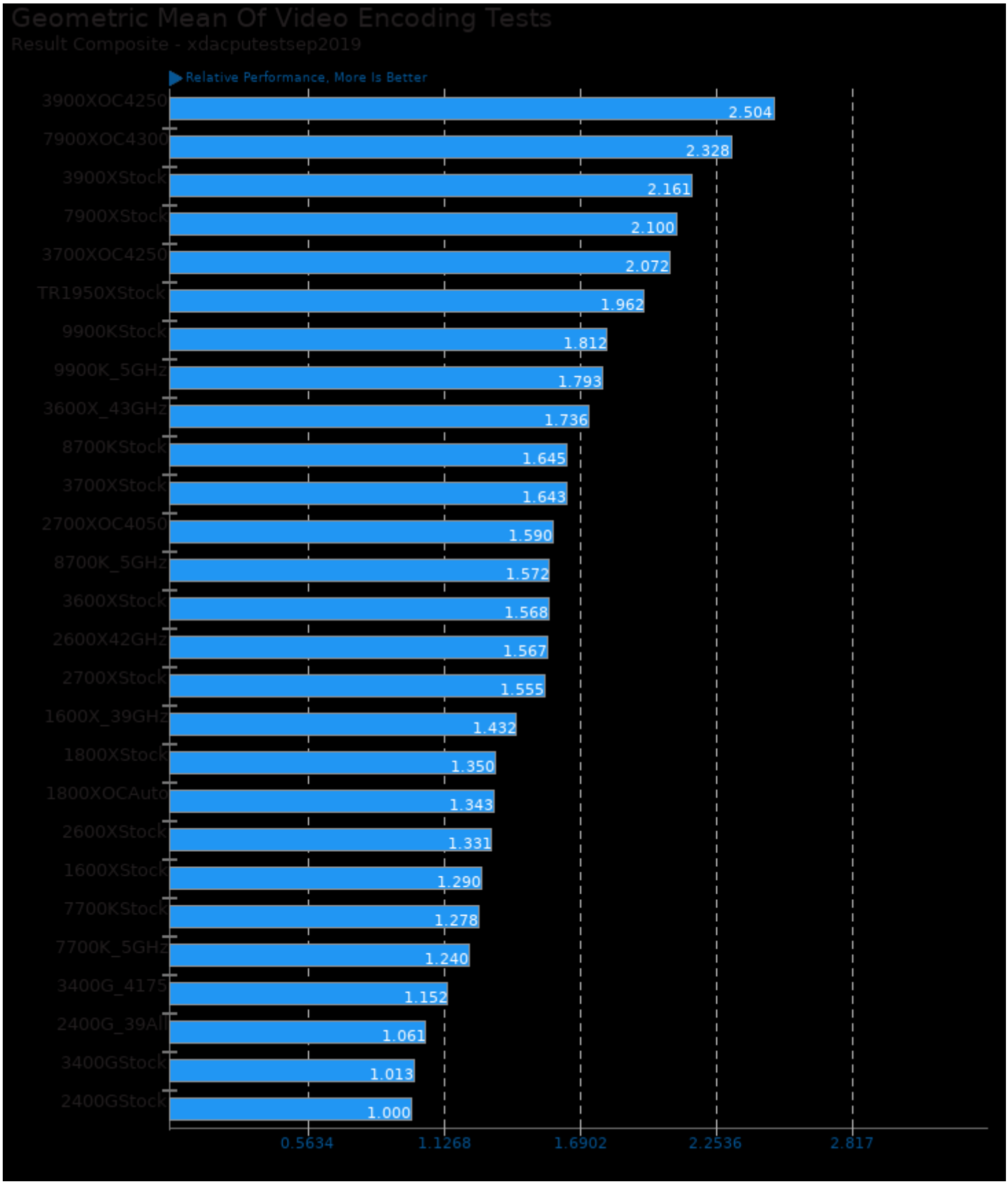
Geometric mean based upon tests: pts/ffte, pts/fftw, pts/namd, pts/cp2k, pts/cloverleaf, pts/himeno, pts/mrbayes, pts/hmmer and pts/mafft

xdacputestsep2019



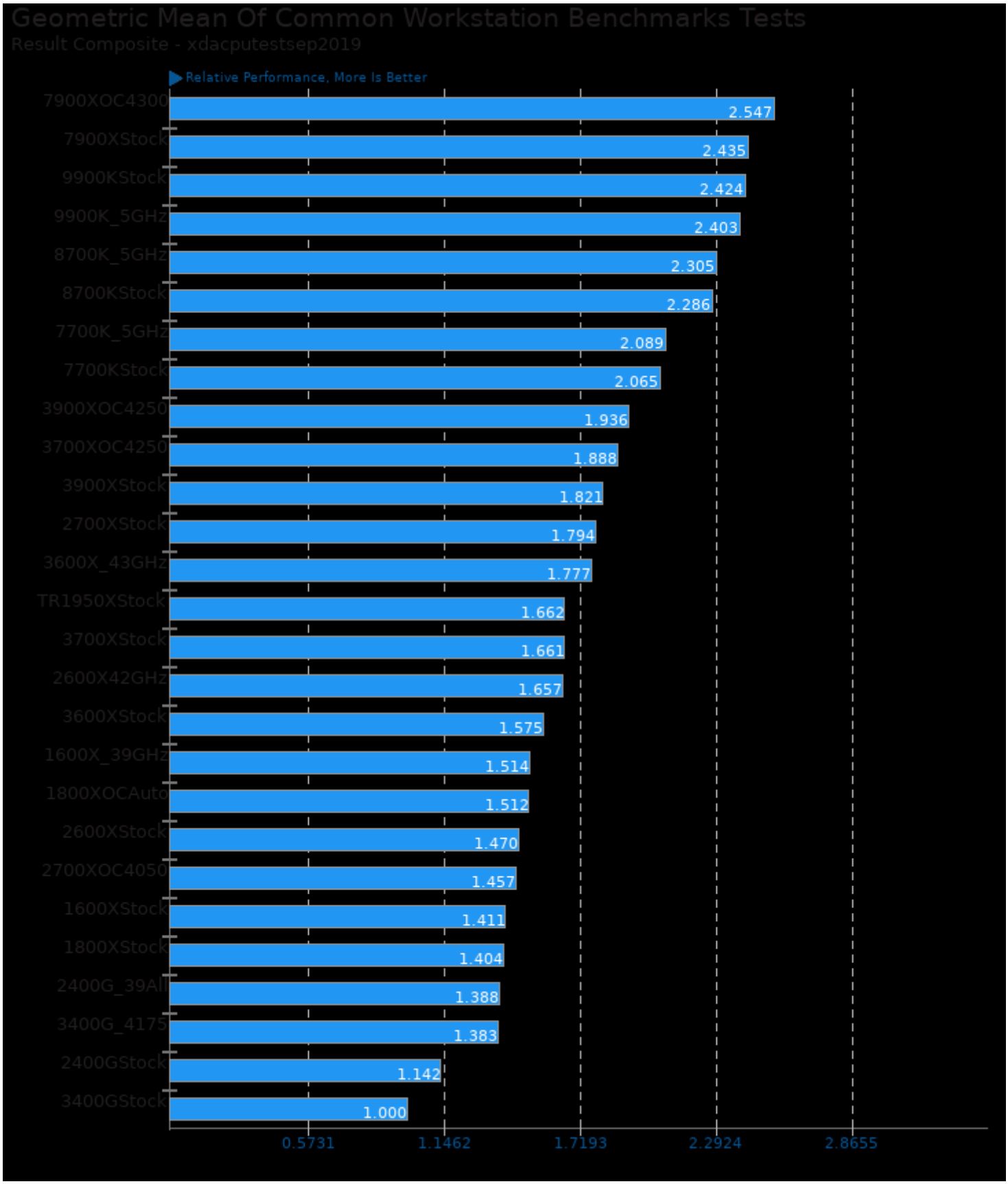
Geometric mean based upon tests: pts/ebizzy, pts/openssl and pts/perl-benchmark

xdacputestsep2019



Geometric mean based upon tests: pts/svt-vp9, pts/svt-hevc, pts/x264, pts/x265, pts/ffmpeg, pts/vpxenc and pts/svt-av1

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Geometric mean based upon tests: pts/himeno, pts/x265 and pts/swet

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

18:33.