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# Intel Core i7 8770K Ubuntu Linux Benchmarks

AMD Ryzen 7 1700 Eight-Core testing with a ASUS GL702ZC v1.0 and ASUS AMD Radeon RX 580 4096MB on ManjaroLinux 17.1pre2 via the Phoronix Test Suite.

**Automated Executive Summary**

*Core i9 7980XE had the most wins, coming in first place for 40% of the tests.*

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

*Xsbench at 7.083x*
*John The Ripper (Test: Blowfish) at 6.394x*
*NAS Parallel Benchmarks (Test / Class: EP.C) at 5.907x*
*asmFish (1024 Hash Memory, 26 Depth) at 5.421x*
*Rodinia (Test: OpenMP LavaMD) at 4.573x*
*OpenSSL (RSA 4096-bit Performance) at 4.409x*
*TTSIOD 3D Renderer (Phong Rendering With Soft-Shadow Mapping) at 3.818x*
*x264 (H.264 Video Encoding) at 3.744x*
*Timed HMMer Search (Pfam Database Search) at 2.344x*
*Timed PHP Compilation (Time To Compile) at 2.304x.*

# Test Systems:

## Core i5 7600K

Processor: Intel Core i5-7600K @ 4.20GHz (4 Cores), Motherboard: Gigabyte Z270M-D3H-CF, Chipset: Intel Device 591f + Z270, Memory: 8192MB, Disk: 250GB Samsung SSD 850, Graphics: Intel HD 630 (1150MHz), Audio: Realtek ALC892, Monitor: Acer B286HK, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Server: Wayland, OpenGL: 4.5 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1920x1080

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Core i5 8400

Processor: Intel Core i5-8400 @ 4.00GHz (6 Cores), Motherboard: ASUS PRIME Z370-A, Chipset: Intel Device 3ec2, Memory: 16384MB, Disk: 120GB Force MP500, Graphics: EFI VGA, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Driver: modesetting 1.19.3, OpenGL: 3.3 Mesa 17.2.1 (LLVM 5.0 256 bits), Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1024x768

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Core i7 4790K

Processor: Intel Core i7-4790K @ 4.40GHz (8 Cores), Motherboard: Gigabyte Z97-HD3P, Chipset: Intel 4th Gen Core DRAM, Memory: 16384MB, Disk: 120GB OCZ TRION100, Graphics: Intel Xeon E3-1200 v3/4th Gen Core IGP (1250MHz), Audio: Intel Xeon E3-1200 v3/4th, Monitor: Acer B286HK, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Server: Wayland, OpenGL: 4.5 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1920x1080

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Core i7 7700K

Processor: Intel Core i7-7700K @ 4.50GHz (8 Cores), Motherboard: MSI Z270-A PRO (MS-7A71) v1.0, Chipset: Intel Device 591f + Z270, Memory: 16384MB, Disk: 128GB THNSN5128GPU7 TOSHIBA, Graphics: Intel HD 630

(1150MHz), Audio: Realtek ALC892, Monitor: DELL P2415Q, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Server: Wayland, OpenGL: 4.5 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Core i7 7740X

Processor: Intel Core i7-7740K @ 4.50GHz (8 Cores), Motherboard: ASUS PRIME X299-A, Chipset: Intel Device 591f, Memory: 16384MB, Disk: 240GB Force MP500, Graphics: NV132 11264MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, OpenGL: 4.3 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Core i7 7820X

Processor: Intel Core i7-7820X @ 4.50GHz (16 Cores), Motherboard: MSI X299 SLI PLUS (MS-7A93) v1.0, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 240GB Force MP500, Graphics: NV132 11264MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, OpenGL: 4.3 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Core i7 8700K

Processor: Intel Core i7-8700K @ 4.00GHz (12 Cores), Motherboard: ASUS PRIME Z370-A, Chipset: Intel Device 3ec2, Memory: 16384MB, Disk: 120GB Force MP500, Graphics: llvmpipe 16000MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Driver: modesetting 1.19.3, OpenGL: 3.3 Mesa 17.2.1 (LLVM 5.0 256 bits), Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1024x768

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Core i9 7900X

Processor: Intel Core i7-7900X @ 4.50GHz (20 Cores), Motherboard: MSI X299 SLI PLUS (MS-7A93) v1.0, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 240GB Force MP500, Graphics: NV132 11264MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, OpenGL: 4.3 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Core i9 7960X

Processor: Intel Core i9-7960X @ 4.40GHz (32 Cores), Motherboard: MSI X299 SLI PLUS (MS-7A93) v1.0, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 240GB Force MP500, Graphics: NV132 11264MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, OpenGL: 4.3 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Core i9 7980XE

Processor: Intel Core i9-7980XE @ 4.40GHz (36 Cores), Motherboard: ASUS PRIME X299-A, Chipset: Intel Device 2020, Memory: 16384MB, Disk: 240GB Force MP500, Graphics: NV132 11264MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, OpenGL: 4.3 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Ryzen 7 1700

Processor: AMD Ryzen 7 1700 Eight-Core @ 3.00GHz (16 Cores), Motherboard: MSI B350 TOMAHAWK (MS-7A34) v1.0, Chipset: AMD Device 1450, Memory: 16384MB, Disk: 120GB Samsung SSD 840, Graphics: HIS AMD Radeon HD

7750/8740 / R7 250E, Audio: AMD Cape Verde/Pitcairn, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Driver: modesetting 1.19.3, OpenGL: 3.3 Mesa 17.2.1 (LLVM 5.0 128 bits), Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1024x768

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Ryzen 7 1800X

Processor: AMD Ryzen 7 1800X Eight-Core @ 3.60GHz (16 Cores), Motherboard: MSI X370 XPOWER GAMING TITANIUM (MS-7A31) v1.0, Chipset: AMD Device 1450, Memory: 16384MB, Disk: 256GB INTEL SSDPEKKW256G7, Graphics: NVE4 2048MB, Audio: NVIDIA GK104 HDMI Audio, Monitor: G237HL, Network: Intel I211 Gigabit Connection

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, Display Server: Wayland, OpenGL: 4.3 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 1920x1080

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Ryzen Threadripper 1950X

Processor: AMD Ryzen Threadripper 1950X 16-Core @ 3.40GHz (32 Cores), Motherboard: Gigabyte X399 AORUS Gaming 7, Chipset: AMD Device 1450, Memory: 16384MB, Disk: 240GB Force MP500, Graphics: NV132 11264MB, Audio: Realtek ALC1220, Network: Qualcomm Atheros Device e0b1 + Intel Wireless 8265 / 8275

OS: Ubuntu 17.10, Kernel: 4.13.0-11-generic (x86_64), Desktop: GNOME Shell 3.26.0, OpenGL: 4.3 Mesa 17.2.1, Compiler: GCC 7.2.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: GJS_DEBUG_TOPICS=JS ERROR;JS LOG GJS_DEBUG_OUTPUT=stderr
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 performance

## Ryzen 7 1700 laptop

## Asus

Processor: AMD Ryzen 7 1700 Eight-Core @ 3.00GHz (16 Cores), Motherboard: ASUS GL702ZC v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 1000GB Seagate ST1000LM035-1RK1 + 256GB SanDisk SD8SN8U2, Graphics: ASUS AMD Radeon RX 580 4096MB, Audio: AMD Ellesmere, Network: Realtek RTL8111/8168/8411 + Realtek Device b822

OS: ManjaroLinux 17.1pre2, Kernel: 4.14.0-0.1-MANJARO (x86_64), Display Driver: modesetting 1.19.5, OpenGL: 4.5

Mesa 17.2.5 (LLVM 5.0.0), Compiler: GCC 7.2.0, File-System: btrfs, Screen Resolution: 1920x1080

Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++ --enable-libmpx --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: acpi-cpufreq schedutil

## Asus 2

Processor: AMD Ryzen 7 1700 Eight-Core @ 3.00GHz (16 Cores), Motherboard: ASUS GL702ZC v1.0, Chipset: AMD Family 17h, Memory: 16384MB, Disk: 1000GB Seagate ST1000LM035-1RK1 + 256GB SanDisk SD8SN8U2, Graphics: ASUS AMD Radeon RX 580 4096MB, Audio: AMD Ellesmere, Network: Realtek RTL8111/8168/8411 + Realtek Device b822

OS: ManjaroLinux 17.1pre2, Kernel: 4.14.2+ (x86_64), Display Driver: modesetting 1.19.5, OpenGL: 4.5 Mesa 17.2.5 (LLVM 5.0.0), Compiler: GCC 7.2.0, File-System: btrfs, Screen Resolution: 1920x1080

Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++ --enable-libmpx --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: acpi-cpufreq performance

| | Core i5 7600K | Core i5 8400 | Core i7 4790K | Core i7 7700K | Core i7 7740X | Core i7 7820X | Core i7 8700K | Core i9 7900X | Core i9 7960X | Core i9 7980XE | Ryzen 7 1700 | Ryzen 7 1800X | Ryzen Threadripper 1950 | Ryzen 7 1700 laptop | Asus | Asus 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **NAS Parallel Benchmarks - EP.C** | 225.48 | 327.55 | 377.34 | 406.23 | 407.57 | 745.27 | 542.04 | 927.48 | 1330 | 1332 | 491.96 | 566.72 | 1087 | 380.04 | 380.22 | 375.56 |
| **Normalized** | 16.93% | 24.59% | 28.33% | 30.5% | 30.6% | 55.96% | 40.7% | 69.64% | 99.84% | 100% | 36.94% | 42.55% | 81.65% | 28.53% | 28.55% | 28.2% |
| **Standard Deviation** | 0% | 0.4% | 0.9% | 1.1% | 0.7% | 0.6% | 0.5% | 0.8% | 0.4% | 0.5% | 0.2% | 0.3% | 0.3% | 0% | 0% | 0.8% |
| **Rodinia - OpenMP LavaMD** | 203.55 | 139.65 | 170.17 | 154.37 | 153.09 | | 115.83 | 69.93 | 48.88 | 46.61 | 95.27 | 82.74 | 44.51 | | 97.24 | 97.32 |
| **Normalized** | 21.87% | 31.87% | 26.16% | 28.83% | 29.07% | | 38.43% | 63.65% | 91.06% | 95.49% | 46.72% | 53.8% | 100% | | 45.77% | 45.74% |
| **Standard Deviation** | 0.2% | 0.1% | 0% | 0.7% | 0.3% | | 0.1% | 0.2% | 2% | 1.6% | 0% | 0.5% | 0.3% | | 0.1% | 0.1% |
| **Timed HMMer Search - P.D.S (sec)** | 10.71 | 6.45 | 8.06 | 6.42 | 6.42 | 5.00 | 5.71 | 4.75 | 4.67 | 4.57 | 9.58 | 8.05 | 8.23 | | | 10.16 |
| **Normalized** | 42.67% | 70.85% | 56.7% | 71.18% | 71.18% | 91.4% | 80.04% | 96.21% | 97.86% | 100% | 47.7% | 56.77% | 55.53% | | | 44.98% |
| **Standard Deviation** | 0.1% | 0.5% | 0.4% | 0% | 0.2% | 1.2% | 0.2% | 0.8% | 0.7% | 0.3% | 0.5% | 0.3% | 1.4% | | | 3.5% |

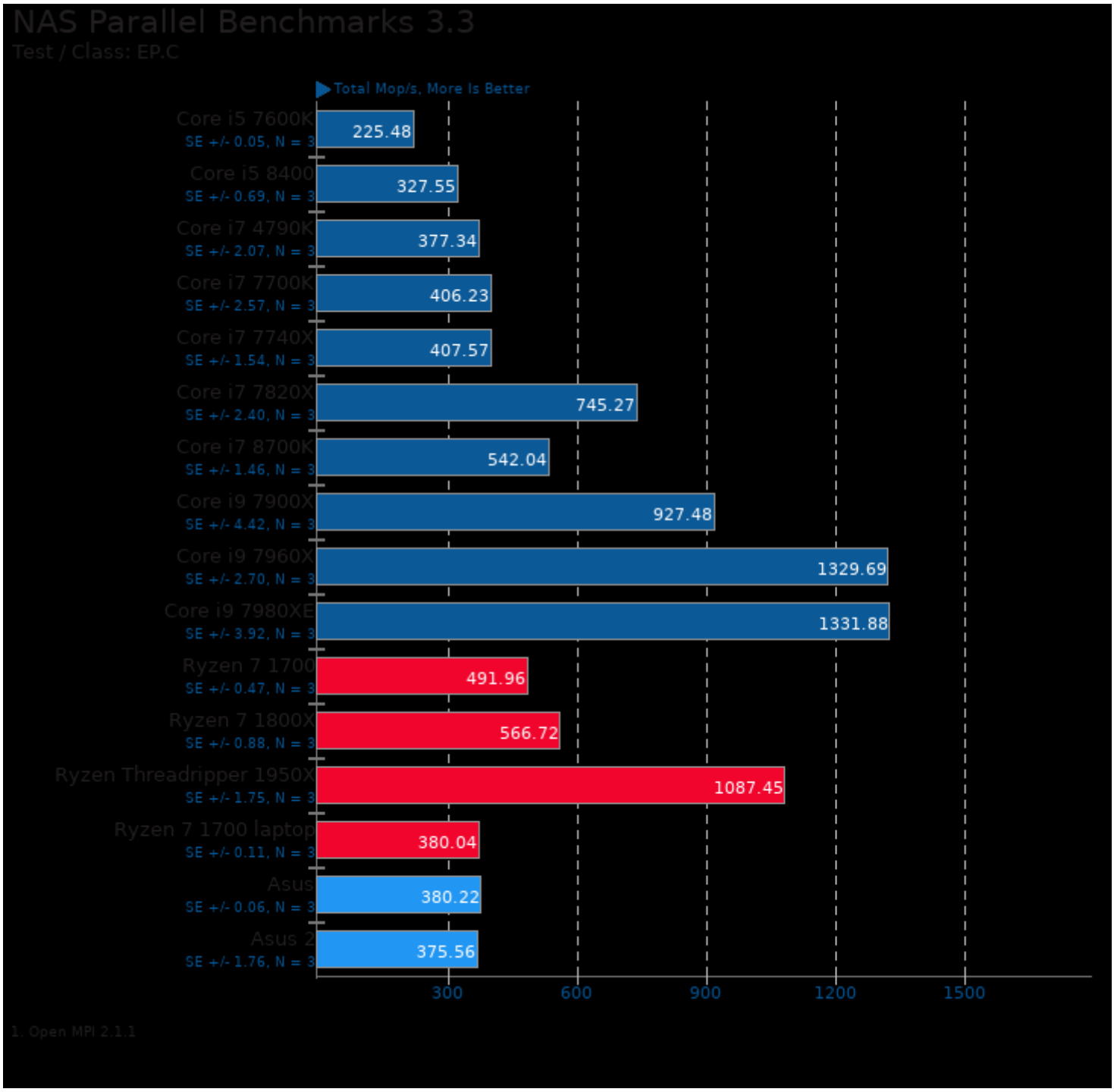
# Intel Core i7 8770K Ubuntu Linux Benchmarks

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **John The Ripper - Blowfish (Real C/S)** | 4907 | 7156 | 7811 | 8899 | 8892 | 16451 | 11856 | 20514 | 29574 | 31377 | 10667 | 12431 | 23562 | 10675 |
| Normalized | 15.64% | 22.81% | 24.89% | 28.36% | 28.34% | 52.43% | 37.79% | 65.38% | 94.25% | 100% | 34% | 39.62% | 75.09% | 34.02% |
| Standard Deviation | 0.1% | | 0.1% | | 0.1% | 0.1% | 0.1% | 0.2% | 0.1% | 0.1% | 0.8% | 0.3% | 1.9% | 0.2% |
| **TTSIOD 3D Renderer - P.R.W.S.S.M (FPS)** | 188.08 | 270.18 | 237.87 | 282.62 | 283.20 | 404.56 | 364.71 | 505.29 | 718.06 | 701.37 | 284.85 | 326.67 | 470.29 | 310.73 |
| Normalized | 26.19% | 37.63% | 33.13% | 39.36% | 39.44% | 56.34% | 50.79% | 70.37% | 100% | 97.68% | 39.67% | 45.49% | 65.49% | 43.27% |
| Standard Deviation | 0.1% | 0.2% | 0.3% | 0.7% | 0.4% | 5.8% | 0.5% | 6.7% | 0.5% | 6.6% | 0% | 0.5% | 2.5% | 0.1% |
| **x264 - H.2.V.E (FPS)** | 151.38 | 240.85 | 203.66 | 231.23 | 231.11 | 410.56 | 296.95 | 504.03 | 566.83 | 492.03 | 242.97 | 273.26 | 388.92 | |
| Normalized | 26.71% | 42.49% | 35.93% | 40.79% | 40.77% | 72.43% | 52.39% | 88.92% | 100% | 86.8% | 42.86% | 48.21% | 68.61% | |
| Standard Deviation | 1.1% | 0.4% | 0.2% | 0.7% | 0.4% | 0.4% | 0.4% | 1.4% | 0.6% | 0.5% | 0.4% | 1.4% | 1.9% | |
| **asmFish - 1.H.M.2.D (Nodes/s)** | 10419006 | 16099472 | 14304842 | 16024705 | 15947406 | 28301133 | 21842867 | 36151239 | 52443163 | 56478666 | 21212680 | 23943535 | 42424098 | 20315010 |
| Normalized | 18.45% | 28.51% | 25.33% | 28.37% | 28.24% | 50.11% | 38.67% | 64.01% | 92.85% | 100% | 37.56% | 42.39% | 75.12% | 35.97% |
| Standard Deviation | 1.2% | 1.1% | 1.6% | 1.3% | 1.2% | 1.1% | 0.7% | 1.1% | 1.4% | 0.3% | 1.3% | 1.4% | 0.2% | 1.4% |
| **Timed PHP Compilation - Time To Compile** | 102.13 | 70.12 | 78.77 | 66.50 | 66.78 | 54.24 | 57.31 | 48.58 | 44.33 | 45.03 | 76.83 | 67.41 | 52.37 | 84.62 |
| Normalized | 43.41% | 63.22% | 56.28% | 66.66% | 66.38% | 81.73% | 77.35% | 91.25% | 100% | 98.45% | 57.7% | 65.76% | 84.65% | 52.39% |
| Standard Deviation | 0.1% | 0.3% | 0.1% | 0.3% | 0.4% | 1.7% | 1.4% | 1.7% | 2.3% | 3.3% | 0.6% | 0.6% | 0.4% | 1.4% |
| **C-Ray - Total Time (sec)** | 22.24 | 15.22 | 20.91 | 18.21 | 18.29 | 10.33 | 13.74 | 8.14 | 5.97 | 5.24 | 11.60 | 9.79 | 5.14 | 11.26 |
| Normalized | 23.11% | 33.77% | 24.58% | 28.23% | 28.1% | 49.76% | 37.41% | 63.14% | 86.1% | 98.09% | 44.31% | 52.5% | 100% | 45.65% |
| Standard Deviation | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 6.7% | 0.1% | 6.7% | 11.5% | 0.4% | 7.4% | 0.8% | 0.9% | 0.1% |
| **OpenSSL - R.4.b.P (Signs/sec)** | 681.57 | 997.47 | 730.07 | 849.63 | 848.70 | 1573 | 1131 | 1964 | 2830 | 3005 | 986.80 | 1141 | 2186 | 985.77 |
| Normalized | 22.68% | 33.2% | 24.3% | 28.28% | 28.24% | 52.34% | 37.64% | 65.37% | 94.18% | 100% | 32.84% | 37.98% | 72.74% | 32.81% |
| Standard Deviation | 0.6% | 0.1% | 0.1% | 0% | 0% | 0% | 0% | 0.1% | 0% | 0% | 0.2% | 0.2% | 0.2% | 0% |
| **Xsbench (Lookups/s)** | 693180 | 15136 06 | 12429 14 | 15295 16 | 15064 80 | 25377 61 | 19421 08 | 35088 43 | 47400 36 | 49099 04 | 15955 23 | 16425 32 | 27572 08 | 91808 9 |
| Normalized | 14.12% | 30.83% | 25.31% | 31.15% | 30.68% | 51.69% | 39.55% | 71.46% | 96.54% | 100% | 32.5% | 33.45% | 56.16% | 18.7% |
| Standard Deviation | 0.1% | 0.1% | 0.9% | 0.2% | 0% | 0% | 0% | 0.1% | 0.1% | 0.5% | 0.3% | 0.7% | 0.1% | 0.1% |

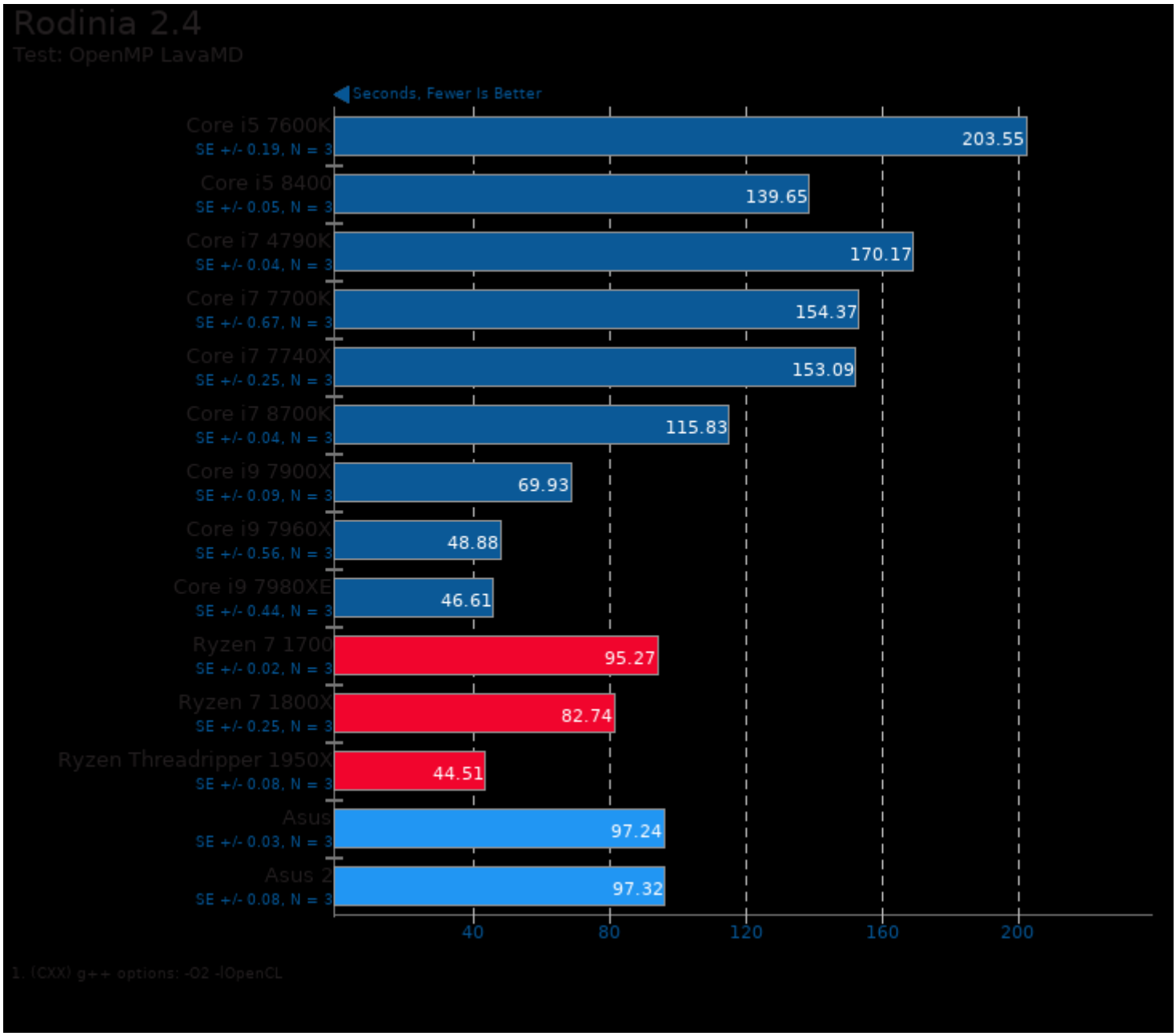
# Intel Core i7 8770K Ubuntu Linux Benchmarks

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **FFmpeg - H.2.H.T.N.D (sec)** | 6.51 | 4.67 | 5.74 | 4.88 | **4.52** | **9.53** | 7.72 | 7.47 |
| **Normalized** | 69.43% | 96.79% | 78.75% | 92.62% | 100% | 47.43% | 58.55% | 60.51% |
| **Standard Deviation** | 1.3% | 0.4% | 0.7% | 1.5% | 2.6% | 0.3% | 1.4% | 2% |
| **Darktable - Masskrug - CPU-only (sec)** | **13.27** | 8.43 | 10.76 | 9.01 | 7.43 | 8.29 | **7.37** | |
| **Normalized** | 55.54% | 87.43% | 68.49% | 81.8% | 99.19% | 88.9% | 100% | |
| **Standard Deviation** | 0.2% | 0.2% | 0.1% | 0.2% | 0.2% | 0.3% | 0.7% | |
| **Darktable - Server Room - CPU-only (sec)** | **11.35** | 6.87 | 9.44 | 7.66 | 6.48 | 6.30 | **5.65** | |
| **Normalized** | 49.78% | 82.24% | 59.85% | 73.76% | 87.19% | 89.68% | 100% | |
| **Standard Deviation** | 0.3% | 0.1% | 0% | 0.1% | 0.1% | 1% | 0.2% | |
| **Java JMH - Throughput (Ops/s)** | 15985 60302 1 | 23296 14696 4 | 17487 84508 9 | 17976 93613 5 | **23957 94605 4** | 12779 95846 6 | 14781 30834 1 | **12750 27816 8** |
| **Normalized** | 66.72% | 97.24% | 72.99% | 75.04% | 100% | 53.34% | 61.7% | 53.22% |
| **Timed LLVM Compilation - Time To Compile** | **897.8 9** | 571.4 0 | 719.3 7 | 586.4 5 | **445.7 2** | 527.1 2 | 467.2 6 | 610.4 5 |
| **Normalized** | 49.64% | 78% | 61.96% | 76% | 100% | 84.56% | 95.39% | 73.01% |
| **Standard Deviation** | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | 0.2% | 0.1% | 0.2% |
| **7-Zip Compression - C.S.T (MIPS)** | **17098** | 25407 | 24711 | 28570 | **37128** | 32475 | 36649 | 28238 |
| **Normalized** | 46.05% | 68.43% | 66.56% | 76.95% | 100% | 87.47% | 98.71% | 76.06% |
| **Standard Deviation** | 0.6% | 0.3% | 0.7% | 0.8% | 0.5% | 0.6% | 0.6% | 0.6% |

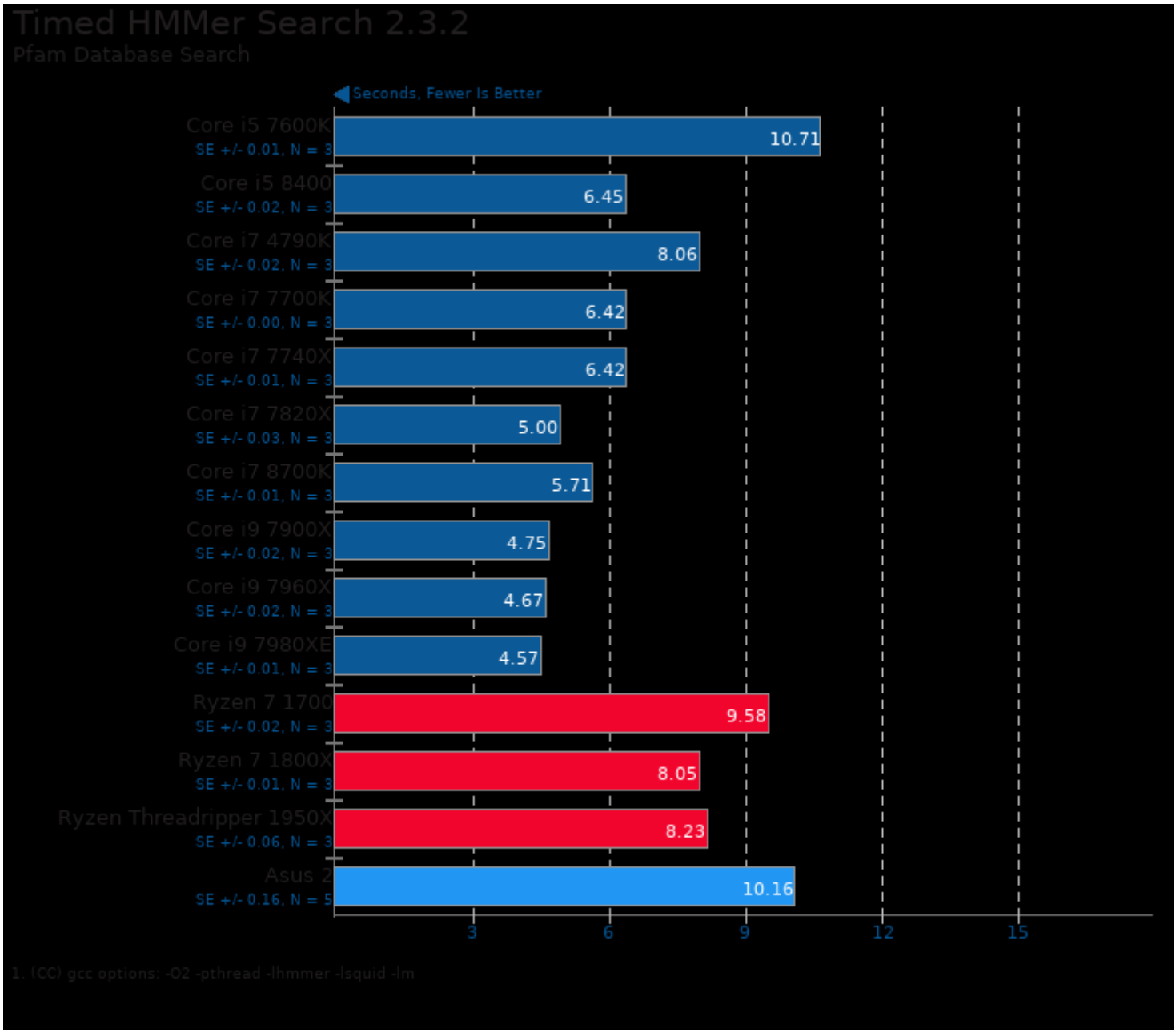
# Intel Core i7 8770K Ubuntu Linux Benchmarks



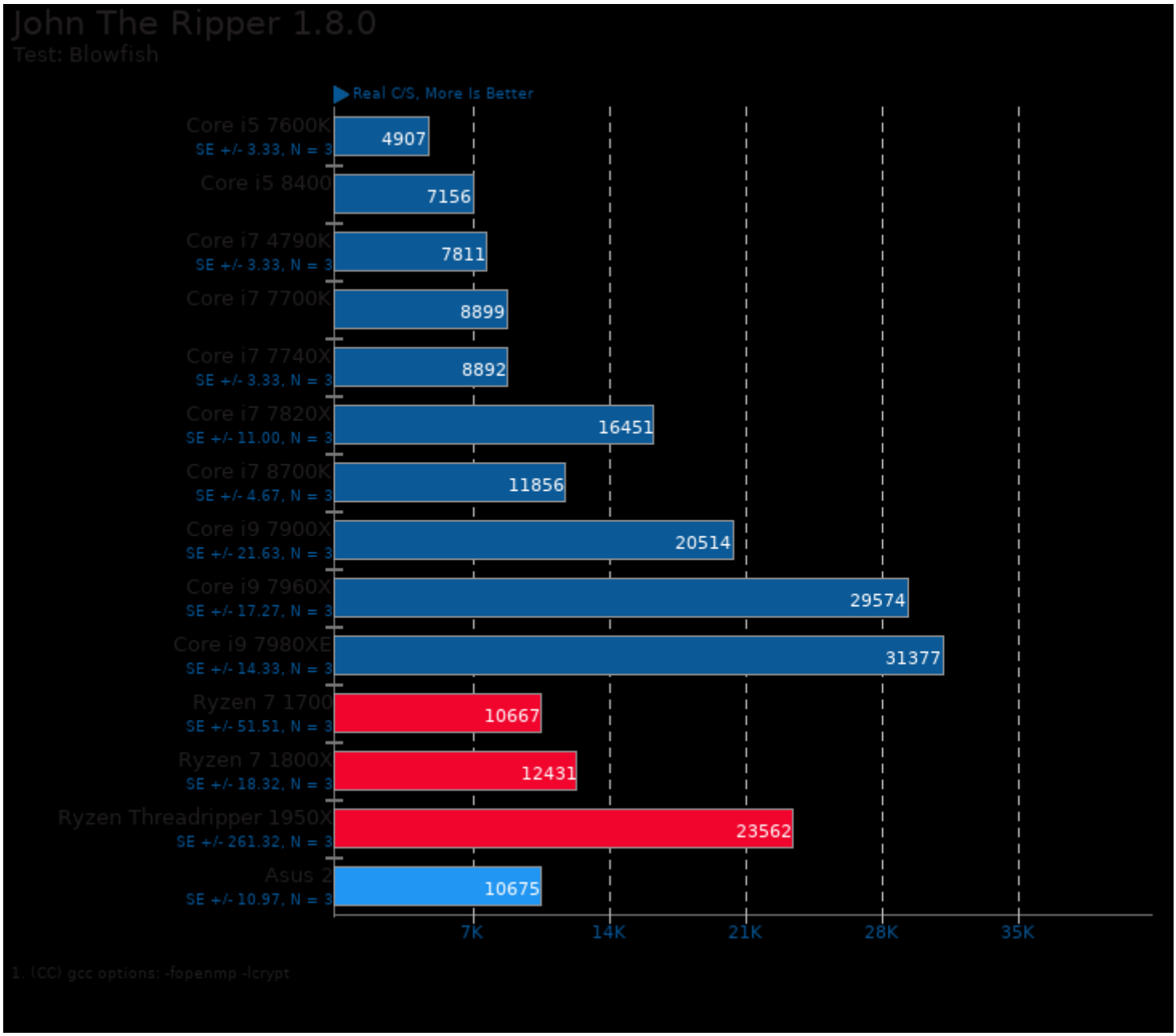
# Intel Core i7 8770K Ubuntu Linux Benchmarks

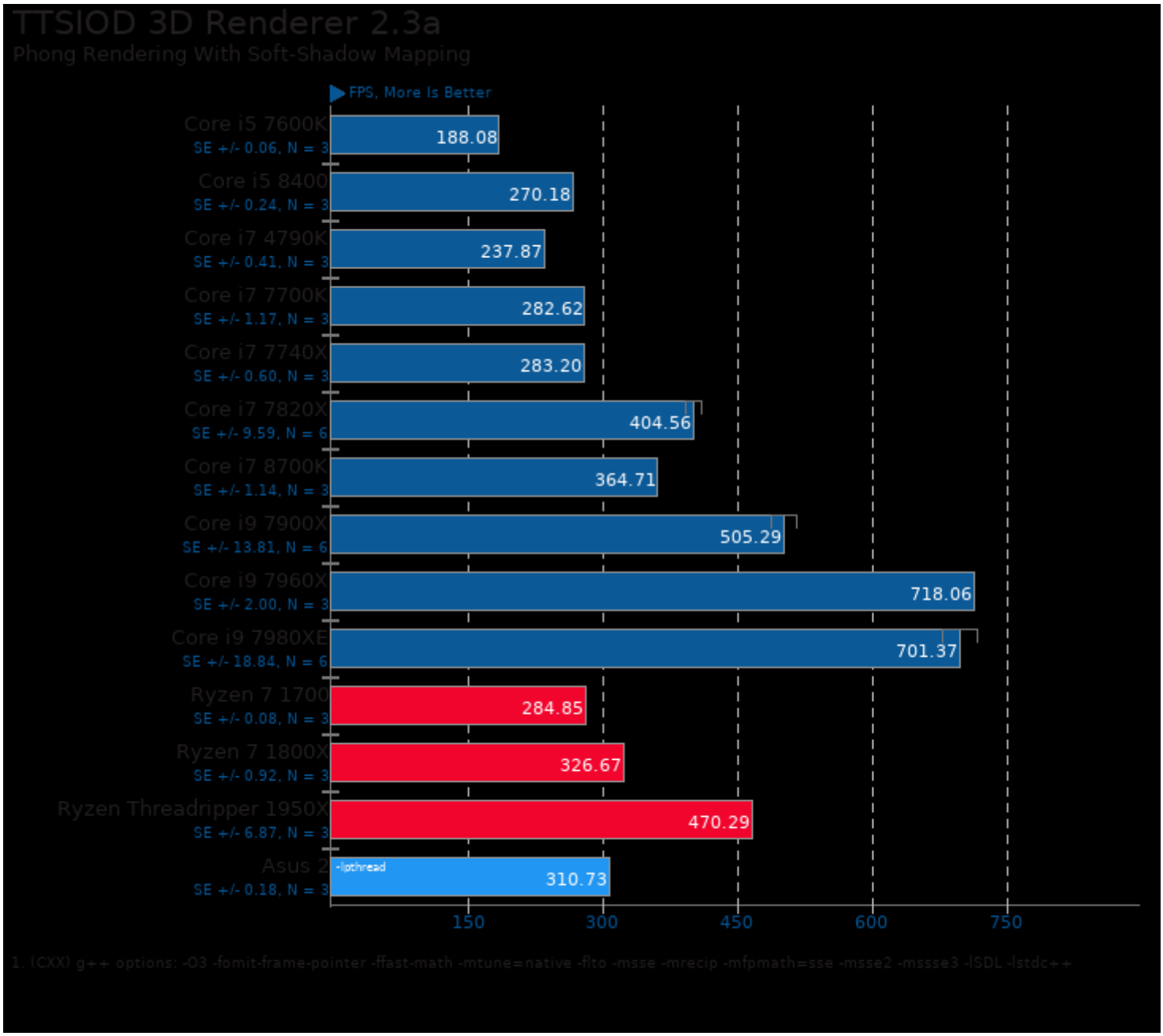


# Intel Core i7 8770K Ubuntu Linux Benchmarks

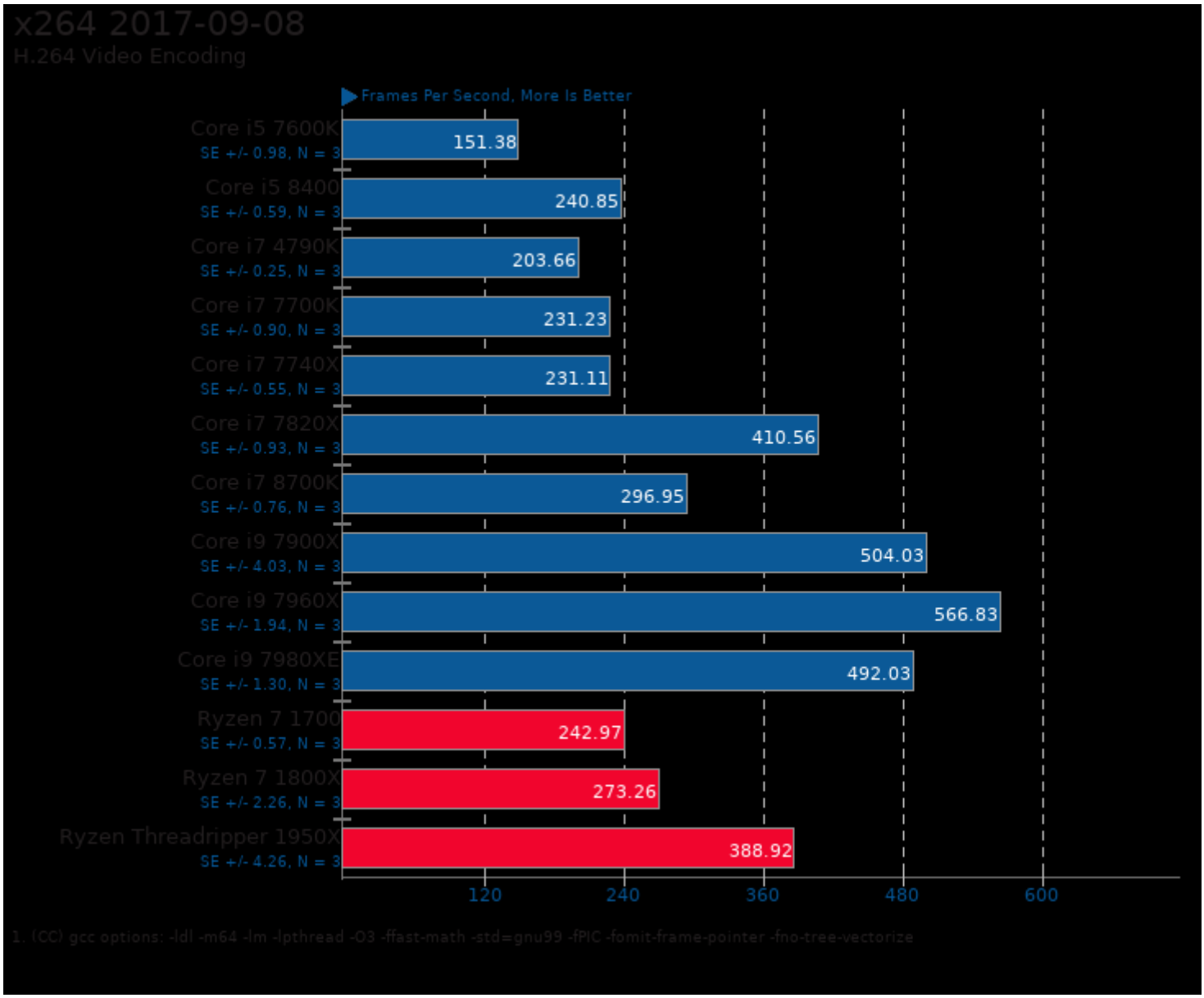


# Intel Core i7 8770K Ubuntu Linux Benchmarks

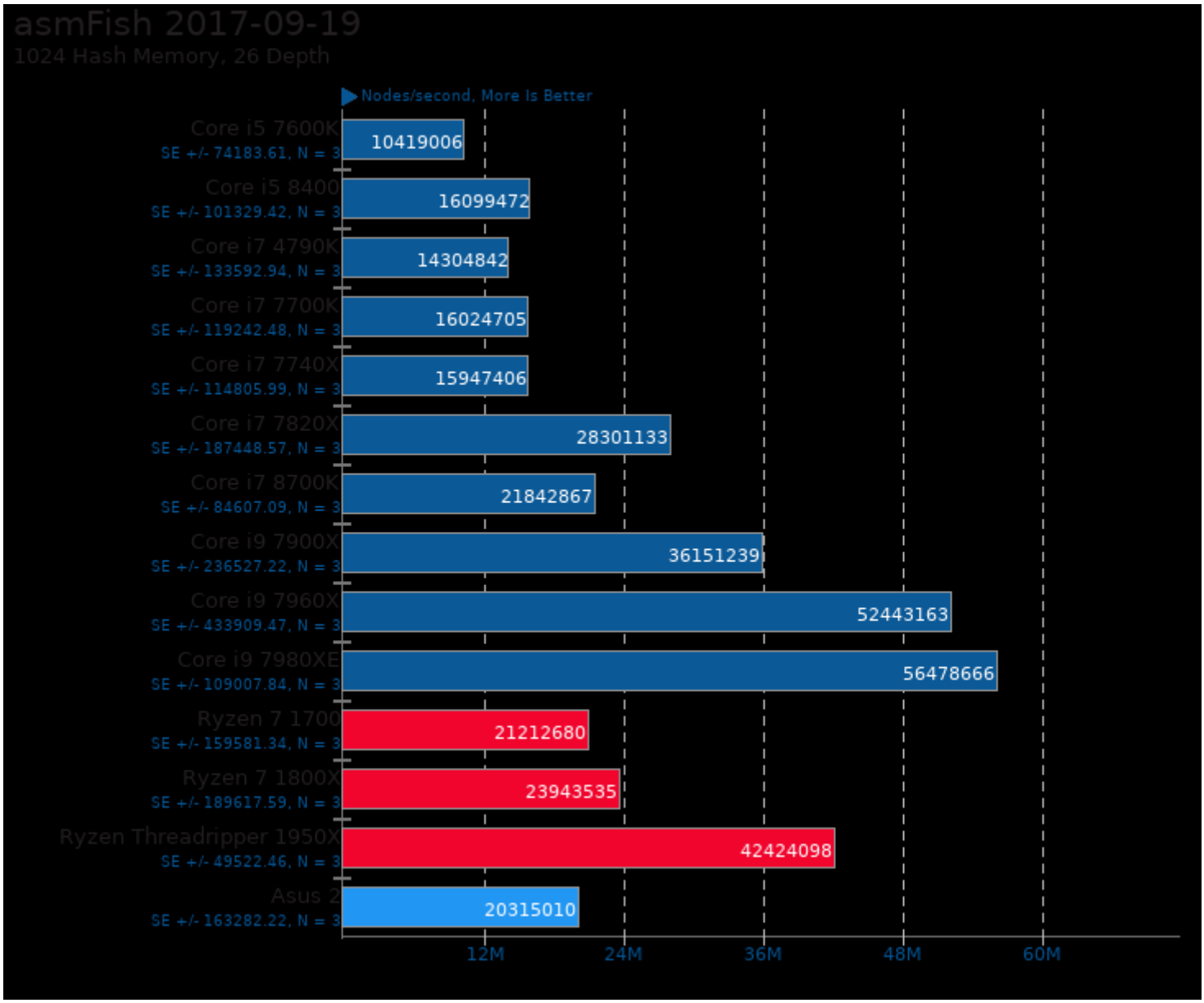


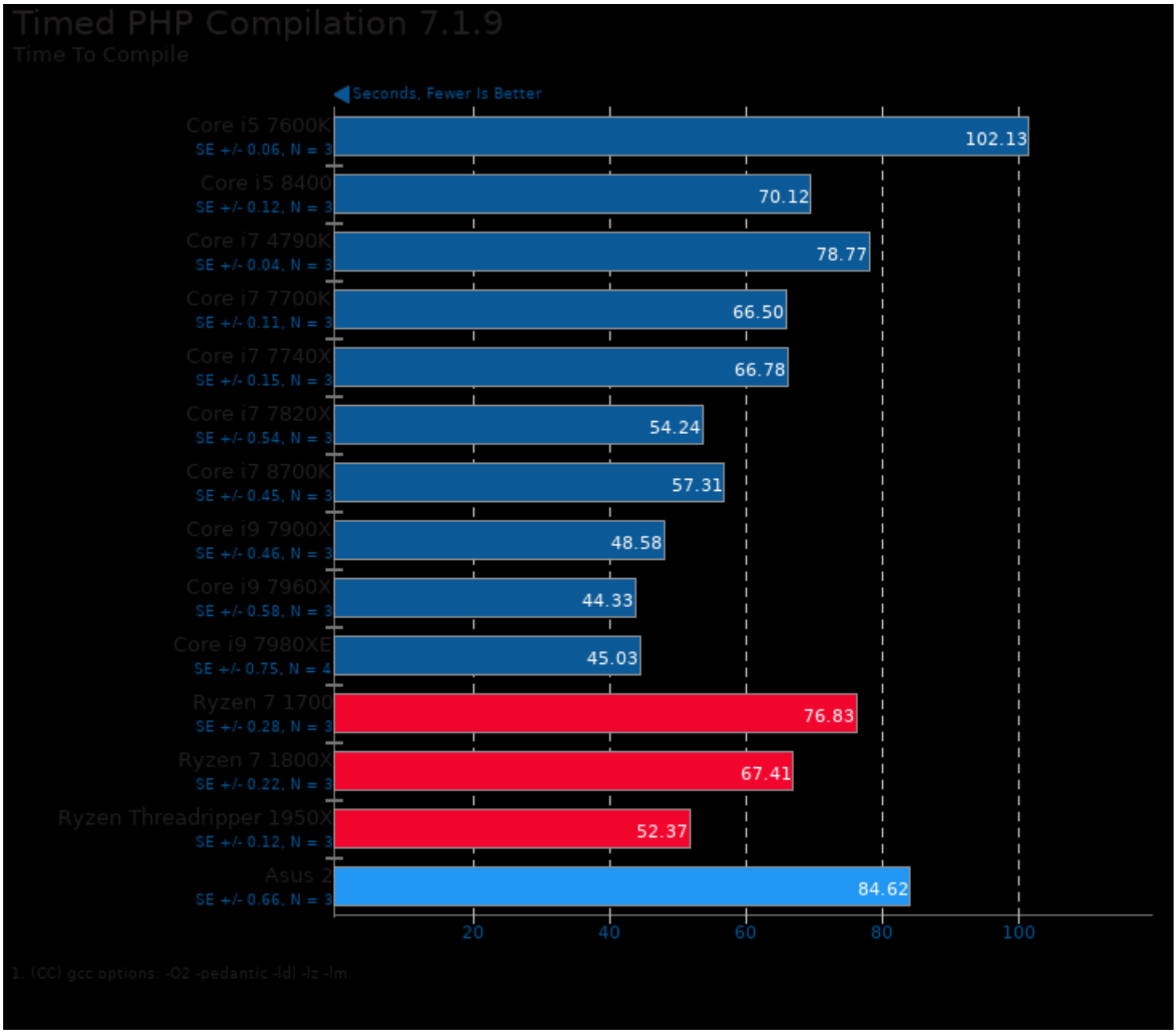

TTSIOD 3D Renderer 2.3a
Phong Rendering With Soft-Shadow Mapping
FPS, More Is Better
Core i5 7600K
SE +/- 0.06, N = 3
188.08
Core i5 8400
SE +/- 0.24, N = 3
270.18
Core i7 4790K
SE +/- 0.41, N = 3
237.87
Core i7 7700K
SE +/- 1.17, N = 3
282.62
Core i7 7740X
SE +/- 0.60, N = 3
283.20
Core i7 7820X
SE +/- 9.59, N = 6
404.56
Core i7 8700K
SE +/- 1.14, N = 3
364.71
Core i9 7900X
SE +/- 13.81, N = 6
505.29
Core i9 7960X
SE +/- 2.00, N = 3
718.06
Core i9 7980XE
SE +/- 18.84, N = 6
701.37
Ryzen 7 1700
SE +/- 0.08, N = 3
284.85
Ryzen 7 1800X
SE +/- 0.92, N = 3
326.67
Ryzen Threadripper 1950X
SE +/- 6.87, N = 3
470.29
Asus 2
SE +/- 0.18, N = 3
-lpthread
310.73
150
300
450
600
750
1. (CXX) g++ options: -O3 -fomit-frame-pointer -ffast-math -mtune=native -flto -msse -mrecip -mfpmath=sse -msse2 -mssse3 -lSDL -lstdc++

# Intel Core i7 8770K Ubuntu Linux Benchmarks

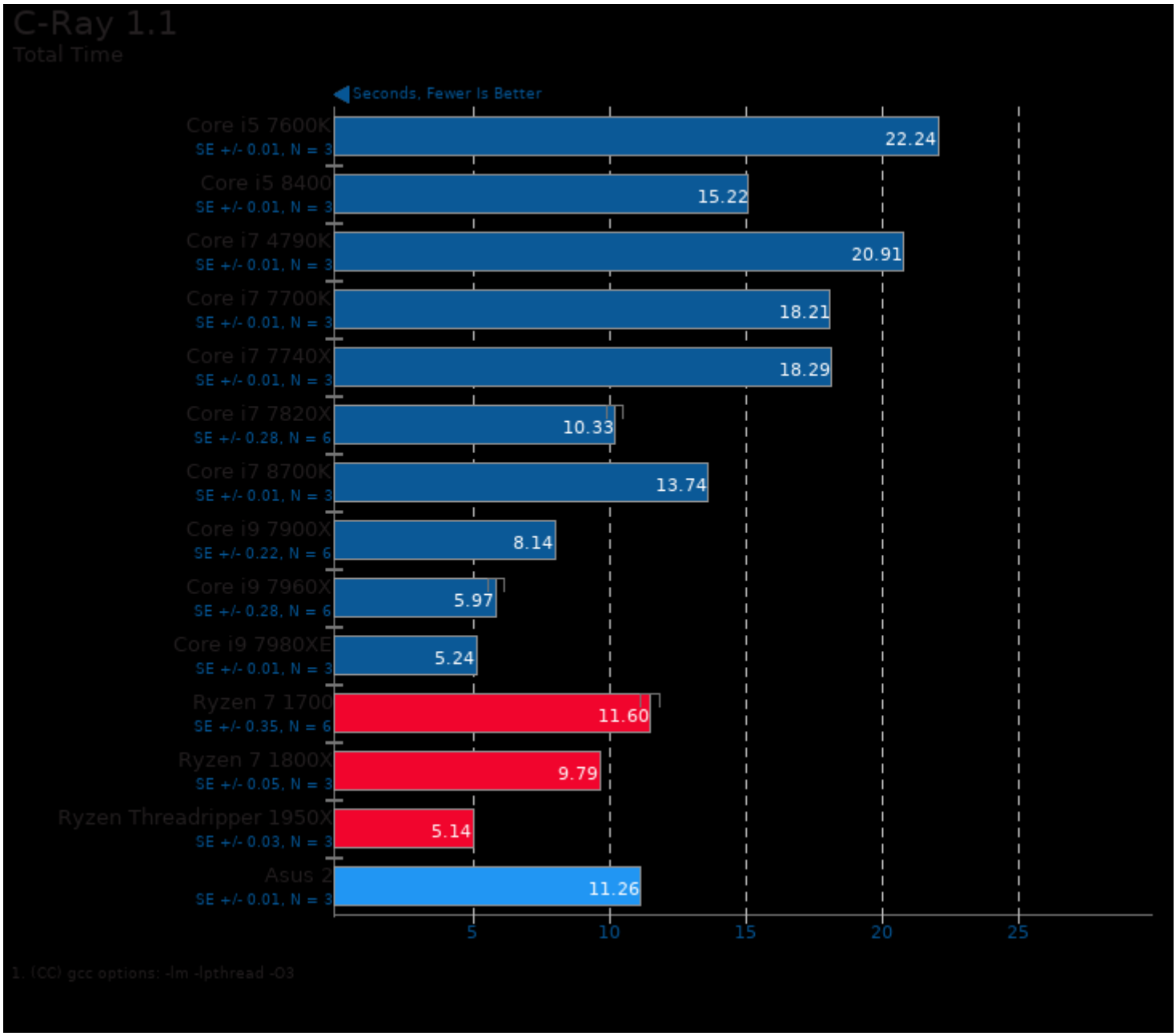


# Intel Core i7 8770K Ubuntu Linux Benchmarks

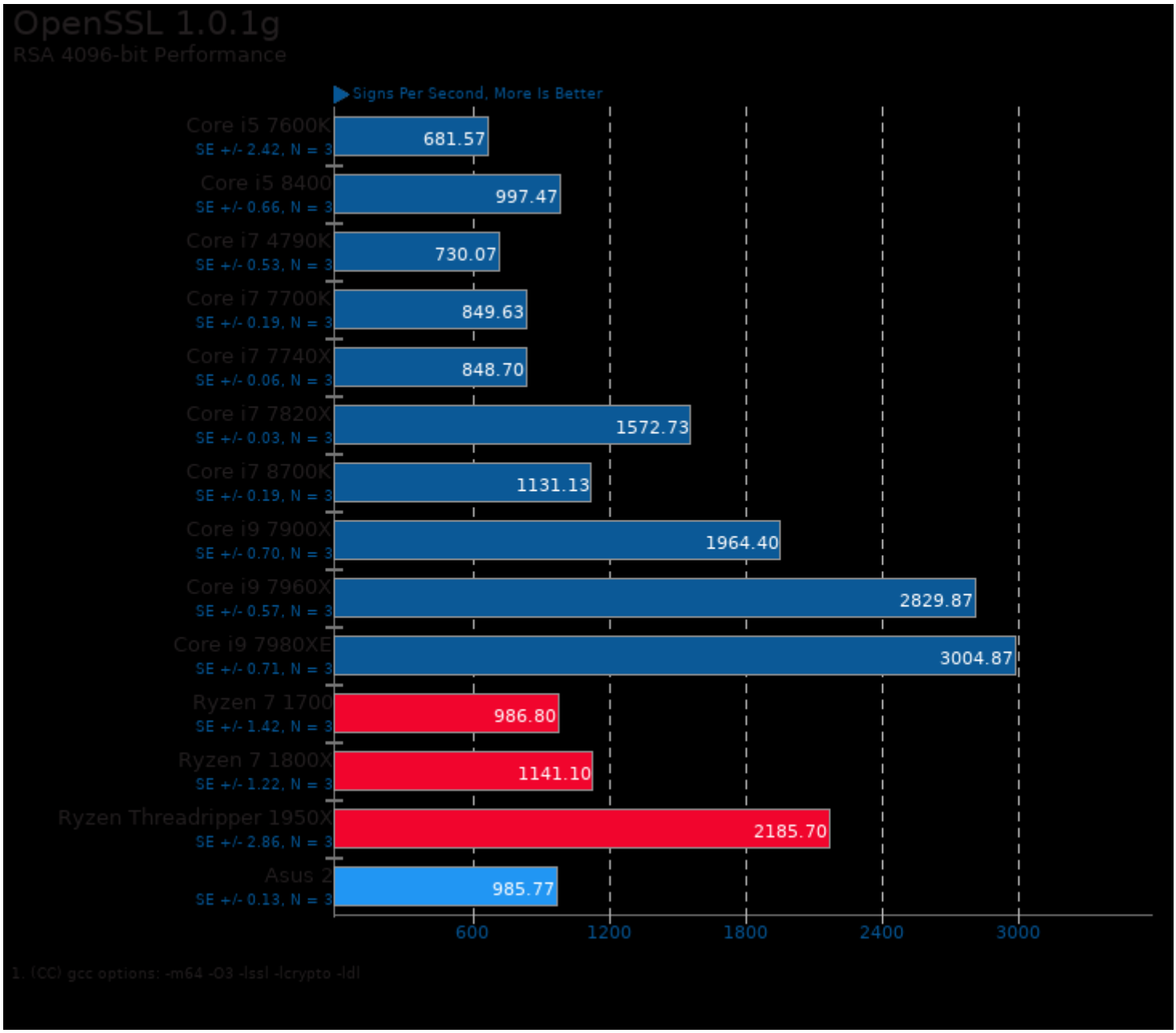



Timed PHP Compilation 7.1.9
Time To Compile
Seconds, Fewer Is Better
Core i5 7600K
SE +/- 0.06, N = 3
102.13
Core i5 8400
SE +/- 0.12, N = 3
70.12
Core i7 4790K
SE +/- 0.04, N = 3
78.77
Core i7 7700K
SE +/- 0.11, N = 3
66.50
Core i7 7740X
SE +/- 0.15, N = 3
66.78
Core i7 7820X
SE +/- 0.54, N = 3
54.24
Core i7 8700K
SE +/- 0.45, N = 3
57.31
Core i9 7900X
SE +/- 0.46, N = 3
48.58
Core i9 7960X
SE +/- 0.58, N = 3
44.33
Core i9 7980XE
SE +/- 0.75, N = 4
45.03
Ryzen 7 1700
SE +/- 0.28, N = 3
76.83
Ryzen 7 1800X
SE +/- 0.22, N = 3
67.41
Ryzen Threadripper 1950X
SE +/- 0.12, N = 3
52.37
Asus Z
SE +/- 0.66, N = 3
84.62
20
40
60
80
100
1. (CC) gcc options: -O2 -pedantic -ldl -lz -lm

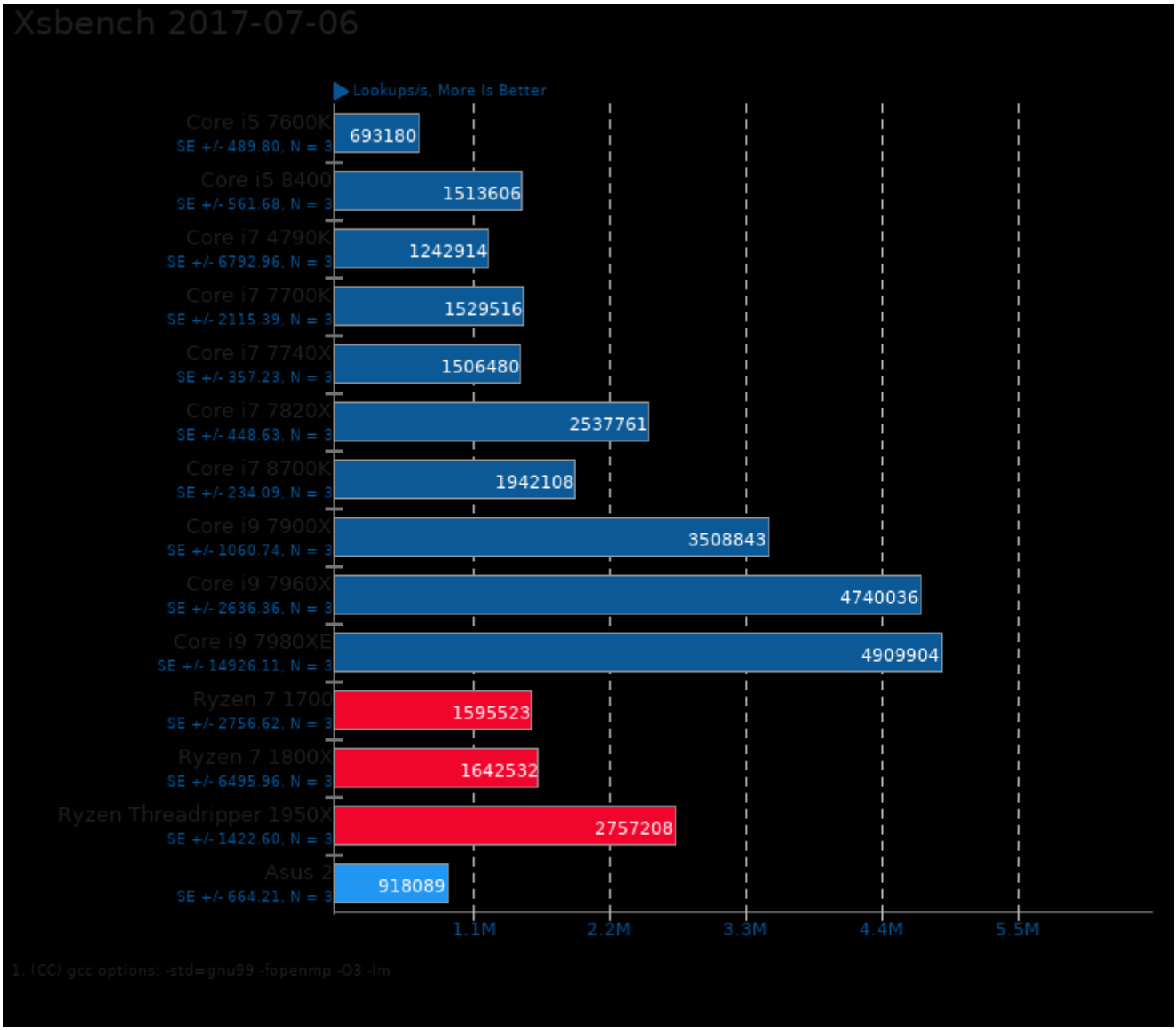
# Intel Core i7 8770K Ubuntu Linux Benchmarks



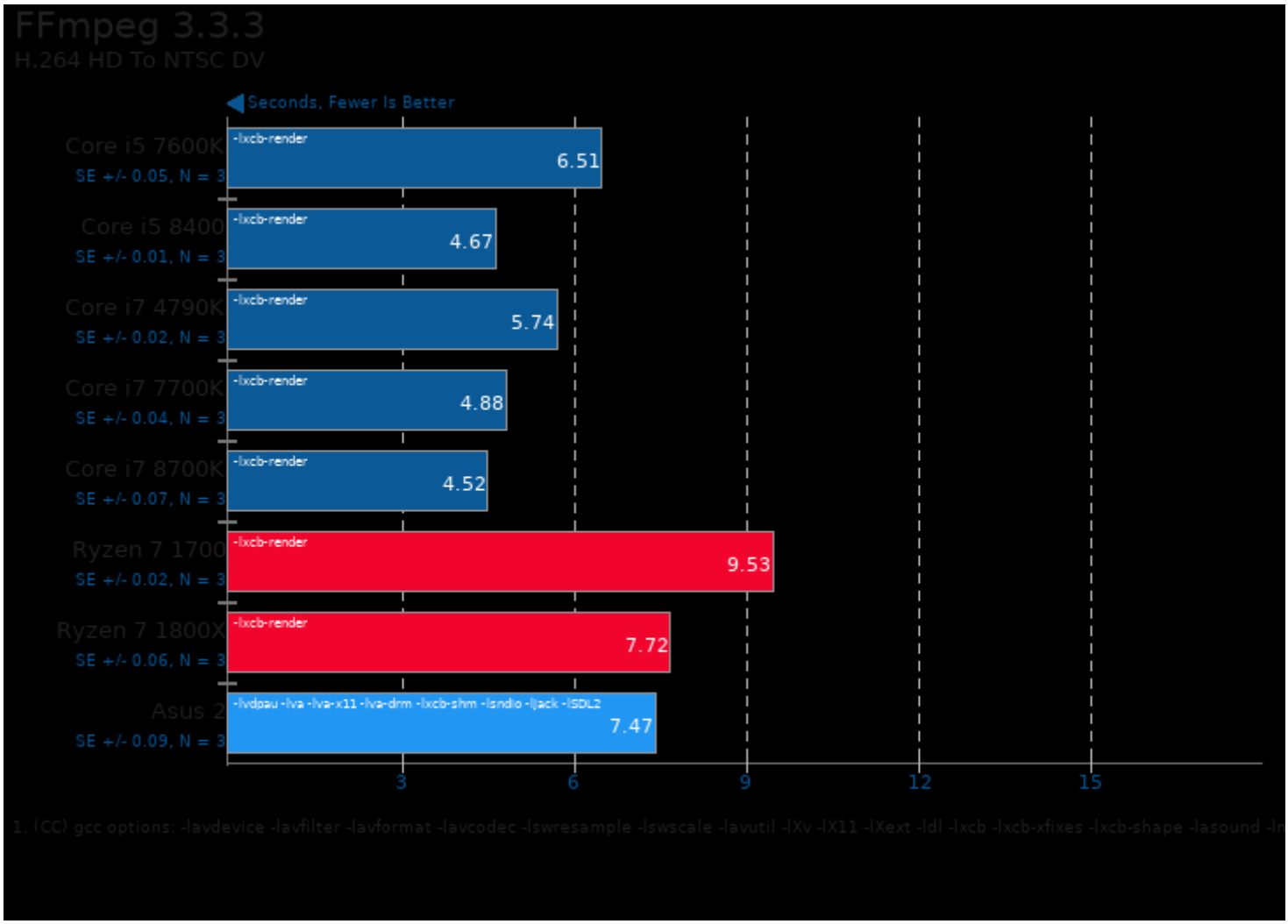
# Intel Core i7 8770K Ubuntu Linux Benchmarks

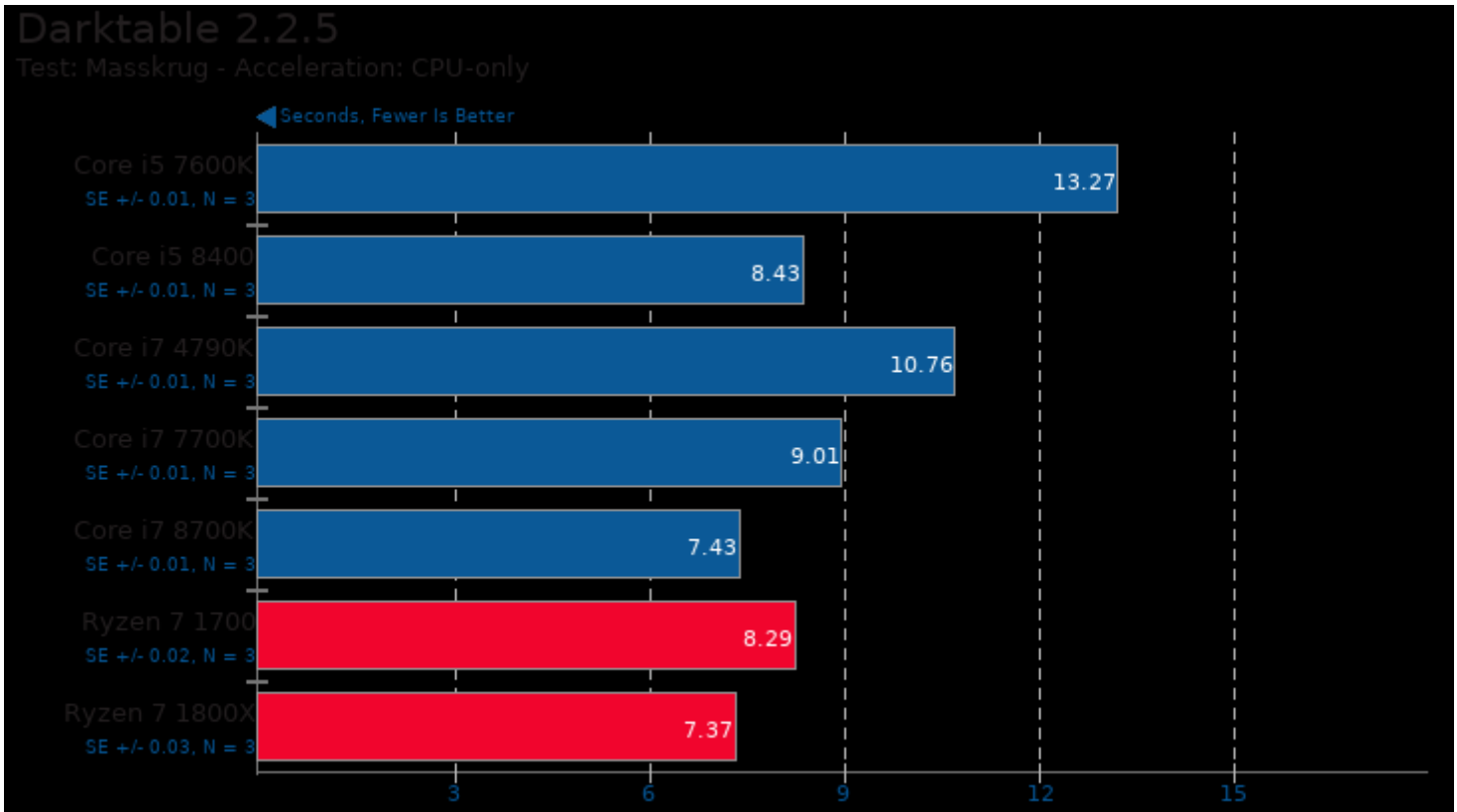


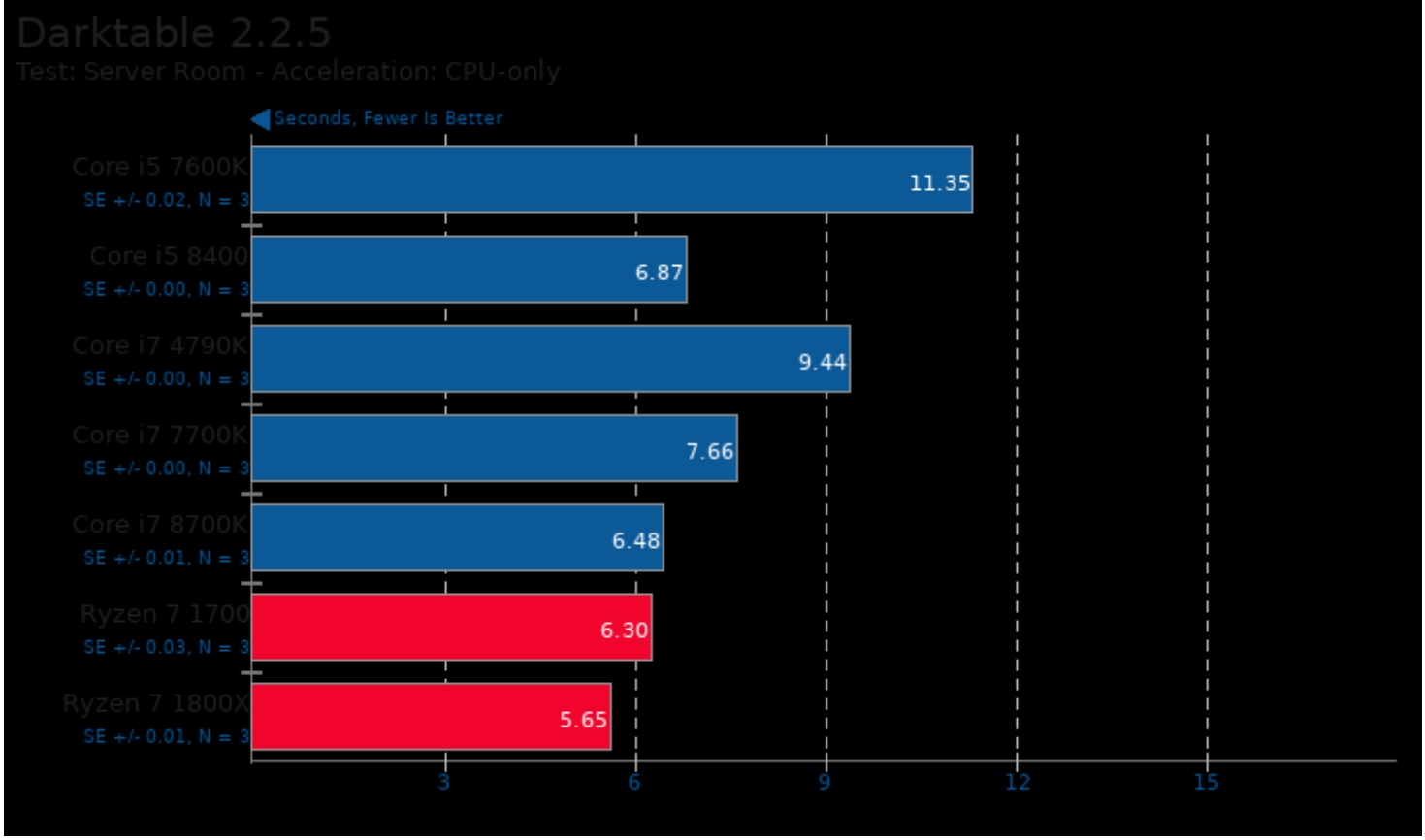
# Intel Core i7 8770K Ubuntu Linux Benchmarks



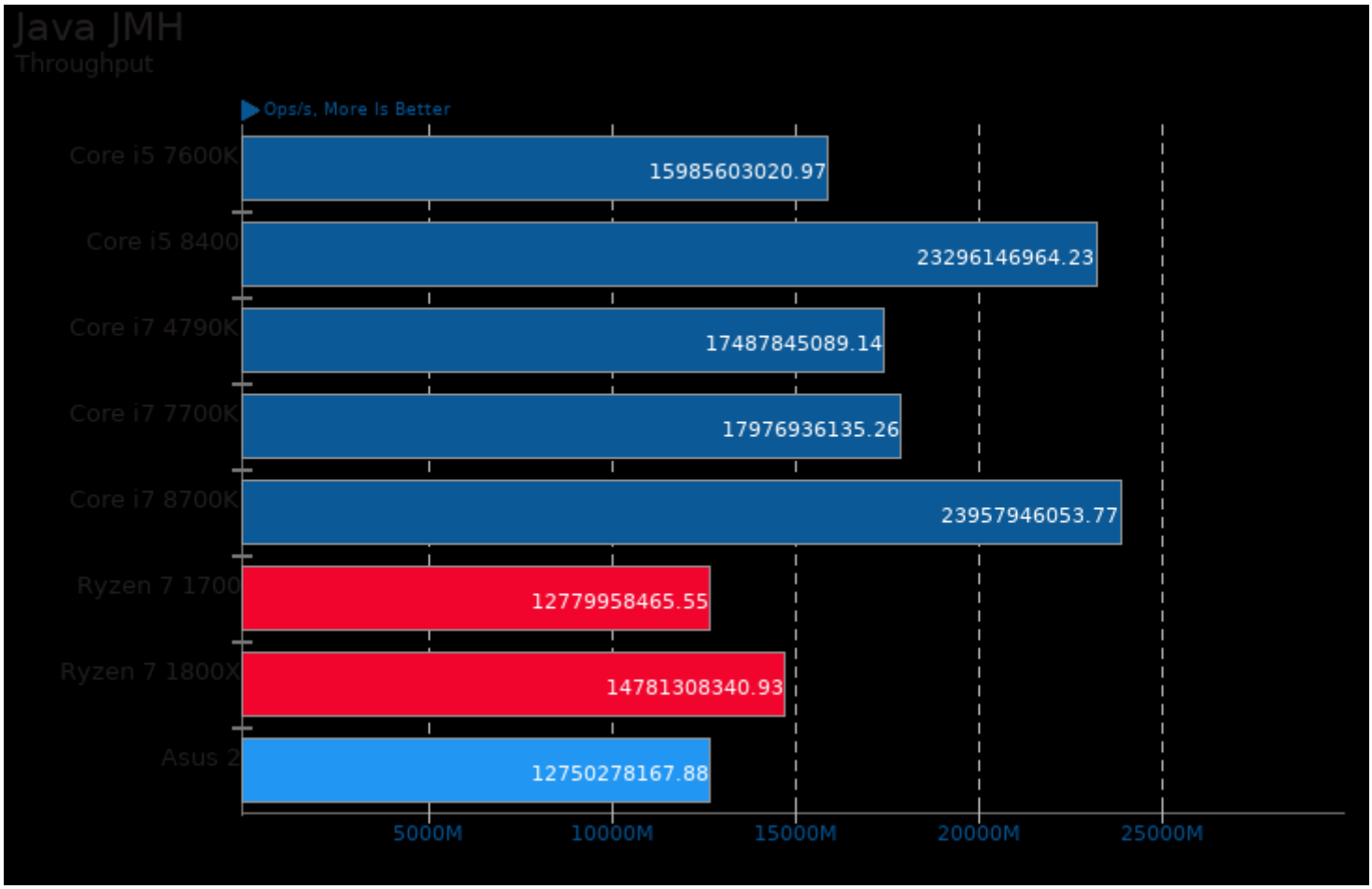
# Intel Core i7 8770K Ubuntu Linux Benchmarks



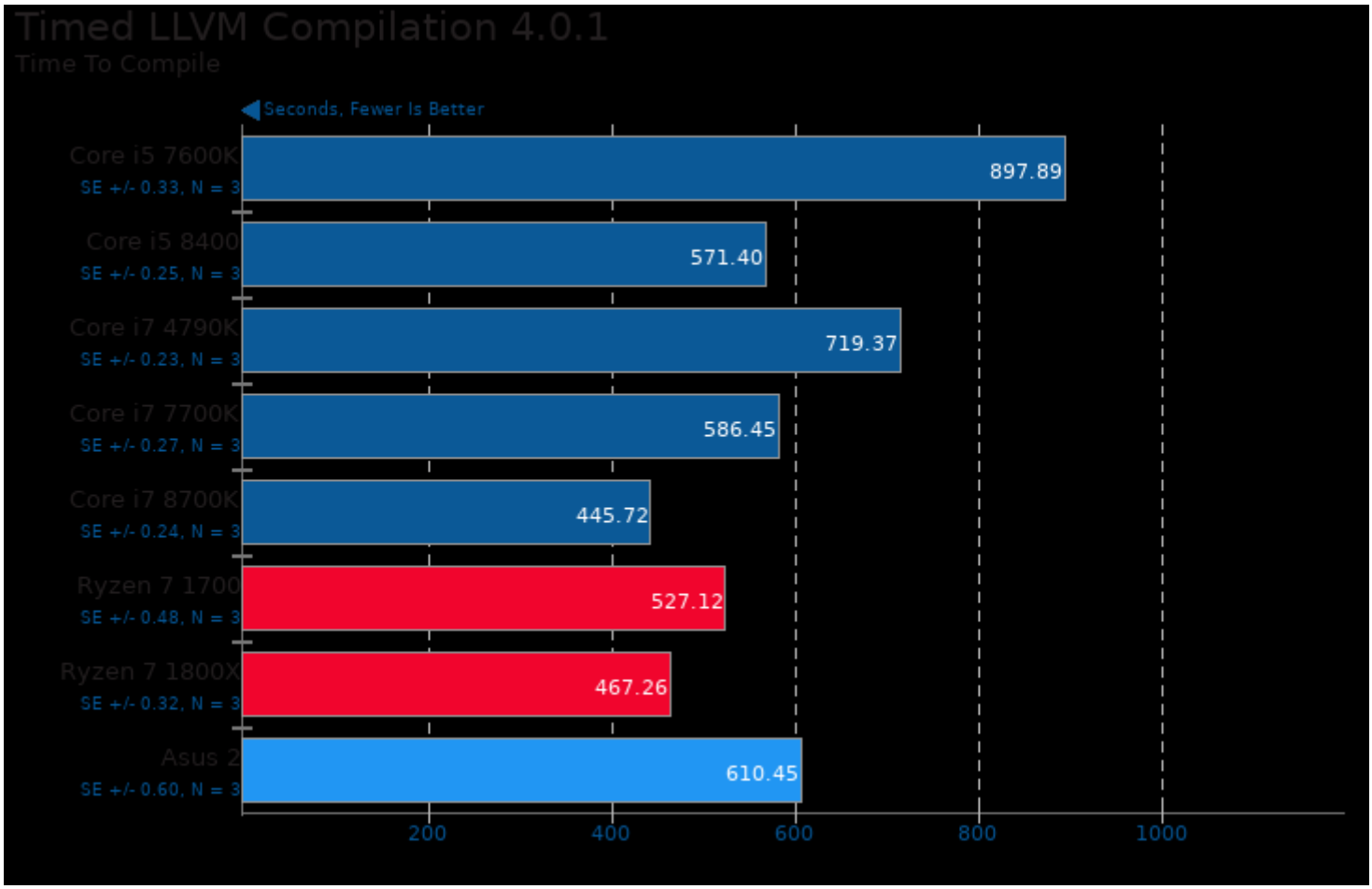

Darktable 2.2.5
Test: Masskrug - Acceleration: CPU-only
Seconds, Fewer Is Better
Core i5 7600K
SE +/- 0.01, N = 3
13.27
Core i5 8400
SE +/- 0.01, N = 3
8.43
Core i7 4790K
SE +/- 0.01, N = 3
10.76
Core i7 7700K
SE +/- 0.01, N = 3
9.01
Core i7 8700K
SE +/- 0.01, N = 3
7.43
Ryzen 7 1700
SE +/- 0.02, N = 3
8.29
Ryzen 7 1800X
SE +/- 0.03, N = 3
7.37
3
6
9
12
15

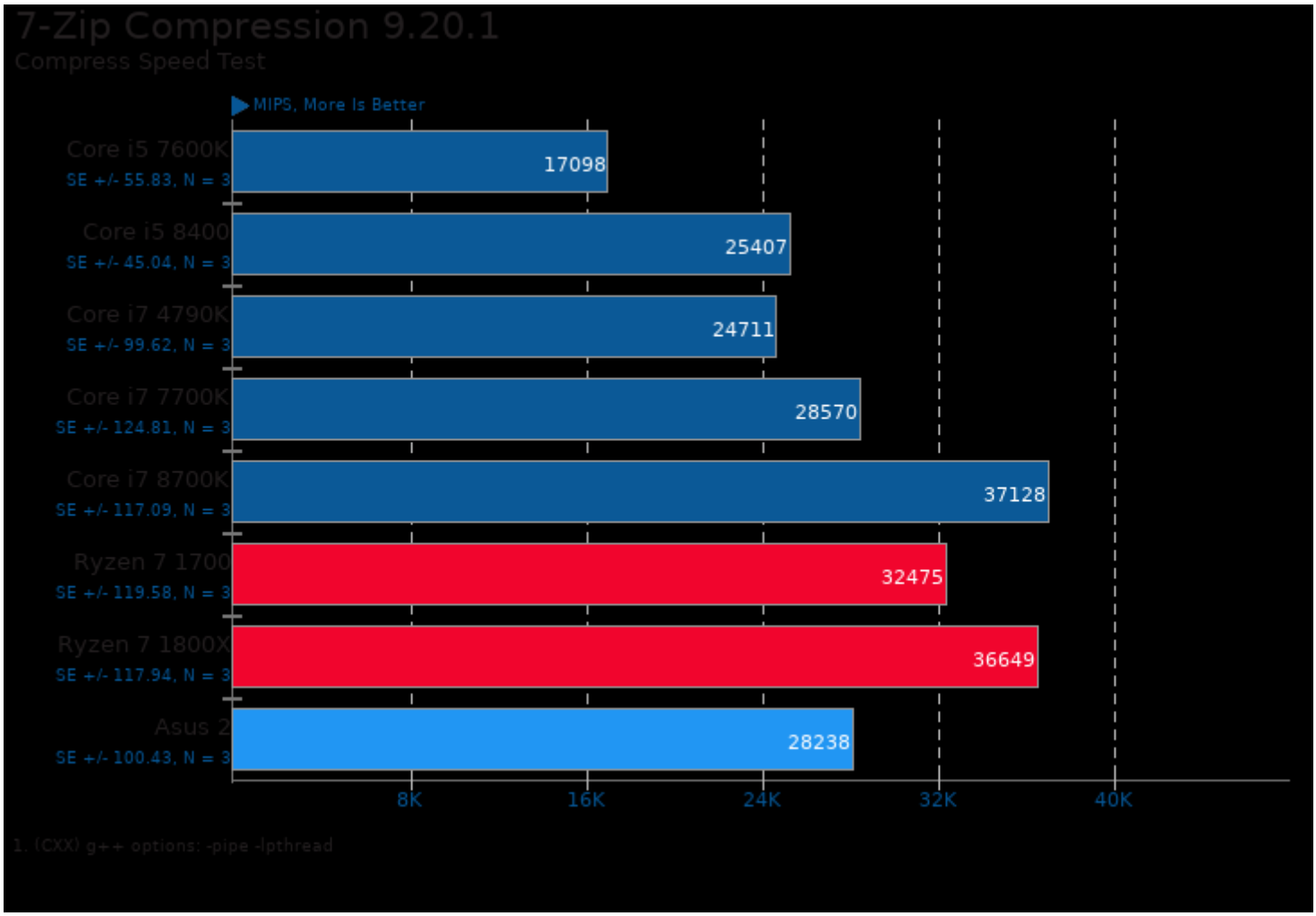

Darktable 2.2.5
Test: Server Room - Acceleration: CPU-only
Seconds, Fewer Is Better
Core i5 7600K
SE +/- 0.02, N = 3
11.35
Core i5 8400
SE +/- 0.00, N = 3
6.87
Core i7 4790K
SE +/- 0.00, N = 3
9.44
Core i7 7700K
SE +/- 0.00, N = 3
7.66
Core i7 8700K
SE +/- 0.01, N = 3
6.48
Ryzen 7 1700
SE +/- 0.03, N = 3
6.30
Ryzen 7 1800X
SE +/- 0.01, N = 3
5.65
3
6
9
12
15

# Intel Core i7 8770K Ubuntu Linux Benchmarks



# Intel Core i7 8770K Ubuntu Linux Benchmarks






*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 08:30.*