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Intel / AMD Large Ubuntu Linux CPU Benchmark Comparison

Intel Core i7-8665U testing with a LENOVO 20Q1SD2200 (N2JET92W 1.70 BIOS) and Intel WhiskeyLake-U GT2 [UHD 620] 3GB on Ubuntu 21.04 via the Phoronix Test Suite.

Automated Executive Summary

Core i9 7980XE had the most wins, coming in first place for 38% of the tests.

Based on the geometric mean of all complete results, the fastest (Core i7 8700K) was 6.778x the speed of the slowest (AMD E-350).

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

Rodinia (Test: OpenMP LavaMD) at 115.366x
OpenSSL (RSA 4096-bit Performance) at 74.791x
Timed Linux Kernel Compilation (Time To Compile) at 66.539x
asmFish (1024 Hash Memory, 26 Depth) at 63.712x
Stockfish (Total Time) at 61.311x
Rodinia (Test: OpenMP CFD Solver) at 57.423x
7-Zip Compression (Compress Speed Test) at 50.345x
m-queens (Time To Solve) at 46.457x
TTSIOD 3D Renderer (Phong Rendering With Soft-Shadow Mapping) at 44.241x

PolyBench-C (Test: Covariance Computation) at 38.408x.

Test Systems:

AMD E-350

Processor: AMD E-350 @ 1.60GHz (2 Cores), Motherboard: ASUS E35M1-M PRO (1602 BIOS), Chipset: AMD Family 14h Root Complex, Memory: 2048MB, Disk: 120GB ADATA SU700, Graphics: HIS AMD Radeon HD 6450/7450/8450 / R5 230 OEM 1024MB, Audio: Realtek ALC887-VD, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

AMD A6-7400K

Processor: AMD A6-7400K Radeon R5 6 Compute Cores 2C+4G @ 3.90GHz (1 Core / 2 Threads), Motherboard: ASRock FM2A58M-VG3+ R2.0 (P2.70 BIOS), Chipset: AMD Family 15h, Memory: 16384MB, Disk: 120GB ADATA SU700, Graphics: HIS AMD Radeon HD 6450/7450/8450 / R5 230 OEM 1024MB, Audio: Realtek ALC662 rev1, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

AMD A10-5800K

Processor: AMD A10-5800K APU @ 3.80GHz (2 Cores / 4 Threads), Motherboard: Gigabyte F2A68HM-H (FA BIOS), Chipset: AMD Family 15h, Memory: 4096MB, Disk: 120GB ADATA SU700, Graphics: HIS AMD Radeon HD 6450/7450/8450 / R5 230 OEM 1024MB, Audio: Realtek ALC887-VD, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

AMD A10-7800

Processor: AMD A10-7800 Radeon R7 12 Compute Cores 4C+8G @ 3.50GHz (2 Cores / 4 Threads), Motherboard: MSI A78M-E35 (MS-7721) v6.0 (V30.1 BIOS), Chipset: AMD Family 15h, Memory: 7168MB, Disk: 120GB ADATA SU700, Graphics: MSI AMD Radeon R7 1024MB, Audio: AMD Kaveri HDMI/DP, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

AMD A10-7870K

Processor: AMD A10-7870K Radeon R7 12 Compute Cores 4C+8G @ 3.90GHz (2 Cores / 4 Threads), Motherboard: ASUS A88XM-E (2001 BIOS), Chipset: AMD Family 15h, Memory: 15360MB, Disk: 250GB Samsung SSD 850,

Graphics: ASUS AMD Radeon R7 1024MB, Audio: AMD Kaveri HDMI/DP, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

AMD Athlon II X3 425

Processor: AMD Athlon II X3 425 @ 2.70GHz (3 Cores), Motherboard: ASRock 890FX Deluxe3 (P1.40 BIOS), Chipset: AMD RD890 PCI-e GFX Hydra part, Memory: 4096MB, Disk: 120GB ADATA SU700, Graphics: HIS AMD Radeon HD 6450/7450/8450 / R5 230 OEM 1024MB, Audio: VIA VT2020, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

AMD FX-8350

Processor: AMD FX-8350 Eight-Core @ 4.00GHz (4 Cores / 8 Threads), Motherboard: ASUS Crosshair V Formula (1703 BIOS), Chipset: AMD RD9x0/RX980, Memory: 8192MB, Disk: 120GB ADATA SU700, Graphics: HIS AMD Radeon HD 6450/7450/8450 / R5 230 OEM 1024MB, Audio: Realtek ALC889, Network: Intel 82583V Gigabit Connection

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Ryzen 5 2400G

Processor: AMD Ryzen 5 2400G @ 3.60GHz (4 Cores / 8 Threads), Motherboard: ASUS PRIME B350M-E (4011 BIOS), Chipset: AMD Device 15d0, Memory: 16384MB, Disk: Samsung SSD 950 PRO 256GB, Graphics: ASUS AMD Radeon Vega 8 Mobile 1024MB, Audio: AMD Device 15de, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Ryzen 5 2600

Processor: AMD Ryzen 5 2600 Six-Core @ 3.40GHz (6 Cores / 12 Threads), Motherboard: ASUS ROG CROSSHAIR VII HERO (WI-FI) (0509 BIOS), Chipset: AMD Family 17h, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + Samsung SSD 950 PRO 256GB, Graphics: AMD Radeon RX Vega 8192MB, Audio: AMD Device aaf8, Network: Intel I211 Gigabit Connection + Realtek Device b822

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Ryzen 5 2600X

Processor: AMD Ryzen 5 2600X Six-Core @ 3.60GHz (6 Cores / 12 Threads), Motherboard: ASUS ROG CROSSHAIR VII HERO (WI-FI) (0509 BIOS), Chipset: AMD Family 17h, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + Samsung SSD 950 PRO 256GB, Graphics: AMD Radeon RX Vega 8192MB, Audio: AMD Device aaf8, Network: Intel I211 Gigabit Connection + Realtek Device b822

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Ryzen 7 1700

Processor: AMD Ryzen 7 1700 Eight-Core @ 3.00GHz (8 Cores / 16 Threads), Motherboard: MSI B350 TOMAHAWK (MS-7A34) v1.0 (1.H0 BIOS), Chipset: AMD Family 17h, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + Samsung SSD 950 PRO 256GB, Graphics: AMD Radeon RX Vega 8192MB, Audio: AMD Device aaf8, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Ryzen 7 1800X

Processor: AMD Ryzen 7 1800X Eight-Core @ 3.60GHz (8 Cores / 16 Threads), Motherboard: ASUS ROG CROSSHAIR VII HERO (WI-FI) (0509 BIOS), Chipset: AMD Family 17h, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + Samsung SSD 950 PRO 256GB, Graphics: AMD Radeon RX Vega 8192MB, Audio: AMD Device aaf8, Network: Intel I211 Gigabit Connection + Realtek Device b822

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Ryzen 7 2700

Processor: AMD Ryzen 7 2700 Eight-Core @ 3.20GHz (8 Cores / 16 Threads), Motherboard: ASUS ROG CROSSHAIR VII HERO (WI-FI) (0509 BIOS), Chipset: AMD Family 17h, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + Samsung SSD 950 PRO 256GB, Graphics: AMD Radeon RX Vega 8192MB, Audio: AMD Device aaf8, Network: Intel I211 Gigabit Connection + Realtek Device b822

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Ryzen 7 2700X

Processor: AMD Ryzen 7 2700X Eight-Core @ 3.70GHz (8 Cores / 16 Threads), Motherboard: ASUS ROG CROSSHAIR VII HERO (WI-FI) (0509 BIOS), Chipset: AMD Family 17h, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + Samsung SSD 950 PRO 256GB, Graphics: AMD Radeon RX Vega 8192MB, Audio: AMD Device aaf8, Network: Intel I211 Gigabit Connection + Realtek Device b822

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Ryzen Threadripper 1950X

Processor: AMD Ryzen Threadripper 1950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: Gigabyte X399 AORUS Gaming 7 (F3g BIOS), Chipset: AMD Family 17h, Memory: 16384MB, Disk: 120GB Force MP500, Graphics: MSI AMD Radeon R7 370 / R9 270/370 OEM 4096MB, Audio: Realtek ALC1220, Network: Qualcomm Atheros Killer E2500 Gigabit + Intel Wireless 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Intel Core 2 Duo E8400

Processor: Intel Core 2 Duo E8400 @ 2.99GHz (2 Cores), Motherboard: Gigabyte EP45T-DS3R (F1 BIOS), Chipset: Intel 4 DRAM + ICH10R, Memory: 4096MB, Disk: 120GB ADATA SU700, Graphics: HIS AMD Radeon HD 6450/7450/8450 / R5 230 OEM 1024MB, Audio: Realtek ALC889A, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Pentium G3258

Processor: Intel Pentium G3258 @ 3.20GHz (2 Cores), Motherboard: Gigabyte H97M-D3H (F2 BIOS), Chipset: Intel 4th Gen Core DRAM, Memory: 8192MB, Disk: 250GB SAMSUNG HD253GJ, Graphics: Intel Haswell Desktop 1536MB (1100MHz), Audio: Intel Xeon E3-1200 v3/4th, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i3 2100

Processor: Intel Core i3-2100 @ 3.10GHz (2 Cores / 4 Threads), Motherboard: MSI H61M-P31/W8 (MS-7788) v1.0 (V3.6 BIOS), Chipset: Intel 2nd Generation Core Family DRAM, Memory: 4096MB, Disk: 120GB ADATA SU700, Graphics: HIS AMD Radeon HD 6450/7450/8450 / R5 230 OEM 1024MB, Audio: Realtek ALC887-VD, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i5 2400S

Processor: Intel Core i5-2400S @ 3.30GHz (4 Cores), Motherboard: ASRock Z68 Pro3 (P2.10 BIOS), Chipset: Intel 2nd Generation Core Family DRAM, Memory: 4096MB, Disk: 120GB ADATA SU700, Graphics: HIS AMD Radeon HD 6450/7450/8450 / R5 230 OEM 1024MB, Audio: Realtek ALC892, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i5 7600K

Processor: Intel Core i5-7600K @ 4.20GHz (4 Cores), Motherboard: Gigabyte Z270M-D3H-CF (F8d BIOS), Chipset: Intel Intel Kaby Lake + Z270, Memory: 8192MB, Disk: 250GB Samsung SSD 850, Graphics: Intel HD 630 (1150MHz), Audio: Realtek ALC892, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i5 8400

Processor: Intel Core i5-8400 @ 4.00GHz (6 Cores), Motherboard: MSI Z370M MORTAR (MS-7B54) v1.0 (1.20 BIOS), Chipset: Intel Device 3ec2, Memory: 16384MB, Disk: Samsung SSD 950 PRO 256GB, Graphics: Intel UHD 630 3072MB (1050MHz), Audio: Realtek ALC892, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i7 5960X

Processor: Intel Core i7-5960X @ 3.50GHz (8 Cores / 16 Threads), Motherboard: ASRock X99 Extreme3 (P3.50 BIOS), Chipset: Intel Xeon E7 v3/Xeon, Memory: 16384MB, Disk: 120GB INTEL SSDSC2BW12, Graphics: AMD FirePro V7900 2048MB, Audio: Realtek ALC1150, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i7 7740X

Processor: Intel Core i7-7740K @ 4.50GHz (4 Cores / 8 Threads), Motherboard: Gigabyte X299 AORUS Gaming-CF (F2d BIOS), Chipset: Intel Intel Kaby Lake, Memory: 8192MB, Disk: 120GB Force MP500, Graphics: MSI NVIDIA GP108 2048MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i7 870

Processor: Intel Core 870 @ 2.93GHz (4 Cores / 8 Threads), Motherboard: ECS P55H-A v1.0 (080016 BIOS), Chipset: Intel Core DMI, Memory: 8192MB, Disk: 120GB ADATA SU700, Graphics: HIS AMD Radeon HD 6450/7450/8450 / R5 230 OEM 1024MB, Audio: Realtek ALC1200, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i7 8700K

Processor: Intel Core i7-8700K @ 4.70GHz (6 Cores / 12 Threads), Motherboard: ASUS PRIME Z370-A (0607 BIOS), Chipset: Intel Device 3ec2, Memory: 16384MB, Disk: 525GB Crucial_CT525MX3 + Samsung SSD 950 PRO 256GB, Graphics: AMD Radeon RX Vega 8192MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i7 990X

Processor: Intel Core i7 990X @ 3.47GHz (6 Cores / 12 Threads), Motherboard: MSI X58M (MS-7593) v1.0 (V3.8 BIOS), Chipset: Intel 5520/5500/X58 + ICH10R, Memory: 12288MB, Disk: PNY CS1211 120GB, Graphics: Sapphire AMD Radeon HD 5000/6000/7350/8350 512MB, Audio: Realtek ALC889, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i9 7900X

Processor: Intel Core i7-7900X @ 4.50GHz (10 Cores / 20 Threads), Motherboard: ASRock X299 Extreme4 (P1.20 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 32768MB, Disk: 120GB Force MP500, Graphics: Zotac NVIDIA GeForce GT 610 1024MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Core i9 7980XE

Processor: Intel Core i9-7980XE @ 4.40GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A (1004 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 16384MB, Disk: 256GB INTEL SSDPEKKW256G8, Graphics: NV134 8192MB, Audio: Realtek ALC1220, Network: Intel Connection

OS: Ubuntu 18.04, Kernel: 4.17.0-999-generic (x86_64), Compiler: GCC 8.1.0, File-System: ext4

Willow6C

Willow16C

Processor: 16 x Intel Core (Haswell IBRS) (16 Cores), Motherboard: Red Hat KVM (0.5.1 BIOS), Memory: 32768MB, Disk: 3938GB, Graphics: qxldrmfb, Audio: QEMU Generic

OS: Clear Linux OS 29390, Kernel: 3.10.0-957.12.2.el7.x86_64 (x86_64), Compiler: GCC 9.1.1 20190512 gcc-9-branch@271104 + Clang 8.0.0 + LLVM 8.0.0, File-System: overlayfs, Screen Resolution: 1024x768, System Layer: container-other

Environment Notes:
CFFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl-sort-common-Wl--enable-new-dtags
FFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl--enable-new-dtags
CXXFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake-fvisibility-inlines-hidden-Wl--enable-new-dtags
CFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake
THEANO_FLAGS=floatX=float32 openmp=true gcc.cxxflags="-ftree-vectorize-mavx"
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Security Notes: KPTI + Load fences __user pointer sanitization + Full retpoline IBPB + SSB disabled via prctl and seccomp + PTE Inversion

Core i5 8500T

Processor: Intel Core i5-8500T @ 3.50GHz (6 Cores), Motherboard: Dell 03KWTV (1.2.22 BIOS), Memory: 8192MB, Disk: 240GB Western Digital WDS240G2G0A + 3001GB EZRZ-00Z5HB0, Graphics: inteldrmfb (1100MHz), Audio:

Realtek ALC3234, Monitor: SAMSUNG

OS: Clear Linux OS 29390, Kernel: 5.0.0-37-generic (x86_64), Compiler: GCC 9.1.1 20190512 gcc-9-branch@271104 + Clang 8.0.0 + LLVM 8.0.0, File-System: overlayfs, Screen Resolution: 1920x1080, System Layer: Docker

Environment Notes:
CFFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl-sort-common-Wl--enable-new-dtags
FFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl--enable-new-dtags
CXXFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake-fvisibility-inlines-hidden-Wl--enable-new-dtags
CFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake
THEANO_FLAGS=floatX=float32 openmp=true gcc.cxxflags="-ftree-vectorize-mavx"
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_pstate powersave
Security Notes: KPTI + usercopy/swapgs barriers and __user pointer sanitization + Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT disabled

Core i5 3470T

Processor: Intel Core i5-3470T @ 3.60GHz (2 Cores / 4 Threads), Motherboard: LENOVO MAHOBAY (9SKT63AUS BIOS), Memory: 4096MB, Disk: 120GB KINGSTON SV300S3 + 31GB Ultra Fit, Graphics: i915drmfb (1100MHz), Audio: Realtek ALC662 rev3, Monitor: SAMSUNG

OS: Clear Linux OS 29390, Kernel: 5.3.0-40-generic (x86_64), Compiler: GCC 9.1.1 20190512 gcc-9-branch@271104 + Clang 8.0.0 + LLVM 8.0.0, File-System: overlayfs, Screen Resolution: 1920x1080, System Layer: Docker

Environment Notes:
CFFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl
relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl-sort-common-Wl--enable-new-dtags
FFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl--enable-new-dtags
CXXFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake-fvisibility-inlines-hidden-Wl--enable-new-dtags
CFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake
THEANO_FLAGS=floatX=float32 openmp=true gcc.cxxflags="-ftree-vectorize-mavx"
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_pstate powersave
Security Notes: KPTI + usercopy/swapgs barriers and __user pointer sanitization + Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + SSB disabled via prctl and seccomp + PTE Inversion

i5 3470T 8GB RAM

Processor: Intel Core i5-3470T @ 3.60GHz (2 Cores / 4 Threads), Motherboard: LENOVO MAHOBAY (9SKT63AUS BIOS), Memory: 8192MB, Disk: 120GB KINGSTON SV300S3, Graphics: i915drmfb (1100MHz), Audio: Realtek ALC662 rev3, Monitor: SAMSUNG

OS: Clear Linux OS 29390, Kernel: 5.3.0-40-generic (x86_64), Compiler: GCC 9.1.1 20190512 gcc-9-branch@271104 +

Clang 8.0.0 + LLVM 8.0.0, File-System: overlayfs, Screen Resolution: 1920x1080, System Layer: Docker

Environment Notes:
CFFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl-sort-common-Wl--enable-new-dtags
FFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl--enable-new-dtags
CXXFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake-fvisibility-inlines-hidden-Wl--enable-new-dtags
CFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake THEANO_FLAGS=floatX=float32 openmp=true gcc.cxxflags="-ftree-vectorize-mavx"
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_pstate powersave
Security Notes: KPTI + usercopy/swapgs barriers and __user pointer sanitization + Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + SSB disabled via prctl and seccomp + PTE Inversion

i5 3470T 10GB

Processor: Intel Core i5-3470T @ 3.60GHz (2 Cores / 4 Threads), Motherboard: LENOVO MAHOBAY (9SKT63AUS BIOS), Memory: 10240MB, Disk: 120GB KINGSTON SV300S3, Graphics: i915drmfb (1100MHz), Audio: Realtek ALC662 rev3, Monitor: SAMSUNG

OS: Clear Linux OS 29390, Kernel: 5.3.0-42-generic (x86_64), Compiler: GCC 9.1.1 20190512 gcc-9-branch@271104 + Clang 8.0.0 + LLVM 8.0.0, File-System: overlayfs, Screen Resolution: 1920x1080, System Layer: Docker

Environment Notes:
CFFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl-sort-common-Wl--enable-new-dtags
FFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl--enable-new-dtags
CXXFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake-fvisibility-inlines-hidden-Wl--enable-new-dtags
CFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake THEANO_FLAGS=floatX=float32 openmp=true gcc.cxxflags="-ftree-vectorize-mavx"
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: KPTI + usercopy/swapgs barriers and __user pointer sanitization + Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + SSB disabled via prctl and seccomp + PTE Inversion

2 x E5-2667v3

Processor: Intel Core (4 Cores / 32 Threads), Motherboard: QEMU Standard PC (Q35 + ICH9 2009) (rel-1.12.0-0-ga698c89-rebuilt.opensuse.org BIOS), Chipset: Intel 82G33/G31/P35/P31 + ICH9, Memory: 18GB, Disk: 59GB, Graphics: llvmpipe 16GB, Audio: QEMU Generic, Network: Red Hat Virtio device

OS: Ubuntu 20.04, Kernel: 5.4.0-18-generic (x86_64), Desktop: GNOME Shell 3.36.0, Display Server: X Server 1.20.7, Display Driver: modesetting 1.20.7, OpenGL: 3.3 Mesa 20.0.2 (LLVM 9.0.1 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080, System Layer: KVM

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: CPU Microcode: 0x1
Security Notes: itlb_multihit: KVM: Vulnerable + l1tf: Mitigation of PTE Inversion + mds: Mitigation of Clear buffers; SMT Host state unknown + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + tsx_async_abort: Not affected

i5 6500 8GB RAM

Processor: Intel Core i5-6500 @ 3.60GHz (4 Cores), Motherboard: HP 8056 (N21 Ver. 02.21 BIOS), Memory: 8192MB, Disk: 120GB KINGSTON SV300S3, Graphics: i915drmfb (1050MHz), Audio: Realtek ALC221, Monitor: SAMSUNG

OS: Clear Linux OS 29390, Kernel: 5.3.0-45-generic (x86_64), Compiler: GCC 9.1.1 20190512 gcc-9-branch@271104 + Clang 8.0.0 + LLVM 8.0.0, File-System: overlayfs, Screen Resolution: 1920x1080, System Layer: Docker

Environment Notes:
CFFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl-sort-common-Wl--enable-new-dtags
FFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl--enable-new-dtags
CXXFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake-fvisibility-inlines-hidden-Wl--enable-new-dtags
CFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake
THEANO_FLAGS=floatX=float32 openmp=true gcc.cxxflags="-ftree-vectorize-mavx"
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_pstate performance
Security Notes: KPTI + usercopy/swapgs barriers and __user pointer sanitization + Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + SSB disabled via prctl and seccomp + PTE Inversion

i5 6500 10GB RAM

Processor: Intel Core i5-6500 @ 3.60GHz (4 Cores), Motherboard: HP 8056 (N21 Ver. 02.21 BIOS), Memory: 10240MB, Disk: 120GB KINGSTON SV300S3, Graphics: i915drmfb (1050MHz), Audio: Realtek ALC221, Monitor: SAMSUNG

OS: Clear Linux OS 29390, Kernel: 5.3.0-45-generic (x86_64), Compiler: GCC 9.1.1 20190512 gcc-9-branch@271104 + Clang 8.0.0 + LLVM 8.0.0, File-System: overlayfs, Screen Resolution: 1920x1080, System Layer: Docker

Environment Notes:
CFFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl now-Wl-z-Wl
relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl-sort-common-Wl--enable-new-dtags
FFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-malign-data=abi-fno-semantic-interposition-ftree-vectorize-ftree-loop-vectorize-Wl--enable-new-dtags
CXXFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake-fvisibility-inlines-hidden-Wl--enable-new-dtags
CFLAGS=-g-O3-feliminate-unused-debug-types-pipe-Wall-Wp-D_FORTIFY_SOURCE=2-fexceptions-fstack-protector--param=ssp-buffer-size=32-Wformat-Wformat-security-m64-fasynchronous-unwind-tables-Wp-D_REENTRANT-ftree-loop-distribute-patterns-Wl-z-Wl
relro-fno-semantic-interposition-ffat-lto-objects-fno-signed-zeros-fno-trapping-math-fassociative-math-Wl-sort-common-Wl--enable-new-dtags-mtune=skylake
THEANO_FLAGS=floatX=float32 openmp=true gcc.cxxflags="-ftree-vectorize-mavx"
Compiler Notes: --build=x86_64-generic-linux --disable-libmpx --disable-libunwind-exceptions --disable-multiarch --disable-vtable-verify --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-clocale=gnu --enable-default-pie --enable-gnu-indirect-function --enable-languages=c,c++,fortran,go --enable-ld=default --enable-libstdcxx-pch --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --exec-prefix=/usr --includedir=/usr/include --target=x86_64-generic-linux --with-arch=westmere --with-gcc-major-version-only --with-glibc-version=2.19 --with-gnu-ld --with-isl --with-ppl=yes --with-tune=haswell
Processor Notes: Scaling Governor: intel_pstate powersave
Security Notes: KPTI + usercopy/swapgs barriers and __user pointer sanitization + Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + SSB disabled via prctl and seccomp + PTE Inversion

LenovoM700Tiny

Processor: Intel Core i3-6100T @ 3.20GHz (2 Cores / 4 Threads), Motherboard: LENOVO SKYBAY (FWKT53A BIOS), Memory: 4096MB, Disk: 240GB Western Digital WDS240G2G0A + 3001GB EZRZ-00Z5HB0, Graphics: i915drmfb (950MHz), Audio: Realtek ALC233, Monitor: SAMSUNG

OS: Ubuntu 20.04.1 LTS, Kernel: 5.8.1-050801-generic (x86_64), Display Driver: i915drmfb, Compiler: GCC 9.3.0, File-System: overlayfs, Screen Resolution: 1920x1080, System Layer: Docker

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xe2
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Core i5 7500T

Processor: Intel Core i5-7500T @ 3.30GHz (4 Cores), Motherboard: HP 82A5 (P23 Ver. 02.04 BIOS), Chipset: Intel Xeon E3-1200 v6/7th + H270, Memory: 16GB, Disk: 256GB Western Digital WDS256G1X0C-00ENX0, Graphics: Intel HD 630 3GB (1100MHz), Audio: Conexant CX20632, Monitor: S243HL, Network: Realtek RTL8111/8168/8411

OS: Ubuntu 20.04, Kernel: 5.10.0-1033-oem (x86_64), Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xea - Thermald 1.9.1
Security Notes: itlb_multihit: KVM: Mitigation of VMX unsupported + l1tf: Mitigation of PTE Inversion + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Mitigation of Clear buffers; SMT disabled

Core i3 7100U

Processor: Intel Core i3-7100U @ 2.40GHz (2 Cores / 4 Threads), Motherboard: LENOVO 20J2S07700 (R0JET44W 1.29 BIOS), Chipset: Intel Xeon E3-1200 v6/7th, Memory: 12GB, Disk: 256GB Western Digital WDS256G1X0C-00ENX0, Graphics: Intel HD 620 3GB (1000MHz), Audio: Realtek ALC298, Monitor: ASUS VN247, Network: Intel I219-V + Intel 8265 / 8275

OS: Ubuntu 20.04, Kernel: 5.10.0-1033-oem (x86_64), Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3286x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0xea - Thermald 1.9.1
Security Notes: itlb_multihit: KVM: Mitigation of VMX unsupported + l1tf: Mitigation of PTE Inversion + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

MacMini2011-2415M

Processor: Intel Core i5-2415M @ 2.30GHz (2 Cores / 4 Threads), Motherboard: Apple Mac mini, Chipset: Intel 6, Memory: 2 x 8 GB DDR3-1333MHz, Disk: 240 06GB OCZ-AGILITY3, Graphics: Intel HD 3000 512MB, Monitor: HP 27er

OS: macOS 10.13.6, Kernel: 17.7.0 (x86_64), Compiler: Apple LLVM 10.0.0 (clang-1000.10.44.4) + GCC 4.2.1, File-System: APFS, Screen Resolution: 1920x1080

Environment Notes: XPC_FLAGS=0x0
Processor Notes: CPU Microcode: 47

Core i5 8250U

Processor: Intel Core i5-8250U @ 1.60GHz (4 Cores / 8 Threads), Motherboard: KBL Charmander_KL (V1.10 BIOS), Chipset: Intel Xeon E3-1200 v6/7th, Memory: 12GB, Disk: 500GB KINGSTON SA2000M8500G, Graphics: NVIDIA GeForce MX150 2GB (1480/3003MHz), Audio: Realtek ALC255, Monitor: LM156LF1L03, Network: Realtek RTL8111/8168/8411 + Qualcomm Atheros QCA9377 802.11ac

OS: Ubuntu 20.04, Kernel: 5.10.0-1044-oem (x86_64), Display Server: X Server 1.20.11, Display Driver: NVIDIA 470.57.02, OpenGL: 4.6.0, OpenCL: OpenCL 3.0 CUDA 11.4.94, Vulkan: 1.2.175, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xea - Thermald 1.9.1
OpenCL Notes: GPU Compute Cores: 384
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Core i3 8130U

Processor: Intel Core i3-8130U @ 3.40GHz (2 Cores / 4 Threads), Motherboard: LENOVO 20LTS28S00 (R0QET41W 1.18 BIOS), Chipset: Intel Xeon E3-1200 v6/7th, Memory: 12GB, Disk: 120GB KINGSTON SV300S3, Graphics: Intel UHD 620 3GB (1000MHz), Audio: Realtek ALC257, Monitor: HP 27er, Network: Intel I219-V + Intel 8265 / 8275

OS: Ubuntu 20.04, Kernel: 5.11.0-27-generic (x86_64), Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.3, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3286x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xea
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Core i5 8265U

Processor: Intel Core i5-8265U @ 3.90GHz (4 Cores / 8 Threads), Motherboard: LENOVO 20N9S19A00 (R0YET28W 1.11 BIOS), Chipset: Intel Cannon Point-LP, Memory: 16GB, Disk: 256GB Western Digital WDS256G1X0C-00ENX0, Graphics: Intel UHD 620 3GB (1100MHz), Audio: Conexant CX8070, Monitor: HP 27er, Network: Realtek

RTL8111/8168/8411 + Intel-AC 9260

OS: Ubuntu 20.04, Kernel: 5.10.0-1044-oem (x86_64), Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.3, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xea
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Ryzen 3 5300U 8GB

Processor: AMD Ryzen 3 5300U @ 2.60GHz (4 Cores / 8 Threads), Motherboard: LENOVO LNVNB161216 (GQCN19WWV1.05 BIOS), Chipset: AMD Renoir Root Complex, Memory: 6GB, Disk: 256GB Western Digital WDS256G1X0C-00ENX0, Graphics: AMD RENOIR 2GB (1500/400MHz), Audio: AMD Device 1637, Monitor: HP 27er, Network: Realtek RTL8111/8168/8411 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.10.0-1045-oem (x86_64), Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.3 (LLVM 12.0.0), Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq powersave (Boost: Enabled) - CPU Microcode: 0x8608103
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Ryzen 3 5300U 16GB

Processor: AMD Ryzen 3 5300U @ 2.60GHz (4 Cores / 8 Threads), Motherboard: LENOVO LNVNB161216 (GQCN19WWV1.05 BIOS), Chipset: AMD Renoir Root Complex, Memory: 14GB, Disk: 256GB Western Digital WDS256G1X0C-00ENX0, Graphics: AMD RENOIR 2GB (1500/400MHz), Audio: AMD Device 1637, Monitor: HP 27er, Network: Realtek RTL8111/8168/8411 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.10.0-1045-oem (x86_64), Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.3 (LLVM 12.0.0), Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0x8608103
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Acer CB 315 - A4 9120C

Processor: 15/70 (2 Cores), Motherboard: ChromiumOS crosvm, Memory: 3072MB, Disk: 31GB

OS: Debian GNU/Linux 10, Kernel: 5.4.131-16049-gc688e114d34e (x86_64), Display Server: Wayland, Compiler: GCC 8.3.0, File-System: btrfs, Screen Resolution: 1920x1080, System Layer: lxc

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --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: CPU Microcode: 0x1000065
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Lenovo Duet Helio P60T

Processor: ARMv8 Cortex-A73 (8 Cores), Memory: 3072MB, Disk: 47GB

OS: Debian GNU/Linux 10, Kernel: 5.4.131-16049-gc688e114d34e (aarch64), Display Server: Wayland, Compiler: GCC 8.3.0, File-System: btrfs, System Layer: lxc

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=aarch64-linux-gnu --disable-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Not affected + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Mitigation of Branch predictor hardening + srbds: Not affected + tsx_async_abort: Not affected

Core i7 8665U

Processor: Intel Core i7-8665U @ 4.80GHz (4 Cores / 8 Threads), Motherboard: LENOVO 20Q1SD2200 (N2JET92W 1.70 BIOS), Chipset: Intel Cannon Point-LP, Memory: 16GB, Disk: 256GB Micron_1100_MTFD, Graphics: Intel WhiskeyLake-U GT2 [UHD 620] 3GB (1150MHz), Audio: Realtek ALC257, Monitor: HP 27er, Network: Intel I219-LM + Intel Cannon Point-LP CNVi

OS: Ubuntu 21.04, Kernel: 5.11.0-37-generic (x86_64), Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.0.3, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 3840x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xea
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Mitigation of TSX disabled + tsx_async_abort: Mitigation of TSX disabled

	A	A	A	A	A	A	A	R	R	R	R	R	R	R	R	I	P	C	C	C	C	C	C	C	C	C	C	C	W	W	C	C	i	i	2	i	i	L	C	C	M	C	C	C	R	R	A	L
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	D	D	D	D	D	D	D	z	z	z	z	z	z	z	z	t	n	r	r	r	r	r	r	r	r	r	r	r	l	l	r	r	3	3	E	6	6	n	r	r	c	r	r	r	z	z	e	n
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	5	7	-	-	-	l	8	4	6	6	7	8	7	7	r	r	G	1	4	6	4	9	7	7	7	9	9	9		C	5	4	8	1	6	G	0	7	5	1	2	2	1	2	3	3	3	u
	0	4	5	7	7	o	3	0	0	0	0	0	0	0	e	e	3	0	0	0	0	6	4	0	0	0	0	8			0	7	G	0	7	B	G	0	0	0	0	5	3	6	0	0	1	e
		0	8	8	8	n	5	0	0	0	0	0	0	0	a	2	2	0	0	0	0	0	0		0	X	0	0			0	0	B	G	v		B	0	0	0	1	0	0	5	0	0	5	t
		0	0	0	7	ll	0	G		X		X		X	d	D	5		S	K		X	X		K		X	X			T	T		B	3	R		T	T	U	1	U	U	U	U	U	-	H
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p		8	8	0	1	4	2	9	1	3	3	7	7	0	3	5	8	5	0	7	7	7	9	6	0	5	1	3	9	7	0	3	0	0	7	3	3	5	3	3	5	5	0	8	4	6	8	5
Co		4	5	1	6	9	4	1	3	5	7	5	2	3	8	5	7	9	6	4	8	2	6	4	8	2	8	3	1	3	3	4	5	1	8	6	5	0	6	6	0	5	6	3	8	6	5	1
mpr		4	9	8	4	6	0	8	1	1	5	1	6	7	5	5	5	4	0	3	3	0	2	9	7	5	9	9	7	0	6	1	9	2	3	0	8	3	4	8	3	0	6	1	3	4	5	1
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		%	%	%	7	%	9	5	3	8	4	7	%	3	9	%	%		6	7	1	4	2	6	7	4	8		3	5	1		%	4	4	7	4	%	1	%	%	%	2	1	8	3	%	
					%		%	%	%	%	%	%		%	%				%	%	%	%	%	%	%	%	%		%	%	%			%	%	%	%		%				%	%	%	%		
Stan		0	3	1	0	0	0	0	0	0	0	0	1	0	0	0	1		0	0	0	0	2	1	1	1	0	0	1	0	0	1	2	1	0	0	0	2	0	0	4	1	2	2	2	0	3	1
dard		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.		.	.	.	.	.	.	%	.	.	.	.	.	.	%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Devi		2	5	4	9	7	5	7	3	6	5	1	2	5	3	1	6		1	2	2	9	3	8		7	4	1	2	9	6		4	3	7	3	7	4	2	5	9	2	5	2	4	3	9	9
ation		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%	%	%	%		%	%	%	%	%	%		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

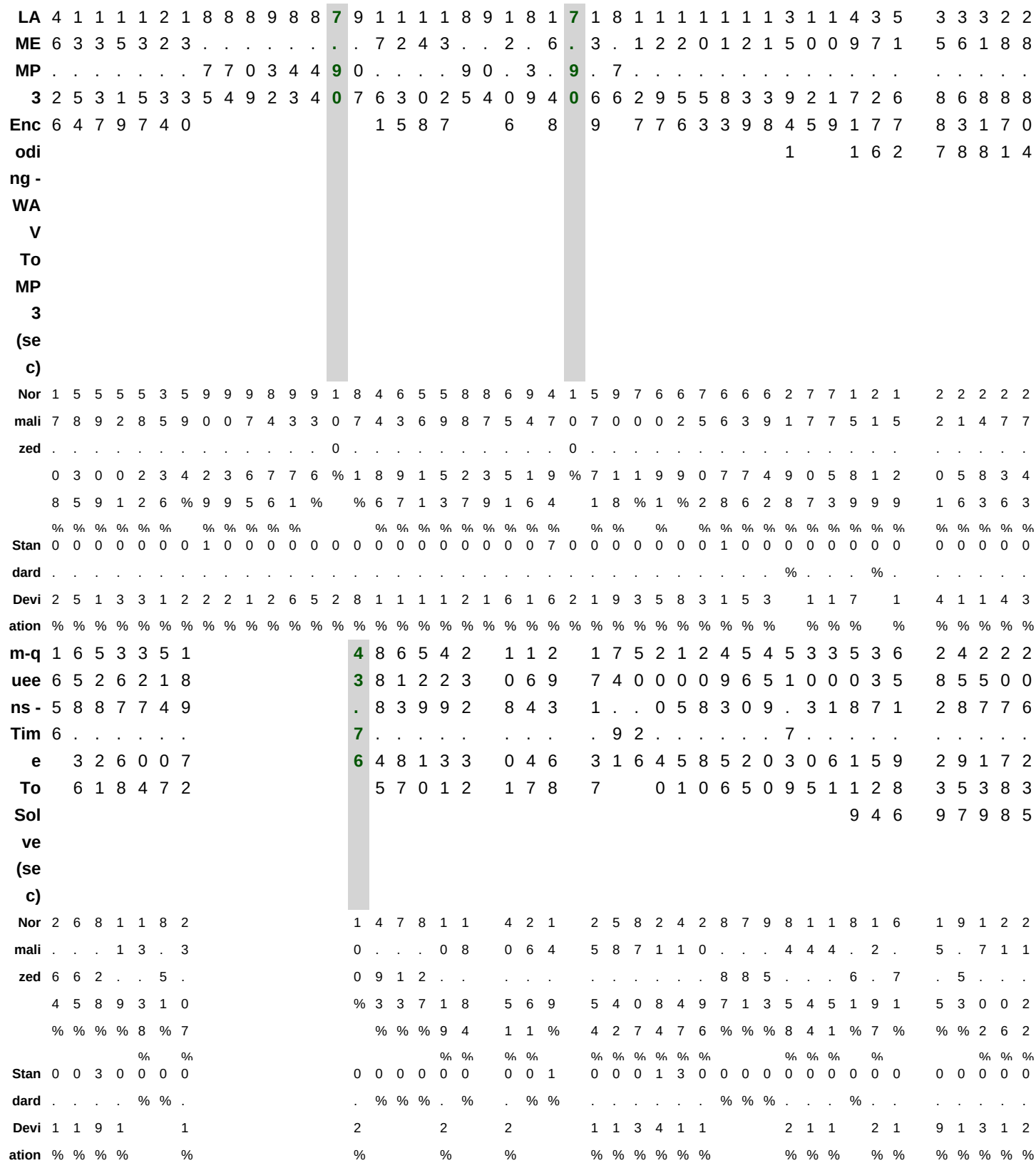
AOBench 2048 x 2048 - Total Time (sec)	256.20	72.53	67.62	80.87	72.57	112.62	66.91	42.12	42.12	39.19	44.38	40.44	41.00	38.19	40.19	81.53
Normalized	13.28%	46.9%	50.31%	42.07%	46.88%	30.21%	50.84%	80.77%	80.77%	86.81%	76.66%	84.12%	82.98%	89.08%	84.65%	41.73%
Standard Deviation	0.8%	0.1%	0.7%	0.1%	0.4%	0.1%	0%	0.7%	0.8%	0.2%	0.5%	0.8%	0.6%	0.3%	0.7%	0.7%
asmFish - 1.H.M.2.D (Nodes/s)	1108041	2849304	3706439	5458760	6190767	3787513	11736634	12449175	18328309	20204470	21061855	23946265	22677693	25792992	42412948	3259778
Normalized	2.02%	5.2%	6.77%	9.96%	11.3%	6.91%	21.42%	22.72%	33.45%	36.88%	38.44%	43.71%	41.39%	47.08%	77.41%	5.95%
Standard Deviation	1.6%	2.1%	1.5%	2.4%	1.5%	2%	1.6%	1%	1.3%	2.4%	0.9%	2.1%	1.9%	1.7%	0.4%	1.7%

AOBench 2048 x 2048 - Total Time (sec)	50.65	58.42	55.56	35.72	39.19	43.67	34.05	68.13	34.02	59.03	34.19	58.07	43.88	42.51	37.85	52.22
Normalized	67.17%	58.23%	61.23%	95.24%	86.81%	77.9%	99.91%	49.93%	100%	57.63%	99.5%	58.58%	77.53%	80.03%	89.88%	65.15%
Standard Deviation	0.1%	0.2%	0.3%	0.1%	0.4%	2.1%	0.9%	0.9%	0.5%	0.2%	0.7%	0.8%	0.6%	0.7%	0.3%	0.6%
asmFish - 1.H.M.2.D (Nodes/s)	3777194	4761682	6626047	10388221	15916013	21985123	16079897	9030922	22738391	15898292	33663064	54787513	10384033	20727985	12550297	4535467
Normalized	6.89%	8.69%	12.09%	18.96%	29.05%	40.13%	29.35%	16.48%	41.5%	29.02%	61.44%	100%	18.95%	37.83%	22.91%	8.28%
Standard Deviation	0.6%	1.3%	0.3%	0.9%	0.9%	0.3%	1.9%	0.9%	0.3%	1.7%	1.1%	1.4%	1.5%	1.7%	1.1%	1.5%

AOBench 2048 x 2048 - Total Time (sec)	54.03	50.25	39.662	37.00	36.67	57.106	42.734	59.436	55.159	41.575	42.509	36.690	35.000	35.080	144.560	103.246
Normalized	62.97%	67.7%	85.77%	91.95%	92.77%	59.57%	79.61%	57.24%	61.68%	81.83%	80.03%	92.72%	97.2%	96.98%	23.53%	32.95%
Standard Deviation	0.1%	0.1%	0.3%	0.3%	0.4%	0.3%	0%	0.2%	0.1%	0.3%	0.3%	0.1%	0.1%	0.2%	1.7%	0.1%
asmFish - 1.H.M.2.D (Nodes/s)	3875759	4945656	40303759	8495300	8626610	4432795	7983701	4041270		8556762	5138357	9240916	9513452	9877438	859927	
Normalized	7.07%	9.03%	73.56%	15.51%	15.75%	8.09%	14.57%	7.38%		15.62%	9.38%	16.87%	17.36%	18.03%	1.57%	
Standard Deviation	2.3%	0.7%	0.2%	2%	0.5%	0.6%	1.6%	1.6%		1.3%	2.4%	0.5%	0.5%	0.9%	0.8%	

Fho	3	8	9	8	9	7	1	1	1	1	1	1	1	1	1	7	9	9	1	1	1	1	1	8	1	9	1	1	9	9	1	1	9	1	1	1	1	8	1	7	7	1	1	1	1	1	3	3
urst	3	7	6	0	2	0	0	2	3	3	1	3	3	4	1	9	8	2	0	3	4	2	5	9	6	6	4	4	4	7	1	0	8	0	0	1	1	3	0	9	6	0	0	1	0	1	8	7
one	7	2	1	8	1	6	2	7	0	8	7	0	3	0	9	4	3	0	2	6	3	0	0	1	1	2	4	7	3	6	6	4	6	6	2	7	8	9	7	5	2	2	3	3	9	1	6	1
s -	3	7	4	7	4	1	4	9	8	3	9	5	4	5	2	0	9	3	7	1	6	6	9	2	3	1	0	0	0	8	9	1	8	3	6	2	6	2	1	1	9	4	1	5	9	8	4	0
C.C							5	3	3	6	6	1	2	3	6				4	9	6	8	2		0		8	1			5	0		3	1	8	2		8			2	2	3	4	4		
.4.S																																																
(Kp																																																
os /																																																
sec																																																
Nor	2	5	5	5	5	4	6	7	8	8	7	8	8	8	7	4	6	5	6	8	8	7	9	5	1	5	8	9	5	6	7	6	6	6	6	7	7	5	6	4	4	6	6	7	6	6	2	2
mali	0	4	9	0	7	3	3	9	1	5	3	0	2	7	3	9	1	7	3	4	9	4	3	5	0	9	9	1	8	0	2	4	1	5	3	2	3	2	6	9	7	3	3	0	8	9	3	3
zed	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	%	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	%
	9	1	6	1	1	7	5	3	1	7	1	9	7	1	9	2		0	6	4	0	8	5	2	%	6	3	1	4	5	5	5	1	9	6	7	5	0	4	2	2	5	9	3	1	3	9	
	1	%	%	4	2	8	2	1	1	8	3	1	2	2	4	3		6	9	3	6	2	6	5		5	2	4	6	6	%	4	8	2	1	1	4	3	4	9	9	%	3	9	6	4	6	
	%			%	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%	%	%	%	%		%	%	%	%	%		%	%	%	%	%	%	%	%	%	%		%	%	%	%	%	
Stan	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
dard	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	%	.	.	.	.	.	.	%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Devi	1	6	2	1	2	1	1	5	2	3	2	4	2	5	6	2		4	2	1	8	2	1		4	1	1	1	5	3	2	5	3	1	5	2	1	4	2	2	3	2	3	2	1	1	4	5
ation	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%	%	%	%		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
FL	9	1	1	1	1	2	1	1	1	9	1	1	1	9	9	2	1	1	1	8	8	1	7	1	7	1	8	9	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	9	8	8	3	7
AC	4	7	6	8	6	5	6	0	0	.	1	0	0	.	.	7	4	5	4	.	.	3	.	9	.	6	.	.	2	2	1	5	5	4	3	2	2	3	1	5	0	1	2	.	.	.	7	7
Au	.	.	.	.	.	.	.	.	.	7	.	.	.	4	8	.	.	.	.	5	5	.	8	.	4	.	5	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	9	9	.	.
dio	3	0	0	6	8	6	0	4	4	2	1	0	1	5	5	4	3	7	8	2	3	0	0	0	4	0	2	8	5	5	3	0	8	5	0	1	1	0	6	8	0	0	6	8	9	0	0	4
Enc	6	1	7	9	8	0	3	7	0		3	2	1			8	9	3	6			6		4		2			6	4	3	0	0	3	5	3	3	0	5	6	3	4	2	9	0	7	8	0
odi																																			5			7	5	3	1	5	7				3	4
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Nor	7	4	4	3	4	2	4	7	7	7	6	7	7	7	7	2	5	4	5	8	8	5	9	3	1	4	8	7	5	5	6	4	4	5	5	6	6	5	6	4	3	6	5	7	8	8	2	9
mali	.	3	6	9	4	9	6	1	1	6	6	4	3	8	5	7	1	7	0	7	7	6	5	9	0	6	7	5	9	9	5	9	7	1	6	1	1	7	3	6	7	7	8	5	2	3	0	.
zed	8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
	8	7	3	8	0	0	4	0	5	5	8	2	5	7	5	0	7	3	0	3	2	9	3	0	%	4	3	3	2	3	6	6	0	2	9	3	3	2	8	9	1	3	9	2	7	5	0	1
	%	4	%	1	8	6	1	6	4	4	5	5	9	3	3	7	%	%	7	2	2	7	8	8		4	2	%	4	3	7	%	9	%	9	4	4	%	4	%	4	6	2	4	6	3	6	%
		%		%	%	%	%	%	%	%	%	%	%	%	%	%			%	%	%	%	%	%		%	%		%	%	%		%		%	%	%		%		%	%	%	%	%	%	%	
Stan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	6	0	0	0	0	1	1	2	1	2	1	1	2	1	0	0	1	0	0	1	0	0	0	1	0
dard	%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Devi		4	4	5	7	2	3	4	1	2	5	4	4	4	2	3	2	6	7	6	3	9	5		3	7	8	5	2	8	4	4	6	2	4	5	6	6	7	6	3	1	3	3	8	4	6	2
ation		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

Intel / AMD Large Ubuntu Linux CPU Benchmark Comparison



OpenSSL - R.4. b.P (Signs/sec)	62.70	170.03	266.55	300.43	338.53	232.80	705.73	812.17	1164	1300	1382	1595	1473	1725	3000	125.80	286.00	235.47	359.20	1147	1645	1203	1367	305.07	1980	526.20	3037	4689	794.37	1392	1160	254.00	221.10	273.27		913.60	915.27										72.7	
Normalized	1.34%	3.63%	5.68%	6.41%	7.22%	4.96%	15.05%	17.32%	24.83%	27.72%	29.46%	34.01%	31.41%	36.79%	63.98%	2.68%	6.1%	5.02%	7.66%	24.46%	35.07%	25.65%	29.14%	6.51%	42.22%	11.22%	64.76%	100%	16.94%	29.68%	24.75%	5.42%	4.71%	5.83%		19.48%	19.52%										1.55%	
Standard Deviation	0.3%	1.3%	10.1%	1.1%	1.2%	0.1%	0.1%	0.2%	0%	0.3%	0%	0%	0.3%	0%	0.1%	0.1%	0.9%	0%	0%	2.3%	2.7%	0.1%	0.2%	1.1%	0%	0%	0.5%	0.3%	0.5%	14.2%	1.6%	0.3%	0.2%	0.1%		0.7%	1.1%										2.3%	

PolyBench-C - 3.M.M (sec)	62.30	9.42	8.97	10.21	8.99	35.49	8.50								3.93	15.05	13.60	21.49	20.20	3.72		10.59	3.03	22.28		20.02		3.18	21.30	23.32	3.77	13.33	14.09	13.01	19.303	4.13	4.12	6.243	4.482	6.545	25.790	5.695	5.085	4.221	4.901	3.473	116.163	33.945
Normalized	4.86%	32.17%	33.78%	29.68%	33.7%	8.54%	35.65%								77.1%	20.13%	22.28%	14.1%	15%	81.45%		28.61%	100%	13.6%		15.13%		95.28%	14.23%	12.99%	80.37%	22.73%	21.5%	23.29%	15.7%	73.37%	73.54%	48.53%	67.6%	46.29%	11.75%	53.2%	59.59%	71.78%	61.82%	87.24%	2.61%	8.93%
Standard Deviation	0%	0.6%	0.8%	0.2%	0.3%	0.3%	1.7%								0.4%	0.1%	3%	0%	0.1%	2.5%		0.8%	0.7%	0%		0.1%		3.3%	21.7%	1.3%	0.5%	1%	0.6%	0.5%	1.4%	0.9%	0.9%	0.6%	2.3%	0.4%	0.1%	2.2%	0.3%	0.7%	1.4%	0.7%	1.6%	1.7%

Pol 7 7 7 8 8 2 8 4 7 1 1 1 5 1 5 1 1 4 5 2 3 3 3 3 2 2 2 8 6 9 1 6 6 5 3 2 6 2
yBe 7 . . . . 5 . . . 3 4 3 . 2 . 3 2 . . 9 1 . . . 9 . . . . . 7 . . . . . 9 7
nch . 7 3 6 2 . 4 2 3 . . . 3 . 0 . . 7 7 . . 3 5 2 . 0 0 5 9 6 . 8 8 9 0 7 . .
-C - 0 4 4 3 3 4 1 2 0 1 0 2 8 2 1 1 1 4 0 4 5 5 6 3 9 6 6 5 6 0 1 9 3 2 3 0 3 2
C.C 8 8 4 3 0 1 8 0 7 5 6 3 1 6 6 0 2 5 6 7 4 5
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c)

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mali . 6 8 3 5 . 4 8 8 5 4 5 8 6 1 5 7 3 6 . . 1 7 3 . 0 0 4 9 1 2 9 0 4 7 6 . .
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Stan 1 0 0 0 1 0 1 0 0 1 0 0 0 1 0 0 0 0 0 7 1 9 1 9 0 0 0 0 0 0 0 0 0 0 0 0 2 2
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-C - 2 5 6 5 0 4 2 2 0 0 0 1 9 2 9 1 0 3 1 7 6 1 2 4 4 5 6 6 9 4 6 1 9 4 3 4 3 1 7
C.C 0 7 8 3 8 1 9 9 9 8 9 3 6 8 6 9 0 6 0 1 2 2
(se 8 3 3 3
c)

Nor 2 2 2 2 2 7 2 4 2 1 1 1 3 1 4 1 1 4 3 6 6 1 5 5 6 6 9 9 2 2 2 1 2 2 3 6 7 2 7
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1 1 4 % % 6 3 3 7 3 5 9 6 8 5 3 9 % % % 2 8 4 % 7 7 9 4 1 1 3 9 6 2 % % %
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dard . . . . % . 2 . % . . . . . . 1 . . . . % . 0 . . . . % . . % .
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Intel / AMD Large Ubuntu Linux CPU Benchmark Comparison

Rodinia - OpenMP CFD Solver (sec)

6 2 1 1 1 2 7 4 3 3 3 2 2 2 1 2 1 1 1 5 3 3 3 9 2 6 1 1 6 5 5 1 1 1 2 7 6 1 7 1 7 1 6 9 6 6 2
8 4 3 3 1 3 0 5 2 1 4 8 9 7 3 0 5 5 1 9 5 3 9 1 9 3 8 1 2 0 3 4 6 4 3 0 9 4 2 3 1 0 0 8 2 1 3
5 8 0 9 9 4 . . . . 6 6 5 4 . . . . 5 1 0 . . . 1 . 6 . 2 . . . 7 5
. . . . . . 4 9 7 1 9 5 2 2 3 . . . . 9 9 8 0 4 0 6 2 9 3 3 7 . . . 6 6 9 . 6 . 6 . 1 1 8 . .
0 0 0 2 9 9 6 1 0 7 2 2 8 2 4 0 2 7 3 1 8 2 2 6 4 4 3 3 5 3 2 3 3 0 4 4 8 3 7 8 4 3 8 5 2 9 4
6 7 6 0 4 3 0 2 9 8 3 5 4 6 6 8 8 5 3 5 5 5 4 5
1 4 9 0 5

Normalized

1 4 9 8 9 5 1 2 3 3 3 4 4 4 8 5 7 7 1 1 3 3 3 1 4 1 6 1 1 2 2 8 7 8 5 1 1 8 1 8 1 1 1 1 1 1 5
. . . . . . 6 5 6 8 4 1 0 3 9 . . . 0 9 3 5 0 3 1 8 5 0 9 3 2 . . . 0 6 7 . 6 . 6 1 9 2 8 . .
7 8 1 5 9 0 . . . . 7 6 6 . . . . 0 . . . 2 3 5 . . . 4 . 7 . . . . . 9 0
4 1 7 7 5 8 9 9 4 2 1 8 7 8 4 9 4 6 4 9 1 2 5 0 0 7 4 % 1 7 2 1 9 2 4 8 0 4 4 2 6 6 8 1 9 3 7
% % % % % % 3 9 8 7 6 3 4 3 3 % % % 3 1 6 7 7 4 8 5 4 3 % 1 % % % 5 9 5 % 1 % 5 6 2 5 9 % %
% %

Standard Deviation

0 0 0 0 0 0 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 3 1 2 0 3 0 3 0 0 0 0 1 0 0 0 0 2 8 1
. . . % . % . . . .
1 3 6 2 2 5 2 3 1 5 5 5 3 1 1 1 2 1 1 1 1 6 1 4 3 3 4 6 5 6 3 1 4 1 4 7 1 2 3 3 6 4 5 8 7
% %

Rodinia - OpenMP LavaMD (sec)

2 8 7 4 4 7 2 1 1 1 1 8 9 8 4 1 7 5 4 1 1 1 1 3 9 1 6 4 8 5 7 2 3 2 2 1 1 2 1 2 1 1 9 8 8 1 3
8 0 0 5 0 6 1 7 2 0 0 9 7 3 8 2 2 3 9 9 3 0 4 5 7 9 3 1 9 0 4 7 0 5 4 0 0 2 1 1 0 7 8 8 9 0 0
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Intel / AMD Large Ubuntu Linux CPU Benchmark Comparison

Sci	3	7	8	7	8	5	1	2	7	1	1	1	2	2	**3**	1	1	2	2	1	1	1	1	1	1	5	1	1	3	4	3	4	5	4	5	5	5	**1**	1
Mar	2	3	1	4	5	7	1	2	8	1	0	3	3	1	**2**	1	3	5	6	6	6	7	3	0	1	4	6	6	7	9	5	0	0	9	7	7	9	**6**	6
k -	1	9	5	1	8	3	5	9	7	0	6	9	8	6	**1**	8	2	7	9	6	5	0	0	3	0	8	0	1	0	3	3	1	4	3	1	1	3	**0**	1
Co							9	7		9	5	8	5	8	**0**	0	4	9	6	8	6	1	4	4	2		4	1	.	.	.	.	.	.	.	.	.	**.**	.
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mali	0	3	5	3	6	7	6	1	4	4	3	3	4	7	0	6	1	0	3	1	1	2	0	2	4	7	9	0	1	5	1	2	5	5	7	7	8	.	.
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ckfi	**2**	6	1	1	7	3	0	0		5	9	4	4	8	3	4	3	9	**4**	6	7	0	7	2	1	4	4	5	9	8	3	4	9	3	5	1	3	7	
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Tot	**1**	4	0	7	3	0	2	2		6	9	0	8	2	9	4	3	7	**1**	1	9	4	3	2	5	6	8	7	3	7	4	5	7	8	2	4	3	3	
al	**5**	6	6	3	0	8	9	6		3	0	5	9	0	6	6	8	7	**4**	9	8	8	2	3	0	2	2	6	3	2	5	9	0	3	2	1	2	7	
Tim	**6**	2	4	5	4	5	1	6		0	0	9	6	2	2	9	3	7	**7**	3	3	7	3	6	7	6	4	1	2	1	4	4	6	2	6	7	8	7	
e		2	8	3	1	5	6	0		4	9	0	2	8	0	9	6	6	**5**	9	9	4	9	1	1	0	7	6	4	7	2	8	3	5	9	6	7		
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ation	%	%	%	%	%	%	%	%		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%		%	%		%	

Timed Linux Kernel Compilation - Time To Compile (sec)	2	6	4	3	2	5	1	1	1	9	9	8	8	7	4	6	4	4	3	1	1	8	1	2	8	1	5	3	1
	3	8	8	3	9	1	6	5	0	4	4	4	7	7	7	2	2	3	0	5	1	8	0	3	0	5	5	5	4
	8	3	1	8	9	2	7	9	4	.	.	.	.	.	.	5	0	9	4	7	2	.	6	5	.	5	.	.	4
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		1	5	1	2	0	6	8	6							0	7	9	5	9	5		7	6		8			
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Standard Deviation	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	0	0	0	0	0	1	2	1	0	1	2	2	3	0
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Timed PHP Compilation - Time To Compile (sec)	1272	402.92	263.28	216.31	189.62	324.71	108.49	106.24	78.36	72.08	83.59	73.41	75.04	66.95	56.29	339.19	259.15	254.80	178.95	103.82	69.43	75.52	67.57	141.04	56.42	108.34	52.57	**46.12**	151.29	141.14	140.70	319.86	373.46	299.43	71.827	164.44	163.33	294.181	145.717	278.499	337.673	144.682	218.478	135.057	149.258	128.630	**1429**
Normalized	3.63%	11.45%	17.52%	21.32%	24.32%	14.2%	42.51%	43.41%	58.86%	63.98%	55.17%	62.83%	61.46%	68.89%	81.93%	13.6%	17.8%	18.1%	25.77%	44.42%	66.43%	61.07%	68.26%	32.7%	81.74%	42.57%	87.73%	100%	30.48%	32.68%	32.78%	14.42%	12.35%	15.4%	64.21%	28.01%	28.24%	15.68%	31.65%	16.56%	13.66%	31.88%	21.11%	34.15%	30.9%	35.85%	3.23%
Standard Deviation	0%	0.1%	6.5%	0.2%	0.1%	0.1%	0.3%	0.7%	0.7%	0.4%	0.6%	0.3%	1.4%	1%	0.9%	0%	0.6%	0.1%	0.1%	0.1%	0.3%	0.4%	0.5%	0.6%	0.5%	0.4%	0.1%	0.3%	3.5%	0.7%	1.8%	0.2%	0.1%	0.1%	0.6%	0.3%	0.2%	0.2%	0.3%	0.1%	25.1%	0.6%	0.5%	0.7%	0.5%	0.4%	0.2%

Tinymembench - Standard Memcpy (MB	2012	4973	5725	5057	5801	4433	5728	15595	3498	7492	7242	8976	7502	11653	**17193**	6906	7385	10519	9959	8041	9248	8074	9133	5655	5642	4355	6666	6848	6612	13187	7183	9595	9467	13535	4321	6713	**1949**	4148
Normalized	11.7%	28.92%	33.3%	29.41%	33.74%	25.78%	33.32%	90.71%	20.35%	43.58%	42.12%	52.21%	43.63%	67.78%	100%	40.17%	42.95%	61.18%	57.92%	46.77%	53.79%	46.96%	53.12%	32.89%	32.82%	25.33%	38.77%	39.83%	38.45%	76.7%	41.78%	55.81%	55.06%	78.72%	25.13%	39.05%	11.34%	24.13%

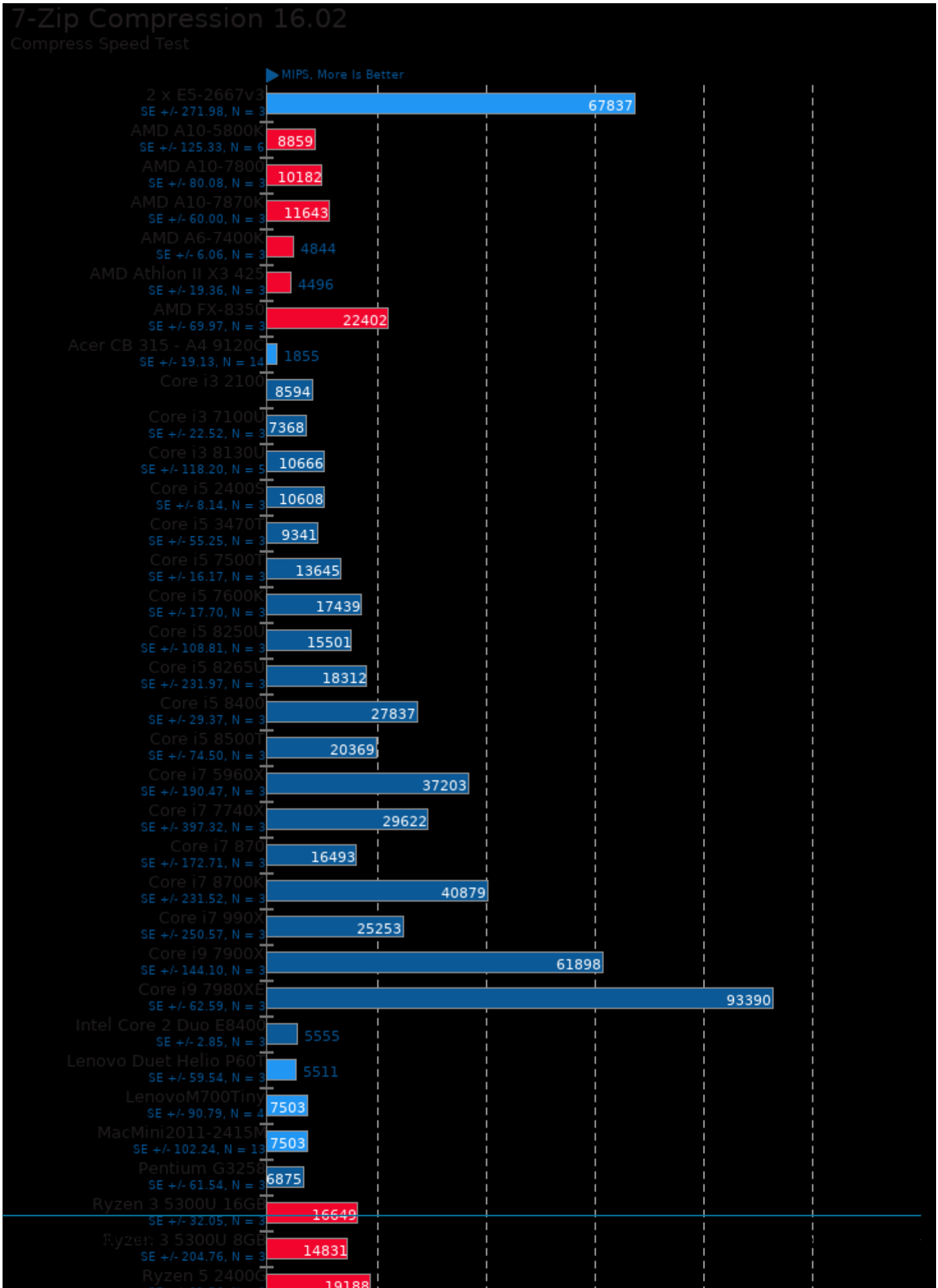
Tinymembench - Standard Memcpy - Standard Memset	2	5	5	5	6	4	6		1	2	1	7	9	1		1	3	7		8	2			
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	4	7	7	9	1	5	1		4	8	9	1	0	7		0	9	1		0	6			
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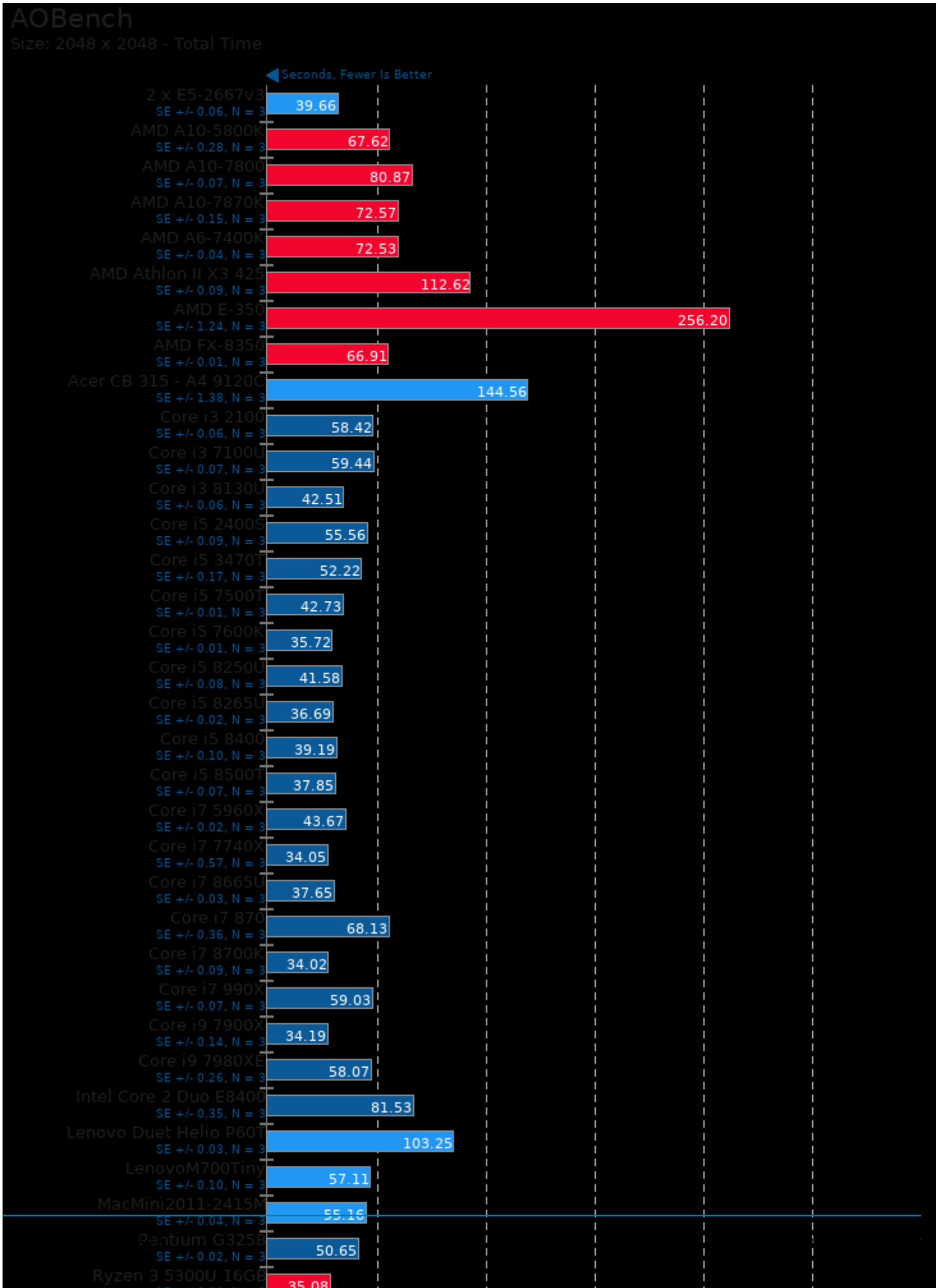
Intel / AMD Large Ubuntu Linux CPU Benchmark Comparison

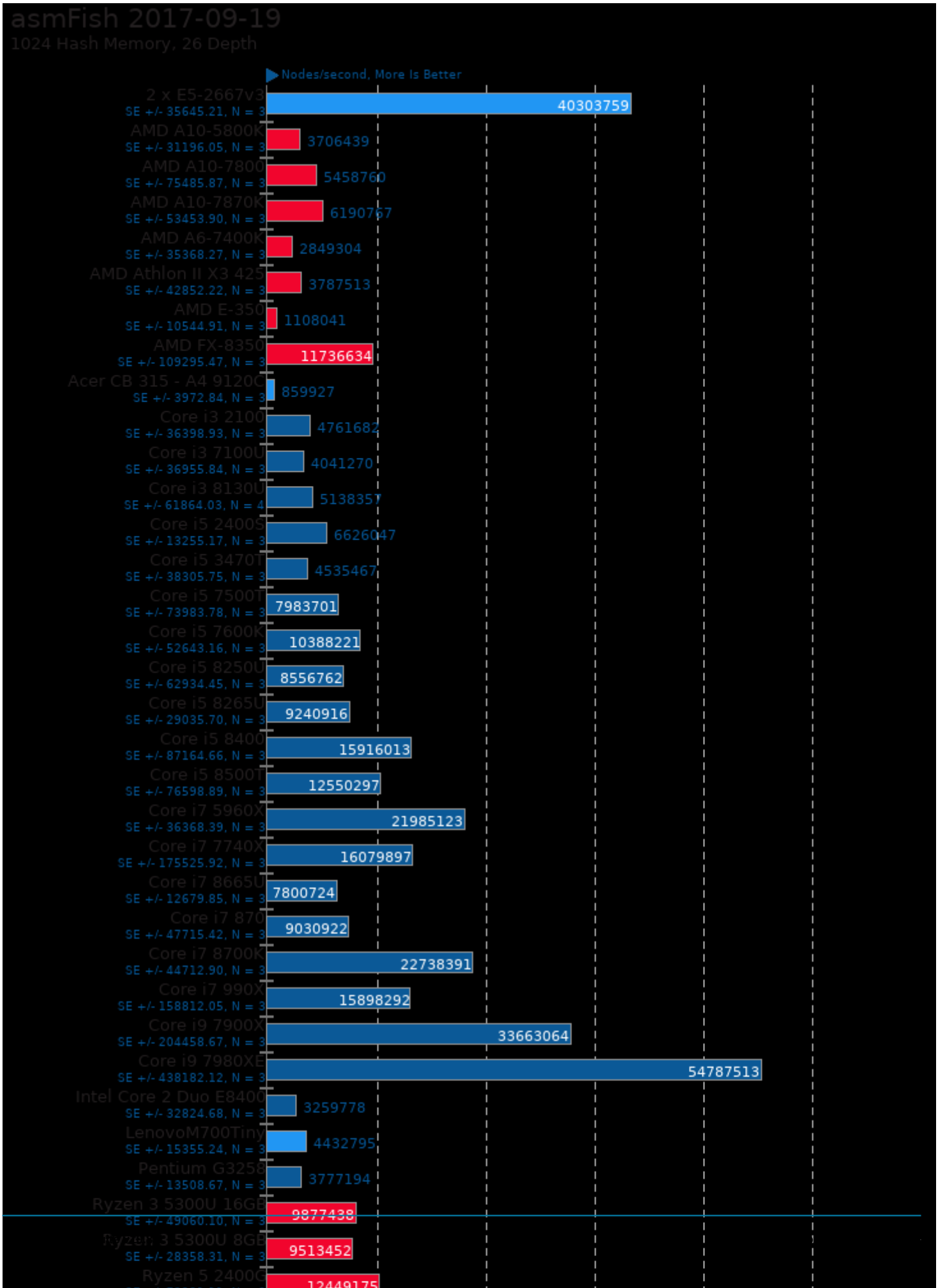
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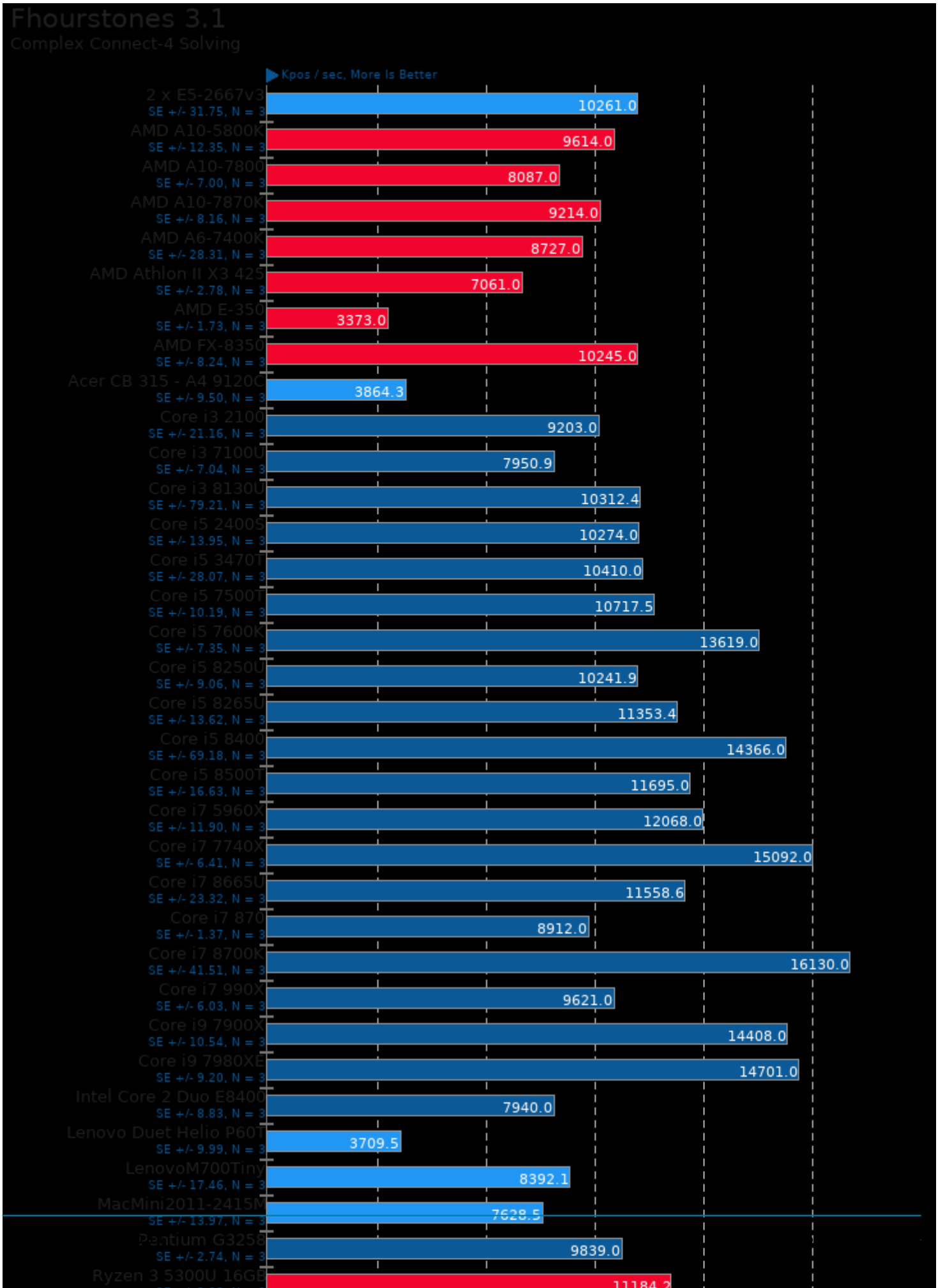
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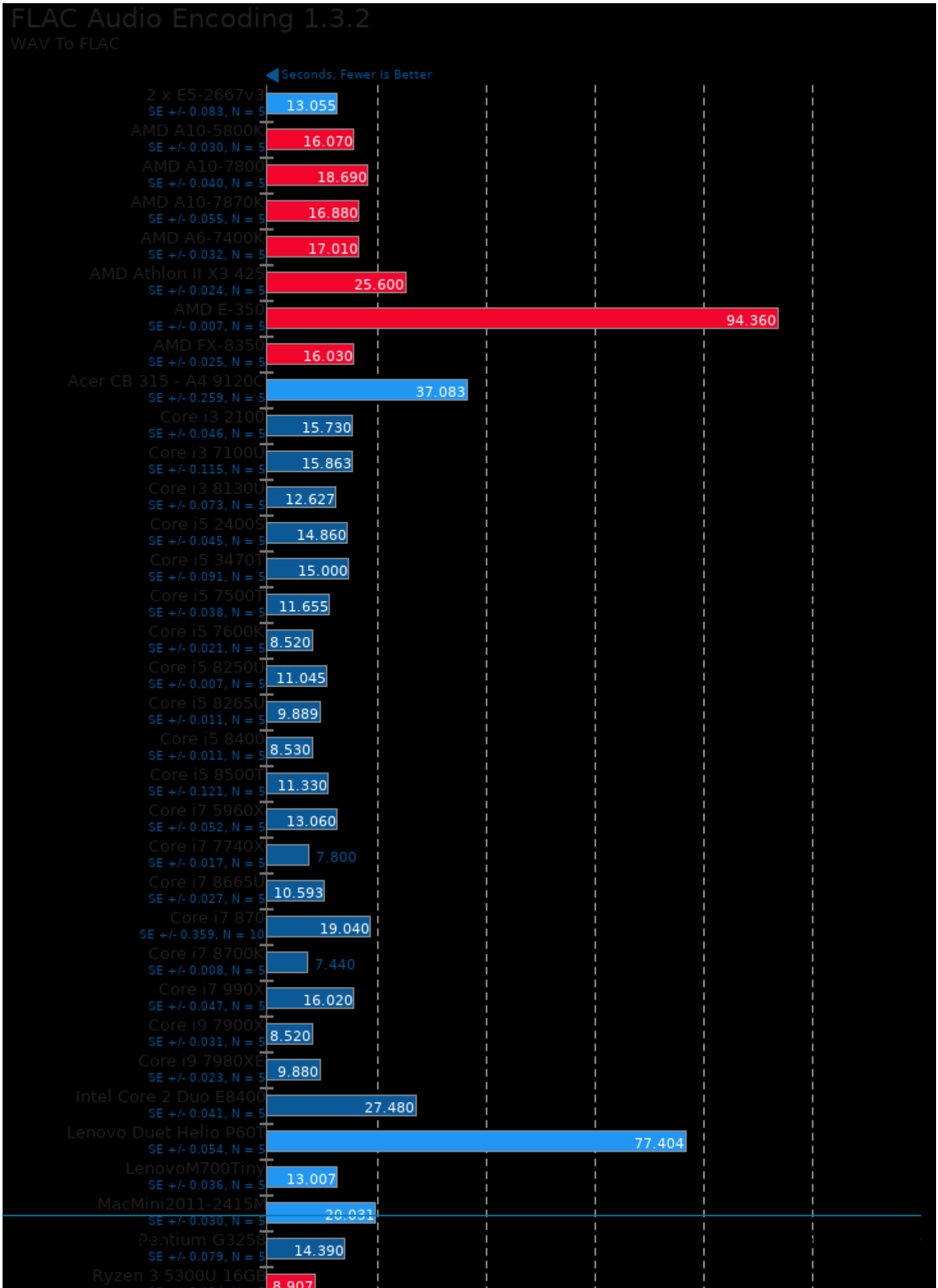
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4 7 6 9 8 7 7 3 6 7 % 3 4 % 3 4 3 4 5 % 5 3 7 6 9 4 2 4 2 6 1 2 5 4 2 7 %
% %
Stan 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 3 2 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 3 8
dard . . . . % . . . . . % . . . . . % . . . % . . . .
Devi 2 3 1 1 2 1 1 2 1 3 2 2 2 3 7 3 4 3 4 2 4 7 5 2 3 5 3 1 1 5 2 3 5 1
ation %

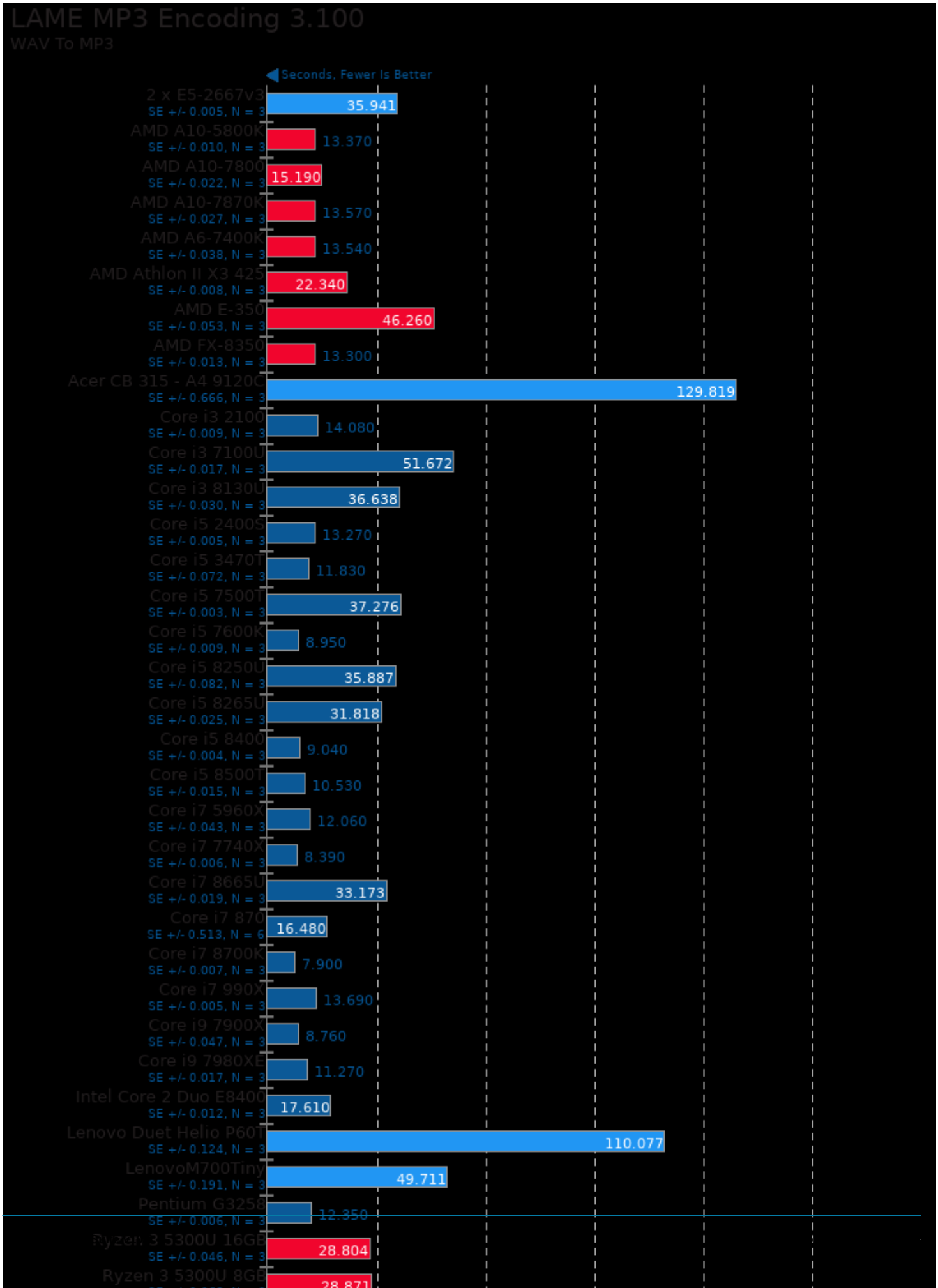

7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
2 x E5-2667v3
SE +/- 271.98, N = 3
67837
AMD A10-5800K
SE +/- 125.33, N = 6
8859
AMD A10-7800
SE +/- 80.08, N = 3
10182
AMD A10-7870K
SE +/- 60.00, N = 3
11643
AMD A6-7400K
SE +/- 6.06, N = 3
4844
AMD Athlon II X3 425
SE +/- 19.36, N = 3
4496
AMD FX-8350
SE +/- 69.97, N = 3
22402
Acer CB 315 - A4 9120C
SE +/- 19.13, N = 14
1855
Core i3 2100
8594
Core i3 7100U
SE +/- 22.52, N = 3
7368
Core i3 8130U
SE +/- 118.20, N = 5
10666
Core i5 2400S
SE +/- 8.14, N = 3
10608
Core i5 3470T
SE +/- 55.25, N = 3
9341
Core i5 7500T
SE +/- 16.17, N = 3
13645
Core i5 7600K
SE +/- 17.70, N = 3
17439
Core i5 8250U
SE +/- 108.81, N = 3
15501
Core i5 8265U
SE +/- 231.97, N = 3
18312
Core i5 8400
SE +/- 29.37, N = 3
27837
Core i5 8500T
SE +/- 74.50, N = 3
20369
Core i7 5960X
SE +/- 190.47, N = 3
37203
Core i7 7740X
SE +/- 397.32, N = 3
29622
Core i7 870
SE +/- 172.71, N = 3
16493
Core i7 8700K
SE +/- 231.52, N = 3
40879
Core i7 990X
SE +/- 250.57, N = 3
25253
Core i9 7900X
SE +/- 144.10, N = 3
61898
Core i9 7980XE
SE +/- 62.59, N = 3
93390
Intel Core 2 Duo E8400
SE +/- 2.85, N = 3
5555
Lenovo Duet Helio P60T
SE +/- 59.54, N = 3
5511
LenovoM700Tiny
SE +/- 90.79, N = 4
7503
MacMini2011-2415M
SE +/- 102.24, N = 13
7503
Pentium G3258
SE +/- 61.54, N = 3
6875
Ryzen 3 5300U 16GB
SE +/- 32.05, N = 3
16649
Ryzen 3 5300U 8GB
SE +/- 204.76, N = 3
14831
Ryzen 5 2400G
19188

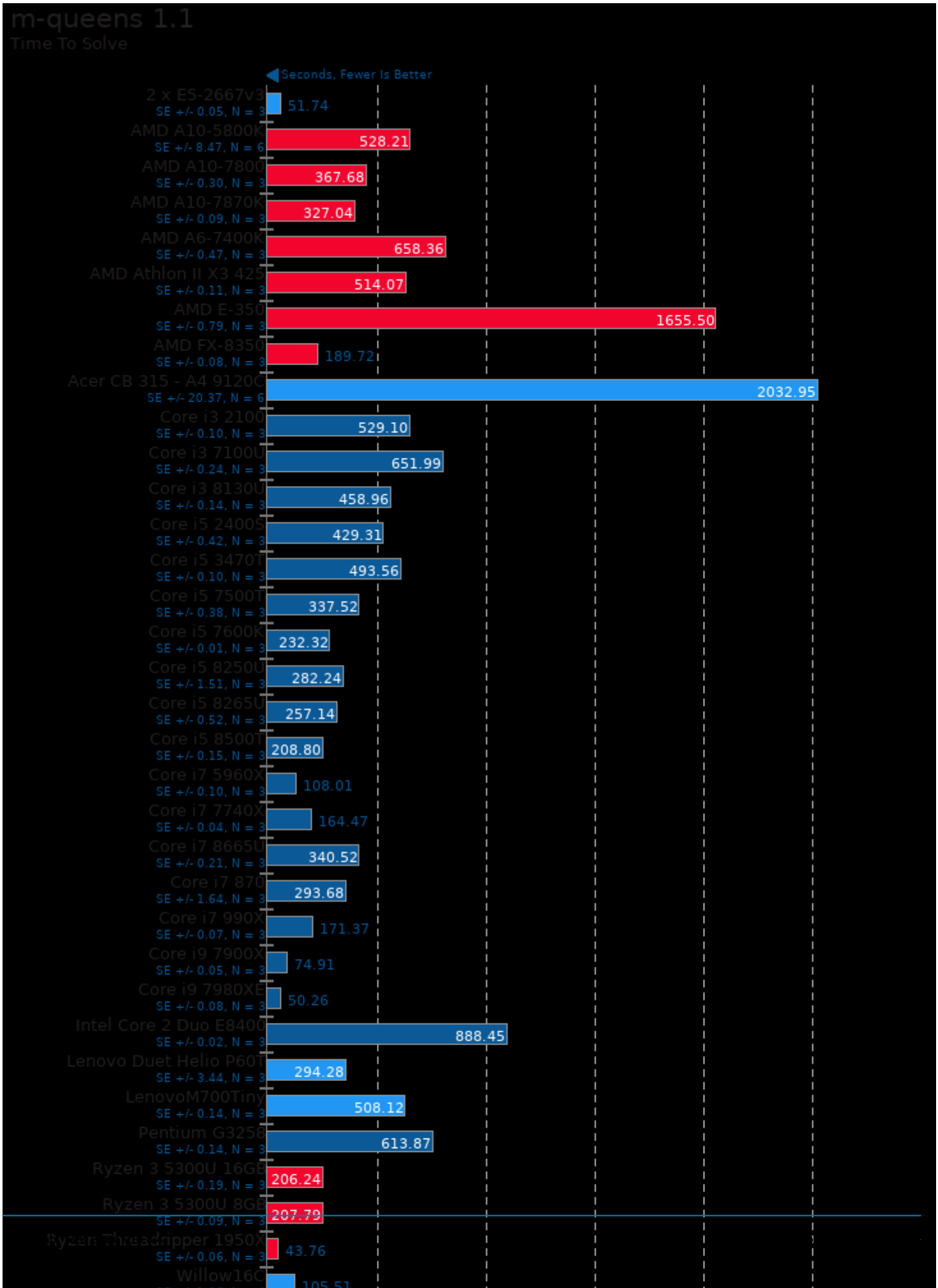

AOBench
Size: 2048 x 2048 - Total Time
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.06, N = 3
39.66
AMD A10-5800K
SE +/- 0.28, N = 3
67.62
AMD A10-7800
SE +/- 0.07, N = 3
80.87
AMD A10-7870K
SE +/- 0.15, N = 3
72.57
AMD A6-7400K
SE +/- 0.04, N = 3
72.53
AMD Athlon II X3 425
SE +/- 0.09, N = 3
112.62
AMD E-350
SE +/- 1.24, N = 3
256.20
AMD FX-8350
SE +/- 0.01, N = 3
66.91
Acer CB 315 - A4 9120C
SE +/- 1.38, N = 3
144.56
Core i3 2100
SE +/- 0.06, N = 3
58.42
Core i3 7100U
SE +/- 0.07, N = 3
59.44
Core i3 8130U
SE +/- 0.06, N = 3
42.51
Core i5 2400S
SE +/- 0.09, N = 3
55.56
Core i5 3470T
SE +/- 0.17, N = 3
52.22
Core i5 7500T
SE +/- 0.01, N = 3
42.73
Core i5 7600K
SE +/- 0.01, N = 3
35.72
Core i5 8250U
SE +/- 0.08, N = 3
41.58
Core i5 8265U
SE +/- 0.02, N = 3
36.69
Core i5 8400
SE +/- 0.10, N = 3
39.19
Core i5 8500T
SE +/- 0.07, N = 3
37.85
Core i7 5960X
SE +/- 0.02, N = 3
43.67
Core i7 7740X
SE +/- 0.57, N = 3
34.05
Core i7 8665U
SE +/- 0.03, N = 3
37.65
Core i7 870
SE +/- 0.36, N = 3
68.13
Core i7 8700K
SE +/- 0.09, N = 3
34.02
Core i7 990X
SE +/- 0.07, N = 3
59.03
Core i9 7900X
SE +/- 0.14, N = 3
34.19
Core i9 7980XE
SE +/- 0.26, N = 3
58.07
Intel Core 2 Duo E8400
SE +/- 0.35, N = 3
81.53
Lenovo Duet Helio P60T
SE +/- 0.03, N = 3
103.25
LenovoM700Tiny
SE +/- 0.10, N = 3
57.11
MacMini2011-2415M
SE +/- 0.04, N = 3
55.16
Pentium G3258
SE +/- 0.02, N = 3
50.65
Ryzen 3 5300U 16GB
35.08

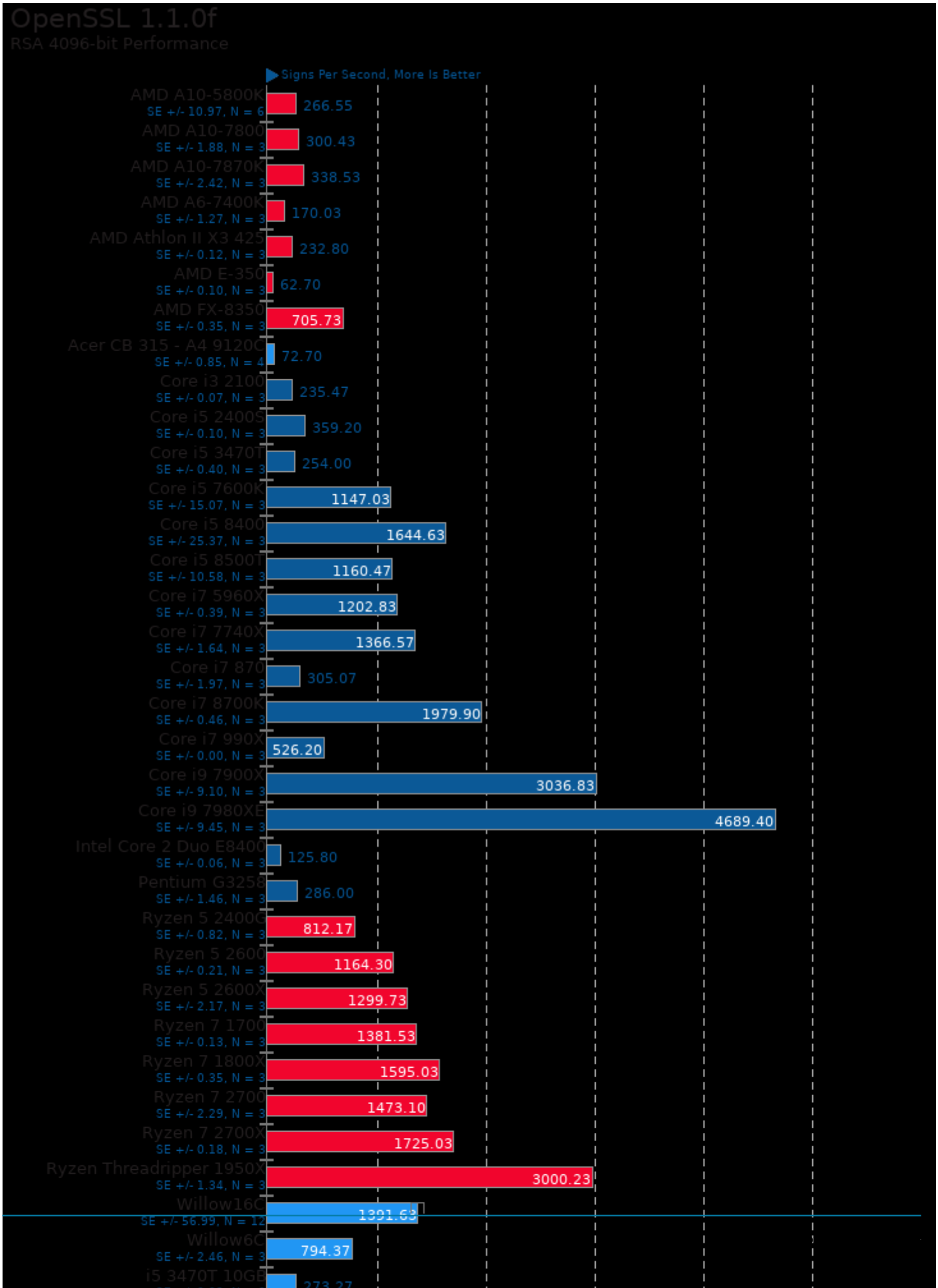

asmFish 2017-09-19
1024 Hash Memory, 26 Depth
Nodes/second, More Is Better
2 x E5-2667v3
SE +/- 35645.21, N = 3
40303759
AMD A10-5800K
SE +/- 31196.05, N = 3
3706439
AMD A10-7800
SE +/- 75485.87, N = 3
5458760
AMD A10-7870K
SE +/- 53453.90, N = 3
6190767
AMD A6-7400K
SE +/- 35368.27, N = 3
2849304
AMD Athlon II X3 425
SE +/- 42852.22, N = 3
3787513
AMD E-350
SE +/- 10544.91, N = 3
1108041
AMD FX-8350
SE +/- 109295.47, N = 3
11736634
Acer CB 315 - A4 9120C
SE +/- 3972.84, N = 3
859927
Core i3 2100
SE +/- 36398.93, N = 3
4761682
Core i3 7100U
SE +/- 36955.84, N = 3
4041270
Core i3 8130U
SE +/- 61864.03, N = 4
5138357
Core i5 2400S
SE +/- 13255.17, N = 3
6626047
Core i5 3470T
SE +/- 38305.75, N = 3
4535467
Core i5 7500T
SE +/- 73983.78, N = 3
7983701
Core i5 7600K
SE +/- 52643.16, N = 3
10388221
Core i5 8250U
SE +/- 62934.45, N = 3
8556762
Core i5 8265U
SE +/- 29035.70, N = 3
9240916
Core i5 8400
SE +/- 87164.66, N = 3
15916013
Core i5 8500T
SE +/- 76598.89, N = 3
12550297
Core i7 5960X
SE +/- 36368.39, N = 3
21985123
Core i7 7740X
SE +/- 175525.92, N = 3
16079897
Core i7 8665U
SE +/- 12679.85, N = 3
7800724
Core i7 870
SE +/- 47715.42, N = 3
9030922
Core i7 8700K
SE +/- 44712.90, N = 3
22738391
Core i7 990X
SE +/- 158812.05, N = 3
15898292
Core i9 7900X
SE +/- 204458.67, N = 3
33663064
Core i9 7980XE
SE +/- 438182.12, N = 3
54787513
Intel Core 2 Duo E8400
SE +/- 32824.68, N = 3
3259778
LenovoM700Tiny
SE +/- 15355.24, N = 3
4432795
Pentium G3258
SE +/- 13508.67, N = 3
3777194
Ryzen 3 5300U 16GB
SE +/- 49060.10, N = 3
9877438
Ryzen 3 5300U 8GB
SE +/- 28358.31, N = 3
9513452
Ryzen 5 2400G
12449175

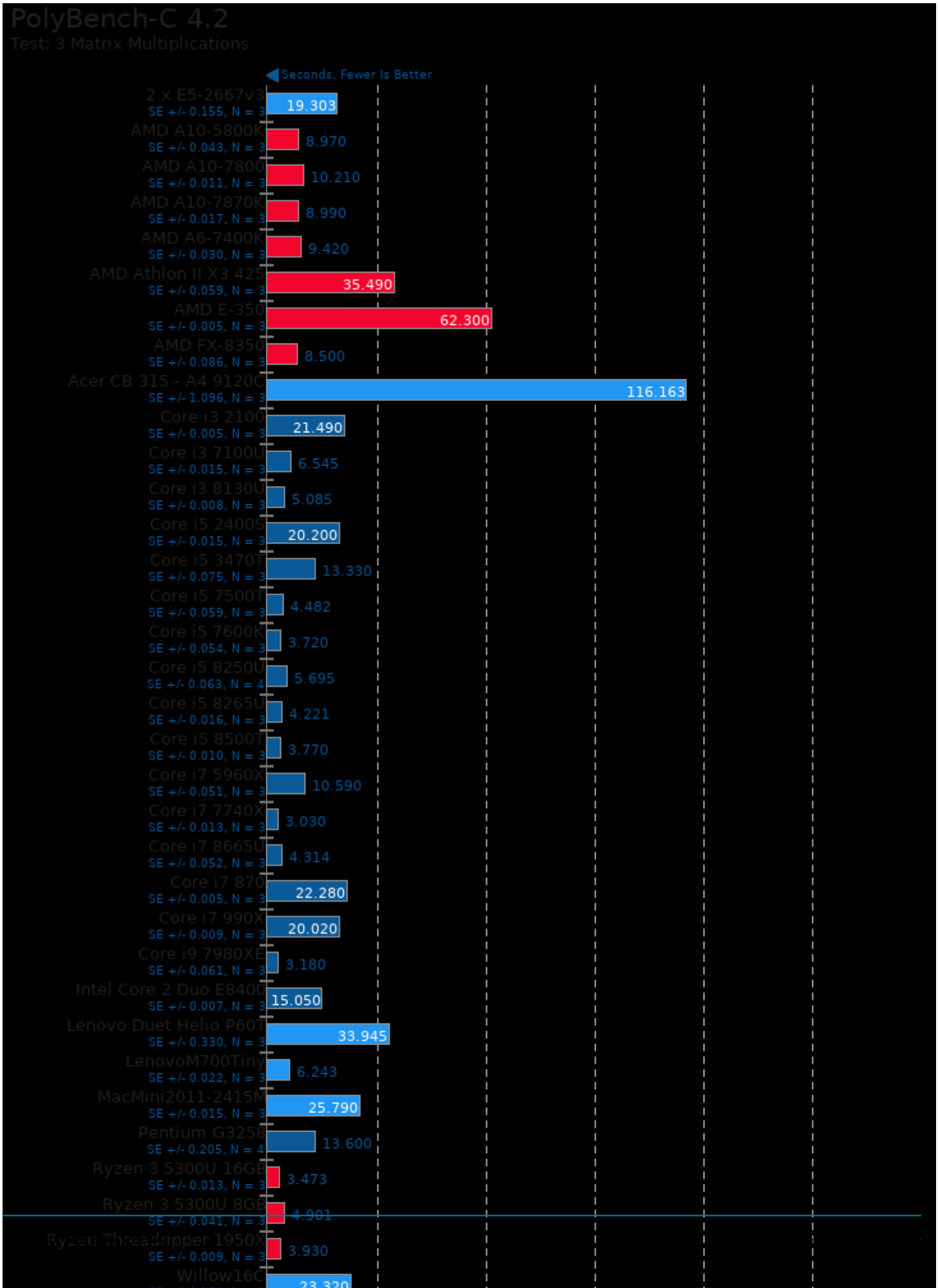

Fhourstones 3.1
Complex Connect-4 Solving
Kpos / sec, More Is Better
2 x E5-2667v3
SE +/- 31.75, N = 3
10261.0
AMD A10-5800K
SE +/- 12.35, N = 3
9614.0
AMD A10-7800
SE +/- 7.00, N = 3
8087.0
AMD A10-7870K
SE +/- 8.16, N = 3
9214.0
AMD A6-7400K
SE +/- 28.31, N = 3
8727.0
AMD Athlon II X3 425
SE +/- 2.78, N = 3
7061.0
AMD E-350
SE +/- 1.73, N = 3
3373.0
AMD FX-8350
SE +/- 8.24, N = 3
10245.0
Acer CB 315 - A4 9120C
SE +/- 9.50, N = 3
3864.3
Core i3 2100
SE +/- 21.16, N = 3
9203.0
Core i3 7100U
SE +/- 7.04, N = 3
7950.9
Core i3 8130U
SE +/- 79.21, N = 3
10312.4
Core i5 2400S
SE +/- 13.95, N = 3
10274.0
Core i5 3470T
SE +/- 28.07, N = 3
10410.0
Core i5 7500T
SE +/- 10.19, N = 3
10717.5
Core i5 7600K
SE +/- 7.35, N = 3
13619.0
Core i5 8250U
SE +/- 9.06, N = 3
10241.9
Core i5 8265U
SE +/- 13.62, N = 3
11353.4
Core i5 8400
SE +/- 69.18, N = 3
14366.0
Core i5 8500T
SE +/- 16.63, N = 3
11695.0
Core i7 5960X
SE +/- 11.90, N = 3
12068.0
Core i7 7740X
SE +/- 6.41, N = 3
15092.0
Core i7 8665U
SE +/- 23.32, N = 3
11558.6
Core i7 870
SE +/- 1.37, N = 3
8912.0
Core i7 8700K
SE +/- 41.51, N = 3
16130.0
Core i7 990X
SE +/- 6.03, N = 3
9621.0
Core i9 7900X
SE +/- 10.54, N = 3
14408.0
Core i9 7980XE
SE +/- 9.20, N = 3
14701.0
Intel Core 2 Duo E8400
SE +/- 8.83, N = 3
7940.0
Lenovo Duet Helio P60T
SE +/- 9.99, N = 3
3709.5
LenovoM700Tiny
SE +/- 17.46, N = 3
8392.1
MacMini2011-2415M
SE +/- 13.97, N = 3
7628.5
Pentium G3258
SE +/- 2.74, N = 3
9839.0
Ryzen 3 5300U 16GB
11184.2

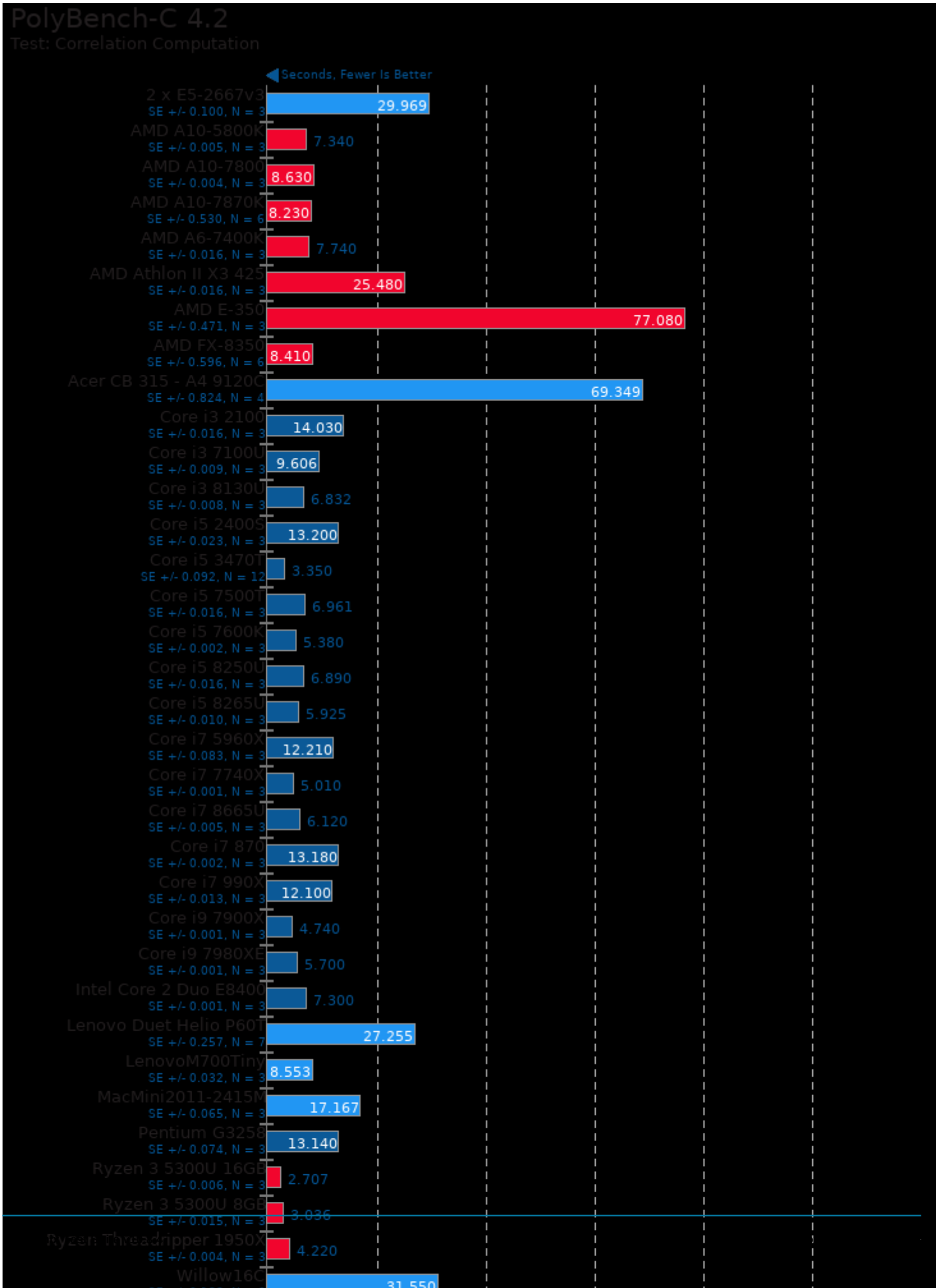

FLAC Audio Encoding 1.3.2
WAV To FLAC
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.083, N = 5
13.055
AMD A10-5800K
SE +/- 0.030, N = 5
16.070
AMD A10-7800
SE +/- 0.040, N = 5
18.690
AMD A10-7870K
SE +/- 0.055, N = 5
16.880
AMD A6-7400K
SE +/- 0.032, N = 5
17.010
AMD Athlon II X3 425
SE +/- 0.024, N = 5
25.600
AMD E-350
SE +/- 0.007, N = 5
94.360
AMD FX-8350
SE +/- 0.025, N = 5
16.030
Acer CB 315 - A4 9120C
SE +/- 0.259, N = 5
37.083
Core i3 2100
SE +/- 0.046, N = 5
15.730
Core i3 7100U
SE +/- 0.115, N = 5
15.863
Core i3 8130U
SE +/- 0.073, N = 5
12.627
Core i5 2400S
SE +/- 0.045, N = 5
14.860
Core i5 3470T
SE +/- 0.091, N = 5
15.000
Core i5 7500T
SE +/- 0.038, N = 5
11.655
Core i5 7600K
SE +/- 0.021, N = 5
8.520
Core i5 8250U
SE +/- 0.007, N = 5
11.045
Core i5 8265U
SE +/- 0.011, N = 5
9.889
Core i5 8400
SE +/- 0.011, N = 5
8.530
Core i5 8500T
SE +/- 0.121, N = 5
11.330
Core i7 5960X
SE +/- 0.052, N = 5
13.060
Core i7 7740X
SE +/- 0.017, N = 5
7.800
Core i7 8665U
SE +/- 0.027, N = 5
10.593
Core i7 870
SE +/- 0.359, N = 10
19.040
Core i7 8700K
SE +/- 0.008, N = 5
7.440
Core i7 990X
SE +/- 0.047, N = 5
16.020
Core i9 7900X
SE +/- 0.031, N = 5
8.520
Core i9 7980XE
SE +/- 0.023, N = 5
9.880
Intel Core 2 Duo E8400
SE +/- 0.041, N = 5
27.480
Lenovo Duet Helio P60T
SE +/- 0.054, N = 5
77.404
LenovoM700Tiny
SE +/- 0.036, N = 5
13.007
MacMini2011-2415M
SE +/- 0.030, N = 5
20.031
Pentium G3258
SE +/- 0.079, N = 5
14.390
Ryzen 3 5300U 16GB
8.907

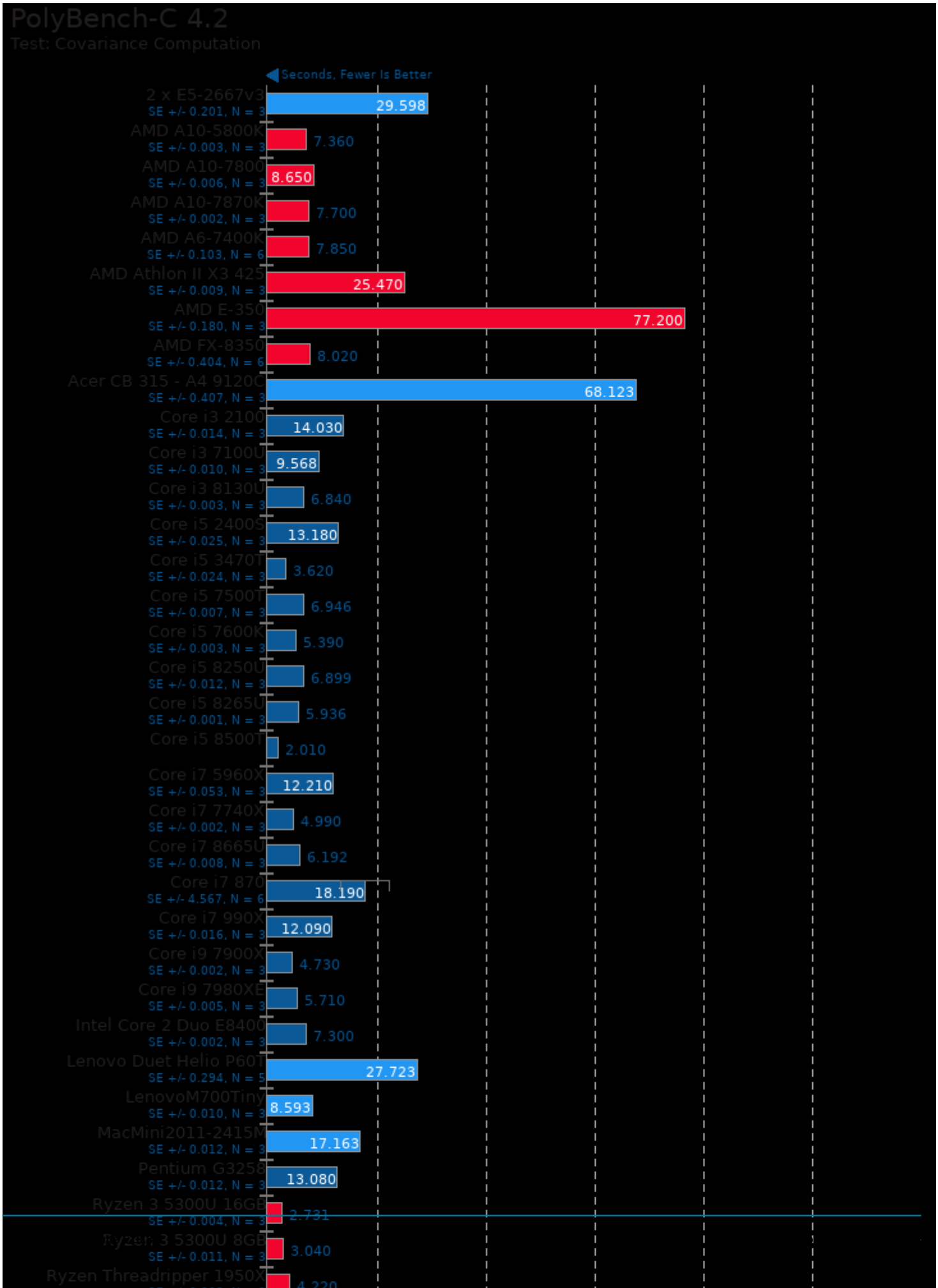

LAME MP3 Encoding 3.100
WAV To MP3
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.005, N = 3
35.941
AMD A10-5800K
SE +/- 0.010, N = 3
13.370
AMD A10-7800
SE +/- 0.022, N = 3
15.190
AMD A10-7870K
SE +/- 0.027, N = 3
13.570
AMD A6-7400K
SE +/- 0.038, N = 3
13.540
AMD Athlon II X3 425
SE +/- 0.008, N = 3
22.340
AMD E-350
SE +/- 0.053, N = 3
46.260
AMD FX-8350
SE +/- 0.013, N = 3
13.300
Acer CB 315 - A4 9120C
SE +/- 0.666, N = 3
129.819
Core i3 2100
SE +/- 0.009, N = 3
14.080
Core i3 7100U
SE +/- 0.017, N = 3
51.672
Core i3 8130U
SE +/- 0.030, N = 3
36.638
Core i5 2400S
SE +/- 0.005, N = 3
13.270
Core i5 3470T
SE +/- 0.072, N = 3
11.830
Core i5 7500T
SE +/- 0.003, N = 3
37.276
Core i5 7600K
SE +/- 0.009, N = 3
8.950
Core i5 8250U
SE +/- 0.082, N = 3
35.887
Core i5 8265U
SE +/- 0.025, N = 3
31.818
Core i5 8400
SE +/- 0.004, N = 3
9.040
Core i5 8500T
SE +/- 0.015, N = 3
10.530
Core i7 5960X
SE +/- 0.043, N = 3
12.060
Core i7 7740X
SE +/- 0.006, N = 3
8.390
Core i7 8665U
SE +/- 0.019, N = 3
33.173
Core i7 870
SE +/- 0.513, N = 6
16.480
Core i7 8700K
SE +/- 0.007, N = 3
7.900
Core i7 990X
SE +/- 0.005, N = 3
13.690
Core i9 7900X
SE +/- 0.047, N = 3
8.760
Core i9 7980XE
SE +/- 0.017, N = 3
11.270
Intel Core 2 Duo E8400
SE +/- 0.012, N = 3
17.610
Lenovo Duet Helio P60T
SE +/- 0.124, N = 3
110.077
LenovoM700Tiny
SE +/- 0.191, N = 3
49.711
Pentium G3258
SE +/- 0.006, N = 3
12.350
Ryzen 3 5300U 16GB
SE +/- 0.046, N = 3
28.804
Ryzen 3 5300U 8GB
28.871

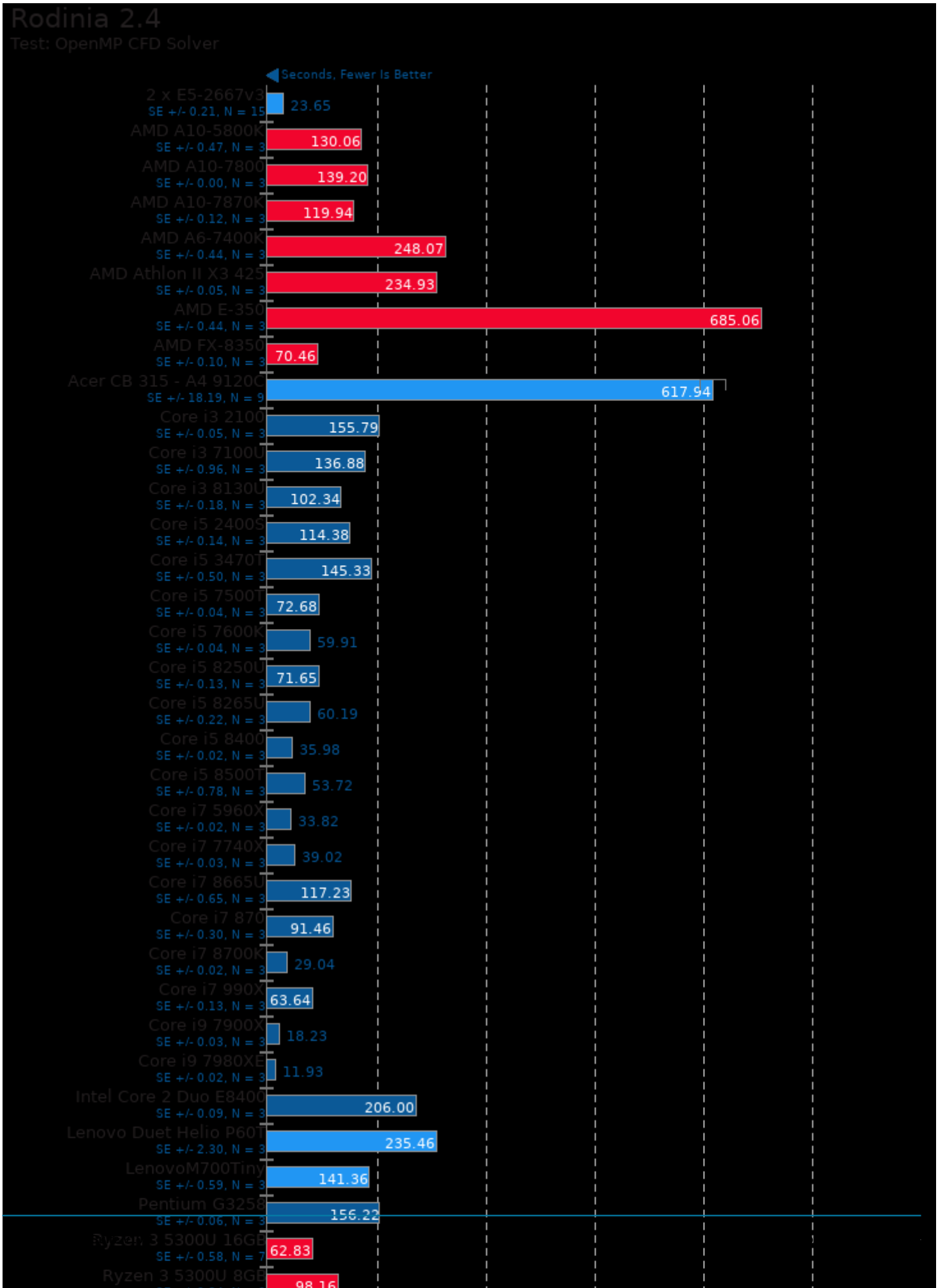

m-queens 1.1
Time To Solve
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.05, N = 3
51.74
AMD A10-5800K
SE +/- 8.47, N = 6
528.21
AMD A10-7800
SE +/- 0.30, N = 3
367.68
AMD A10-7870K
SE +/- 0.09, N = 3
327.04
AMD A6-7400K
SE +/- 0.47, N = 3
658.36
AMD Athlon II X3 425
SE +/- 0.11, N = 3
514.07
AMD E-350
SE +/- 0.79, N = 3
1655.50
AMD FX-8350
SE +/- 0.08, N = 3
189.72
Acer CB 315 - A4 9120C
SE +/- 20.37, N = 6
2032.95
Core i3 2100
SE +/- 0.10, N = 3
529.10
Core i3 7100U
SE +/- 0.24, N = 3
651.99
Core i3 8130U
SE +/- 0.14, N = 3
458.96
Core i5 2400S
SE +/- 0.42, N = 3
429.31
Core i5 3470T
SE +/- 0.10, N = 3
493.56
Core i5 7500T
SE +/- 0.38, N = 3
337.52
Core i5 7600K
SE +/- 0.01, N = 3
232.32
Core i5 8250U
SE +/- 1.51, N = 3
282.24
Core i5 8265U
SE +/- 0.52, N = 3
257.14
Core i5 8500T
SE +/- 0.15, N = 3
208.80
Core i7 5960X
SE +/- 0.10, N = 3
108.01
Core i7 7740X
SE +/- 0.04, N = 3
164.47
Core i7 8665U
SE +/- 0.21, N = 3
340.52
Core i7 870
SE +/- 1.64, N = 3
293.68
Core i7 990X
SE +/- 0.07, N = 3
171.37
Core i9 7900X
SE +/- 0.05, N = 3
74.91
Core i9 7980XE
SE +/- 0.08, N = 3
50.26
Intel Core 2 Duo E8400
SE +/- 0.02, N = 3
888.45
Lenovo Duet Helio P60T
SE +/- 3.44, N = 3
294.28
LenovoM700Tiny
SE +/- 0.14, N = 3
508.12
Pentium G3258
SE +/- 0.14, N = 3
613.87
Ryzen 3 5300U 16GB
SE +/- 0.19, N = 3
206.24
Ryzen 3 5300U 8GB
SE +/- 0.09, N = 3
207.79
Ryzen Threadripper 1950X
SE +/- 0.06, N = 3
43.76
Willow16G
105.51

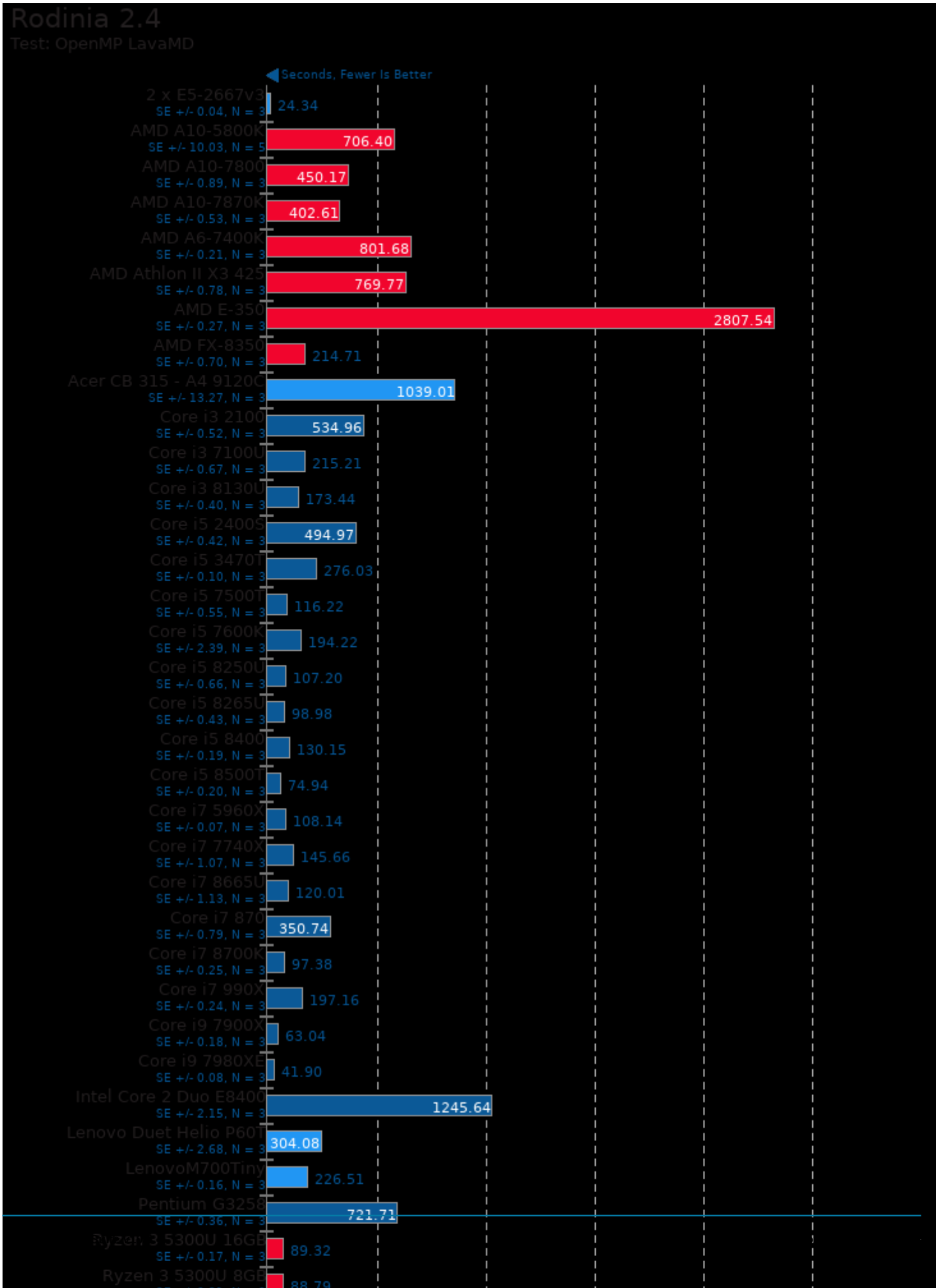

OpenSSL 1.1.0f
RSA 4096-bit Performance
Signs Per Second, More Is Better
AMD A10-5800K
SE +/- 10.97, N = 6
266.55
AMD A10-7800
SE +/- 1.88, N = 3
300.43
AMD A10-7870K
SE +/- 2.42, N = 3
338.53
AMD A6-7400K
SE +/- 1.27, N = 3
170.03
AMD Athlon II X3 425
SE +/- 0.12, N = 3
232.80
AMD E-350
SE +/- 0.10, N = 3
62.70
AMD FX-8350
SE +/- 0.35, N = 3
705.73
Acer CB 315 - A4 9120C
SE +/- 0.85, N = 4
72.70
Core i3 2100
SE +/- 0.07, N = 3
235.47
Core i5 2400S
SE +/- 0.10, N = 3
359.20
Core i5 3470T
SE +/- 0.40, N = 3
254.00
Core i5 7600K
SE +/- 15.07, N = 3
1147.03
Core i5 8400
SE +/- 25.37, N = 3
1644.63
Core i5 8500T
SE +/- 10.58, N = 3
1160.47
Core i7 5960X
SE +/- 0.39, N = 3
1202.83
Core i7 7740X
SE +/- 1.64, N = 3
1366.57
Core i7 870
SE +/- 1.97, N = 3
305.07
Core i7 8700K
SE +/- 0.46, N = 3
1979.90
Core i7 990X
SE +/- 0.00, N = 3
526.20
Core i9 7900X
SE +/- 9.10, N = 3
3036.83
Core i9 7980XE
SE +/- 9.45, N = 3
4689.40
Intel Core 2 Duo E8400
SE +/- 0.06, N = 3
125.80
Pentium G3258
SE +/- 1.46, N = 3
286.00
Ryzen 5 2400G
SE +/- 0.82, N = 3
812.17
Ryzen 5 2600
SE +/- 0.21, N = 3
1164.30
Ryzen 5 2600X
SE +/- 2.17, N = 3
1299.73
Ryzen 7 1700
SE +/- 0.13, N = 3
1381.53
Ryzen 7 1800X
SE +/- 0.35, N = 3
1595.03
Ryzen 7 2700
SE +/- 2.29, N = 3
1473.10
Ryzen 7 2700X
SE +/- 0.18, N = 3
1725.03
Ryzen Threadripper 1950X
SE +/- 1.34, N = 3
3000.23
Willow16C
SE +/- 56.99, N = 12
1391.69
Willow6C
SE +/- 2.46, N = 3
794.37
i5 3470T 10GB
273.27

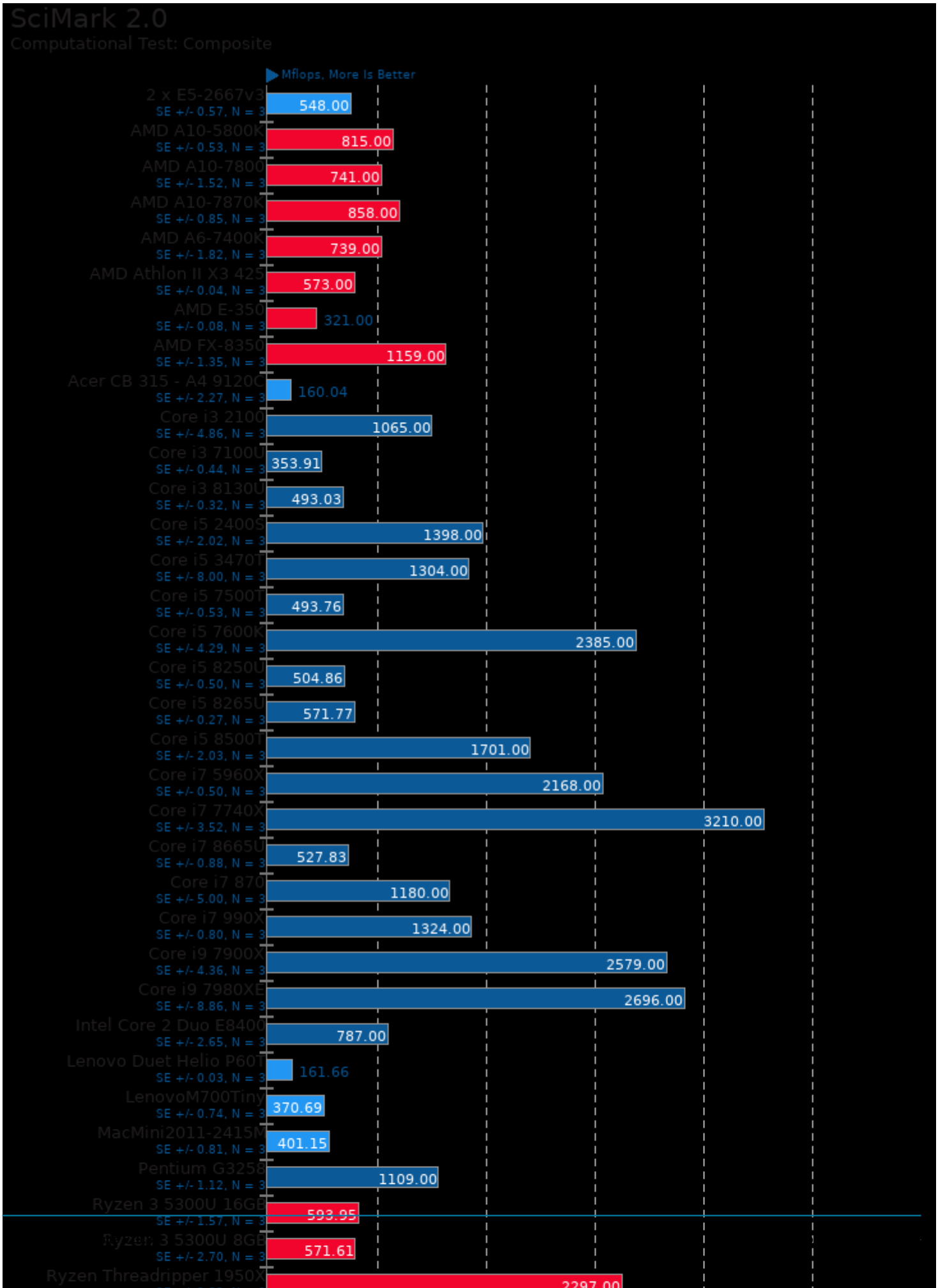

PolyBench-C 4.2
Test: 3 Matrix Multiplications
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.155, N = 3
19.303
AMD A10-5800K
SE +/- 0.043, N = 3
8.970
AMD A10-7800
SE +/- 0.011, N = 3
10.210
AMD A10-7870K
SE +/- 0.017, N = 3
8.990
AMD A6-7400K
SE +/- 0.030, N = 3
9.420
AMD Athlon II X3 425
SE +/- 0.059, N = 3
35.490
AMD E-350
SE +/- 0.005, N = 3
62.300
AMD FX-8350
SE +/- 0.086, N = 3
8.500
Acer CB 315 - A4 9120C
SE +/- 1.096, N = 3
116.163
Core i3 2100
SE +/- 0.005, N = 3
21.490
Core i3 7100U
SE +/- 0.015, N = 3
6.545
Core i3 8130U
SE +/- 0.008, N = 3
5.085
Core i5 2400S
SE +/- 0.015, N = 3
20.200
Core i5 3470T
SE +/- 0.075, N = 3
13.330
Core i5 7500T
SE +/- 0.059, N = 3
4.482
Core i5 7600K
SE +/- 0.054, N = 3
3.720
Core i5 8250U
SE +/- 0.063, N = 4
5.695
Core i5 8265U
SE +/- 0.016, N = 3
4.221
Core i5 8500T
SE +/- 0.010, N = 3
3.770
Core i7 5960X
SE +/- 0.051, N = 3
10.590
Core i7 7740X
SE +/- 0.013, N = 3
3.030
Core i7 8665U
SE +/- 0.052, N = 3
4.314
Core i7 870
SE +/- 0.005, N = 3
22.280
Core i7 990X
SE +/- 0.009, N = 3
20.020
Core i9 7980XE
SE +/- 0.061, N = 3
3.180
Intel Core 2 Duo E8400
SE +/- 0.007, N = 3
15.050
Lenovo Duet Helio P60T
SE +/- 0.330, N = 3
33.945
LenovoM700Tiny
SE +/- 0.022, N = 3
6.243
MacMini2011-2415M
SE +/- 0.015, N = 3
25.790
Pentium G3258
SE +/- 0.205, N = 4
13.600
Ryzen 3 5300U 16GB
SE +/- 0.013, N = 3
3.473
Ryzen 3 5300U 8GB
SE +/- 0.041, N = 3
4.901
Ryzen Threadripper 1950X
SE +/- 0.009, N = 3
3.930
Willow16G
23.320

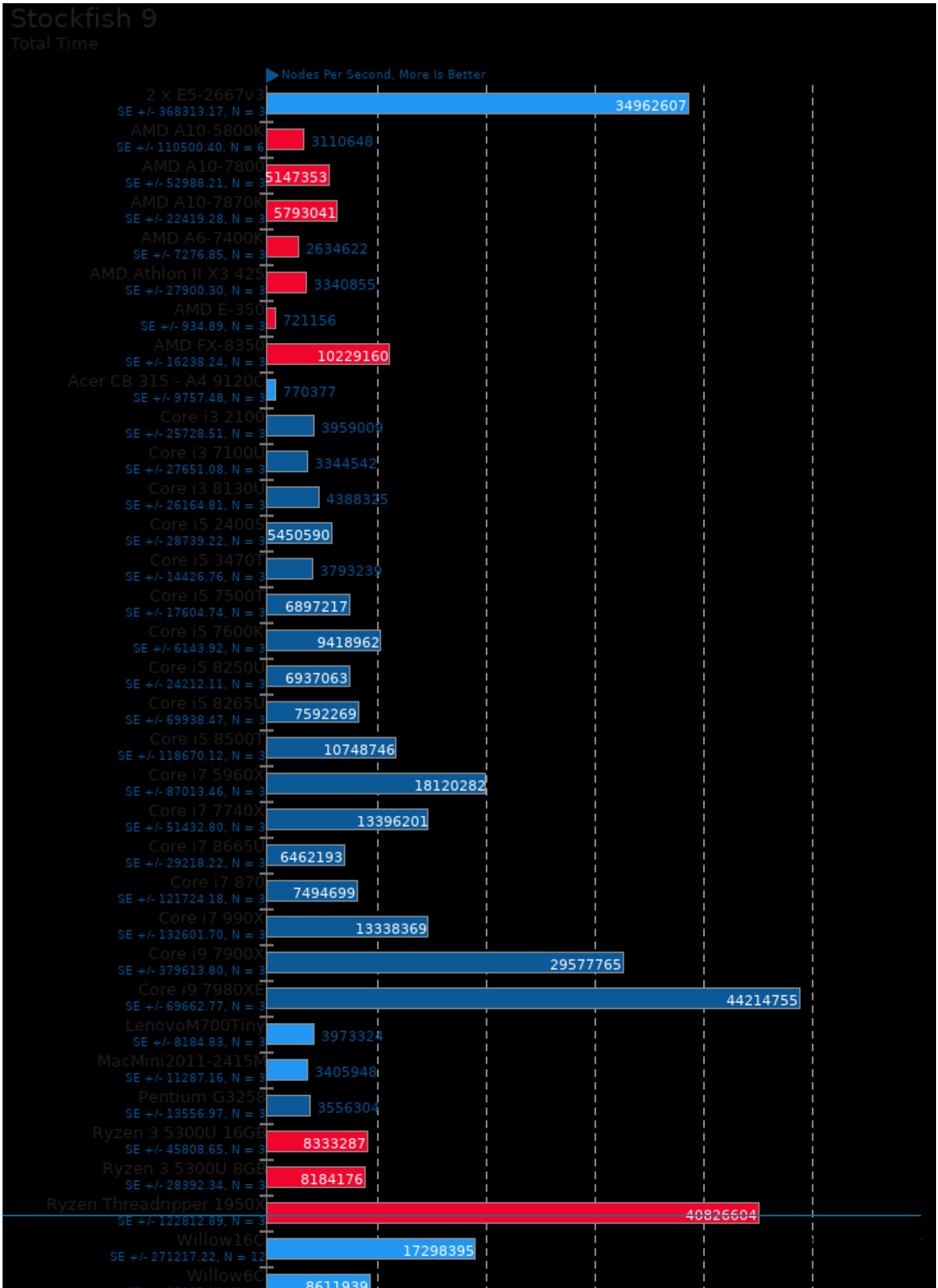

PolyBench-C 4.2
Test: Correlation Computation
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.100, N = 3
29.969
AMD A10-5800K
SE +/- 0.005, N = 3
7.340
AMD A10-7800
SE +/- 0.004, N = 3
8.630
AMD A10-7870K
SE +/- 0.530, N = 6
8.230
AMD A6-7400K
SE +/- 0.016, N = 3
7.740
AMD Athlon II X3 425
SE +/- 0.016, N = 3
25.480
AMD E-350
SE +/- 0.471, N = 3
77.080
AMD FX-8350
SE +/- 0.596, N = 6
8.410
Acer CB 315 - A4 9120C
SE +/- 0.824, N = 4
69.349
Core i3 2100
SE +/- 0.016, N = 3
14.030
Core i3 7100U
SE +/- 0.009, N = 3
9.606
Core i3 8130U
SE +/- 0.008, N = 3
6.832
Core i5 2400S
SE +/- 0.023, N = 3
13.200
Core i5 3470T
SE +/- 0.092, N = 12
3.350
Core i5 7500T
SE +/- 0.016, N = 3
6.961
Core i5 7600K
SE +/- 0.002, N = 3
5.380
Core i5 8250U
SE +/- 0.016, N = 3
6.890
Core i5 8265U
SE +/- 0.010, N = 3
5.925
Core i7 5960X
SE +/- 0.083, N = 3
12.210
Core i7 7740X
SE +/- 0.001, N = 3
5.010
Core i7 8665U
SE +/- 0.005, N = 3
6.120
Core i7 870
SE +/- 0.002, N = 3
13.180
Core i7 990X
SE +/- 0.013, N = 3
12.100
Core i9 7900X
SE +/- 0.001, N = 3
4.740
Core i9 7980XE
SE +/- 0.001, N = 3
5.700
Intel Core 2 Duo E8400
SE +/- 0.001, N = 3
7.300
Lenovo Duet Helio P60T
SE +/- 0.257, N = 7
27.255
LenovoM700Tiny
SE +/- 0.032, N = 3
8.553
MacMini2011-2415M
SE +/- 0.065, N = 3
17.167
Pentium G3258
SE +/- 0.074, N = 3
13.140
Ryzen 3 5300U 16GB
SE +/- 0.006, N = 3
2.707
Ryzen 3 5300U 8GB
SE +/- 0.015, N = 3
3.036
Ryzen Threadripper 1950X
SE +/- 0.004, N = 3
4.220
Willow16G
31.550

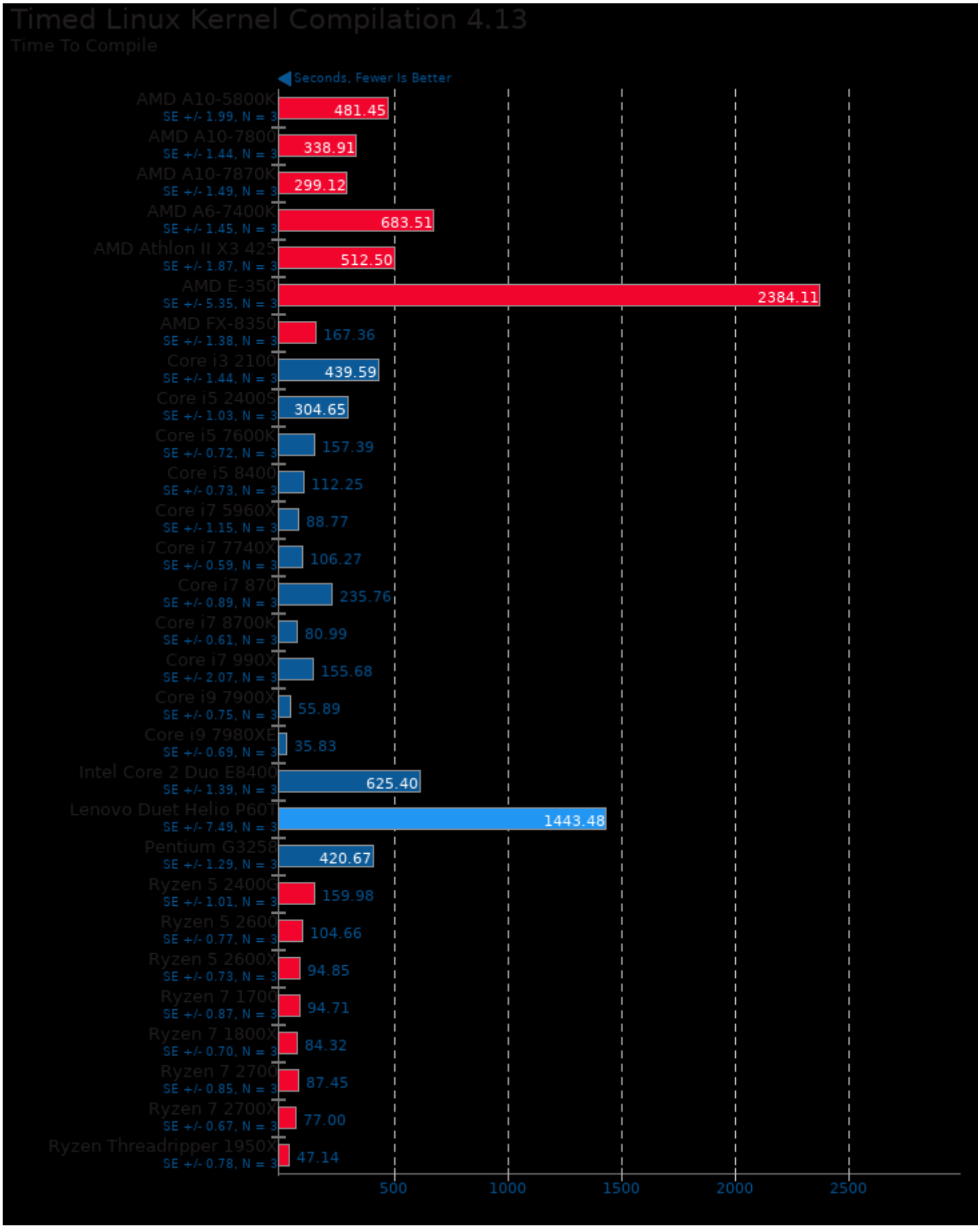

PolyBench-C 4.2
Test: Covariance Computation
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.201, N = 3
29.598
AMD A10-5800K
SE +/- 0.003, N = 3
7.360
AMD A10-7800
SE +/- 0.006, N = 3
8.650
AMD A10-7870K
SE +/- 0.002, N = 3
7.700
AMD A6-7400K
SE +/- 0.103, N = 6
7.850
AMD Athlon II X3 425
SE +/- 0.009, N = 3
25.470
AMD E-350
SE +/- 0.180, N = 3
77.200
AMD FX-8350
SE +/- 0.404, N = 6
8.020
Acer CB 315 - A4 9120C
SE +/- 0.407, N = 3
68.123
Core i3 2100
SE +/- 0.014, N = 3
14.030
Core i3 7100U
SE +/- 0.010, N = 3
9.568
Core i3 8130U
SE +/- 0.003, N = 3
6.840
Core i5 2400S
SE +/- 0.025, N = 3
13.180
Core i5 3470T
SE +/- 0.024, N = 3
3.620
Core i5 7500T
SE +/- 0.007, N = 3
6.946
Core i5 7600K
SE +/- 0.003, N = 3
5.390
Core i5 8250U
SE +/- 0.012, N = 3
6.899
Core i5 8265U
SE +/- 0.001, N = 3
5.936
Core i5 8500T
2.010
Core i7 5960X
SE +/- 0.053, N = 3
12.210
Core i7 7740X
SE +/- 0.002, N = 3
4.990
Core i7 8665U
SE +/- 0.008, N = 3
6.192
Core i7 870
SE +/- 4.567, N = 6
18.190
Core i7 990X
SE +/- 0.016, N = 3
12.090
Core i9 7900X
SE +/- 0.002, N = 3
4.730
Core i9 7980XE
SE +/- 0.005, N = 3
5.710
Intel Core 2 Duo E8400
SE +/- 0.002, N = 3
7.300
Lenovo Duet Helio P60T
SE +/- 0.294, N = 5
27.723
LenovoM700Tiny
SE +/- 0.010, N = 3
8.593
MacMini2011-2415M
SE +/- 0.012, N = 3
17.163
Pentium G3258
SE +/- 0.012, N = 3
13.080
Ryzen 3 5300U 16GB
SE +/- 0.004, N = 3
2.731
Ryzen 3 5300U 8GB
SE +/- 0.011, N = 3
3.040
Ryzen Threadripper 1950X
4.220

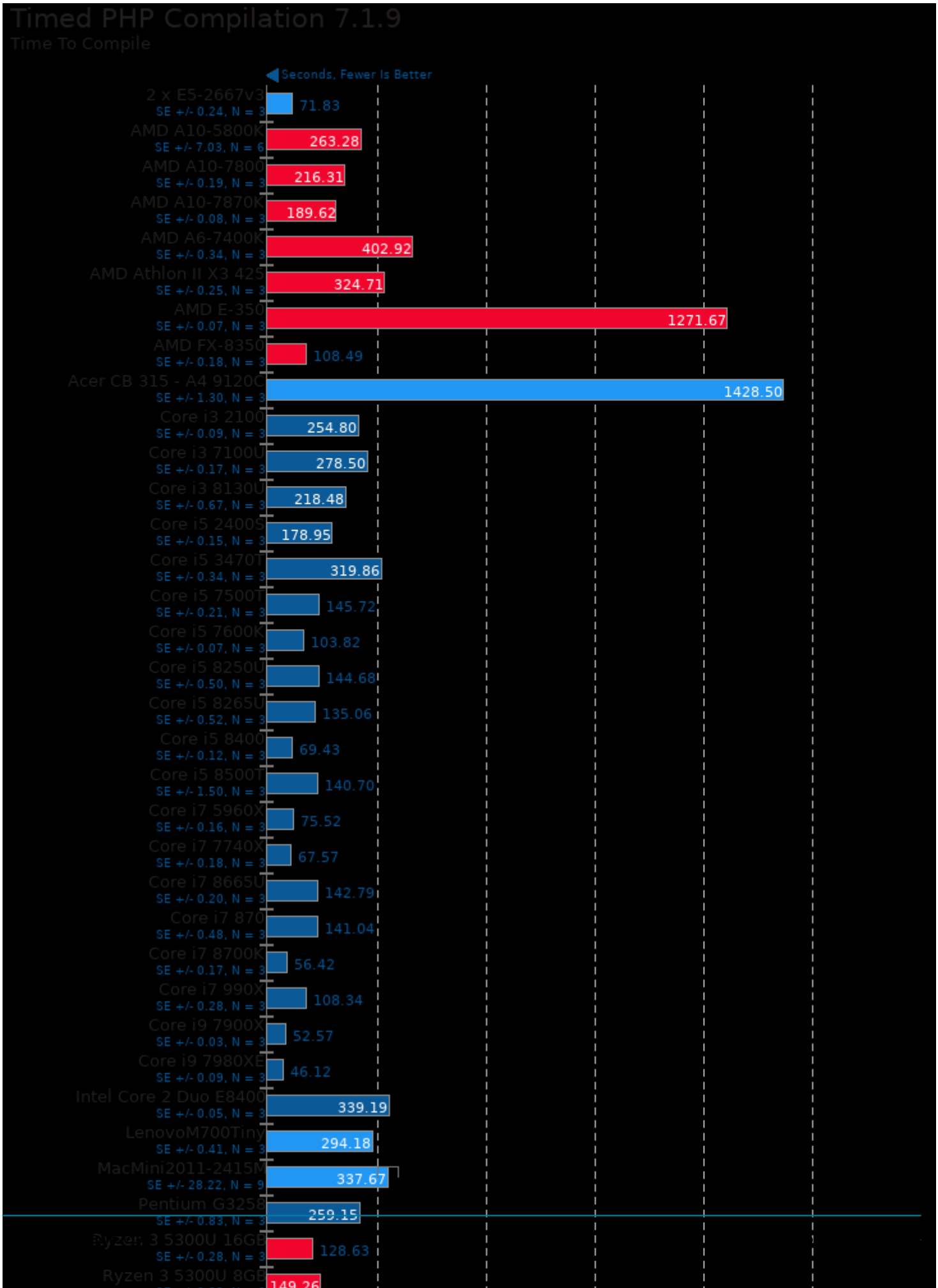

Rodinia 2.4
Test: OpenMP CFD Solver
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.21, N = 15
23.65
AMD A10-5800K
SE +/- 0.47, N = 3
130.06
AMD A10-7800
SE +/- 0.00, N = 3
139.20
AMD A10-7870K
SE +/- 0.12, N = 3
119.94
AMD A6-7400K
SE +/- 0.44, N = 3
248.07
AMD Athlon II X3 425
SE +/- 0.05, N = 3
234.93
AMD E-350
SE +/- 0.44, N = 3
685.06
AMD FX-8350
SE +/- 0.10, N = 3
70.46
Acer CB 315 - A4 9120C
SE +/- 18.19, N = 9
617.94
Core i3 2100
SE +/- 0.05, N = 3
155.79
Core i3 7100U
SE +/- 0.96, N = 3
136.88
Core i3 8130U
SE +/- 0.18, N = 3
102.34
Core i5 2400S
SE +/- 0.14, N = 3
114.38
Core i5 3470T
SE +/- 0.50, N = 3
145.33
Core i5 7500T
SE +/- 0.04, N = 3
72.68
Core i5 7600K
SE +/- 0.04, N = 3
59.91
Core i5 8250U
SE +/- 0.13, N = 3
71.65
Core i5 8265U
SE +/- 0.22, N = 3
60.19
Core i5 8400
SE +/- 0.02, N = 3
35.98
Core i5 8500T
SE +/- 0.78, N = 3
53.72
Core i7 5960X
SE +/- 0.02, N = 3
33.82
Core i7 7740X
SE +/- 0.03, N = 3
39.02
Core i7 8665U
SE +/- 0.65, N = 3
117.23
Core i7 870
SE +/- 0.30, N = 3
91.46
Core i7 8700K
SE +/- 0.02, N = 3
29.04
Core i7 990X
SE +/- 0.13, N = 3
63.64
Core i9 7900X
SE +/- 0.03, N = 3
18.23
Core i9 7980XE
SE +/- 0.02, N = 3
11.93
Intel Core 2 Duo E8400
SE +/- 0.09, N = 3
206.00
Lenovo Duet Helio P60T
SE +/- 2.30, N = 3
235.46
LenovoM700Tiny
SE +/- 0.59, N = 3
141.36
Pentium G3258
SE +/- 0.06, N = 3
156.22
Ryzen 3 5300U 16GB
SE +/- 0.58, N = 7
62.83
Ryzen 3 5300U 8GB
98.16

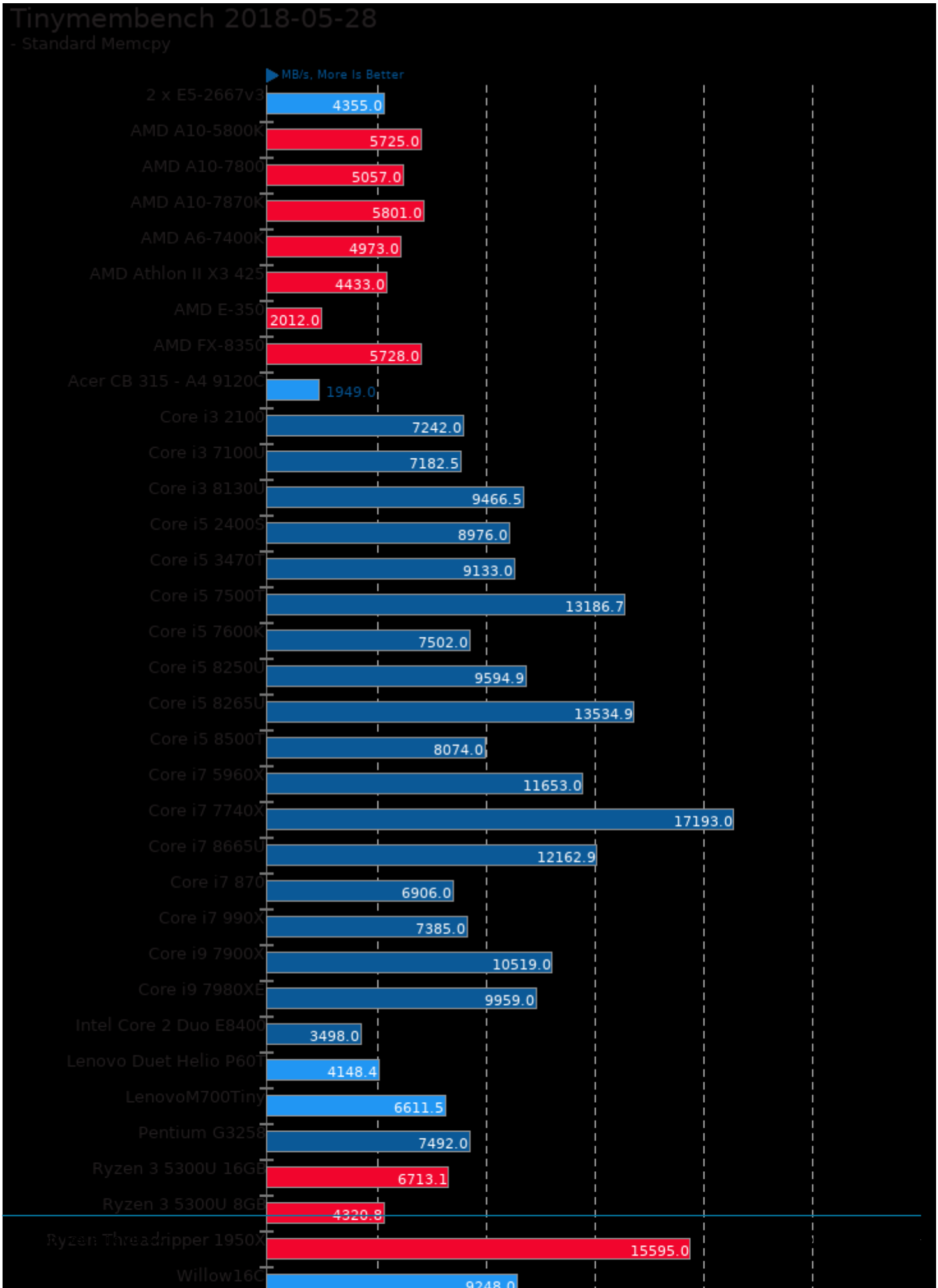

Rodinia 2.4
Test: OpenMP LavaMD
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.04, N = 3
24.34
AMD A10-5800K
SE +/- 10.03, N = 5
706.40
AMD A10-7800
SE +/- 0.89, N = 3
450.17
AMD A10-7870K
SE +/- 0.53, N = 3
402.61
AMD A6-7400K
SE +/- 0.21, N = 3
801.68
AMD Athlon II X3 425
SE +/- 0.78, N = 3
769.77
AMD E-350
SE +/- 0.27, N = 3
2807.54
AMD FX-8350
SE +/- 0.70, N = 3
214.71
Acer CB 315 - A4 9120C
SE +/- 13.27, N = 3
1039.01
Core i3 2100
SE +/- 0.52, N = 3
534.96
Core i3 7100U
SE +/- 0.67, N = 3
215.21
Core i3 8130U
SE +/- 0.40, N = 3
173.44
Core i5 2400S
SE +/- 0.42, N = 3
494.97
Core i5 3470T
SE +/- 0.10, N = 3
276.03
Core i5 7500T
SE +/- 0.55, N = 3
116.22
Core i5 7600K
SE +/- 2.39, N = 3
194.22
Core i5 8250U
SE +/- 0.66, N = 3
107.20
Core i5 8265U
SE +/- 0.43, N = 3
98.98
Core i5 8400
SE +/- 0.19, N = 3
130.15
Core i5 8500T
SE +/- 0.20, N = 3
74.94
Core i7 5960X
SE +/- 0.07, N = 3
108.14
Core i7 7740X
SE +/- 1.07, N = 3
145.66
Core i7 8665U
SE +/- 1.13, N = 3
120.01
Core i7 870
SE +/- 0.79, N = 3
350.74
Core i7 8700K
SE +/- 0.25, N = 3
97.38
Core i7 990X
SE +/- 0.24, N = 3
197.16
Core i9 7900X
SE +/- 0.18, N = 3
63.04
Core i9 7980XE
SE +/- 0.08, N = 3
41.90
Intel Core 2 Duo E8400
SE +/- 2.15, N = 3
1245.64
Lenovo Duet Helio P60T
SE +/- 2.68, N = 3
304.08
LenovoM700Tiny
SE +/- 0.16, N = 3
226.51
Pentium G3258
SE +/- 0.36, N = 3
721.71
Ryzen 3 5300U 16GB
SE +/- 0.17, N = 3
89.32
Ryzen 3 5300U 8GB
88.79

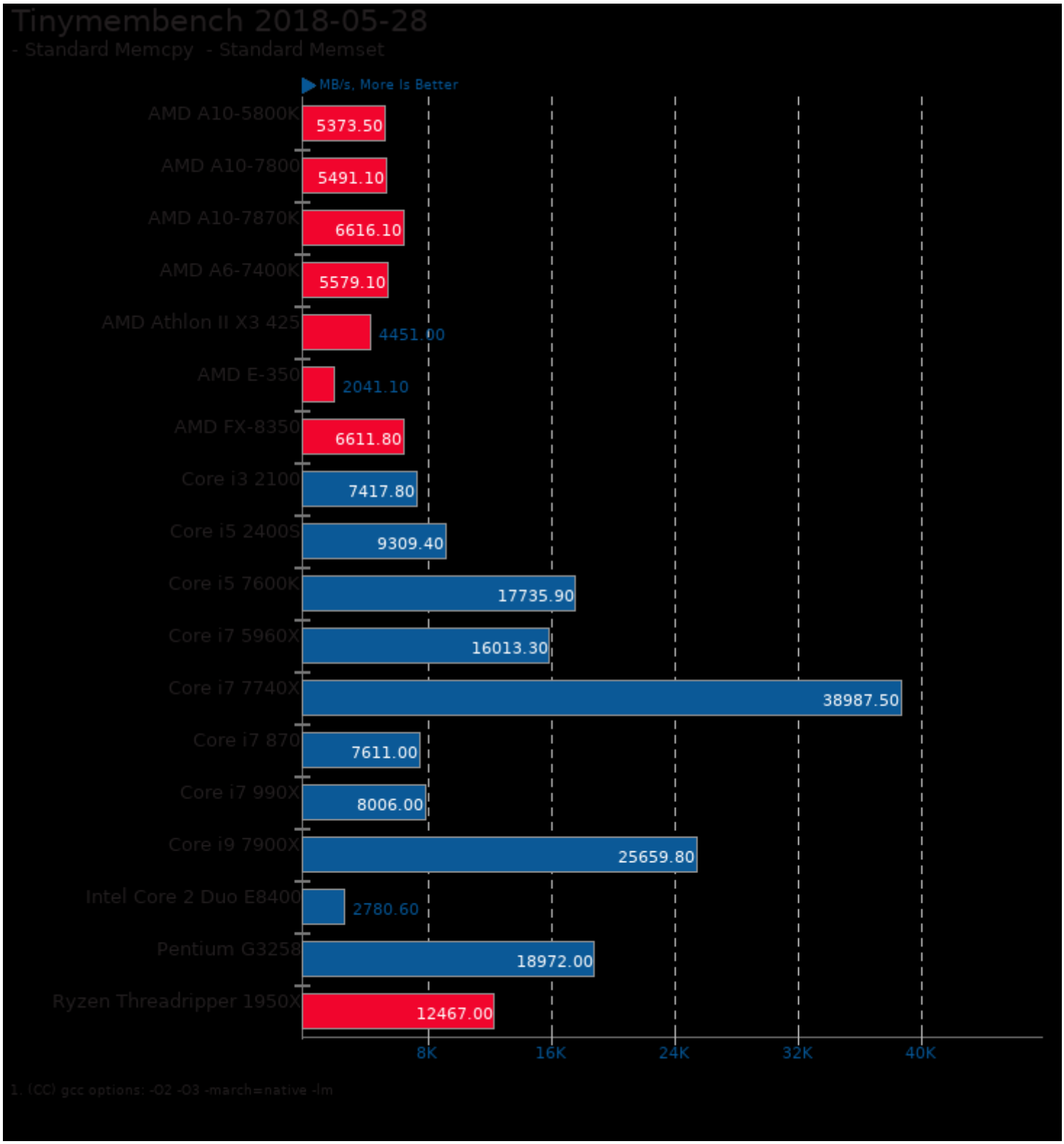

SciMark 2.0
Computational Test: Composite
Mflops, More Is Better
2 x E5-2667v3
SE +/- 0.57, N = 3
548.00
AMD A10-5800K
SE +/- 0.53, N = 3
815.00
AMD A10-7800
SE +/- 1.52, N = 3
741.00
AMD A10-7870K
SE +/- 0.85, N = 3
858.00
AMD A6-7400K
SE +/- 1.82, N = 3
739.00
AMD Athlon II X3 425
SE +/- 0.04, N = 3
573.00
AMD E-350
SE +/- 0.08, N = 3
321.00
AMD FX-8350
SE +/- 1.35, N = 3
1159.00
Acer CB 315 - A4 9120C
SE +/- 2.27, N = 3
160.04
Core i3 2100
SE +/- 4.86, N = 3
1065.00
Core i3 7100U
SE +/- 0.44, N = 3
353.91
Core i3 8130U
SE +/- 0.32, N = 3
493.03
Core i5 2400S
SE +/- 2.02, N = 3
1398.00
Core i5 3470T
SE +/- 8.00, N = 3
1304.00
Core i5 7500T
SE +/- 0.53, N = 3
493.76
Core i5 7600K
SE +/- 4.29, N = 3
2385.00
Core i5 8250U
SE +/- 0.50, N = 3
504.86
Core i5 8265U
SE +/- 0.27, N = 3
571.77
Core i5 8500T
SE +/- 2.03, N = 3
1701.00
Core i7 5960X
SE +/- 0.50, N = 3
2168.00
Core i7 7740X
SE +/- 3.52, N = 3
3210.00
Core i7 8665U
SE +/- 0.88, N = 3
527.83
Core i7 870
SE +/- 5.00, N = 3
1180.00
Core i7 990X
SE +/- 0.80, N = 3
1324.00
Core i9 7900X
SE +/- 4.36, N = 3
2579.00
Core i9 7980XE
SE +/- 8.86, N = 3
2696.00
Intel Core 2 Duo E8400
SE +/- 2.65, N = 3
787.00
Lenovo Duet Helio P60T
SE +/- 0.03, N = 3
161.66
LenovoM700Tiny
SE +/- 0.74, N = 3
370.69
MacMini2011-2415M
SE +/- 0.81, N = 3
401.15
Pentium G3258
SE +/- 1.12, N = 3
1109.00
Ryzen 3 5300U 16GB
SE +/- 1.57, N = 3
593.95
Ryzen 3 5300U 8GB
SE +/- 2.70, N = 3
571.61
Ryzen Threadripper 1950X
2297.00

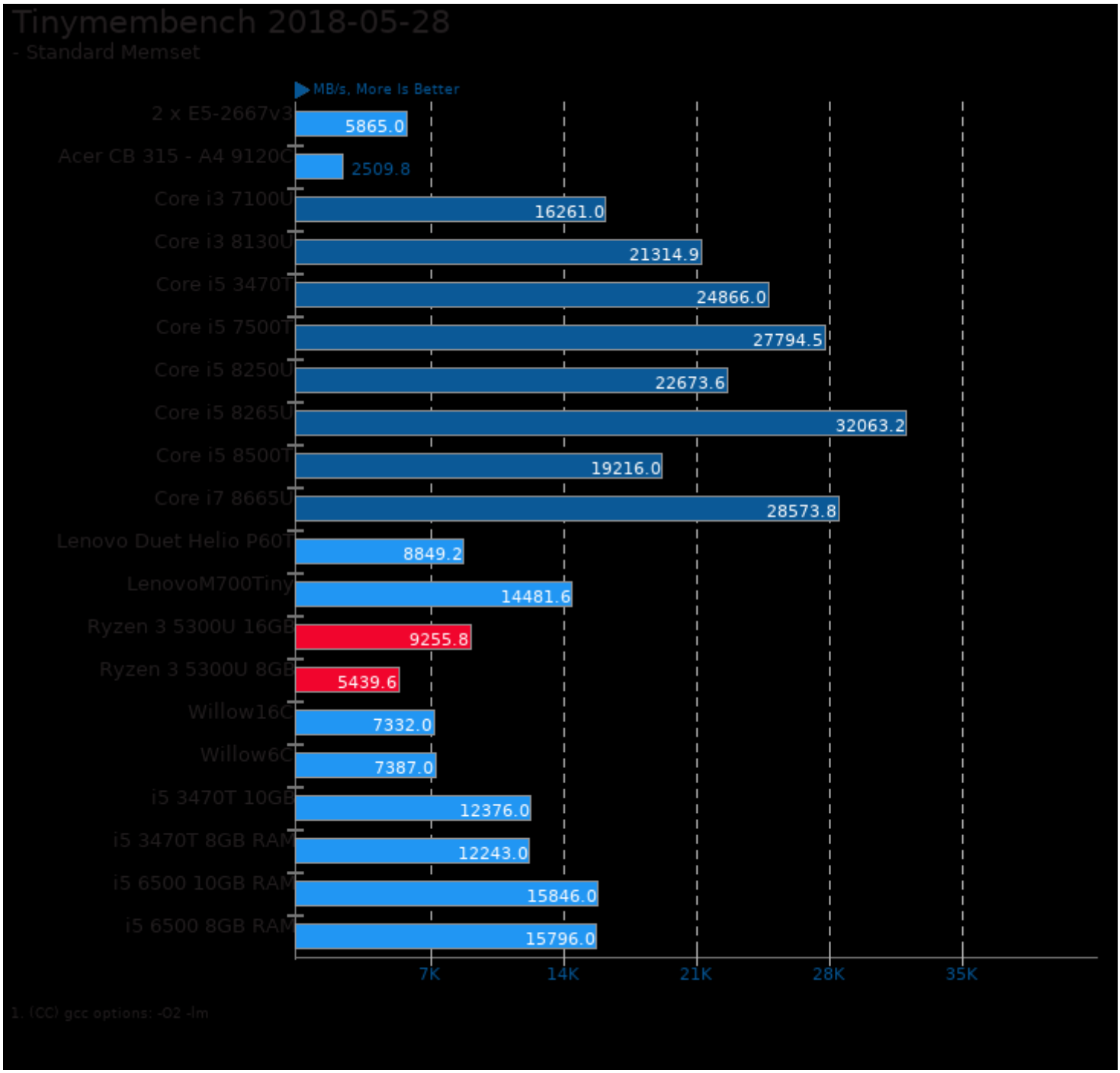

Stockfish 9
Total Time
Nodes Per Second, More Is Better
2 x E5-2667v3
SE +/- 368313.17, N = 3
34962607
AMD A10-5800K
SE +/- 110500.40, N = 6
3110648
AMD A10-7800
SE +/- 52988.21, N = 3
5147353
AMD A10-7870K
SE +/- 22419.28, N = 3
5793041
AMD A6-7400K
SE +/- 7276.85, N = 3
2634622
AMD Athlon II X3 425
SE +/- 27900.30, N = 3
3340855
AMD E-350
SE +/- 934.89, N = 3
721156
AMD FX-8350
SE +/- 16238.24, N = 3
10229160
Acer CB 315 - A4 9120C
SE +/- 9757.48, N = 3
770377
Core i3 2100
SE +/- 25728.51, N = 3
3959009
Core i3 7100U
SE +/- 27651.08, N = 3
3344542
Core i3 8130U
SE +/- 26164.81, N = 3
4388325
Core i5 2400S
SE +/- 28739.22, N = 3
5450590
Core i5 3470T
SE +/- 14426.76, N = 3
3793239
Core i5 7500T
SE +/- 17604.74, N = 3
6897217
Core i5 7600K
SE +/- 6143.92, N = 3
9418962
Core i5 8250U
SE +/- 24212.11, N = 3
6937063
Core i5 8265U
SE +/- 69938.47, N = 3
7592269
Core i5 8500T
SE +/- 118670.12, N = 3
10748746
Core i7 5960X
SE +/- 87013.46, N = 3
18120282
Core i7 7740X
SE +/- 51432.80, N = 3
13396201
Core i7 8665U
SE +/- 29218.22, N = 3
6462193
Core i7 870
SE +/- 121724.18, N = 3
7494699
Core i7 990X
SE +/- 132601.70, N = 3
13338369
Core i9 7900X
SE +/- 379613.80, N = 3
29577765
Core i9 7980XE
SE +/- 69662.77, N = 3
44214755
LenovoM700Tiny
SE +/- 8184.83, N = 3
3973324
MacMini2011-2415M
SE +/- 11287.16, N = 3
3405948
Pentium G3258
SE +/- 13556.97, N = 3
3556304
Ryzen 3 5300U 16GB
SE +/- 45808.65, N = 3
8333287
Ryzen 3 5300U 8GB
SE +/- 28392.34, N = 3
8184176
Ryzen Threadripper 1950X
SE +/- 122812.89, N = 3
40826604
Willow16C
SE +/- 271217.22, N = 12
17298395
Willow6C
8611939

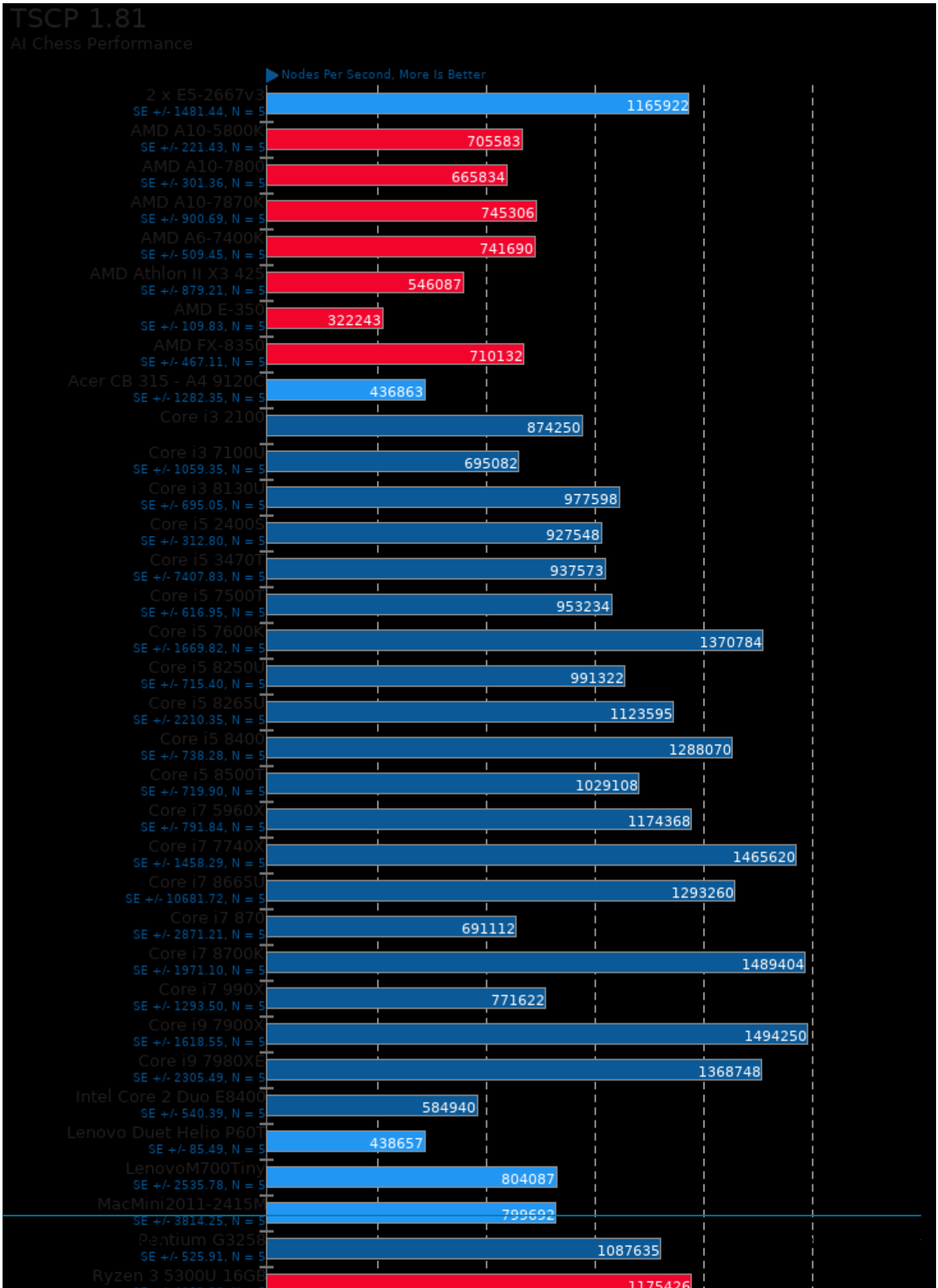

Timed Linux Kernel Compilation 4.13
Time To Compile
Seconds, Fewer Is Better
AMD A10-5800K
SE +/- 1.99, N = 3
481.45
AMD A10-7800
SE +/- 1.44, N = 3
338.91
AMD A10-7870K
SE +/- 1.49, N = 3
299.12
AMD A6-7400K
SE +/- 1.45, N = 3
683.51
AMD Athlon II X3 425
SE +/- 1.87, N = 3
512.50
AMD E-350
SE +/- 5.35, N = 3
2384.11
AMD FX-8350
SE +/- 1.38, N = 3
167.36
Core i3 2100
SE +/- 1.44, N = 3
439.59
Core i5 2400S
SE +/- 1.03, N = 3
304.65
Core i5 7600K
SE +/- 0.72, N = 3
157.39
Core i5 8400
SE +/- 0.73, N = 3
112.25
Core i7 5960X
SE +/- 1.15, N = 3
88.77
Core i7 7740X
SE +/- 0.59, N = 3
106.27
Core i7 870
SE +/- 0.89, N = 3
235.76
Core i7 8700K
SE +/- 0.61, N = 3
80.99
Core i7 990X
SE +/- 2.07, N = 3
155.68
Core i9 7900X
SE +/- 0.75, N = 3
55.89
Core i9 7980XE
SE +/- 0.69, N = 3
35.83
Intel Core 2 Duo E8400
SE +/- 1.39, N = 3
625.40
Lenovo Duet Helio P60T
SE +/- 7.49, N = 3
1443.48
Pentium G3258
SE +/- 1.29, N = 3
420.67
Ryzen 5 2400G
SE +/- 1.01, N = 3
159.98
Ryzen 5 2600
SE +/- 0.77, N = 3
104.66
Ryzen 5 2600X
SE +/- 0.73, N = 3
94.85
Ryzen 7 1700
SE +/- 0.87, N = 3
94.71
Ryzen 7 1800X
SE +/- 0.70, N = 3
84.32
Ryzen 7 2700
SE +/- 0.85, N = 3
87.45
Ryzen 7 2700X
SE +/- 0.67, N = 3
77.00
Ryzen Threadripper 1950X
SE +/- 0.78, N = 3
47.14
500
1000
1500
2000
2500

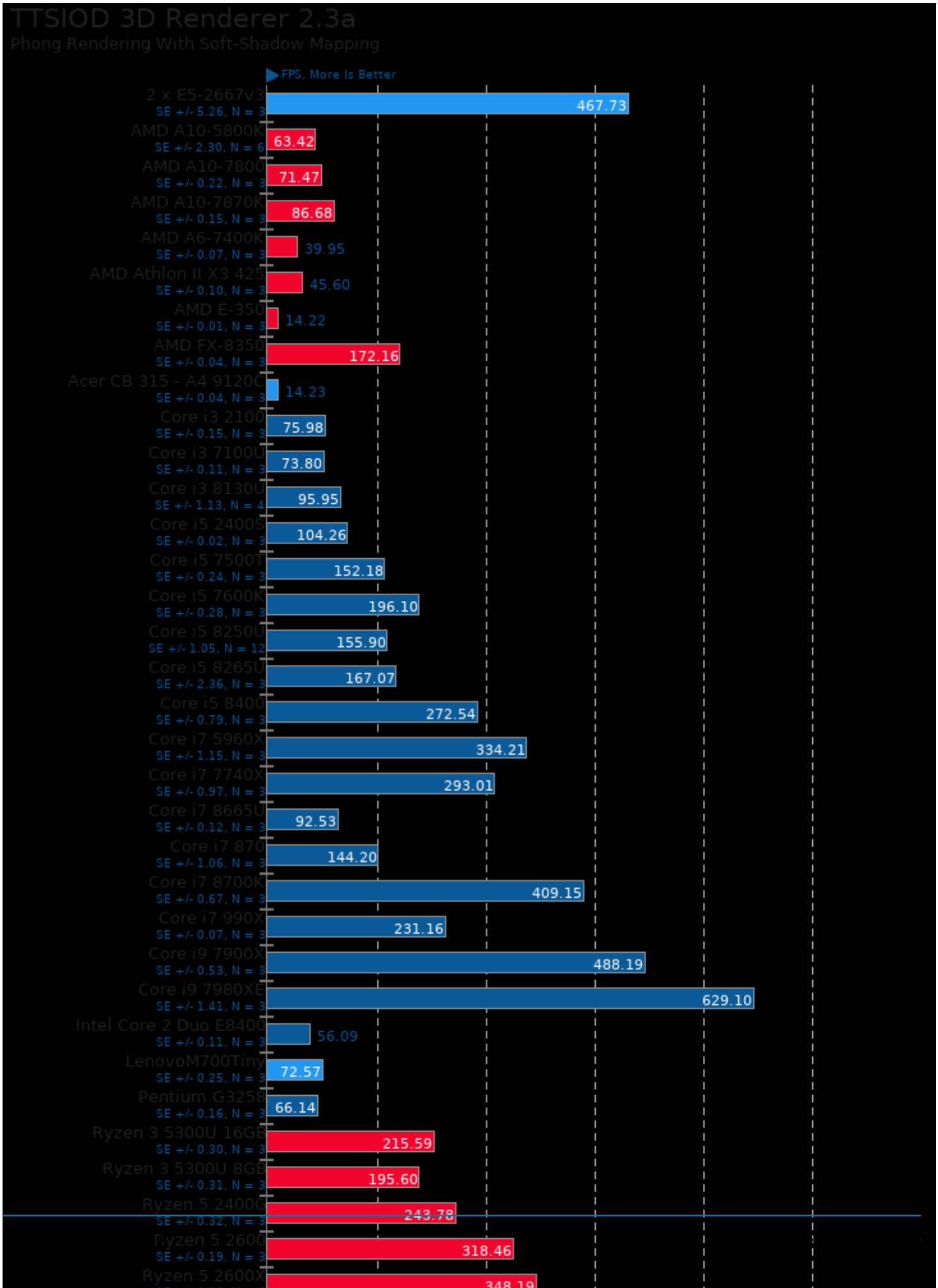

Timed PHP Compilation 7.1.9
Time To Compile
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.24, N = 3
71.83
AMD A10-5800K
SE +/- 7.03, N = 6
263.28
AMD A10-7800
SE +/- 0.19, N = 3
216.31
AMD A10-7870K
SE +/- 0.08, N = 3
189.62
AMD A6-7400K
SE +/- 0.34, N = 3
402.92
AMD Athlon II X3 425
SE +/- 0.25, N = 3
324.71
AMD E-350
SE +/- 0.07, N = 3
1271.67
AMD FX-8350
SE +/- 0.18, N = 3
108.49
Acer CB 315 - A4 9120C
SE +/- 1.30, N = 3
1428.50
Core i3 2100
SE +/- 0.09, N = 3
254.80
Core i3 7100U
SE +/- 0.17, N = 3
278.50
Core i3 8130U
SE +/- 0.67, N = 3
218.48
Core i5 2400S
SE +/- 0.15, N = 3
178.95
Core i5 3470T
SE +/- 0.34, N = 3
319.86
Core i5 7500T
SE +/- 0.21, N = 3
145.72
Core i5 7600K
SE +/- 0.07, N = 3
103.82
Core i5 8250U
SE +/- 0.50, N = 3
144.68
Core i5 8265U
SE +/- 0.52, N = 3
135.06
Core i5 8400
SE +/- 0.12, N = 3
69.43
Core i5 8500T
SE +/- 1.50, N = 3
140.70
Core i7 5960X
SE +/- 0.16, N = 3
75.52
Core i7 7740X
SE +/- 0.18, N = 3
67.57
Core i7 8665U
SE +/- 0.20, N = 3
142.79
Core i7 870
SE +/- 0.48, N = 3
141.04
Core i7 8700K
SE +/- 0.17, N = 3
56.42
Core i7 990X
SE +/- 0.28, N = 3
108.34
Core i9 7900X
SE +/- 0.03, N = 3
52.57
Core i9 7980XE
SE +/- 0.09, N = 3
46.12
Intel Core 2 Duo E8400
SE +/- 0.05, N = 3
339.19
LenovoM700Tiny
SE +/- 0.41, N = 3
294.18
MacMini2011-2415M
SE +/- 28.22, N = 9
337.67
Pentium G3258
SE +/- 0.83, N = 3
259.15
Ryzen 3 5300U 16GB
SE +/- 0.28, N = 3
128.63
Ryzen 3 5300U 8GB
149.26

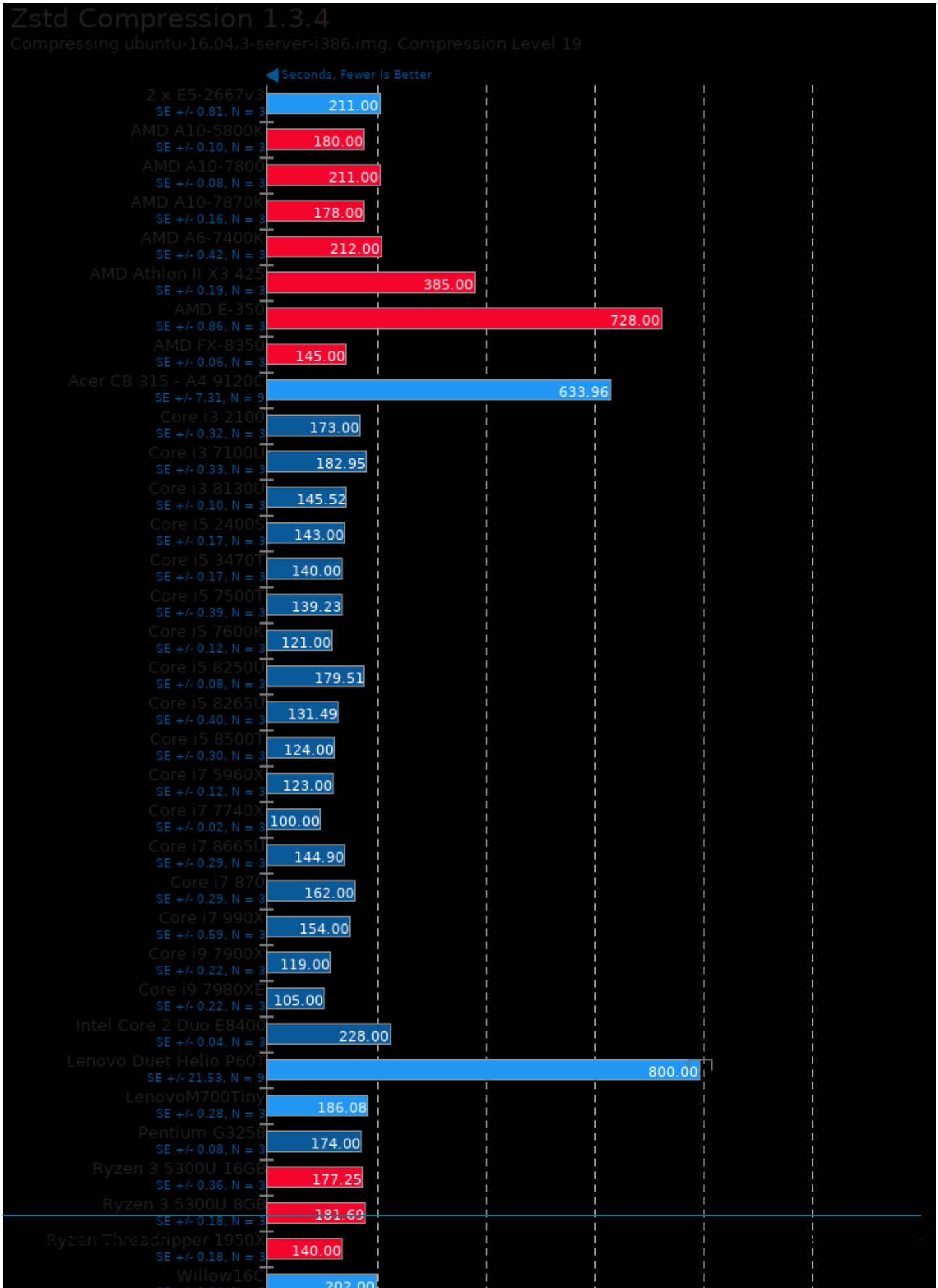

Tinymembench 2018-05-28
- Standard Memcpy
MB/s, More Is Better
2 x E5-2667v3
4355.0
AMD A10-5800K
5725.0
AMD A10-7800
5057.0
AMD A10-7870K
5801.0
AMD A6-7400K
4973.0
AMD Athlon II X3 425
4433.0
AMD E-350
2012.0
AMD FX-8350
5728.0
Acer CB 315 - A4 9120C
1949.0
Core i3 2100
7242.0
Core i3 7100U
7182.5
Core i3 8130U
9466.5
Core i5 2400S
8976.0
Core i5 3470T
9133.0
Core i5 7500T
13186.7
Core i5 7600K
7502.0
Core i5 8250U
9594.9
Core i5 8265U
13534.9
Core i5 8500T
8074.0
Core i7 5960X
11653.0
Core i7 7740X
17193.0
Core i7 8665U
12162.9
Core i7 870
6906.0
Core i7 990X
7385.0
Core i9 7900X
10519.0
Core i9 7980XE
9959.0
Intel Core 2 Duo E8400
3498.0
Lenovo Duet Helio P60T
4148.4
LenovoM700Tiny
6611.5
Pentium G3258
7492.0
Ryzen 3 5300U 16GB
6713.1
Ryzen 3 5300U 8GB
4320.8
Ryzen Threadripper 1950X
15595.0
Willow16G
9248.0


Tinymembench 2018-05-28
- Standard Memcpy - Standard Memset
MB/s, More Is Better
AMD A10-5800K
5373.50
AMD A10-7800
5491.10
AMD A10-7870K
6616.10
AMD A6-7400K
5579.10
AMD Athlon II X3 425
4451.00
AMD E-350
2041.10
AMD FX-8350
6611.80
Core i3 2100
7417.80
Core i5 2400S
9309.40
Core i5 7600K
17735.90
Core i7 5960X
16013.30
Core i7 7740X
38987.50
Core i7 870
7611.00
Core i7 990X
8006.00
Core i9 7900X
25659.80
Intel Core 2 Duo E8400
2780.60
Pentium G3258
18972.00
Ryzen Threadripper 1950X
12467.00
8K
16K
24K
32K
40K
1. (CC) gcc options: -O2 -O3 -march=native -lm

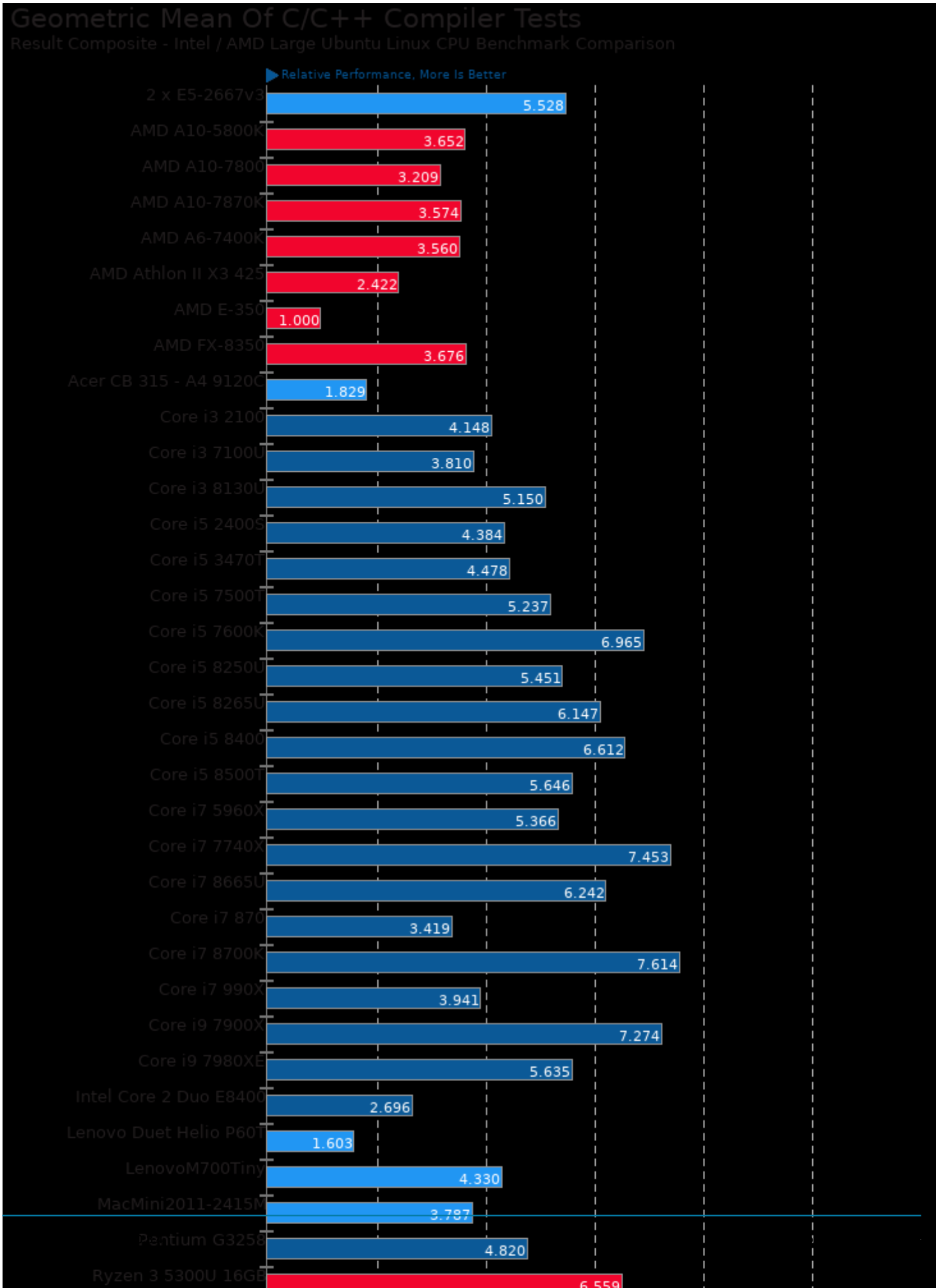

Tinymembench 2018-05-28
- Standard Memset
MB/s, More Is Better
2 x E5-2667v3
5865.0
Acer CB 315 - A4 9120C
2509.8
Core i3 7100U
16261.0
Core i3 8130U
21314.9
Core i5 3470T
24866.0
Core i5 7500T
27794.5
Core i5 8250U
22673.6
Core i5 8265U
32063.2
Core i5 8500T
19216.0
Core i7 8665U
28573.8
Lenovo Duet Helio P60T
8849.2
LenovoM700Tiny
14481.6
Ryzen 3 5300U 16GB
9255.8
Ryzen 3 5300U 8GB
5439.6
Willow16C
7332.0
Willow6C
7387.0
i5 3470T 10GB
12376.0
i5 3470T 8GB RAM
12243.0
i5 6500 10GB RAM
15846.0
i5 6500 8GB RAM
15796.0
7K
14K
21K
28K
35K
1. (CC) gcc options: -O2 -lm


TSCP 1.81
AI Chess Performance
Nodes Per Second, More Is Better
2 x E5-2667v3
SE +/- 1481.44, N = 5
1165922
AMD A10-5800K
SE +/- 221.43, N = 5
705583
AMD A10-7800
SE +/- 301.36, N = 5
665834
AMD A10-7870K
SE +/- 900.69, N = 5
745306
AMD A6-7400K
SE +/- 509.45, N = 5
741690
AMD Athlon II X3 425
SE +/- 879.21, N = 5
546087
AMD E-350
SE +/- 109.83, N = 5
322243
AMD FX-8350
SE +/- 467.11, N = 5
710132
Acer CB 315 - A4 9120C
SE +/- 1282.35, N = 5
436863
Core i3 2100
874250
Core i3 7100U
SE +/- 1059.35, N = 5
695082
Core i3 8130U
SE +/- 695.05, N = 5
977598
Core i5 2400S
SE +/- 312.80, N = 5
927548
Core i5 3470T
SE +/- 7407.83, N = 5
937573
Core i5 7500T
SE +/- 616.95, N = 5
953234
Core i5 7600K
SE +/- 1669.82, N = 5
1370784
Core i5 8250U
SE +/- 715.40, N = 5
991322
Core i5 8265U
SE +/- 2210.35, N = 5
1123595
Core i5 8400
SE +/- 738.28, N = 5
1288070
Core i5 8500T
SE +/- 719.90, N = 5
1029108
Core i7 5960X
SE +/- 791.84, N = 5
1174368
Core i7 7740X
SE +/- 1458.29, N = 5
1465620
Core i7 8665U
SE +/- 10681.72, N = 5
1293260
Core i7 870
SE +/- 2871.21, N = 5
691112
Core i7 8700K
SE +/- 1971.10, N = 5
1489404
Core i7 990X
SE +/- 1293.50, N = 5
771622
Core i9 7900X
SE +/- 1618.55, N = 5
1494250
Core i9 7980XE
SE +/- 2305.49, N = 5
1368748
Intel Core 2 Duo E8400
SE +/- 540.39, N = 5
584940
Lenovo Duet Helio P60T
SE +/- 85.49, N = 5
438657
LenovoM700Tiny
SE +/- 2535.78, N = 5
804087
MacMini2011-2415M
SE +/- 3814.25, N = 5
799692
Pentium G3258
SE +/- 525.91, N = 5
1087635
Ryzen 3 5300U 16GB
1175426

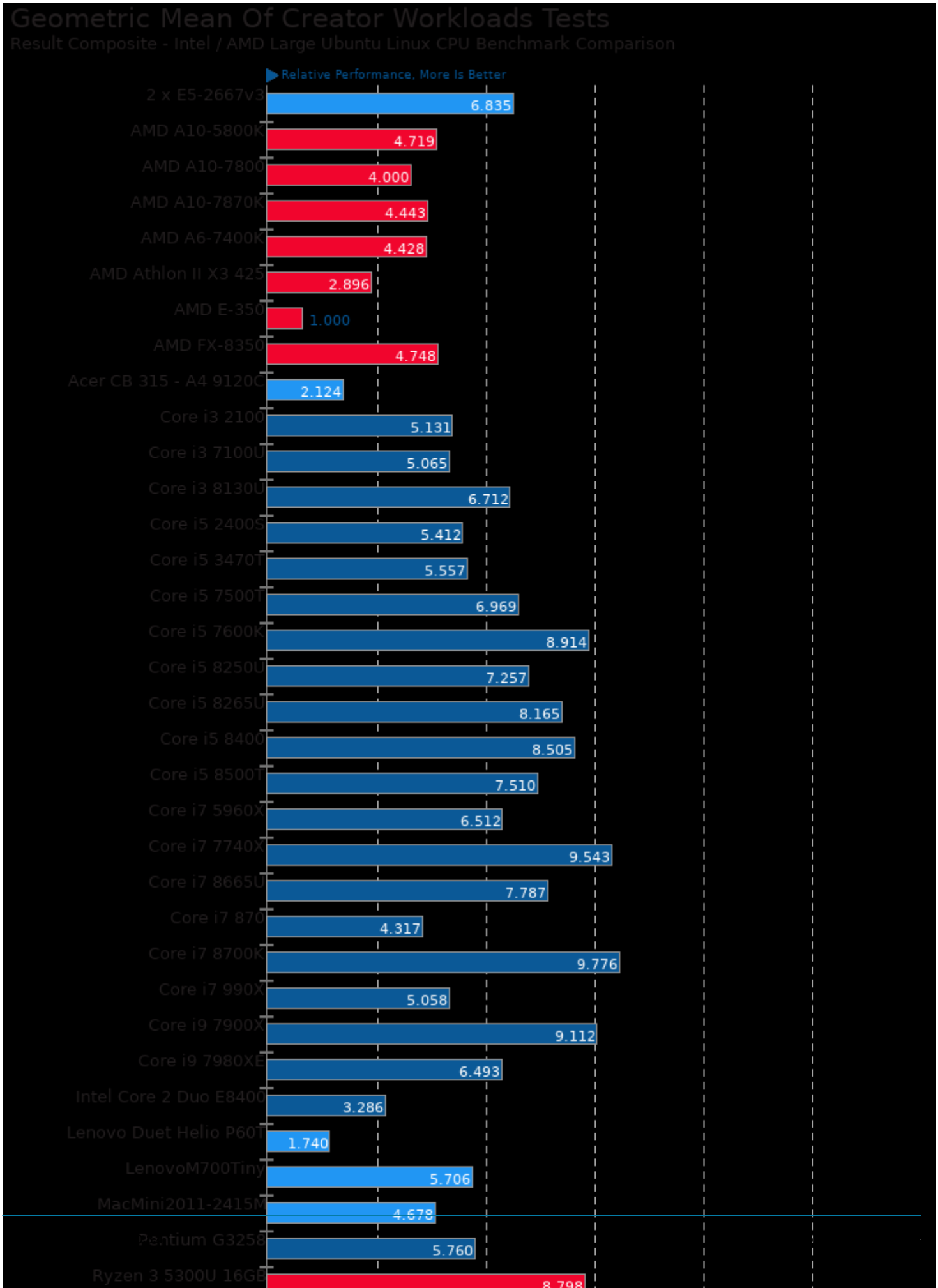

TTSIOD 3D Renderer 2.3a
Phong Rendering With Soft-Shadow Mapping
FPS, More Is Better
2 x E5-2667v3
SE +/- 5.26, N = 3
467.73
AMD A10-5800K
SE +/- 2.30, N = 6
63.42
AMD A10-7800
SE +/- 0.22, N = 3
71.47
AMD A10-7870K
SE +/- 0.15, N = 3
86.68
AMD A6-7400K
SE +/- 0.07, N = 3
39.95
AMD Athlon II X3 425
SE +/- 0.10, N = 3
45.60
AMD E-350
SE +/- 0.01, N = 3
14.22
AMD FX-8350
SE +/- 0.04, N = 3
172.16
Acer CB 315 - A4 9120C
SE +/- 0.04, N = 3
14.23
Core i3 2100
SE +/- 0.15, N = 3
75.98
Core i3 7100U
SE +/- 0.11, N = 3
73.80
Core i3 8130U
SE +/- 1.13, N = 4
95.95
Core i5 2400S
SE +/- 0.02, N = 3
104.26
Core i5 7500T
SE +/- 0.24, N = 3
152.18
Core i5 7600K
SE +/- 0.28, N = 3
196.10
Core i5 8250U
SE +/- 1.05, N = 12
155.90
Core i5 8265U
SE +/- 2.36, N = 3
167.07
Core i5 8400
SE +/- 0.79, N = 3
272.54
Core i7 5960X
SE +/- 1.15, N = 3
334.21
Core i7 7740X
SE +/- 0.97, N = 3
293.01
Core i7 8665U
SE +/- 0.12, N = 3
92.53
Core i7 870
SE +/- 1.06, N = 3
144.20
Core i7 8700K
SE +/- 0.67, N = 3
409.15
Core i7 990X
SE +/- 0.07, N = 3
231.16
Core i9 7900X
SE +/- 0.53, N = 3
488.19
Core i9 7980XE
SE +/- 1.41, N = 3
629.10
Intel Core 2 Duo E8400
SE +/- 0.11, N = 3
56.09
LenovoM700Tiny
SE +/- 0.25, N = 3
72.57
Pentium G3258
SE +/- 0.16, N = 3
66.14
Ryzen 3 5300U 16GB
SE +/- 0.30, N = 3
215.59
Ryzen 3 5300U 8GB
SE +/- 0.31, N = 3
195.60
Ryzen 5 2400G
SE +/- 0.32, N = 3
243.78
Ryzen 5 2600
SE +/- 0.19, N = 3
318.46
Ryzen 5 2600X
348.19


Zstd Compression 1.3.4
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 19
Seconds, Fewer Is Better
2 x E5-2667v3
SE +/- 0.81, N = 3
211.00
AMD A10-5800K
SE +/- 0.10, N = 3
180.00
AMD A10-7800
SE +/- 0.08, N = 3
211.00
AMD A10-7870K
SE +/- 0.16, N = 3
178.00
AMD A6-7400K
SE +/- 0.42, N = 3
212.00
AMD Athlon II X3 425
SE +/- 0.19, N = 3
385.00
AMD E-350
SE +/- 0.86, N = 3
728.00
AMD FX-8350
SE +/- 0.06, N = 3
145.00
Acer CB 315 - A4 9120C
SE +/- 7.31, N = 9
633.96
Core i3 2100
SE +/- 0.32, N = 3
173.00
Core i3 7100U
SE +/- 0.33, N = 3
182.95
Core i3 8130U
SE +/- 0.10, N = 3
145.52
Core i5 2400S
SE +/- 0.17, N = 3
143.00
Core i5 3470T
SE +/- 0.17, N = 3
140.00
Core i5 7500T
SE +/- 0.39, N = 3
139.23
Core i5 7600K
SE +/- 0.12, N = 3
121.00
Core i5 8250U
SE +/- 0.08, N = 3
179.51
Core i5 8265U
SE +/- 0.40, N = 3
131.49
Core i5 8500T
SE +/- 0.30, N = 3
124.00
Core i7 5960X
SE +/- 0.12, N = 3
123.00
Core i7 7740X
SE +/- 0.02, N = 3
100.00
Core i7 8665U
SE +/- 0.29, N = 3
144.90
Core i7 870
SE +/- 0.29, N = 3
162.00
Core i7 990X
SE +/- 0.59, N = 3
154.00
Core i9 7900X
SE +/- 0.22, N = 3
119.00
Core i9 7980XE
SE +/- 0.22, N = 3
105.00
Intel Core 2 Duo E8400
SE +/- 0.04, N = 3
228.00
Lenovo Duet Helio P60T
SE +/- 21.53, N = 9
800.00
LenovoM700Tiny
SE +/- 0.28, N = 3
186.08
Pentium G3258
SE +/- 0.08, N = 3
174.00
Ryzen 3 5300U 16GB
SE +/- 0.36, N = 3
177.25
Ryzen 3 5300U 8GB
SE +/- 0.18, N = 3
181.69
Ryzen Threadripper 1950X
SE +/- 0.18, N = 3
140.00
Willow16G
202.00

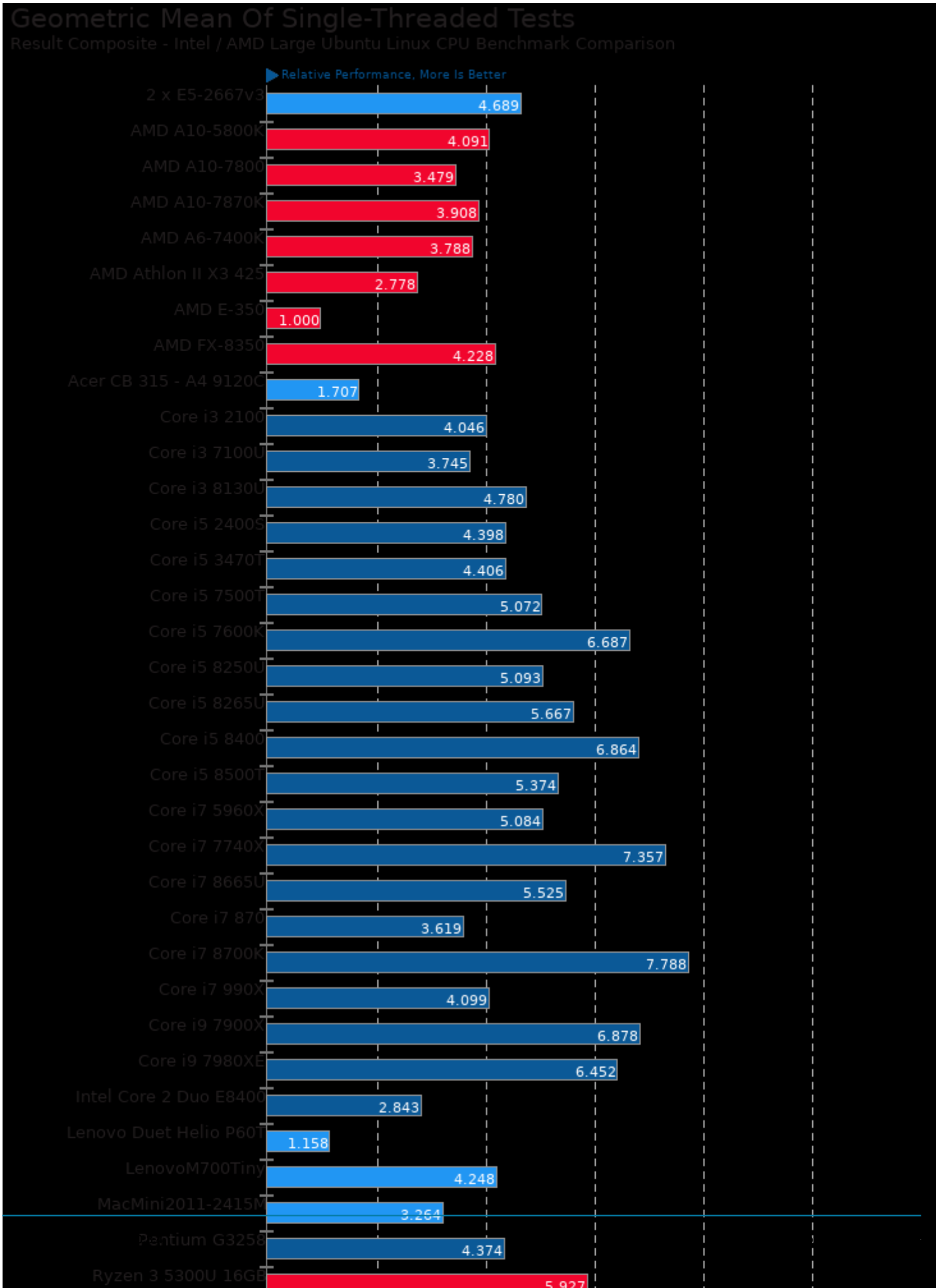
These geometric means are based upon test groupings / test suites for this result file.


Geometric Mean Of C/C++ Compiler Tests
Result Composite - Intel / AMD Large Ubuntu Linux CPU Benchmark Comparison
Relative Performance, More Is Better
2 x E5-2667v3
5.528
AMD A10-5800K
3.652
AMD A10-7800
3.209
AMD A10-7870K
3.574
AMD A6-7400K
3.560
AMD Athlon II X3 425
2.422
AMD E-350
1.000
AMD FX-8350
3.676
Acer CB 315 - A4 9120C
1.829
Core i3 2100
4.148
Core i3 7100U
3.810
Core i3 8130U
5.150
Core i5 2400S
4.384
Core i5 3470T
4.478
Core i5 7500T
5.237
Core i5 7600K
6.965
Core i5 8250U
5.451
Core i5 8265U
6.147
Core i5 8400
6.612
Core i5 8500T
5.646
Core i7 5960X
5.366
Core i7 7740X
7.453
Core i7 8665U
6.242
Core i7 870
3.419
Core i7 8700K
7.614
Core i7 990X
3.941
Core i9 7900X
7.274
Core i9 7980XE
5.635
Intel Core 2 Duo E8400
2.696
Lenovo Duet Helio P60T
1.603
LenovoM700Tiny
4.330
MacMini2011-2415M
3.787
Pentium G3258
4.820
Ryzen 3 5300U 16GB
6.559

Geometric mean based upon tests: pts/scimark2, pts/aobench, pts/tscp, pts/stockfish, pts/build-php, pts/compress-7zip, pts/encode-mp3, pts/encode-flac, pts/compress-zstd and pts/openssl


Geometric Mean Of Creator Workloads Tests
Result Composite - Intel / AMD Large Ubuntu Linux CPU Benchmark Comparison
Relative Performance, More Is Better
2 x E5-2667v3
6.835
AMD A10-5800K
4.719
AMD A10-7800
4.000
AMD A10-7870K
4.443
AMD A6-7400K
4.428
AMD Athlon II X3 425
2.896
AMD E-350
1.000
AMD FX-8350
4.748
Acer CB 315 - A4 9120C
2.124
Core i3 2100
5.131
Core i3 7100U
5.065
Core i3 8130U
6.712
Core i5 2400S
5.412
Core i5 3470T
5.557
Core i5 7500T
6.969
Core i5 7600K
8.914
Core i5 8250U
7.257
Core i5 8265U
8.165
Core i5 8400
8.505
Core i5 8500T
7.510
Core i7 5960X
6.512
Core i7 7740X
9.543
Core i7 8665U
7.787
Core i7 870
4.317
Core i7 8700K
9.776
Core i7 990X
5.058
Core i9 7900X
9.112
Core i9 7980XE
6.493
Intel Core 2 Duo E8400
3.286
Lenovo Duet Helio P60T
1.740
LenovoM700Tiny
5.706
MacMini2011-2415M
4.678
Pentium G3258
5.760
Ryzen 3 5300U 16GB
8.798

Geometric mean based upon tests: pts/aobench, pts/ttsiod-renderer, pts/encode-mp3 and pts/encode-flac


Geometric Mean Of Single-Threaded Tests
Result Composite - Intel / AMD Large Ubuntu Linux CPU Benchmark Comparison
Relative Performance, More Is Better
2 x E5-2667v3
4.689
AMD A10-5800K
4.091
AMD A10-7800
3.479
AMD A10-7870K
3.908
AMD A6-7400K
3.788
AMD Athlon II X3 425
2.778
AMD E-350
1.000
AMD FX-8350
4.228
Acer CB 315 - A4 9120C
1.707
Core i3 2100
4.046
Core i3 7100U
3.745
Core i3 8130U
4.780
Core i5 2400S
4.398
Core i5 3470T
4.406
Core i5 7500T
5.072
Core i5 7600K
6.687
Core i5 8250U
5.093
Core i5 8265U
5.667
Core i5 8400
6.864
Core i5 8500T
5.374
Core i7 5960X
5.084
Core i7 7740X
7.357
Core i7 8665U
5.525
Core i7 870
3.619
Core i7 8700K
7.788
Core i7 990X
4.099
Core i9 7900X
6.878
Core i9 7980XE
6.452
Intel Core 2 Duo E8400
2.843
Lenovo Duet Helio P60T
1.158
LenovoM700Tiny
4.248
MacMini2011-2415M
3.264
Pentium G3258
4.374
Ryzen 3 5300U 16GB
5.927

Geometric mean based upon tests: pts/polybench-c, pts/fhourstones, pts/scimark2, pts/encode-flac and pts/encode-mp3

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 12:00.