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Ubuntu Linux Laptop Benchmarking

Intel Core i5-8259U testing with a Intel NUC8BEB (BECFL357.86A.0056.2018.1128.1717 BIOS) and Intel HD 3GB on Ubuntu 19.04 via the Phoronix Test Suite.

Automated Executive Summary

Dell XPS 9380 had the most wins, coming in first place for 54% of the tests.

Based on the geometric mean of all complete results, the fastest (Dell XPS 9380) was 3.689x the speed of the slowest (HP 8460p). NUC was 0.61x the speed of Dell XPS 9380, LENOVO 20BSCTO1WW was 0.86x the speed of NUC, ASUS UX32VDA was 0.903x the speed of LENOVO 20BSCTO1WW, Lenovo W510 was 0.678x the speed of ASUS UX32VDA, ASUS UX301LAA was 0.913x the speed of Lenovo W510, HP 8460p was 0.924x the speed of ASUS UX301LAA.

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

SQLite (Timed SQLite Insertions) at 74.557x
Scikit-Learn at 15.366x
FS-Mark (Test: 1000 Files, 1MB Size) at 8.593x
dav1d (Video Input: Summer Nature 1080p) at 7.669x
R Benchmark at 7.266x
FS-Mark (Test: 4000 Files, 32 Sub Dirs, 1MB Size) at 6.828x

FS-Mark (Test: 5000 Files, 1MB Size, 4 Threads) at 6.215x
Rust Prime Benchmark (Prime Number Test To 200,000,000) at 5.155x
x265 (H.265 Video Encoding) at 3.913x
Go Benchmarks (Test: http) at 3.341x.

Test Systems:

Lenovo W510

Processor: Intel Core i7 720Q @ 1.60GHz (4 Cores / 8 Threads), Motherboard: LENOVO 4318CTO (6NET61WW 1.24 BIOS), Chipset: Intel Core DMI, Memory: 4096MB, Disk: 160GB FUJITSU MHZ2160B, Graphics: NVIDIA Quadro FX 880M 1GB, Audio: Conexant CX20585, Network: Intel 82577LM + Intel Centrino Ultimate-N 6300

OS: Ubuntu 18.10, Kernel: 4.18.0-10-generic (x86_64), Desktop: GNOME Shell 3.30.1, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, OpenGL: 3.3 Mesa 18.2.2, Compiler: GCC 8.2.0, File-System: ext4, Screen Resolution: 1600x900

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: CFQ / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: acpi-cpufreq ondemand
Python Notes: Python 2.7.15+ + Python 3.6.7
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

HP 8460p

Processor: Intel Core i5-2520M @ 3.20GHz (2 Cores / 4 Threads), Motherboard: HP 161C (68SCF Ver. F.01 BIOS), Chipset: Intel 2nd Generation Core Family DRAM, Memory: 4096MB, Disk: 160GB INTEL SSDSA2M160, Graphics: Intel 2nd Generation Core Family IGP (1300MHz), Audio: IDT 92HD81B1X5, Network: Intel 82579LM + Intel Centrino Advanced-N 6205

OS: Ubuntu 18.10, Kernel: 4.18.0-10-generic (x86_64), Desktop: GNOME Shell 3.30.1, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, Compiler: GCC 8.2.0, File-System: ext4, Screen Resolution: 1600x900

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: CFQ / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 2.7.15+ + Python 3.6.7
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

ASUS UX32VDA

Processor: Intel Core i7-3517U @ 3.00GHz (2 Cores / 4 Threads), Motherboard: ASUS UX32VDA v1.0 (UX32VDA.203 BIOS), Chipset: Intel 3rd Gen Core DRAM, Memory: 3584MB, Disk: 2 x 128GB SanDisk SD5SF212, Graphics: Intel 3rd

Gen Core 1GB (1150MHz), Audio: Realtek ALC269VB, Network: Intel Centrino Advanced-N 6235

OS: Ubuntu 18.10, Kernel: 4.18.0-13-generic (x86_64), Desktop: GNOME Shell 3.30.1, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, Compiler: GCC 8.2.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: CFQ / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 2.7.15+ + Python 3.6.7
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

ASUS UX301LAA

Processor: Intel Core i7-4558U @ 3.30GHz (2 Cores / 4 Threads), Motherboard: ASUS UX301LAA v1.0 (UX301LAA.209 BIOS), Chipset: Intel Haswell-ULT DRAM, Memory: 8192MB, Disk: 2 x 128GB SanDisk SD6SP1M1, Graphics: Intel Haswell-ULT IGP (1200MHz), Audio: Intel Haswell-ULT HD Audio, Monitor: LQ133T1JW14, Network: Intel 7260

OS: Ubuntu 18.10, Kernel: 4.18.0-13-generic (x86_64), Desktop: GNOME Shell 3.30.1, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, OpenGL: 4.5 Mesa 18.2.2, Compiler: GCC 8.2.0, File-System: ext4, Screen Resolution: 2560x1440

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: CFQ / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 2.7.15+ + Python 3.6.7
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion

LENOVO 20BSCTO1WW

Processor: Intel Core i7-5600U @ 3.20GHz (2 Cores / 4 Threads), Motherboard: LENOVO 20BSCTO1WW (N14ET25W 1.03 BIOS), Chipset: Intel Broadwell-U-OPI, Memory: 8192MB, Disk: 128GB SAMSUNG MZNTE128, Graphics: Intel HD 5500 (950MHz), Audio: Intel Broadwell-U Audio, Network: Intel I218-LM + Intel 7265

OS: Ubuntu 18.10, Kernel: 4.18.0-13-generic (x86_64), Desktop: GNOME Shell 3.30.1, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, OpenGL: 4.5 Mesa 18.2.2, Compiler: GCC 8.2.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: CFQ / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 2.7.15+ + Python 3.6.7
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

Dell XPS 9380

Processor: Intel Core i7-8565U @ 4.60GHz (4 Cores / 8 Threads), Motherboard: Dell 0KTW76 (1.0.0 BIOS), Chipset:

Intel Device 9def, Memory: 16384MB, Disk: PC401 NVMe SK hynix 256GB, Graphics: Intel HD 3GB (1150MHz), Audio: Realtek ALC3271, Network: Qualcomm Atheros QCA6174 802.11ac

OS: Ubuntu 18.10, Kernel: 4.18.0-13-generic (x86_64), Desktop: GNOME Shell 3.30.1, Display Server: X Server 1.20.1, Display Driver: modesetting 1.20.1, OpenGL: 4.5 Mesa 18.2.2, Compiler: GCC 8.2.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: NONE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Python Notes: Python 2.7.15+ + Python 3.6.7
Security Notes: __user pointer sanitization + Full generic retpoline IBPB IBRS_FW + SSB disabled via prctl and seccomp

NUC

Processor: Intel Core i5-8259U @ 3.80GHz (4 Cores / 8 Threads), Motherboard: Intel NUC8BEB (BECFL357.86A.0056.2018.1128.1717 BIOS), Chipset: Intel Cannon Point-LP, Memory: 16384MB, Disk: 250GB CT250MX500SSD4, Graphics: Intel HD 3GB (1050MHz), Audio: Realtek ALC233, Monitor: M2380D, Network: Intel I219-V + Intel Cannon Point-LP CNVi

OS: Ubuntu 19.04, Kernel: 5.0.0-15-generic (x86_64), Desktop: GNOME Shell 3.32.0, Display Server: X Server 1.20.4, Display Driver: modesetting 1.20.4, OpenGL: 4.5 Mesa 19.0.2, Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1920x1080

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
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave
Java Notes: OpenJDK Runtime Environment (build 11.0.3+7-Ubuntu-1ubuntu219.04.1)
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + SSB disabled via prctl and seccomp + PTE Inversion; VMX: conditional cache flushes SMT vulnerable

	Lenovo W510	HP 8460p	ASUS UX32VDA	ASUS UX301LAA	LENOVO 20BSCTO1WW	Dell XPS 9380	NUC
SQLite - T.S.I (sec)	**730.66**	**9.80**	54.14	51.14	101.25	55.95	32.45
Normalized	1.34%	100%	18.1%	19.16%	9.68%	17.52%	30.2%
Standard Deviation		1.3%	1.7%	3.3%	0.4%	23.3%	5%
FS-Mark - 1.F.1.S (Files/s)	**14.70**	78.50	50.97	47.70	39.50	**126.31**	109.67
Normalized	11.64%	62.15%	40.35%	37.76%	31.27%	100%	86.83%
Standard Deviation	0.7%	2.2%	1.1%	2%	1.4%	18.7%	2.7%
FS-Mark - 5.F.1.S.4.T (Files/s)	**33.07**	97.37	124.73	119.07	69.07	**205.53**	135.90
Normalized	16.09%	47.38%	60.69%	57.93%	33.61%	100%	66.12%
Standard Deviation	0.7%	0.5%	1.1%	1.2%	1.5%	2.8%	38.1%

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FS-Mark - 4.F.3.S.D.1.S (Files/s)	**15.70**	77.53	50.23	46.90	38.27	**107.20**	68.43
Normalized	14.65%	72.32%	46.86%	43.75%	35.7%	100%	63.83%
Standard Deviation	3.2%	0.5%	0.5%	1.9%	0.8%	4.9%	2.7%
Go Benchmarks - http (ns/op)	**31945**	29580	30269	20666	22650	12176	**9562**
Normalized	29.93%	32.33%	31.59%	46.27%	42.22%	78.53%	100%
Standard Deviation	0.2%	0.2%	0.1%	0.1%	0.2%	12.6%	0.1%
Go Benchmarks - json (ns/op)	**42881097**	39454371	40427557	32139672	38393753	21320790	**15030225**
Normalized	35.05%	38.1%	37.18%	46.77%	39.15%	70.5%	100%
Standard Deviation	0.3%	0.2%	0.4%	0.1%	0.1%	3%	0.3%
Go Benchmarks - build (ns/op)	**33074207737**	24019970606	23461452345	18318227224	17682743975	**13560481172**	14811883137
Normalized	41%	56.46%	57.8%	74.03%	76.69%	100%	91.55%
Standard Deviation	8.7%	2.7%	2.7%	3.2%	2.2%	3.4%	2.9%
Go Benchmarks - garbage (ns/op)	**8404621**	8219006	8307952	7009027	7969703	4362596	**3100829**
Normalized	36.89%	37.73%	37.32%	44.24%	38.91%	71.08%	100%
Standard Deviation	0.4%	0.8%	1.4%	0.2%	0.6%	3.5%	0.6%
DaCapo Benchmark - Jython (msec)	**11749**	8572	8823	6499	7676	5751	**4466**
Normalized	38.01%	52.1%	50.62%	68.72%	58.18%	77.66%	100%
Standard Deviation	4.2%	3.2%	3.3%	3.2%	3.5%	8%	2.1%
DaCapo Benchmark - Eclipse (msec)	**51561**	41789	39509	**31953**	35874		
Normalized	61.97%	76.46%	80.88%	100%	89.07%		
Standard Deviation	2%	1.4%	4.3%	6.7%	2.9%		
x265 - H.2.V.E (FPS)	**5.42**	5.63	5.74	8.93	8.00	14.96	**21.21**
Normalized	25.55%	26.54%	27.06%	42.1%	37.72%	70.53%	100%
Standard Deviation	0.6%	0.4%	0.2%	3.3%	1.6%	2.7%	0.9%
Timed Linux Kernel Compilation - Time To Compile (sec)	527	574	**575**	471	508	260	**177**
Normalized	33.59%	30.84%	30.78%	37.58%	34.84%	68.08%	100%
Standard Deviation	0.8%	0.5%	0.4%	0.5%	2.8%	0.6%	1%
Rust Mandelbrot - T.T.C.S.P.M (sec)	139	140	**149**	141	125	77.36	**76.02**
Normalized	54.69%	54.3%	51.02%	53.91%	60.82%	98.27%	100%
Standard Deviation	0.7%	0.5%	0%	0%	0.5%	0.3%	0.2%
Rust Prime Benchmark - P.N.T.T.2.0.0 (sec)	115.32	**147.27**	107.85	99.88	93.32	35.60	**28.57**
Normalized	24.77%	19.4%	26.49%	28.6%	30.62%	80.25%	100%
Standard Deviation	0%	0%	0%	0%	0.1%	2.5%	1.2%
Zstd Compression - C.u.1.0.3.s.i.i.C.L.1 (sec)	62.56	**93.74**	75.83	74.44	68.18	56.11	**37.73**
Normalized	60.31%	40.25%	49.76%	50.69%	55.34%	67.24%	100%
Standard Deviation	1.1%	0.3%	0.4%	2.4%	0.2%	0.2%	0.2%
dav1d - S.N.1 (sec)	**140.80**	125.60	123.16	42.42	42.71	24.14	**18.36**
Normalized	13.04%	14.62%	14.91%	43.28%	42.99%	76.06%	100%
Standard Deviation	1%	0.2%	0.2%	1%	2%	3.8%	0.5%

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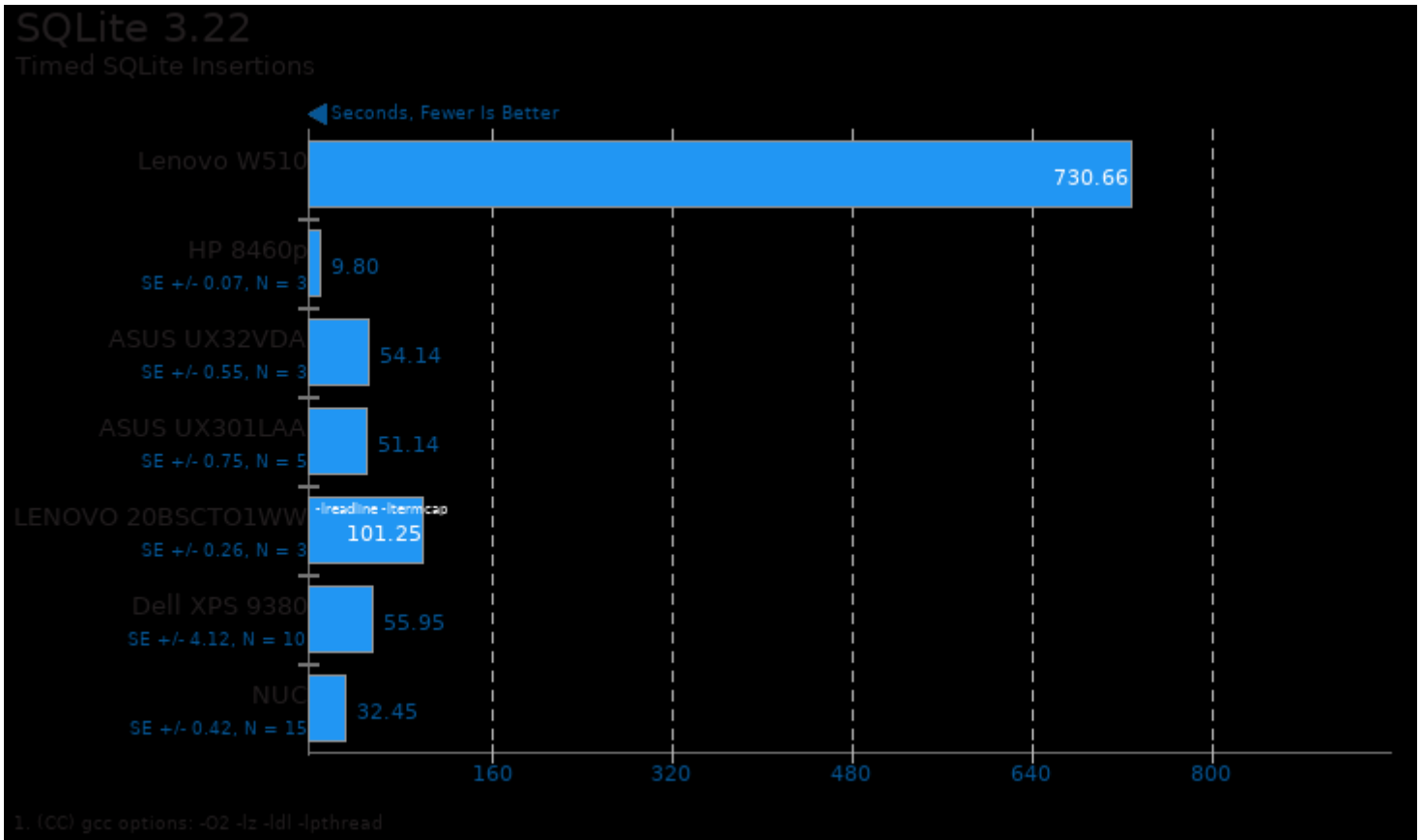
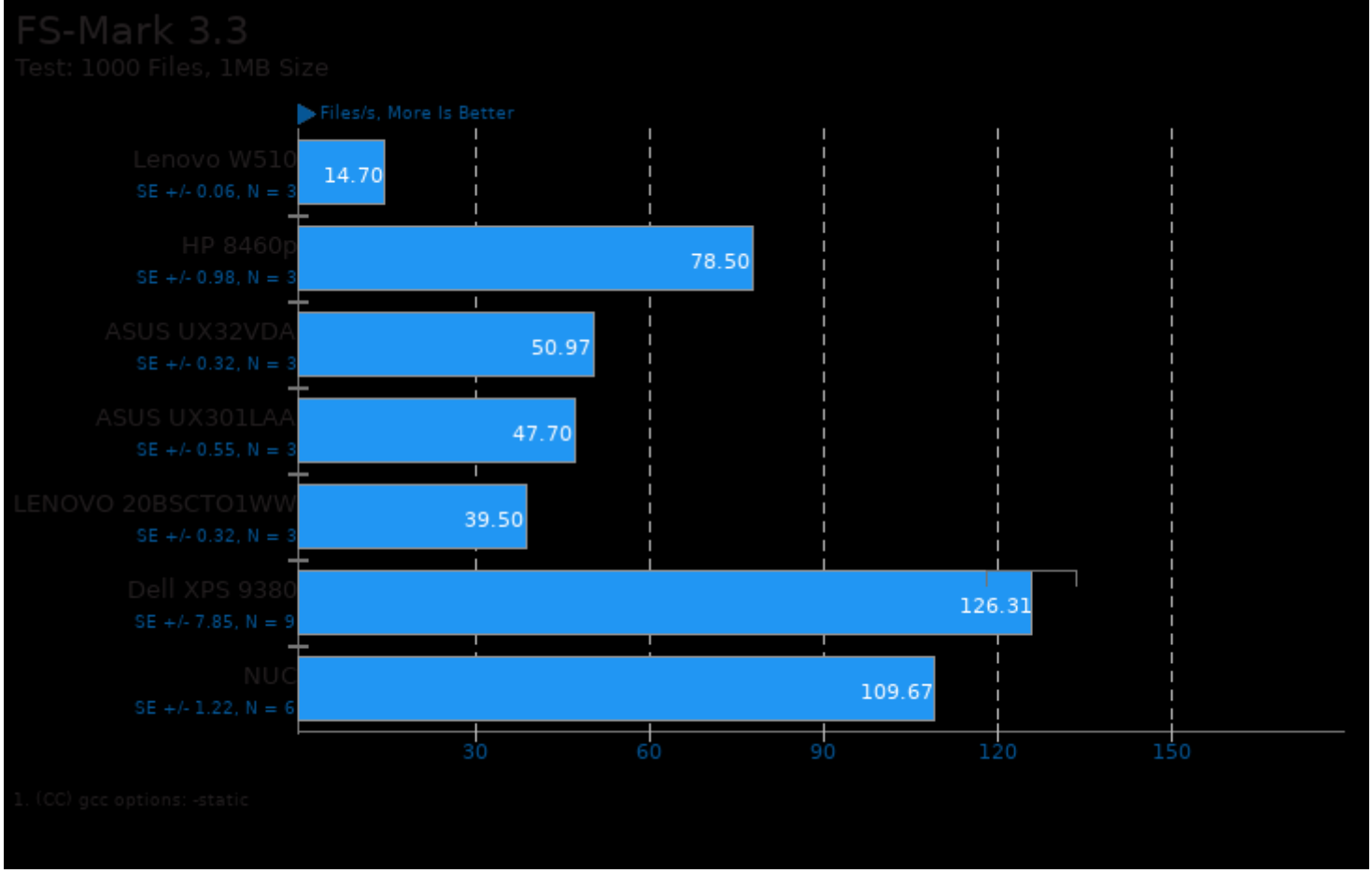
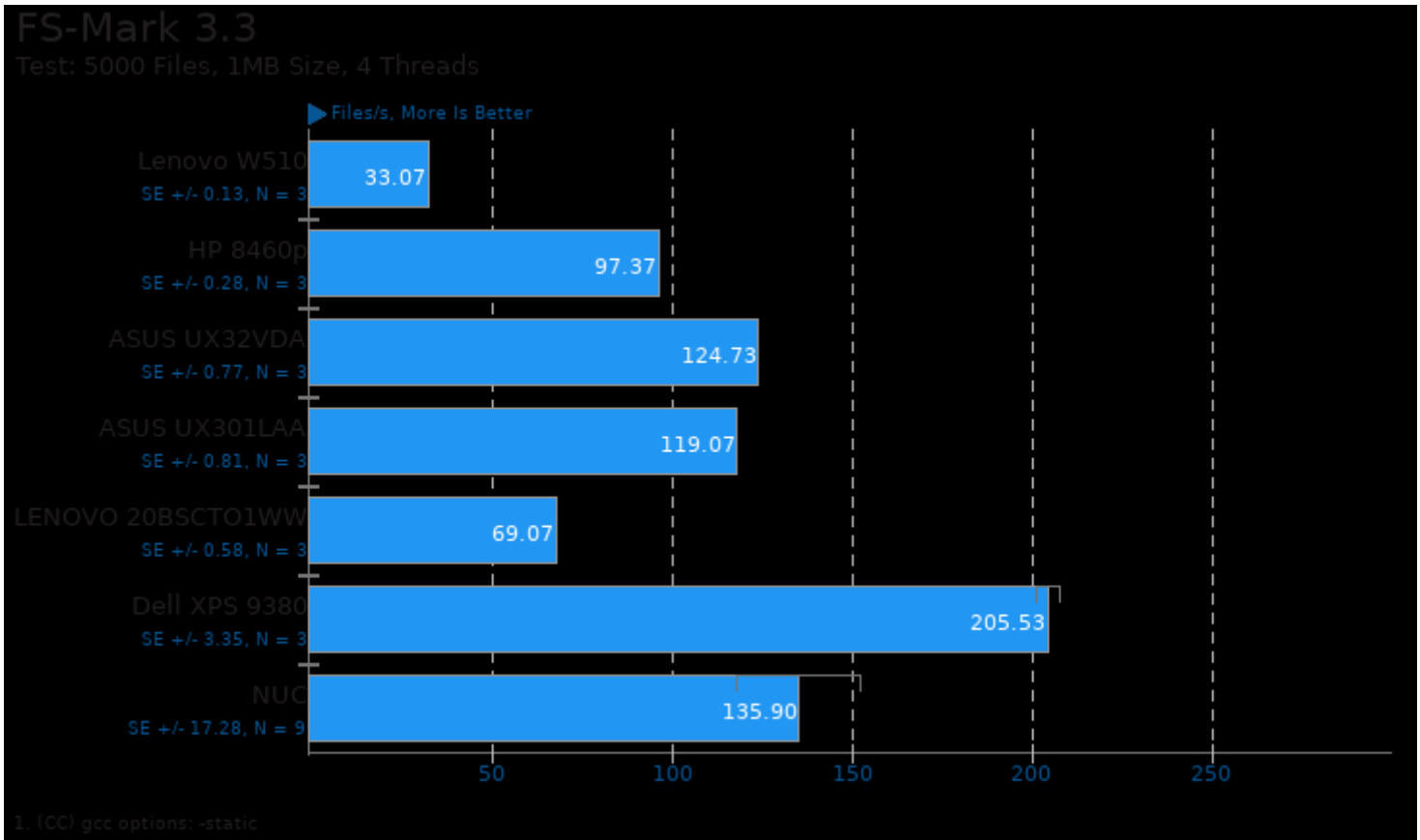
FLAC Audio Encoding - WAV To FLAC (sec)	**24.65**	17.23	15.35	15.23	13.63	**9.53**	10.69
Normalized	38.66%	55.31%	62.08%	62.57%	69.92%	100%	89.15%
Standard Deviation	1.6%	1.4%	0.5%	0.6%	1.4%	1.9%	7%
LAME MP3 Encoding - WAV To MP3 (sec)	**73.10**	44.50	44.86	47.07	38.21	**30.09**	31.99
Normalized	41.16%	67.62%	67.08%	63.93%	78.75%	100%	94.06%
Standard Deviation	0.7%	0.3%	0.1%	0%	0%	2.4%	0.1%
R Benchmark (sec)	**1.4547**		1.0823		0.8553		**0.2002**
Normalized	13.76%		18.5%		23.41%		100%
Standard Deviation	0.4%		0.3%		0.2%		0.3%
Cryptsetup - PBKDF2-sha512 (Iterations/sec)	**622675**		838494		1176412	**1563011**	
Normalized	39.05%		52.58%		73.78%	98.02%	
Standard Deviation	0.4%		1.2%		0.1%	1.7%	
Cryptsetup - PBKDF2-whirlpool (Iterations/sec)	**378204**		469231		683559	**891584**	
Normalized	42.42%		52.63%		76.67%	100%	
Standard Deviation	2.1%		0.1%		0.2%	2.8%	
Darktable - Boat - CPU-only (sec)	59.79	**71.12**	47.47	44.32	43.31	**22.81**	
Normalized	38.15%	32.07%	48.05%	51.47%	52.67%	100%	
Standard Deviation	0%	0.1%	0.4%	0.2%	2.1%	2.6%	
Darktable - Masskrug - CPU-only (sec)	32.83	**34.41**	30.95	30.11	28.34	**13.94**	
Normalized	42.46%	40.51%	45.04%	46.3%	49.19%	100%	
Standard Deviation	0.1%	0.1%	0.1%	0.1%	0.2%	3.4%	
Darktable - Server Rack - CPU-only (sec)	**0.76**	**0.76**	0.68	0.65	0.53	**0.25**	
Normalized	32.89%	32.89%	36.76%	38.46%	47.17%	100%	
Standard Deviation	1.2%	0.5%	0.2%	0.6%	1.1%	2.1%	
Darktable - Server Room - CPU-only (sec)	27.29	**30.63**	26.14	25.64	21.90	**9.86**	
Normalized	36.13%	32.19%	37.72%	38.46%	45.02%	100%	
Standard Deviation	0.2%	0.9%	0.3%	0.1%	0.4%	7.8%	
GIMP - resize (sec)	**28.97**	18.95	18.37	17.10	15.19	**11.79**	
Normalized	40.7%	62.22%	64.18%	68.95%	77.62%	100%	
Standard Deviation	5.9%	2.3%	2.6%	1.9%	1.1%	3.5%	
GIMP - rotate (sec)	**38.31**	24.30	22.82	21.48	18.34	**13.78**	
Normalized	35.97%	56.71%	60.39%	64.15%	75.14%	100%	
Standard Deviation	0.8%	0.3%	0.2%	0.2%	0.3%	1.8%	
GIMP - auto-levels (sec)	**47.06**	33.31	29.89	27.89	23.77	**17.74**	
Normalized	37.7%	53.26%	59.35%	63.61%	74.63%	100%	
Standard Deviation	0.7%	0.7%	1%	1%	0.8%	3.3%	
GIMP - unsharp-mask	**54.66**	38.20	32.92	30.92	27.72	**21.26**	
Normalized	38.89%	55.65%	64.58%	68.76%	76.7%	100%	
Standard Deviation	0.4%	0.4%	0.2%	0.2%	3.3%	3.3%	
IndigoBench - Bedroom (M samples/s)	0.19	**0.18**	**0.18**	0.20	0.20	0.37	**0.49**
Normalized	38.78%	36.73%	36.73%	40.82%	40.82%	75.51%	100%
Standard Deviation	0.6%	0.9%	0.5%	0.6%	2.6%	1.8%	1.8%

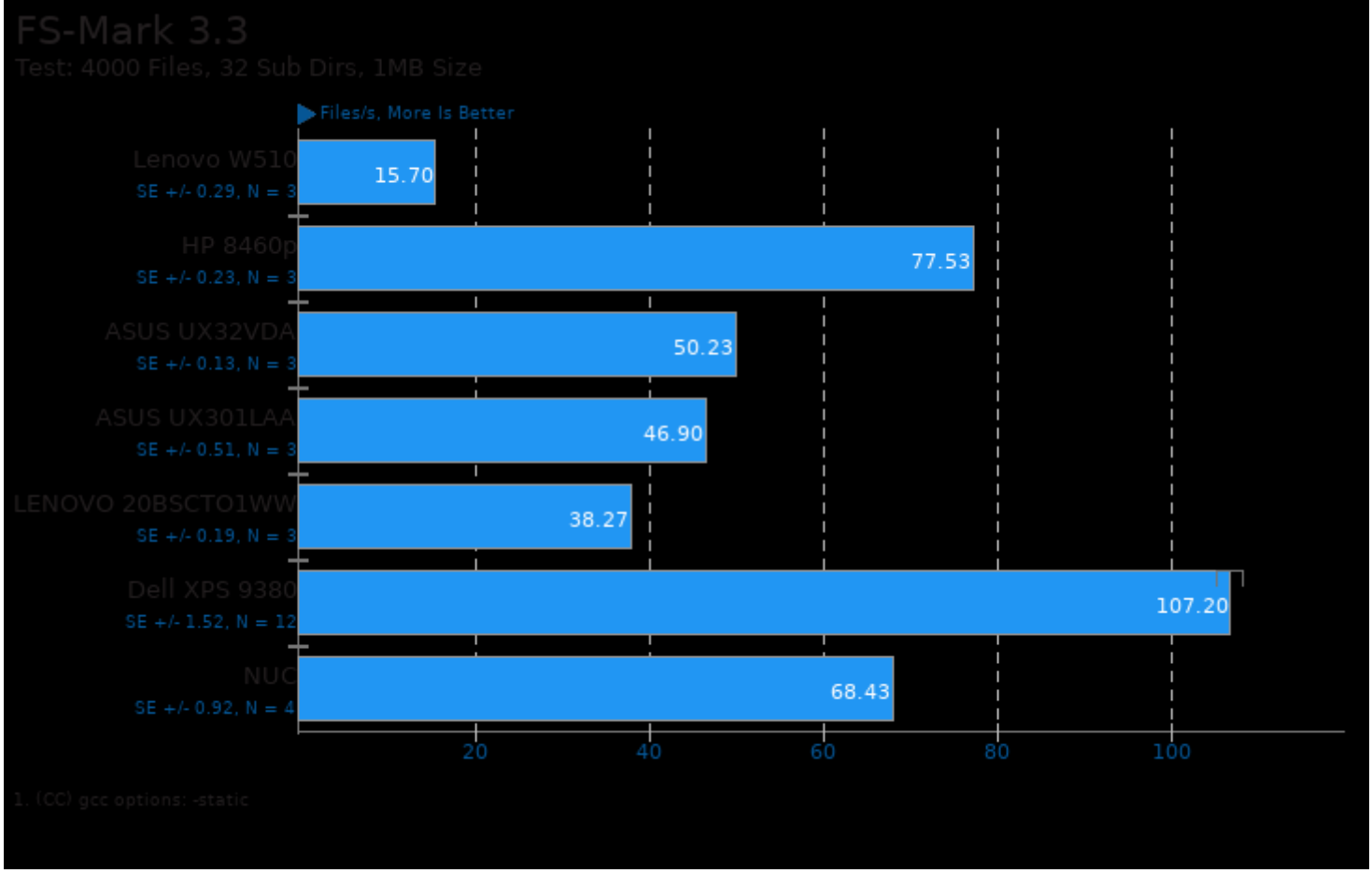
Ubuntu Linux Laptop Benchmarking

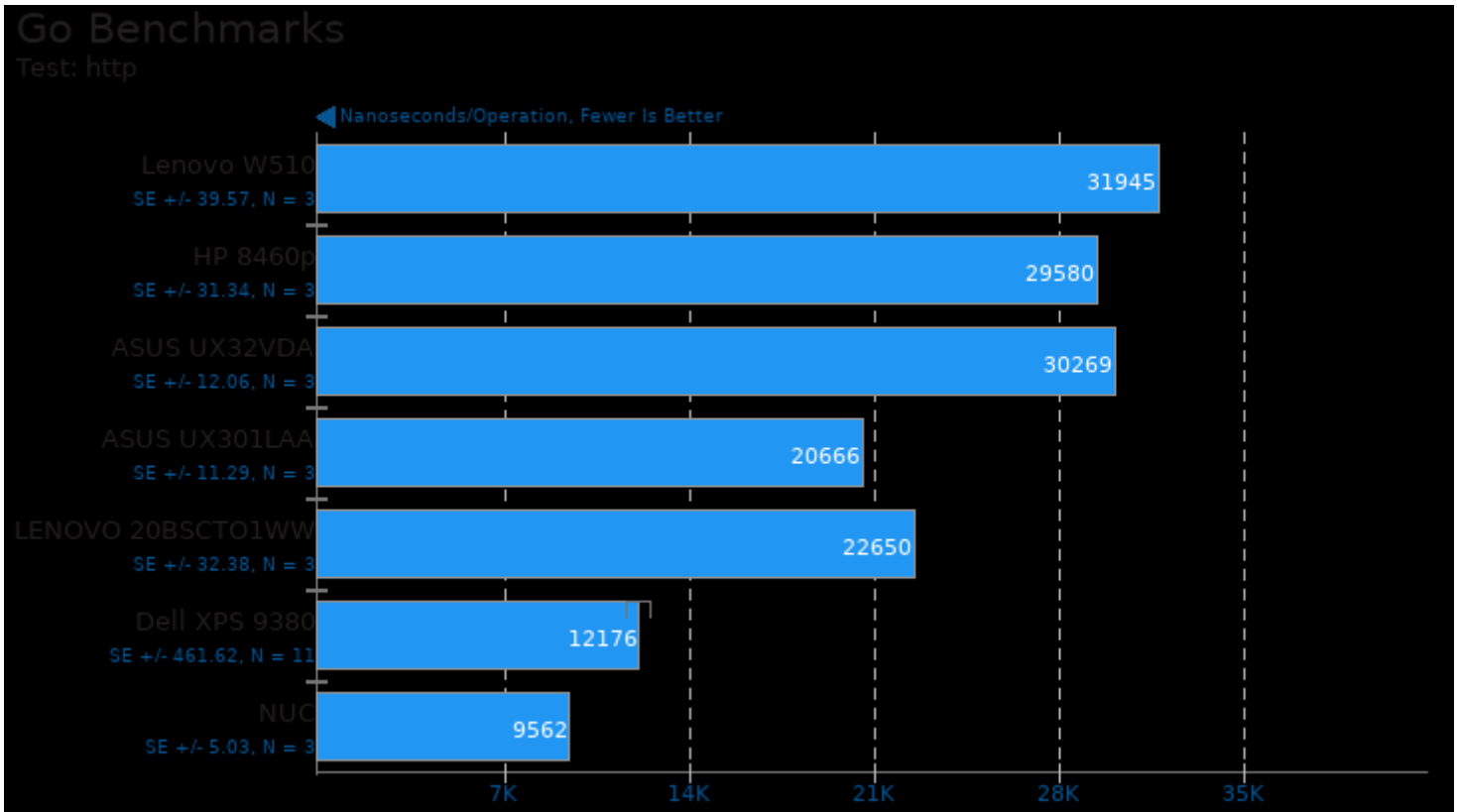
IndigoBench - Supercar (M samples/s)	0.44	**0.38**	0.40	0.45	0.46	0.86	**1.13**
Normalized	38.94%	33.63%	35.4%	39.82%	40.71%	76.11%	100%
Standard Deviation	1.8%	0.5%	1.4%	0.5%	2.4%	1.3%	0.8%
Blender - BMW27 - CPU-Only (sec)	**1976**	1574	1600	1412	1622	751	**592**
Normalized	29.96%	37.61%	37%	41.93%	36.5%	78.83%	100%
PyBench - T.F.A.T.T (Milliseconds)	**2867**	1827	1817	1741	1476	**1008**	1086
Normalized	35.16%	55.17%	55.48%	57.9%	68.29%	100%	92.82%
Standard Deviation	0.1%	0.2%	0.2%	0.1%	0.7%	0.8%	2.8%
PHPBench - P.B.S (Score)	**264200**	364027	356409	404811	475455	**650001**	610583
Normalized	40.65%	56%	54.83%	62.28%	73.15%	100%	93.94%
Standard Deviation	0.7%	0.3%	0.4%	0.1%	0.6%	3%	0.5%
Scikit-Learn (sec)	**195**	169	157	170	143	16.36	**12.69**
Normalized	6.51%	7.51%	8.08%	7.46%	8.87%	77.57%	100%
Standard Deviation	1.5%	0.1%	0.1%	0.1%	0.1%	2.5%	1.4%
Chaos Group V-RAY - CPU (sec)	643	649	**660**	500	529	**273**	
Normalized	42.46%	42.06%	41.36%	54.6%	51.61%	100%	
Standard Deviation	3.4%	0.3%	3.5%	1%	1.6%	0.8%	
Cryptsetup - PBKDF2-whirlpool (Iterations/sec)	**383463**		469512			**911812**	
Normalized	42.06%		51.49%			100%	
Standard Deviation	1%		0.1%			2.9%	
Darktable - Boat - CPU-only (sec)							16.54
Standard Deviation							0.3%
Darktable - Masskrug - CPU-only (sec)							10.48
Standard Deviation							0.1%
Darktable - Server Rack - CPU-only (sec)							0.27
Standard Deviation							0%
Darktable - Server Room - CPU-only (sec)							7.71
Standard Deviation							0.3%
GIMP - resize (sec)							10.44
Standard Deviation							2.9%
GIMP - rotate (sec)							15.19
Standard Deviation							0.1%
GIMP - auto-levels (sec)							17.38
Standard Deviation							1.3%
GIMP - unsharp-mask							19.16
Standard Deviation							0.4%

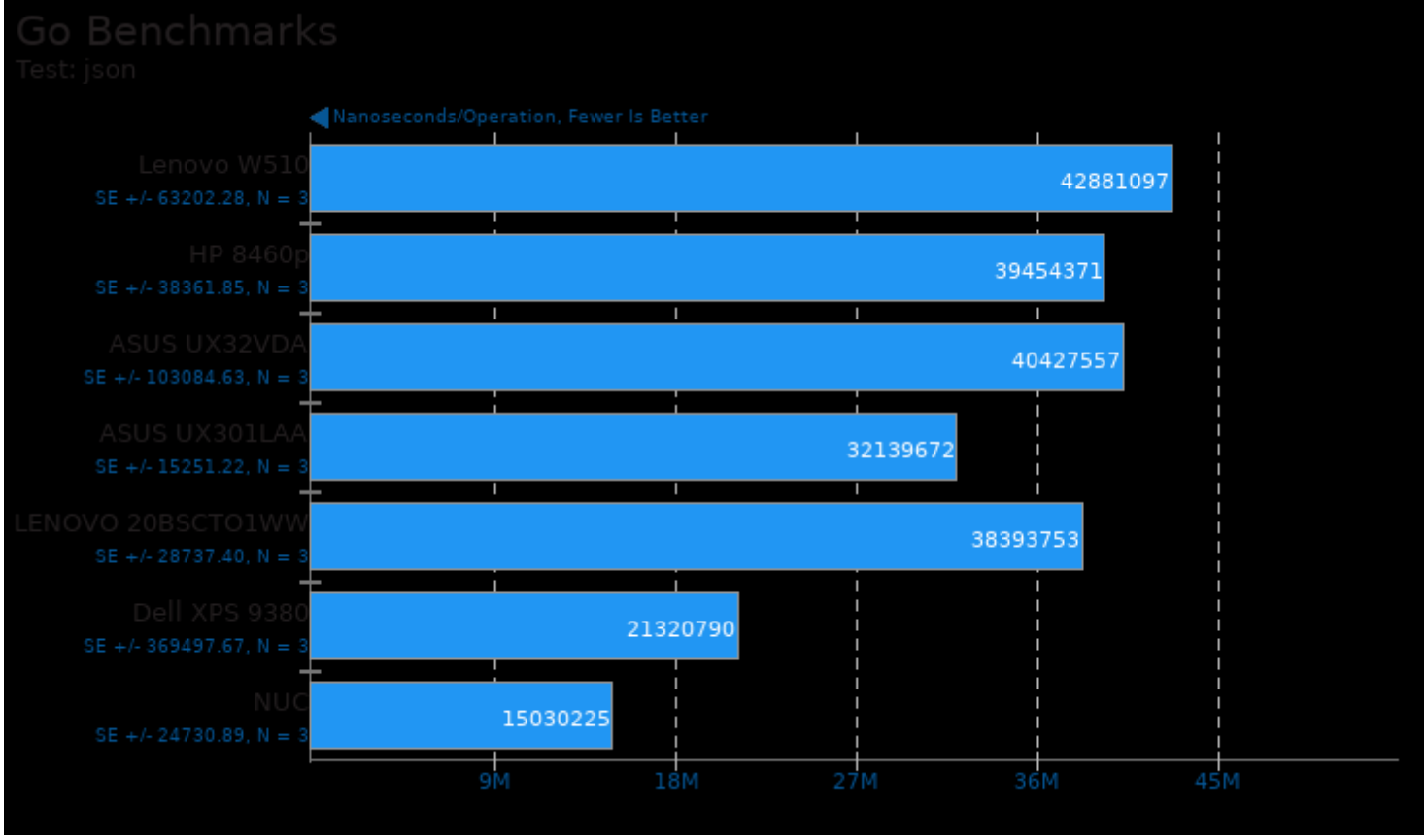

SQLite 3.22
Timed SQLite Insertions
Seconds, Fewer Is Better
Lenovo W510
730.66
HP 8460p
SE +/- 0.07, N = 3
9.80
ASUS UX32VDA
SE +/- 0.55, N = 3
54.14
ASUS UX301LAA
SE +/- 0.75, N = 5
51.14
LENOVO 20BSCTO1WW
SE +/- 0.26, N = 3
-lreadline -ltermcap
101.25
Dell XPS 9380
SE +/- 4.12, N = 10
55.95
NUC
SE +/- 0.42, N = 15
32.45
160
320
480
640
800
1. (CC) gcc options: -O2 -lz -ldl -lpthread

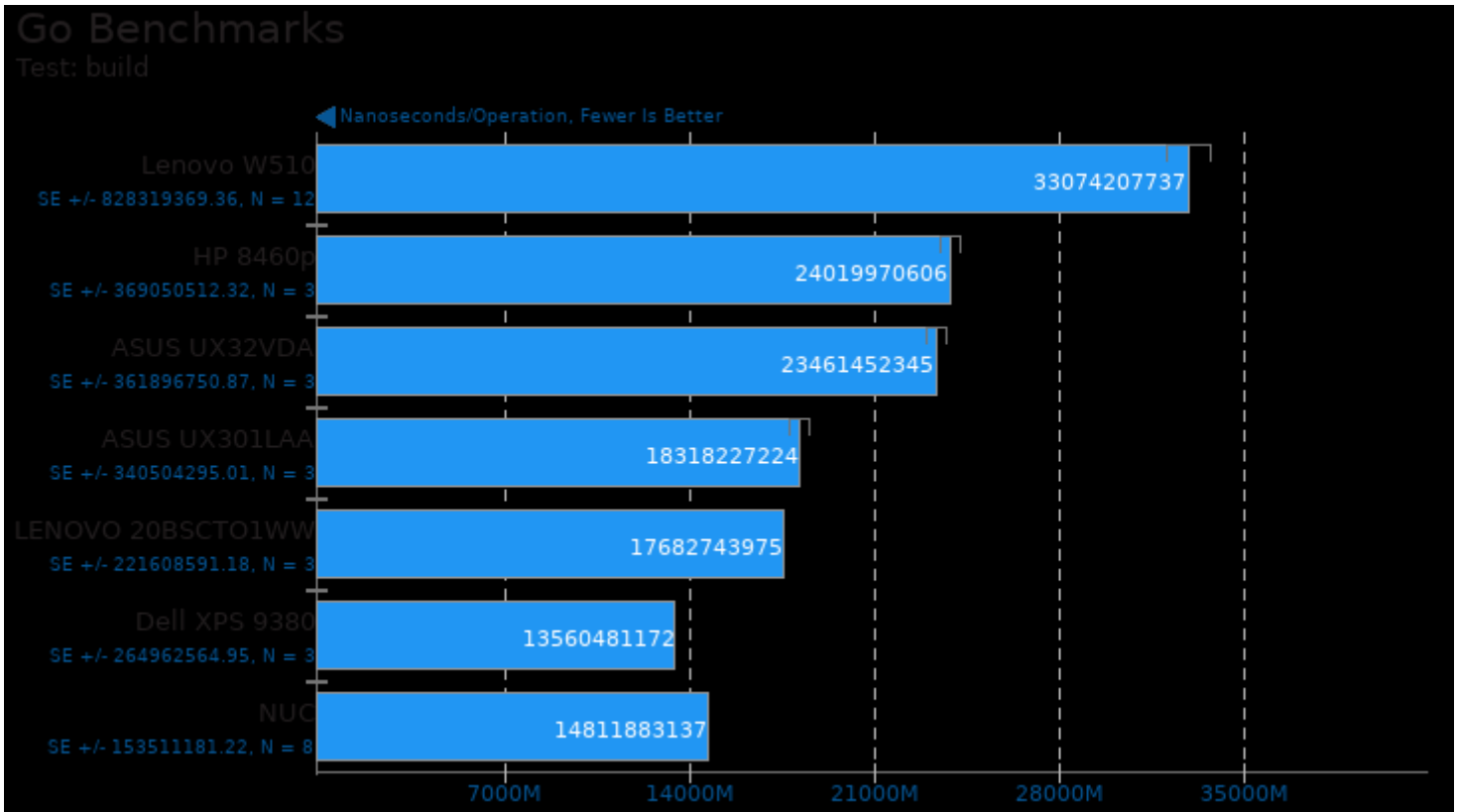

FS-Mark 3.3
Test: 1000 Files, 1MB Size
Files/s, More Is Better
Lenovo W510
SE +/- 0.06, N = 3
14.70
HP 8460p
SE +/- 0.98, N = 3
78.50
ASUS UX32VDA
SE +/- 0.32, N = 3
50.97
ASUS UX301LAA
SE +/- 0.55, N = 3
47.70
LENOVO 20BSCTO1WW
SE +/- 0.32, N = 3
39.50
Dell XPS 9380
SE +/- 7.85, N = 9
126.31
NUC
SE +/- 1.22, N = 6
109.67
30
60
90
120
150
1. (CC) gcc options: -static

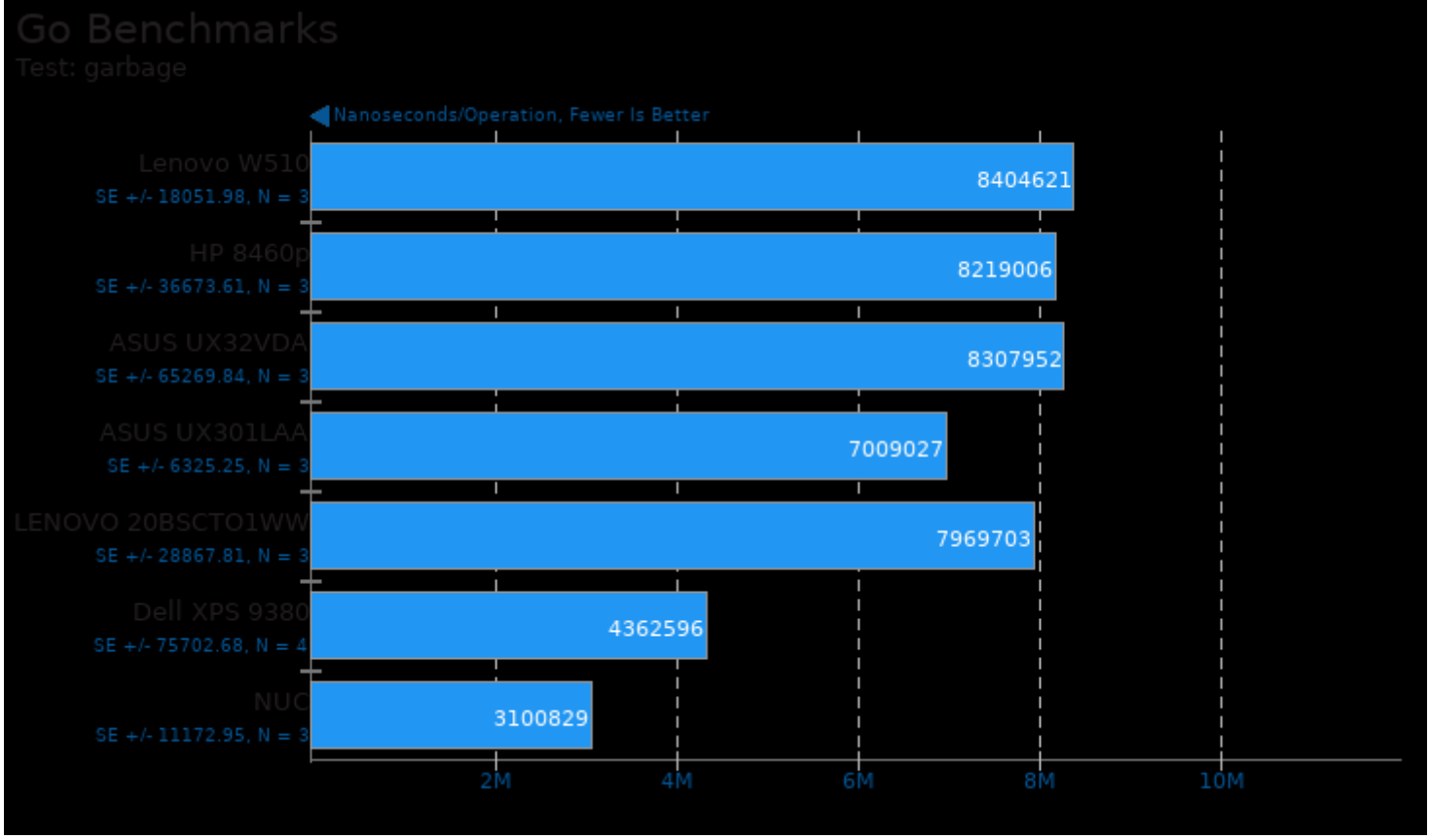

FS-Mark 3.3
Test: 5000 Files, 1MB Size, 4 Threads
Files/s, More Is Better
Lenovo W510
SE +/- 0.13, N = 3
33.07
HP 8460p
SE +/- 0.28, N = 3
97.37
ASUS UX32VDA
SE +/- 0.77, N = 3
124.73
ASUS UX301LAA
SE +/- 0.81, N = 3
119.07
LENOVO 20BSCTO1WW
SE +/- 0.58, N = 3
69.07
Dell XPS 9380
SE +/- 3.35, N = 3
205.53
NUC
SE +/- 17.28, N = 9
135.90
50
100
150
200
250
1. (CC) gcc options: -static

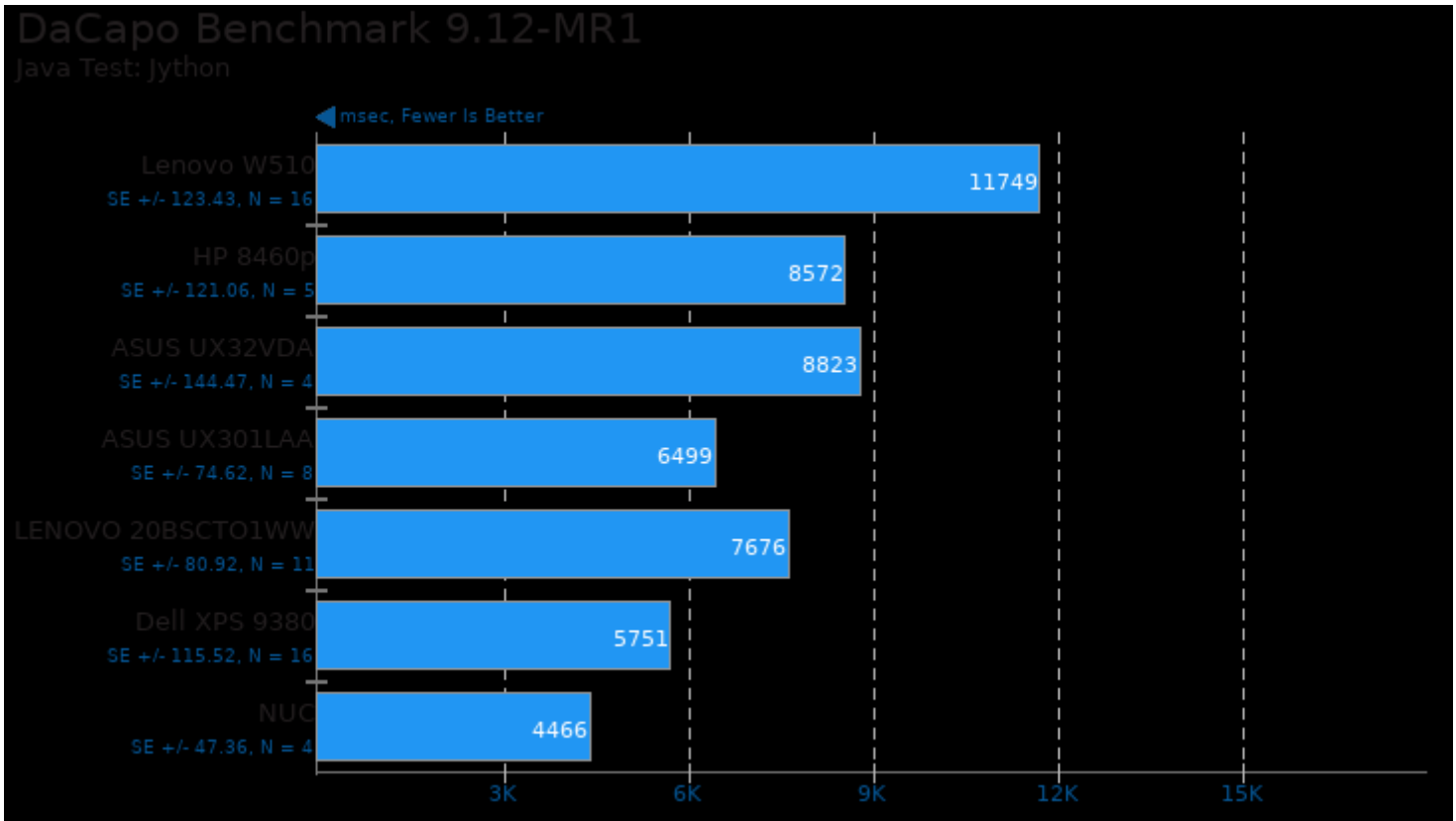

FS-Mark 3.3
Test: 4000 Files, 32 Sub Dirs, 1MB Size
Files/s, More Is Better
Lenovo W510
SE +/- 0.29, N = 3
15.70
HP 8460p
SE +/- 0.23, N = 3
77.53
ASUS UX32VDA
SE +/- 0.13, N = 3
50.23
ASUS UX301LAA
SE +/- 0.51, N = 3
46.90
LENOVO 20BSCTO1WW
SE +/- 0.19, N = 3
38.27
Dell XPS 9380
SE +/- 1.52, N = 12
107.20
NUC
SE +/- 0.92, N = 4
68.43
20
40
60
80
100
1. (CC) gcc options: -static

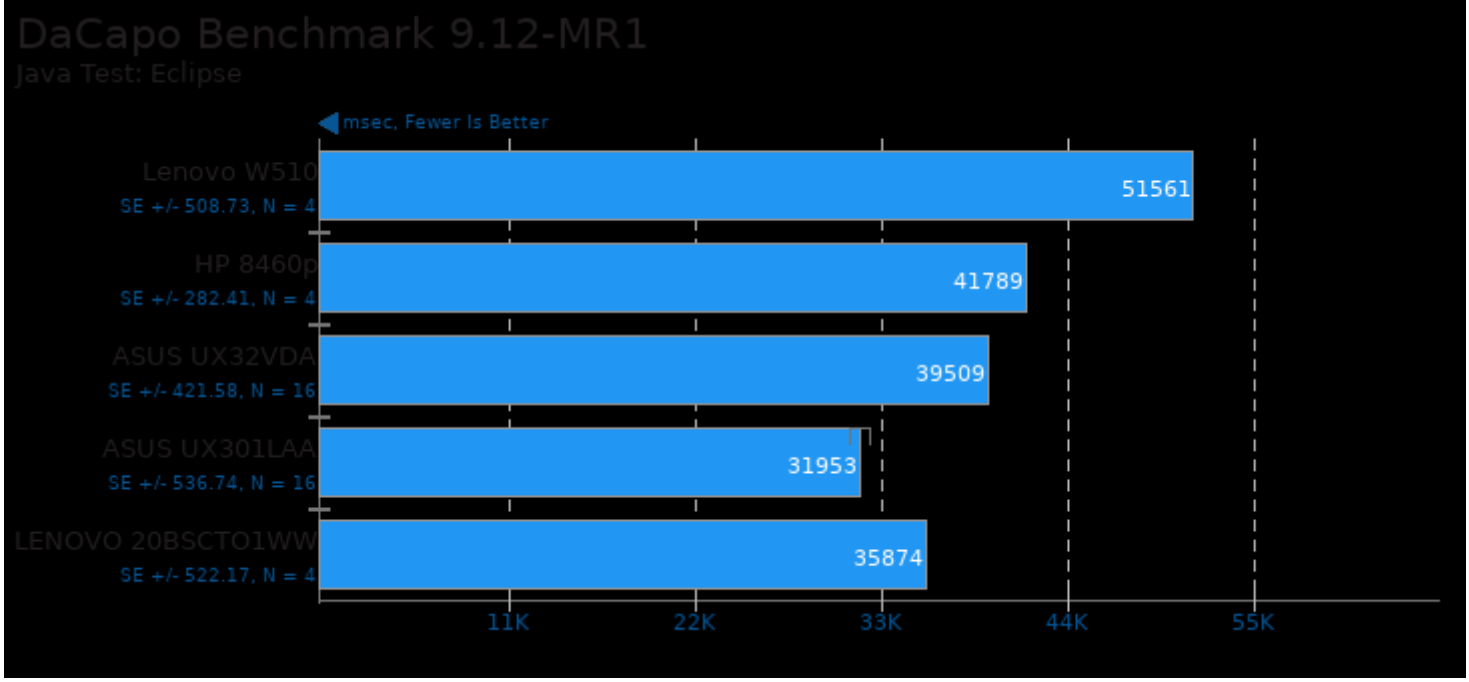

Go Benchmarks
Test: http
Nanoseconds/Operation, Fewer Is Better
Lenovo W510
SE +/- 39.57, N = 3
31945
HP 8460p
SE +/- 31.34, N = 3
29580
ASUS UX32VDA
SE +/- 12.06, N = 3
30269
ASUS UX301LAA
SE +/- 11.29, N = 3
20666
LENOVO 20BSCTO1WW
SE +/- 32.38, N = 3
22650
Dell XPS 9380
SE +/- 461.62, N = 11
12176
NUC
SE +/- 5.03, N = 3
9562
7K
14K
21K
28K
35K

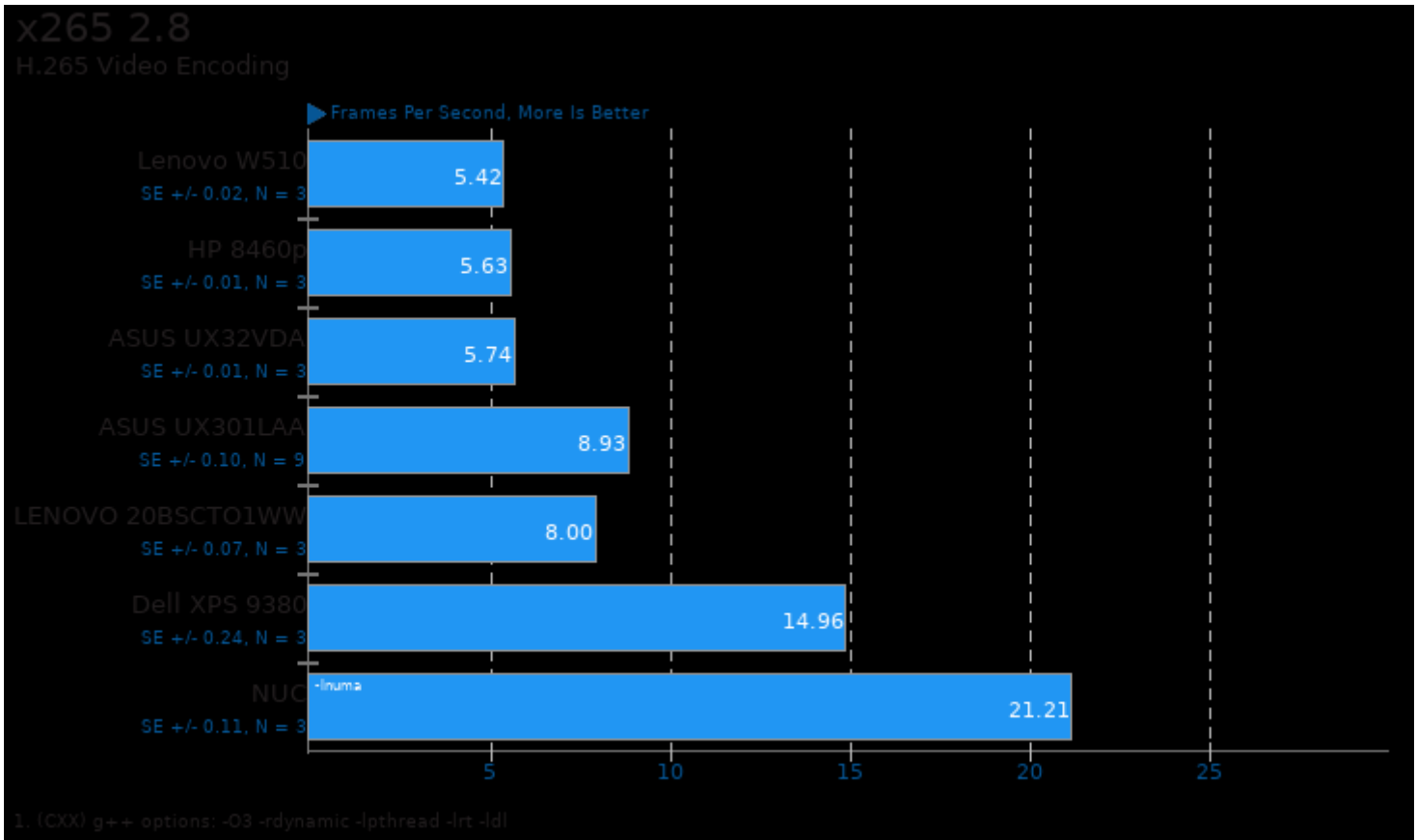

Go Benchmarks
Test: json
Nanoseconds/Operation, Fewer Is Better
Lenovo W510
SE +/- 63202.28, N = 3
42881097
HP 8460p
SE +/- 38361.85, N = 3
39454371
ASUS UX32VDA
SE +/- 103084.63, N = 3
40427557
ASUS UX301LAA
SE +/- 15251.22, N = 3
32139672
LENOVO 20BSCTO1WW
SE +/- 28737.40, N = 3
38393753
Dell XPS 9380
SE +/- 369497.67, N = 3
21320790
NUC
SE +/- 24730.89, N = 3
15030225
9M
18M
27M
36M
45M

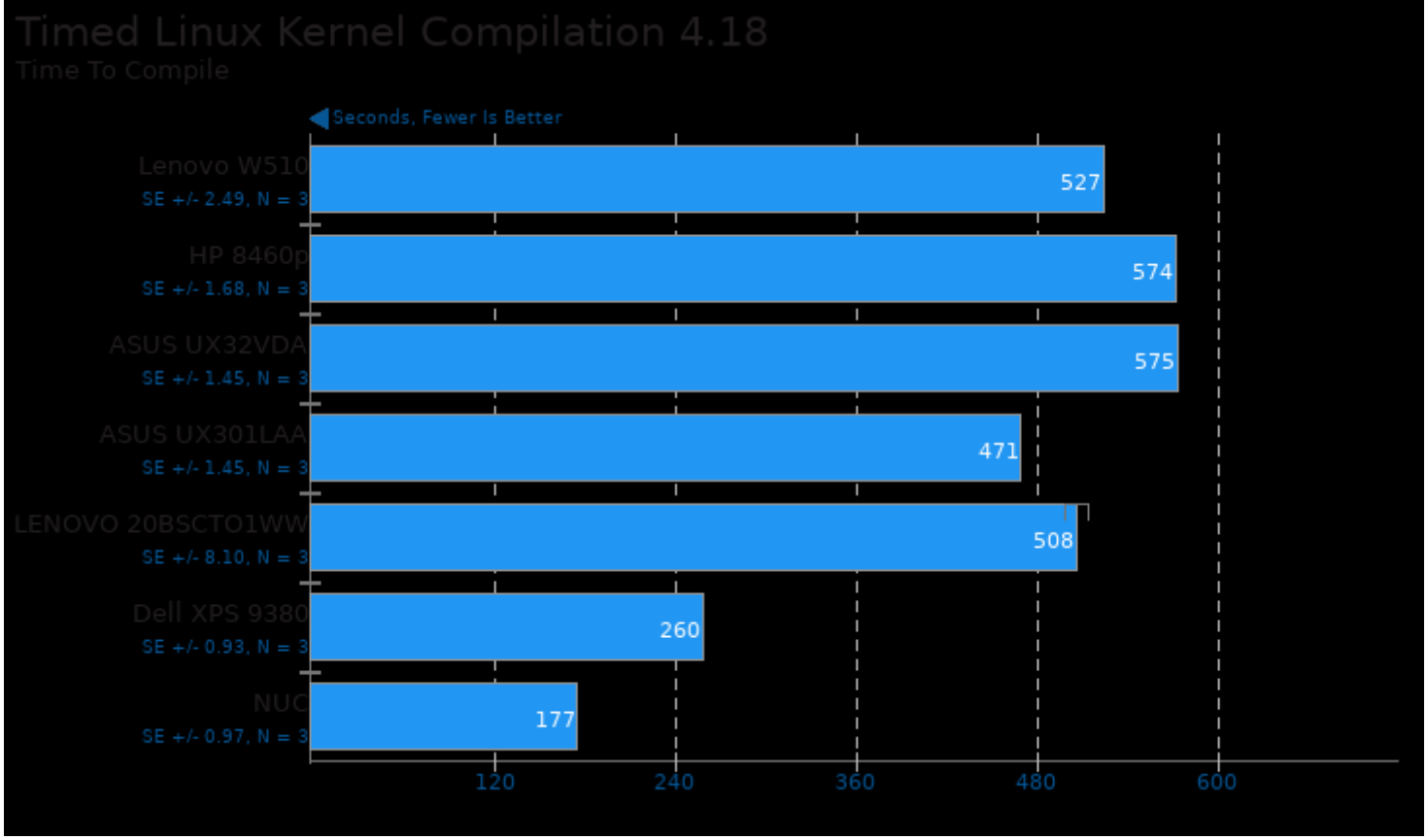

Go Benchmarks
Test: build
Nanoseconds/Operation, Fewer Is Better
Lenovo W510
SE +/- 828319369.36, N = 12
33074207737
HP 8460p
SE +/- 369050512.32, N = 3
24019970606
ASUS UX32VDA
SE +/- 361896750.87, N = 3
23461452345
ASUS UX301LAA
SE +/- 340504295.01, N = 3
18318227224
LENOVO 20BSCTO1WW
SE +/- 221608591.18, N = 3
17682743975
Dell XPS 9380
SE +/- 264962564.95, N = 3
13560481172
NUC
SE +/- 153511181.22, N = 8
14811883137
7000M
14000M
21000M
28000M
35000M

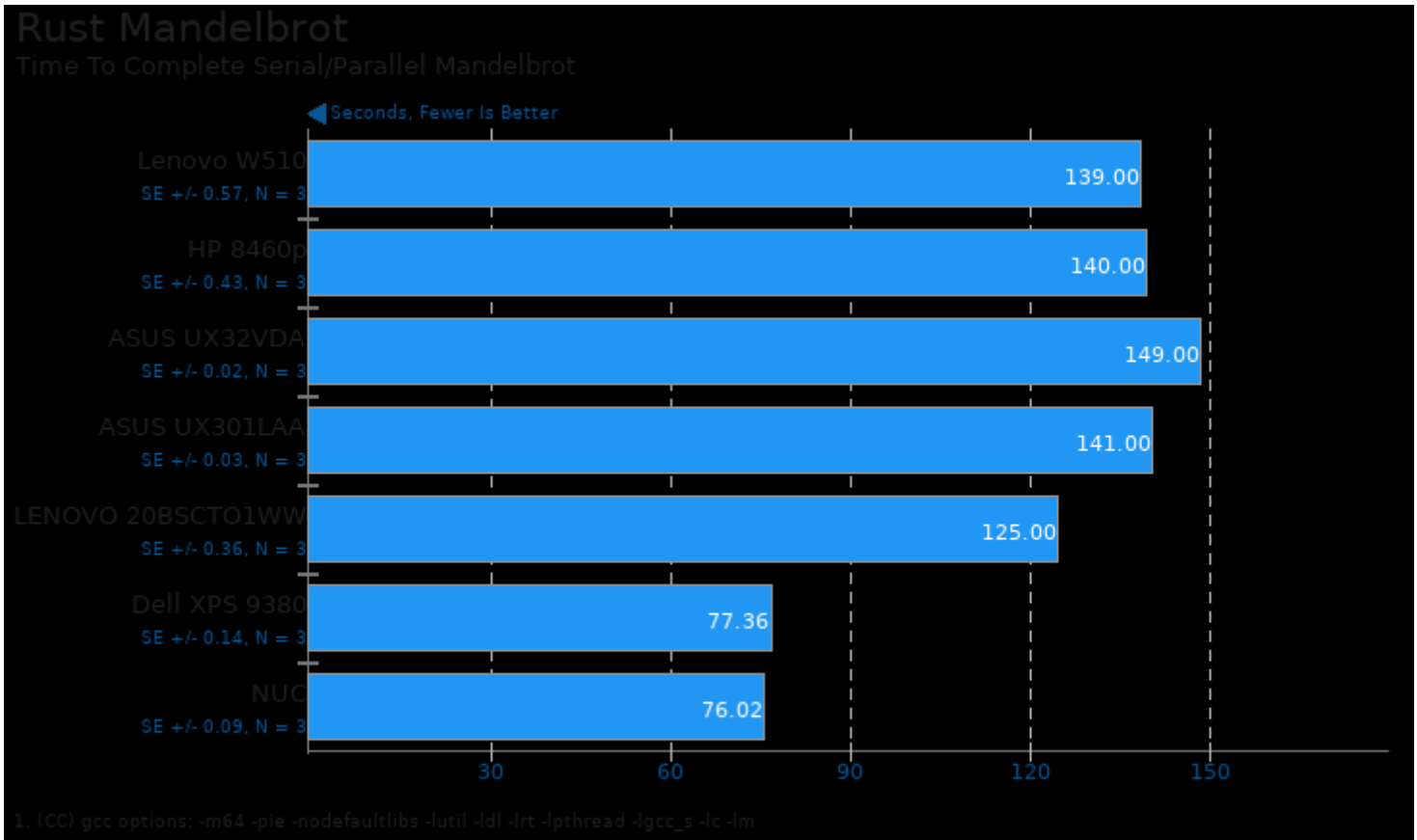

Go Benchmarks
Test: garbage
Nanoseconds/Operation, Fewer Is Better
Lenovo W510
SE +/- 18051.98, N = 3
8404621
HP 8460p
SE +/- 36673.61, N = 3
8219006
ASUS UX32VDA
SE +/- 65269.84, N = 3
8307952
ASUS UX301LAA
SE +/- 6325.25, N = 3
7009027
LENOVO 20BSCTO1WW
SE +/- 28867.81, N = 3
7969703
Dell XPS 9380
SE +/- 75702.68, N = 4
4362596
NUC
SE +/- 11172.95, N = 3
3100829
2M
4M
6M
8M
10M

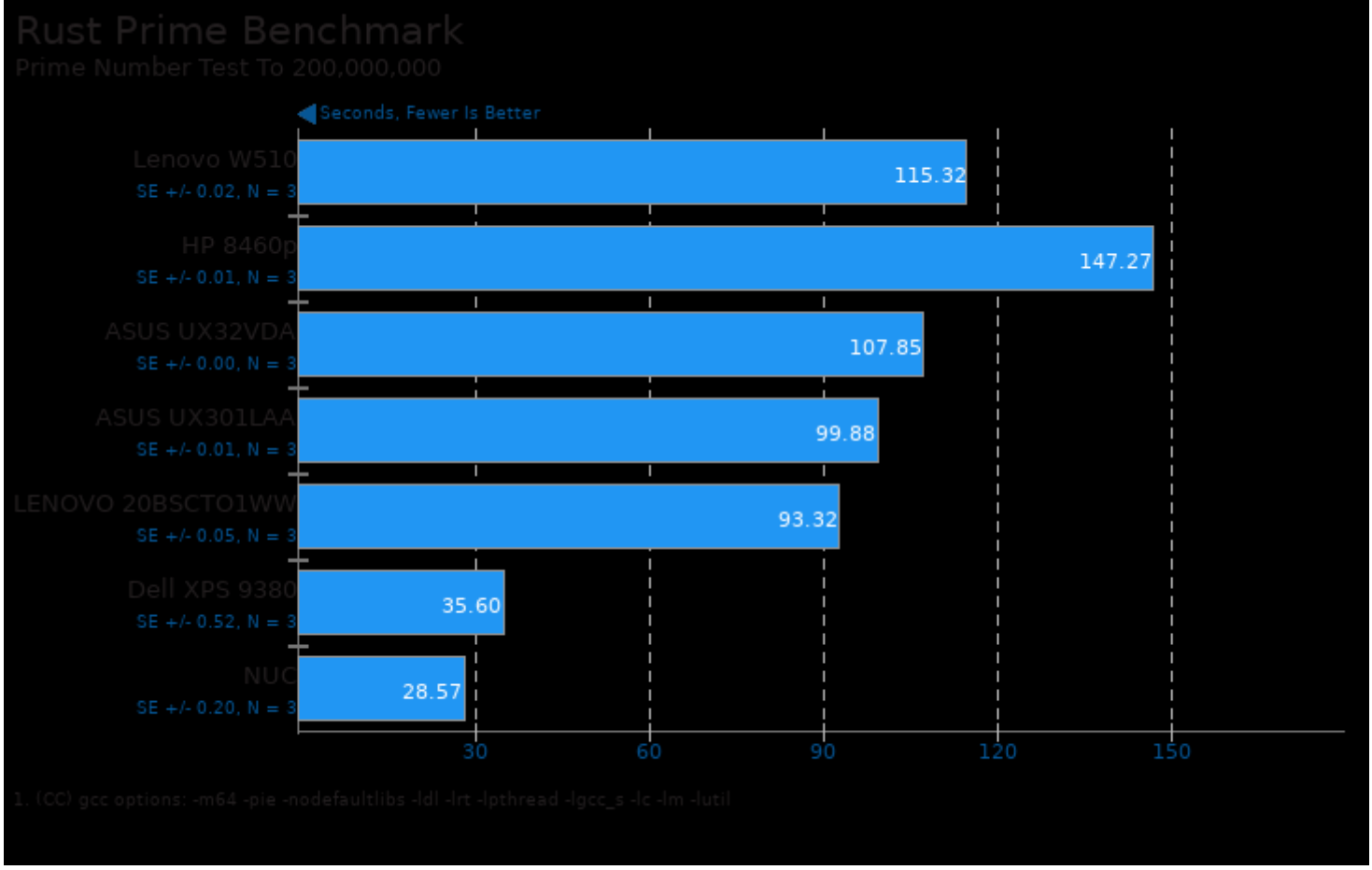

DaCapo Benchmark 9.12-MR1
Java Test: Jython
msec, Fewer Is Better
Lenovo W510
SE +/- 123.43, N = 16
11749
HP 8460p
SE +/- 121.06, N = 5
8572
ASUS UX32VDA
SE +/- 144.47, N = 4
8823
ASUS UX301LAA
SE +/- 74.62, N = 8
6499
LENOVO 20BSCTO1WW
SE +/- 80.92, N = 11
7676
Dell XPS 9380
SE +/- 115.52, N = 16
5751
NUC
SE +/- 47.36, N = 4
4466
3K
6K
9K
12K
15K

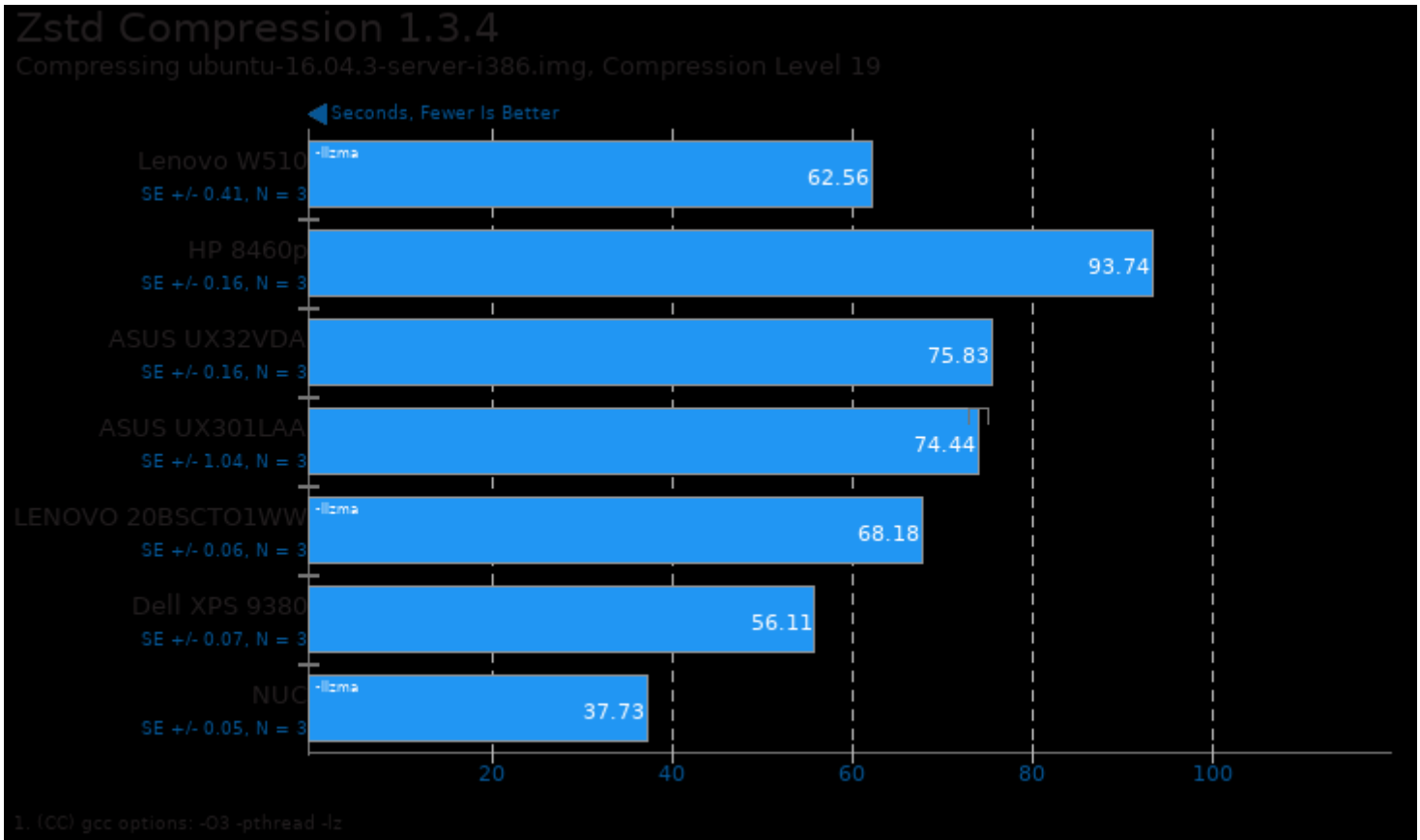

DaCapo Benchmark 9.12-MR1
Java Test: Eclipse
msec, Fewer Is Better
Lenovo W510
SE +/- 508.73, N = 4
51561
HP 8460p
SE +/- 282.41, N = 4
41789
ASUS UX32VDA
SE +/- 421.58, N = 16
39509
ASUS UX301LAA
SE +/- 536.74, N = 16
31953
LENOVO 20BSCTO1WW
SE +/- 522.17, N = 4
35874
11K
22K
33K
44K
55K

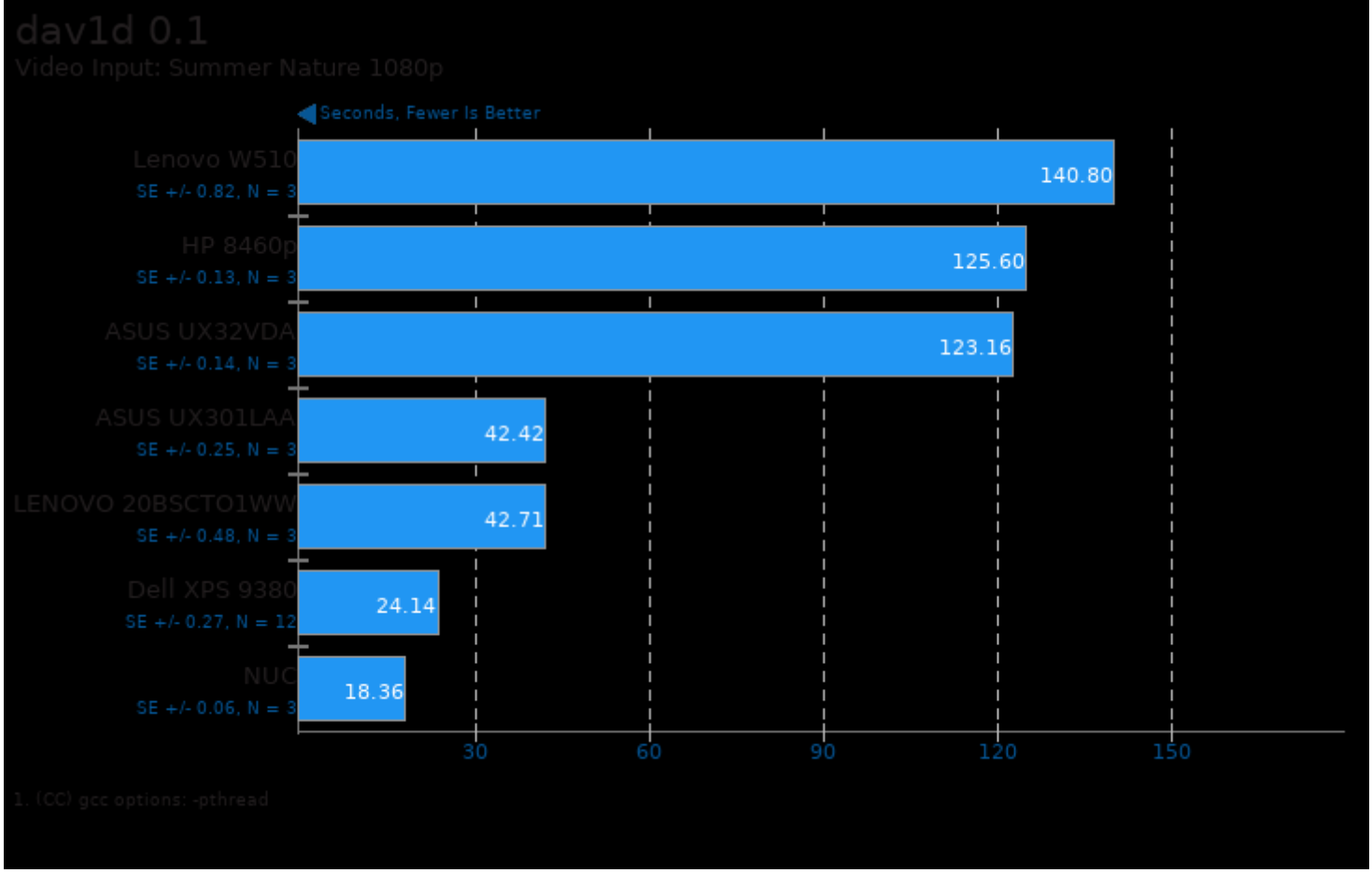

x265 2.8
H.265 Video Encoding
Frames Per Second, More Is Better
Lenovo W510
SE +/- 0.02, N = 3
5.42
HP 8460p
SE +/- 0.01, N = 3
5.63
ASUS UX32VDA
SE +/- 0.01, N = 3
5.74
ASUS UX301LAA
SE +/- 0.10, N = 9
8.93
LENOVO 20BSCTO1WW
SE +/- 0.07, N = 3
8.00
Dell XPS 9380
SE +/- 0.24, N = 3
14.96
NUC
SE +/- 0.11, N = 3
-lnuma
21.21
5
10
15
20
25
1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl

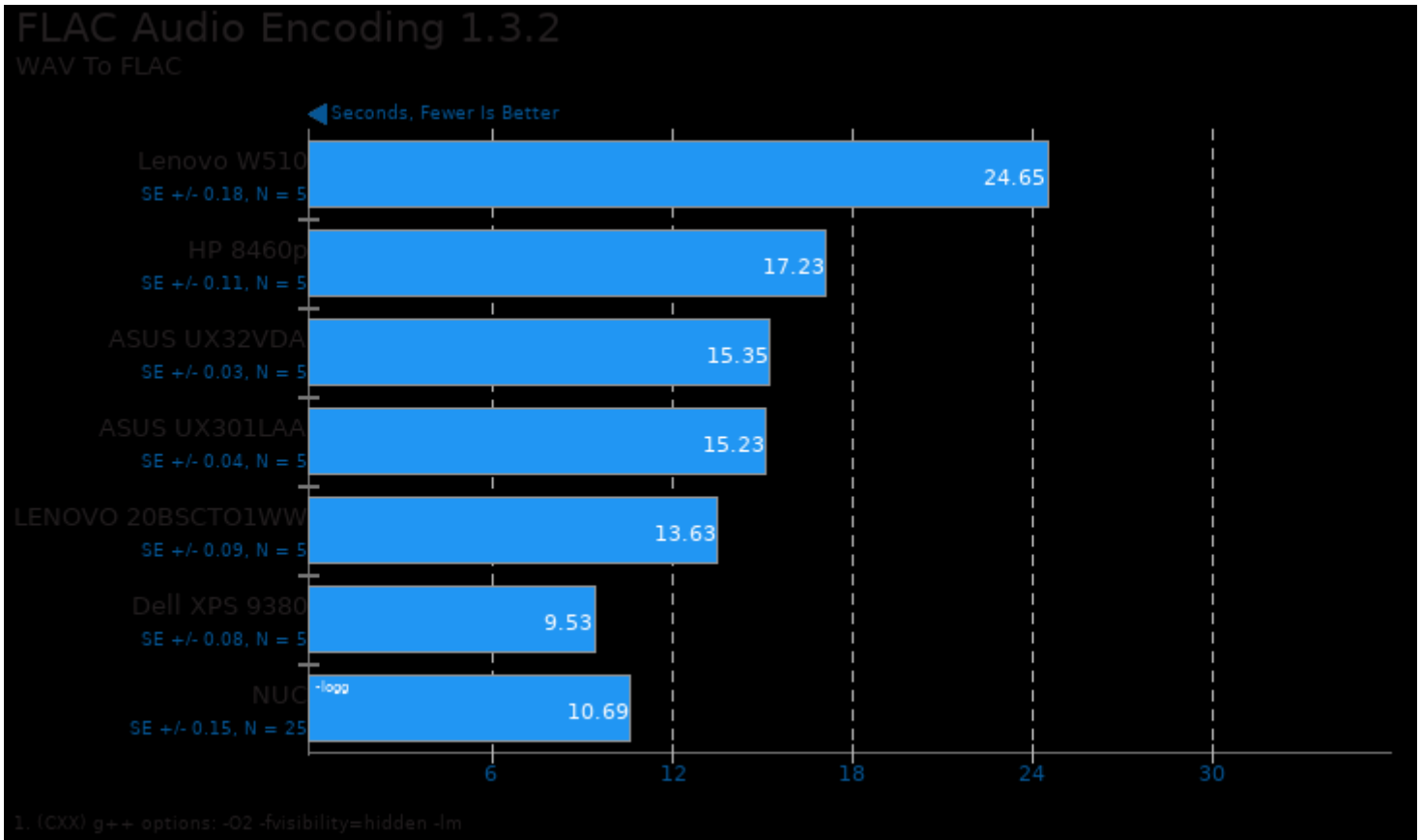

Timed Linux Kernel Compilation 4.18
Time To Compile
Seconds, Fewer Is Better
Lenovo W510
SE +/- 2.49, N = 3
527
HP 8460p
SE +/- 1.68, N = 3
574
ASUS UX32VDA
SE +/- 1.45, N = 3
575
ASUS UX301LAA
SE +/- 1.45, N = 3
471
LENOVO 20BSCTO1WW
SE +/- 8.10, N = 3
508
Dell XPS 9380
SE +/- 0.93, N = 3
260
NUC
SE +/- 0.97, N = 3
177
120
240
360
480
600

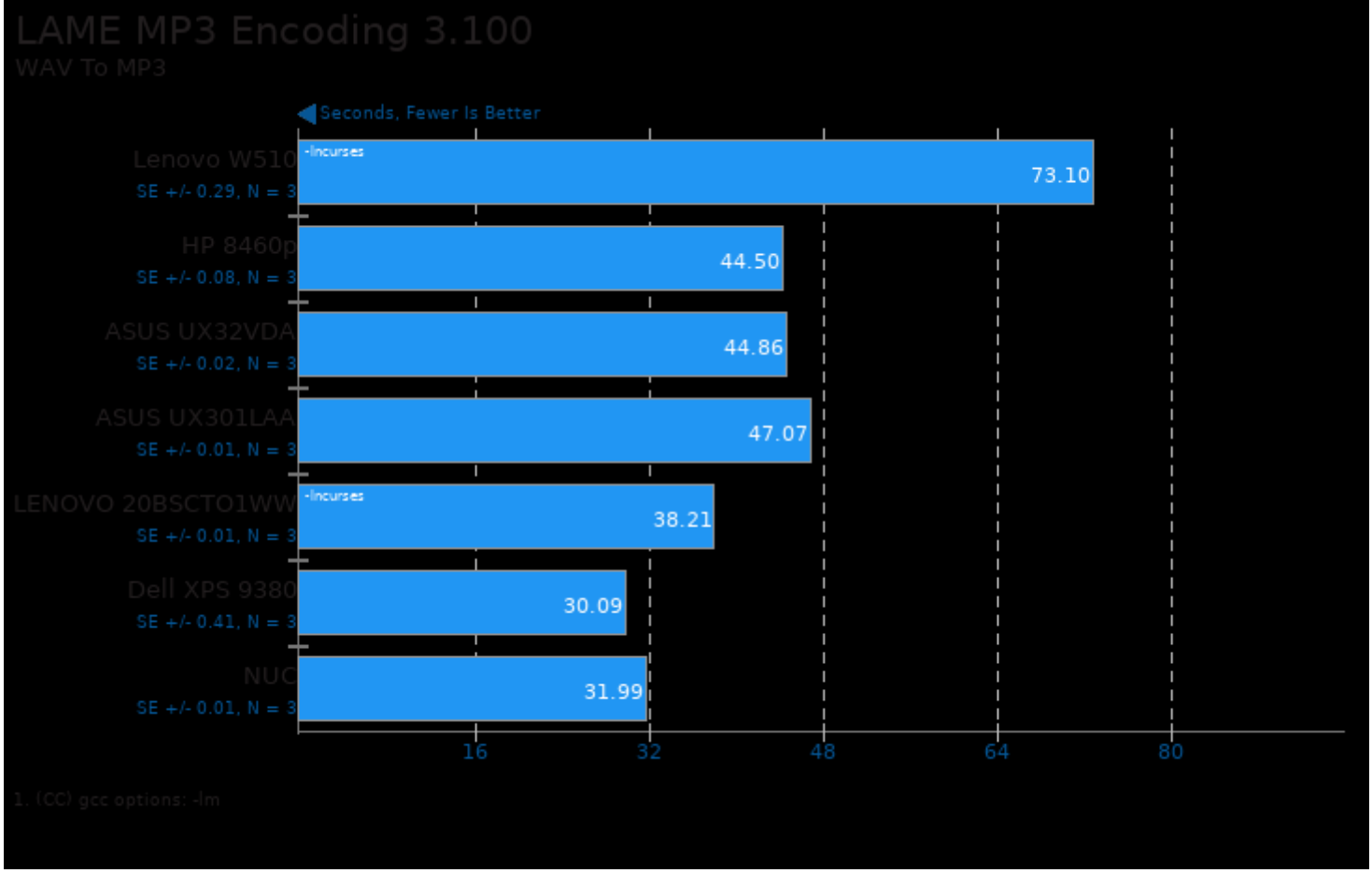

Rust Mandelbrot
Time To Complete Serial/Parallel Mandelbrot
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.57, N = 3
139.00
HP 8460p
SE +/- 0.43, N = 3
140.00
ASUS UX32VDA
SE +/- 0.02, N = 3
149.00
ASUS UX301LAA
SE +/- 0.03, N = 3
141.00
LENOVO 20BSCTO1WW
SE +/- 0.36, N = 3
125.00
Dell XPS 9380
SE +/- 0.14, N = 3
77.36
NUC
SE +/- 0.09, N = 3
76.02
30
60
90
120
150
1. (CC) gcc options: -m64 -pie -nodefaultlibs -lutil -ldl -lrt -lpthread -lgcc_s -lc -lm

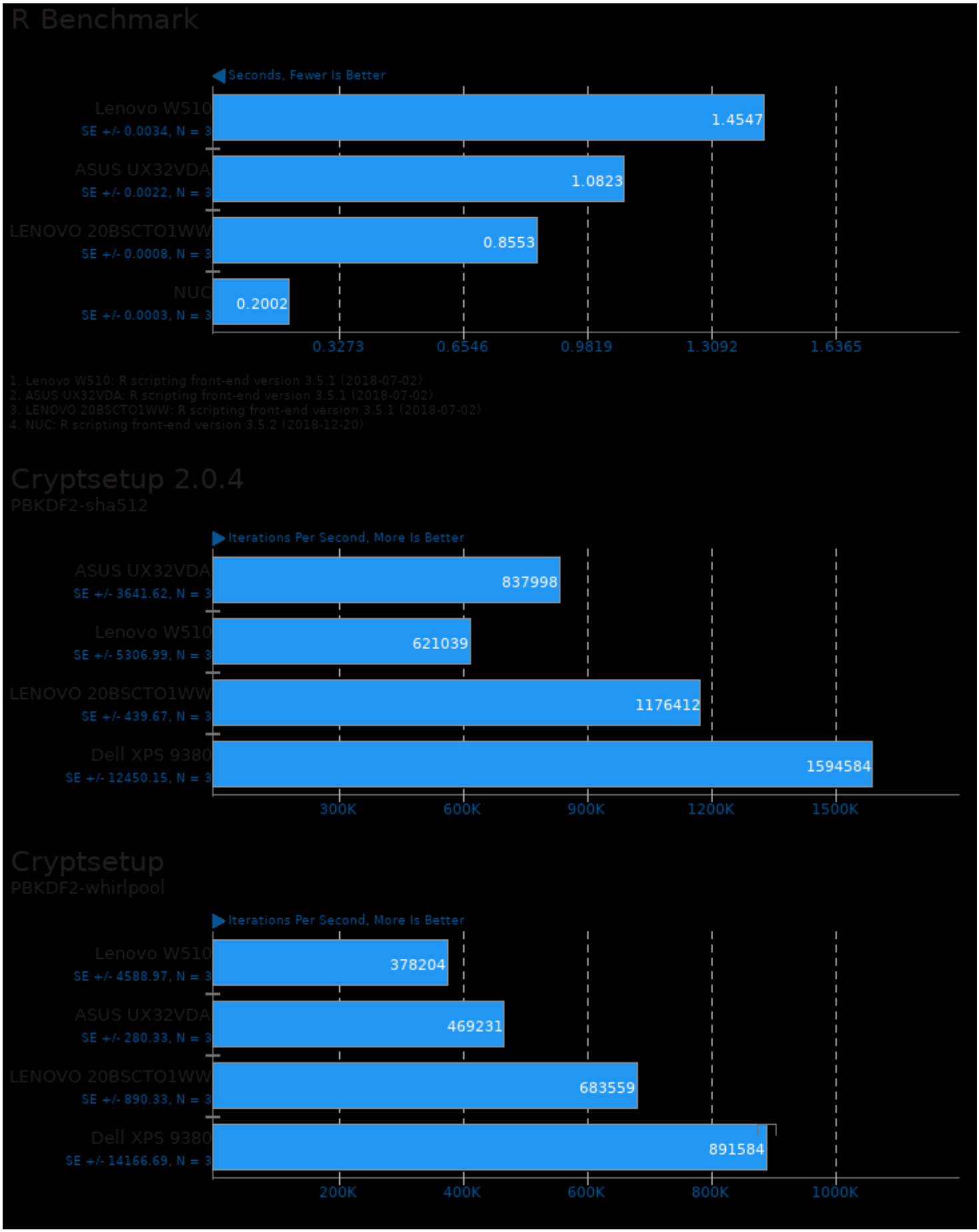

Rust Prime Benchmark
Prime Number Test To 200,000,000
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.02, N = 3
115.32
HP 8460p
SE +/- 0.01, N = 3
147.27
ASUS UX32VDA
SE +/- 0.00, N = 3
107.85
ASUS UX301LAA
SE +/- 0.01, N = 3
99.88
LENOVO 20BSCTO1WW
SE +/- 0.05, N = 3
93.32
Dell XPS 9380
SE +/- 0.52, N = 3
35.60
NUC
SE +/- 0.20, N = 3
28.57
30
60
90
120
150
1. (CC) gcc options: -m64 -pie -nodefaultlibs -ldl -lrt -lpthread -lgcc_s -lc -lm -lutil

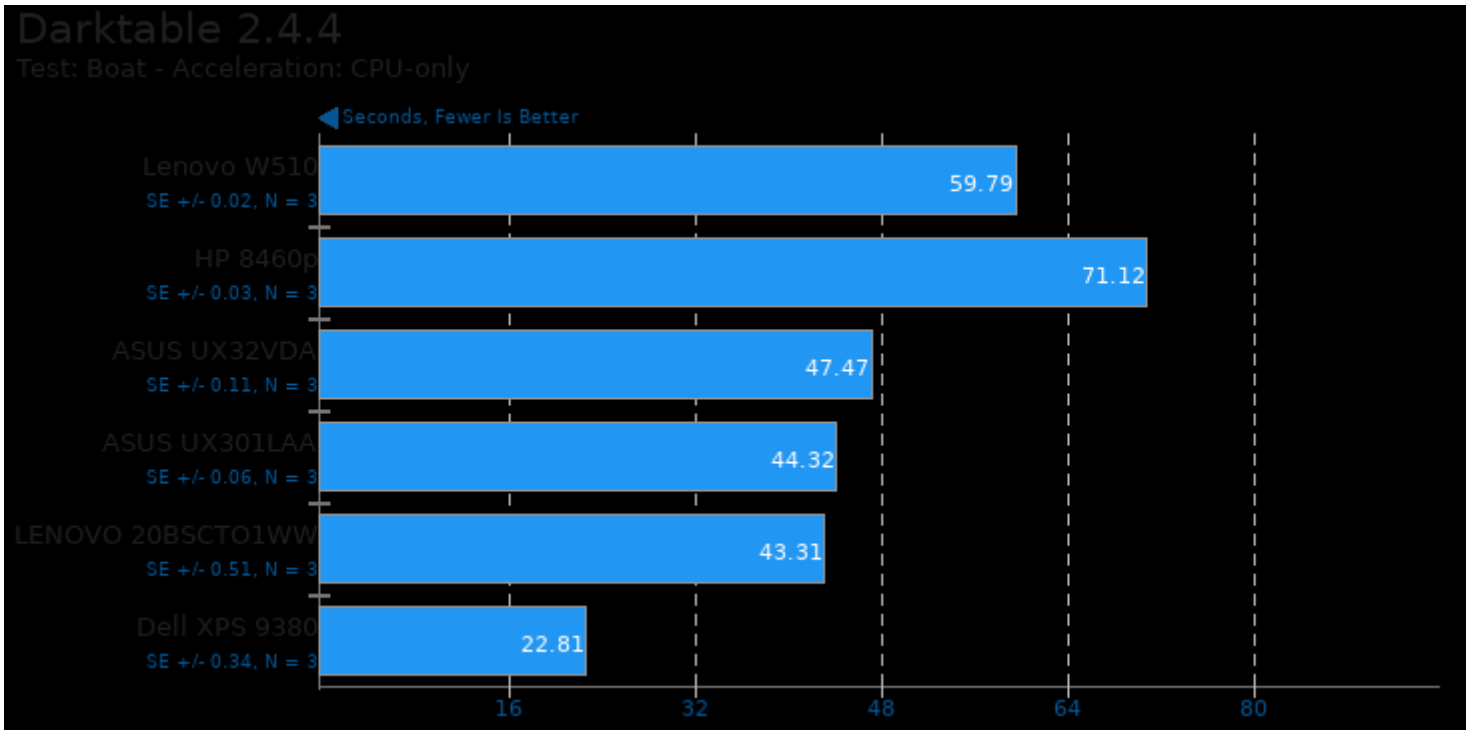

Zstd Compression 1.3.4
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 19
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.41, N = 3
-llzma
62.56
HP 8460p
SE +/- 0.16, N = 3
93.74
ASUS UX32VDA
SE +/- 0.16, N = 3
75.83
ASUS UX301LAA
SE +/- 1.04, N = 3
74.44
LENOVO 20BSCTO1WW
SE +/- 0.06, N = 3
-llzma
68.18
Dell XPS 9380
SE +/- 0.07, N = 3
56.11
NUC
SE +/- 0.05, N = 3
-llzma
37.73
20
40
60
80
100
1. (CC) gcc options: -O3 -pthread -lz

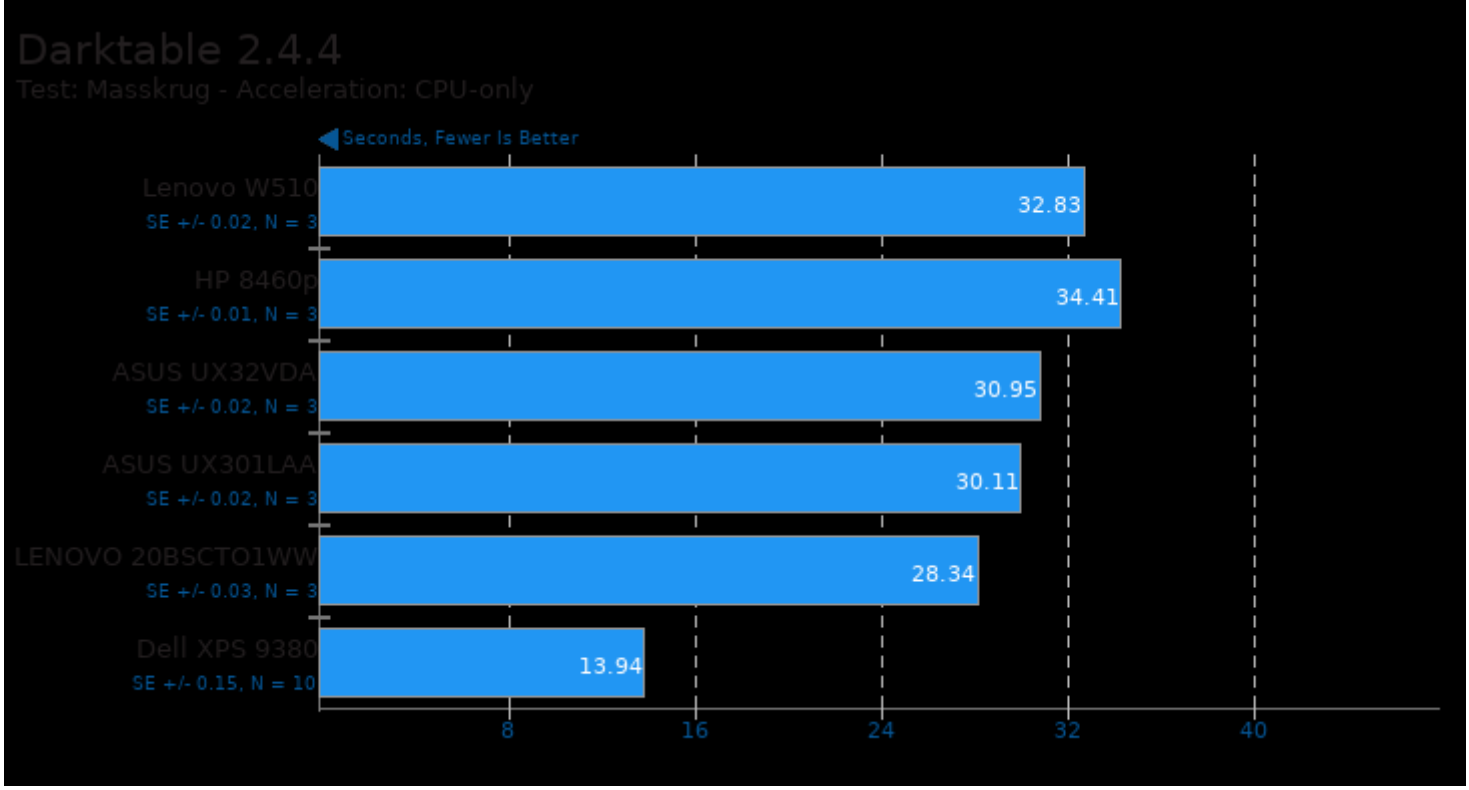

dav1d 0.1
Video Input: Summer Nature 1080p
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.82, N = 3
140.80
HP 8460p
SE +/- 0.13, N = 3
125.60
ASUS UX32VDA
SE +/- 0.14, N = 3
123.16
ASUS UX301LAA
SE +/- 0.25, N = 3
42.42
LENOVO 20BSCTO1WW
SE +/- 0.48, N = 3
42.71
Dell XPS 9380
SE +/- 0.27, N = 12
24.14
NUC
SE +/- 0.06, N = 3
18.36
30
60
90
120
150
1. (CC) gcc options: -pthread

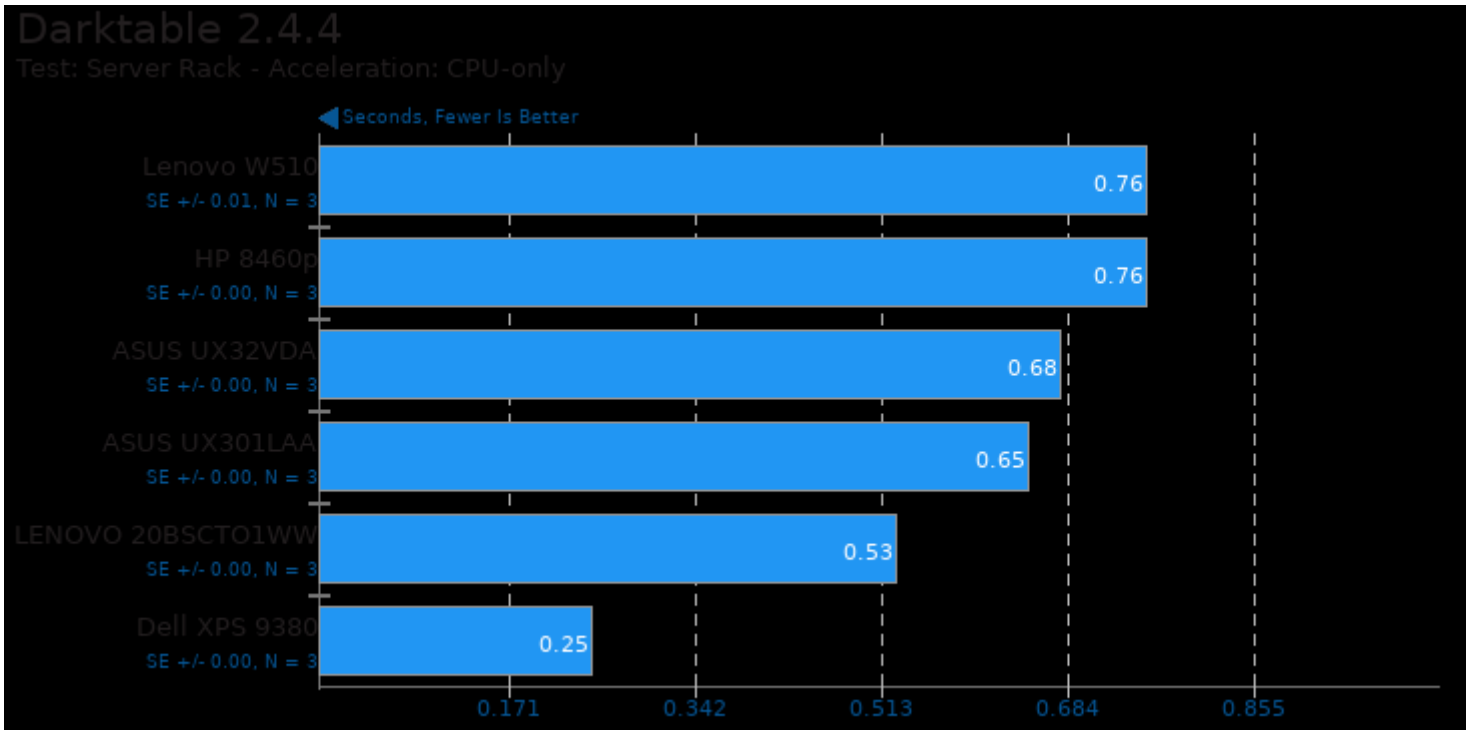

FLAC Audio Encoding 1.3.2
WAV To FLAC
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.18, N = 5
24.65
HP 8460p
SE +/- 0.11, N = 5
17.23
ASUS UX32VDA
SE +/- 0.03, N = 5
15.35
ASUS UX301LAA
SE +/- 0.04, N = 5
15.23
LENOVO 20BSCTO1WW
SE +/- 0.09, N = 5
13.63
Dell XPS 9380
SE +/- 0.08, N = 5
9.53
NUC
SE +/- 0.15, N = 25
-logg
10.69
6
12
18
24
30
1. (CXX) g++ options: -O2 -fvisibility=hidden -lm

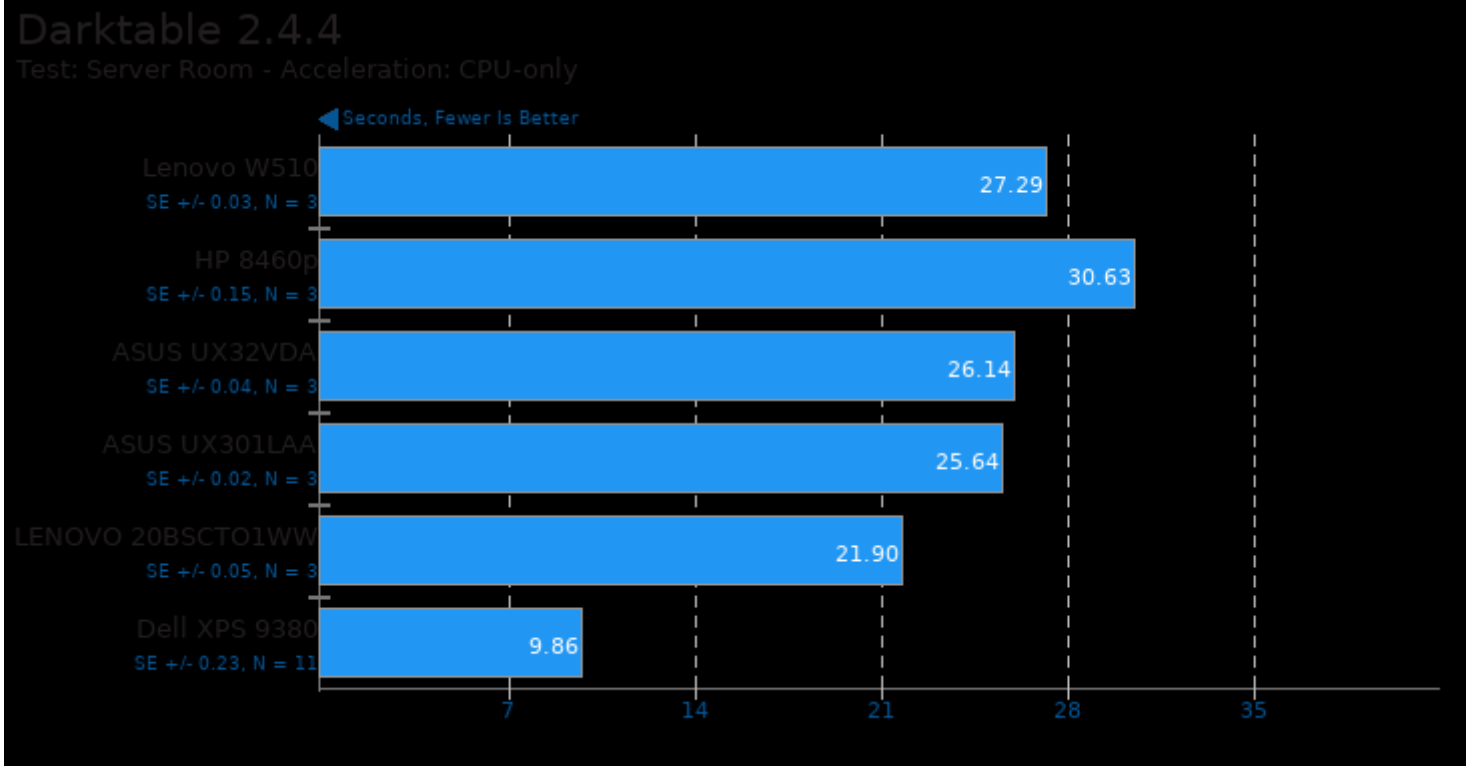

LAME MP3 Encoding 3.100
WAV To MP3
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.29, N = 3
-lncurses
73.10
HP 8460p
SE +/- 0.08, N = 3
44.50
ASUS UX32VDA
SE +/- 0.02, N = 3
44.86
ASUS UX301LAA
SE +/- 0.01, N = 3
47.07
LENOVO 20BSCTO1WW
SE +/- 0.01, N = 3
-lncurses
38.21
Dell XPS 9380
SE +/- 0.41, N = 3
30.09
NUC
SE +/- 0.01, N = 3
31.99
16
32
48
64
80
1. (CC) gcc options: -lm

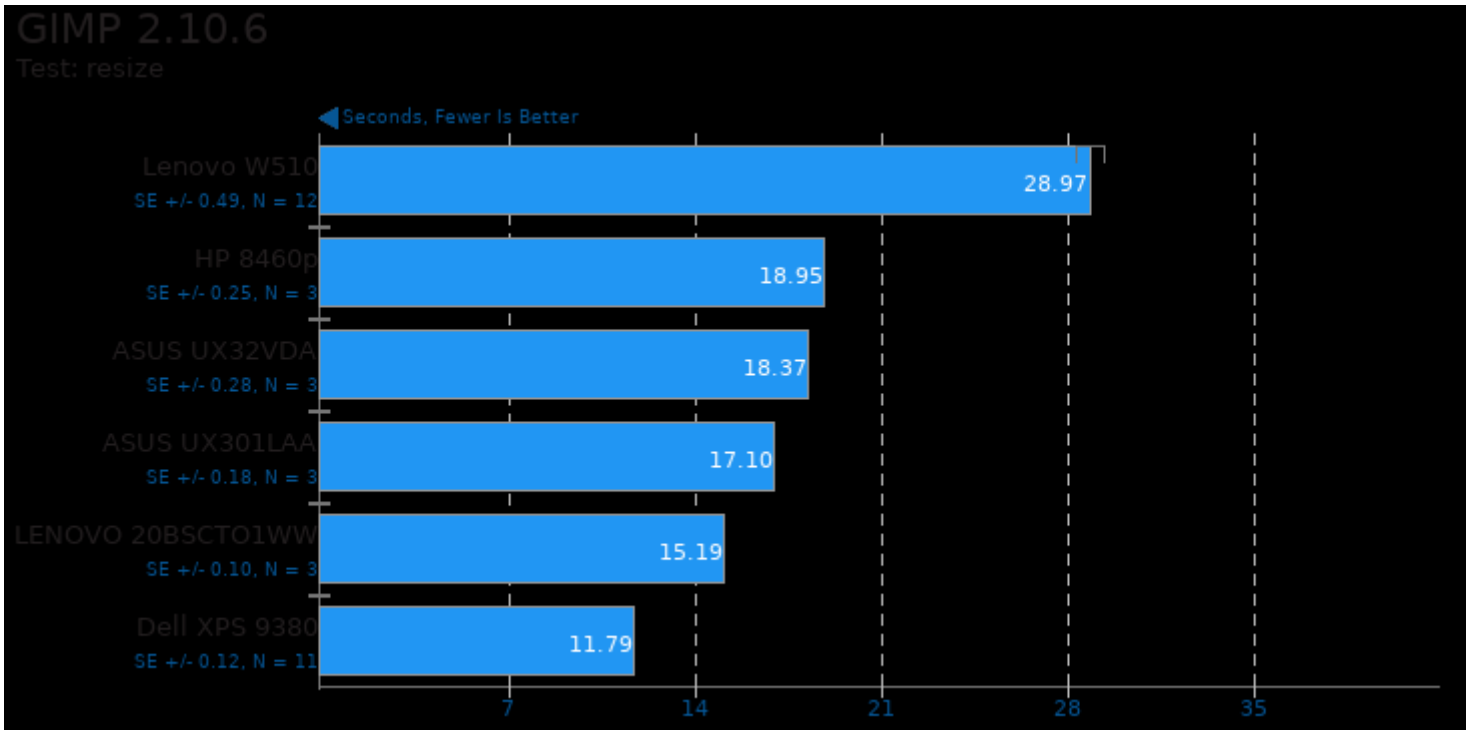

R Benchmark
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.0034, N = 3
1.4547
ASUS UX32VDA
SE +/- 0.0022, N = 3
1.0823
LENOVO 20BSCTO1WW
SE +/- 0.0008, N = 3
0.8553
NUC
SE +/- 0.0003, N = 3
0.2002
0.3273
0.6546
0.9819
1.3092
1.6365
1. Lenovo W510: R scripting front-end version 3.5.1 (2018-07-02)
2. ASUS UX32VDA: R scripting front-end version 3.5.1 (2018-07-02)
3. LENOVO 20BSCTO1WW: R scripting front-end version 3.5.1 (2018-07-02)
4. NUC: R scripting front-end version 3.5.2 (2018-12-20)
Cryptsetup 2.0.4
PBKDF2-sha512
Iterations Per Second, More Is Better
ASUS UX32VDA
SE +/- 3641.62, N = 3
837998
Lenovo W510
SE +/- 5306.99, N = 3
621039
LENOVO 20BSCTO1WW
SE +/- 439.67, N = 3
1176412
Dell XPS 9380
SE +/- 12450.15, N = 3
1594584
300K
600K
900K
1200K
1500K
Cryptsetup
PBKDF2-whirlpool
Iterations Per Second, More Is Better
Lenovo W510
SE +/- 4588.97, N = 3
378204
ASUS UX32VDA
SE +/- 280.33, N = 3
469231
LENOVO 20BSCTO1WW
SE +/- 890.33, N = 3
683559
Dell XPS 9380
SE +/- 14166.69, N = 3
891584
200K
400K
600K
800K
1000K

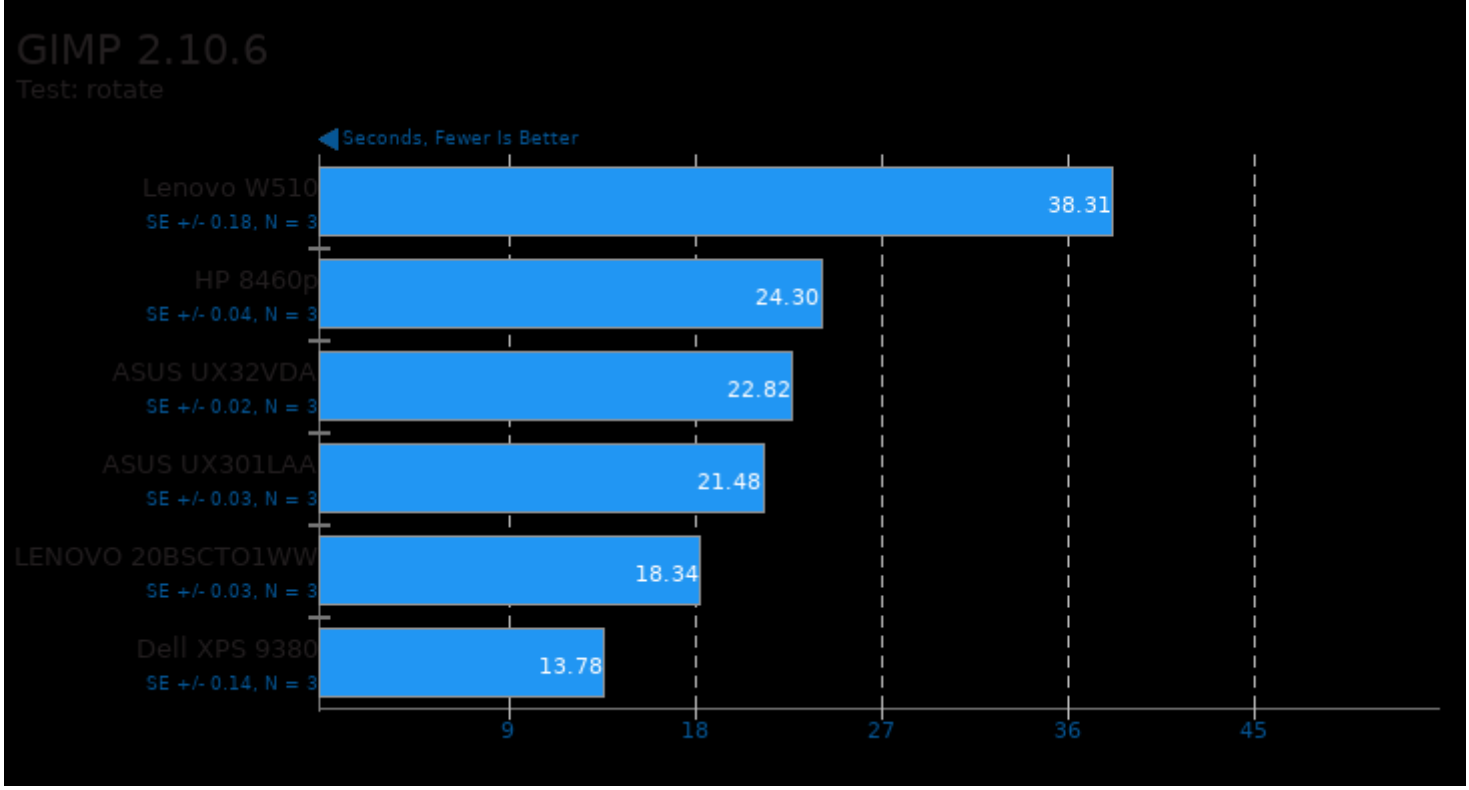

Darktable 2.4.4
Test: Boat - Acceleration: CPU-only
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.02, N = 3
59.79
HP 8460p
SE +/- 0.03, N = 3
71.12
ASUS UX32VDA
SE +/- 0.11, N = 3
47.47
ASUS UX301LAA
SE +/- 0.06, N = 3
44.32
LENOVO 20BSCTO1WW
SE +/- 0.51, N = 3
43.31
Dell XPS 9380
SE +/- 0.34, N = 3
22.81
16
32
48
64
80

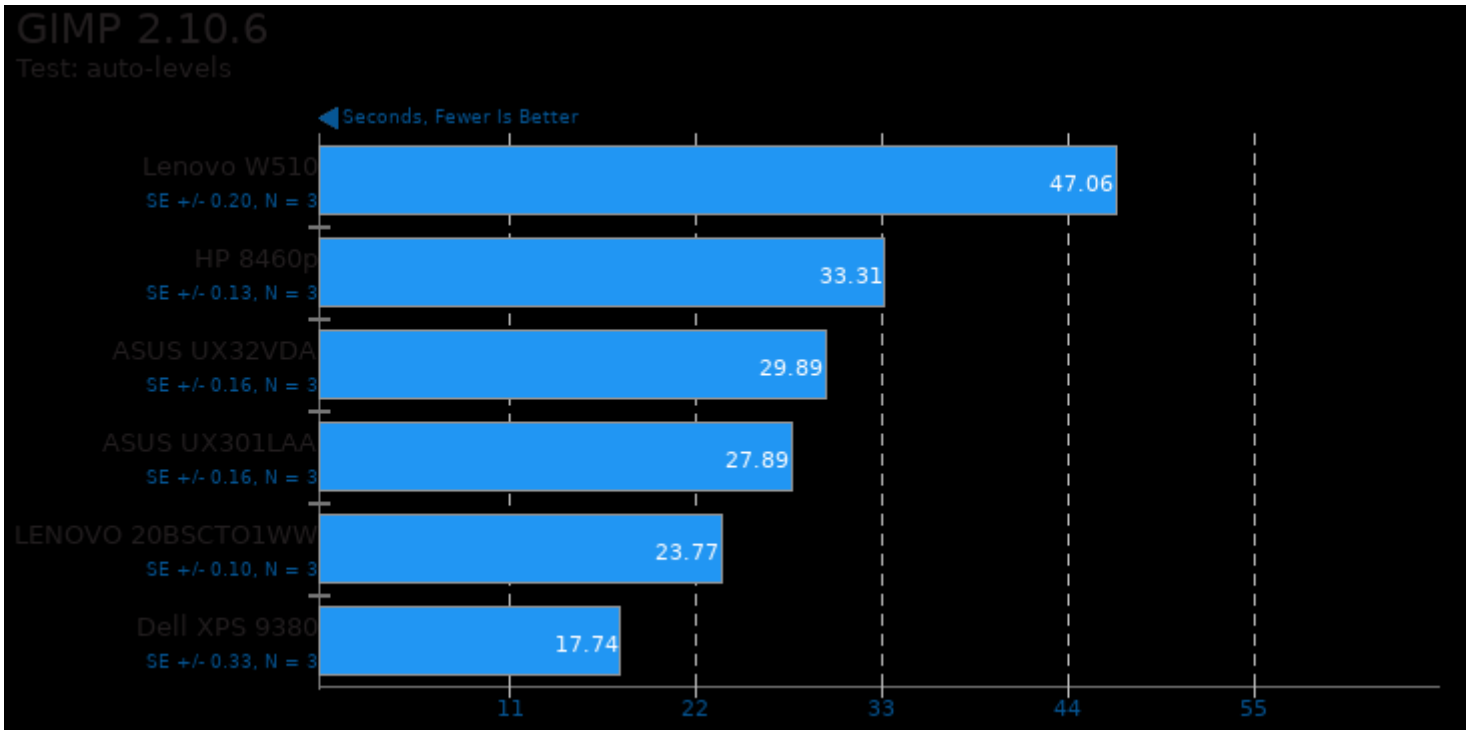

Darktable 2.4.4
Test: Masskrug - Acceleration: CPU-only
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.02, N = 3
32.83
HP 8460p
SE +/- 0.01, N = 3
34.41
ASUS UX32VDA
SE +/- 0.02, N = 3
30.95
ASUS UX301LAA
SE +/- 0.02, N = 3
30.11
LENOVO 20BSCTO1WW
SE +/- 0.03, N = 3
28.34
Dell XPS 9380
SE +/- 0.15, N = 10
13.94
8
16
24
32
40

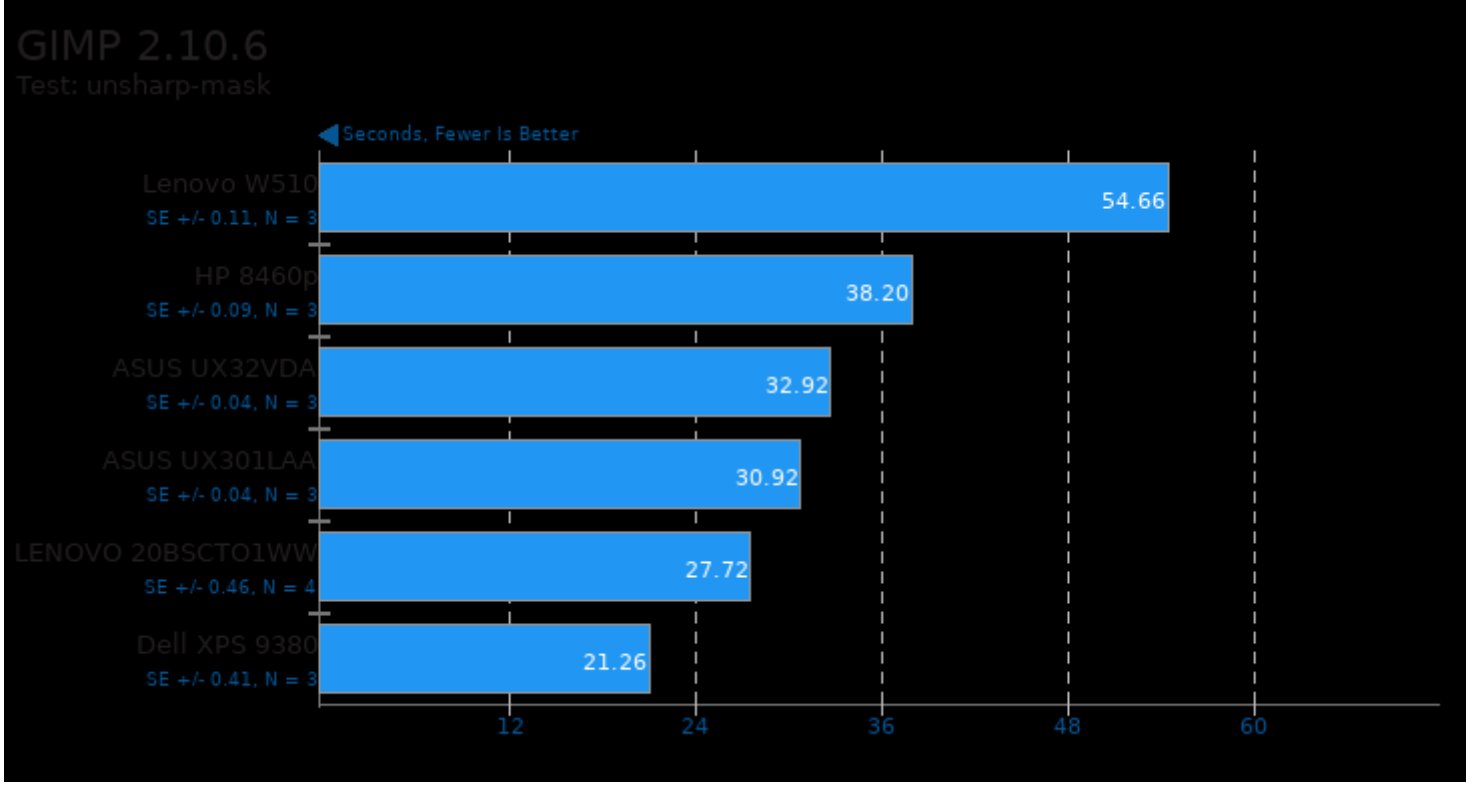

Darktable 2.4.4
Test: Server Rack - Acceleration: CPU-only
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.01, N = 3
0.76
HP 8460p
SE +/- 0.00, N = 3
0.76
ASUS UX32VDA
SE +/- 0.00, N = 3
0.68
ASUS UX301LAA
SE +/- 0.00, N = 3
0.65
LENOVO 20BSCTO1WW
SE +/- 0.00, N = 3
0.53
Dell XPS 9380
SE +/- 0.00, N = 3
0.25
0.171
0.342
0.513
0.684
0.855

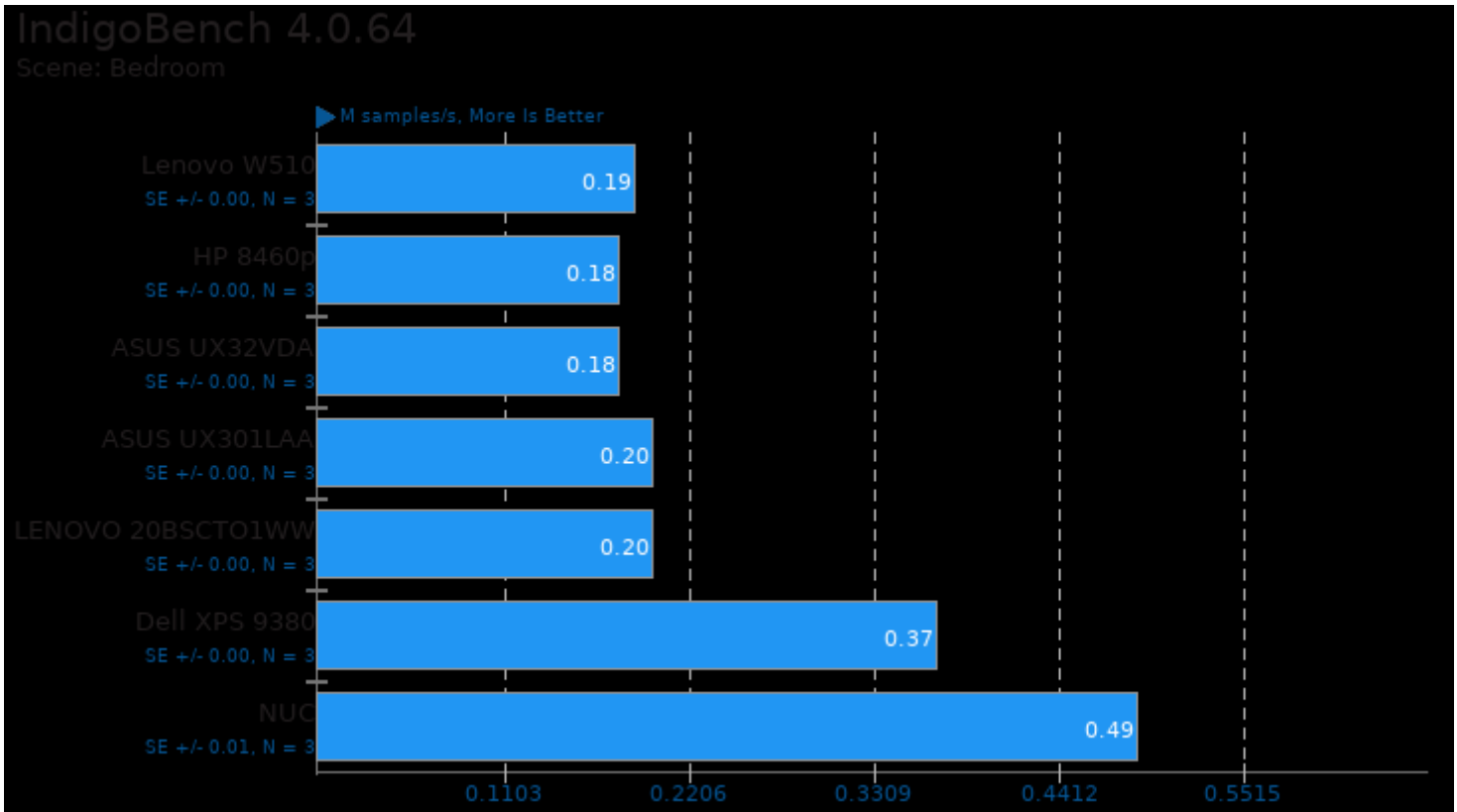

Darktable 2.4.4
Test: Server Room - Acceleration: CPU-only
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.03, N = 3
27.29
HP 8460p
SE +/- 0.15, N = 3
30.63
ASUS UX32VDA
SE +/- 0.04, N = 3
26.14
ASUS UX301LAA
SE +/- 0.02, N = 3
25.64
LENOVO 20BSCTO1WW
SE +/- 0.05, N = 3
21.90
Dell XPS 9380
SE +/- 0.23, N = 11
9.86
7
14
21
28
35

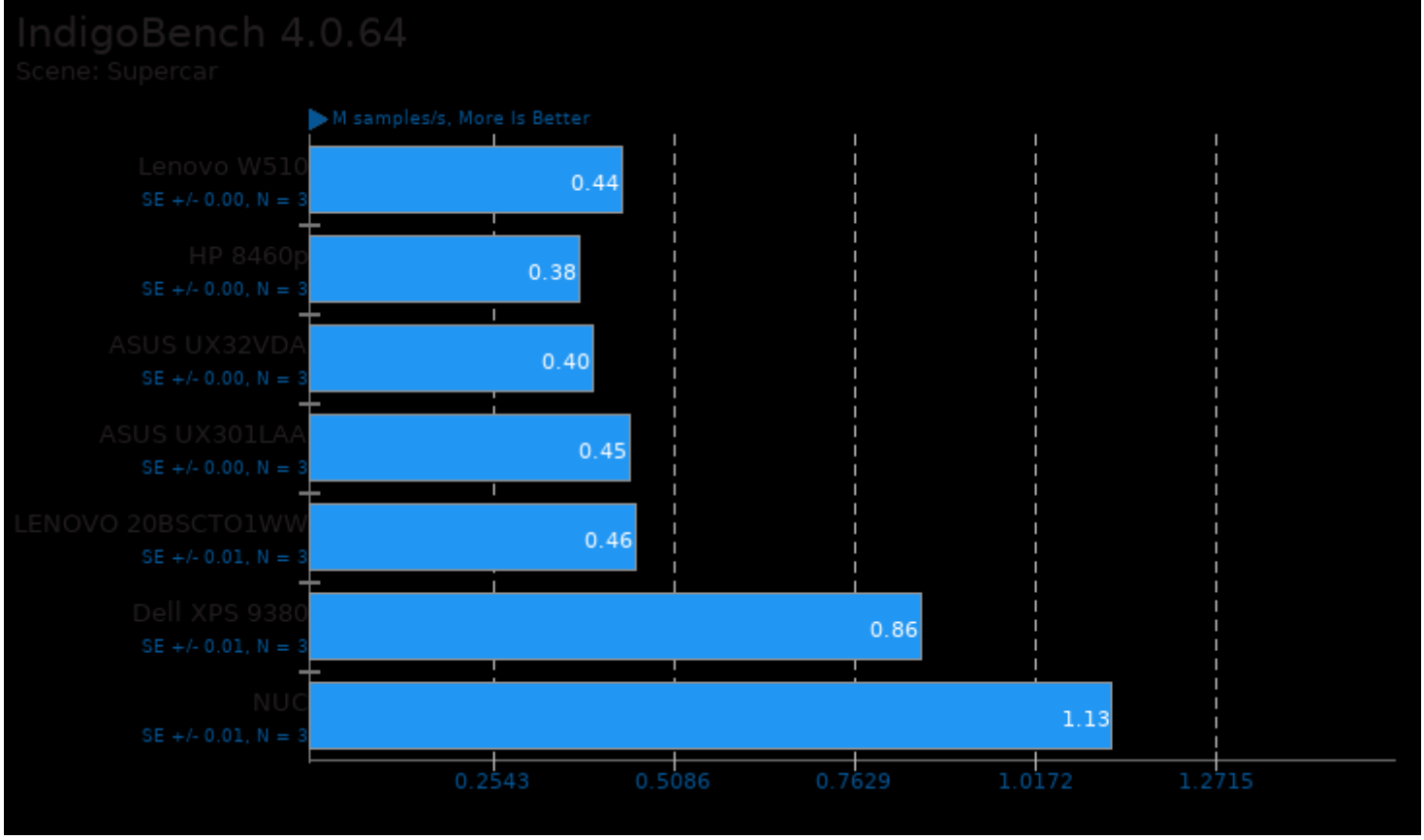

GIMP 2.10.6
Test: resize
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.49, N = 12
28.97
HP 8460p
SE +/- 0.25, N = 3
18.95
ASUS UX32VDA
SE +/- 0.28, N = 3
18.37
ASUS UX301LAA
SE +/- 0.18, N = 3
17.10
LENOVO 20BSCTO1WW
SE +/- 0.10, N = 3
15.19
Dell XPS 9380
SE +/- 0.12, N = 11
11.79
7
14
21
28
35

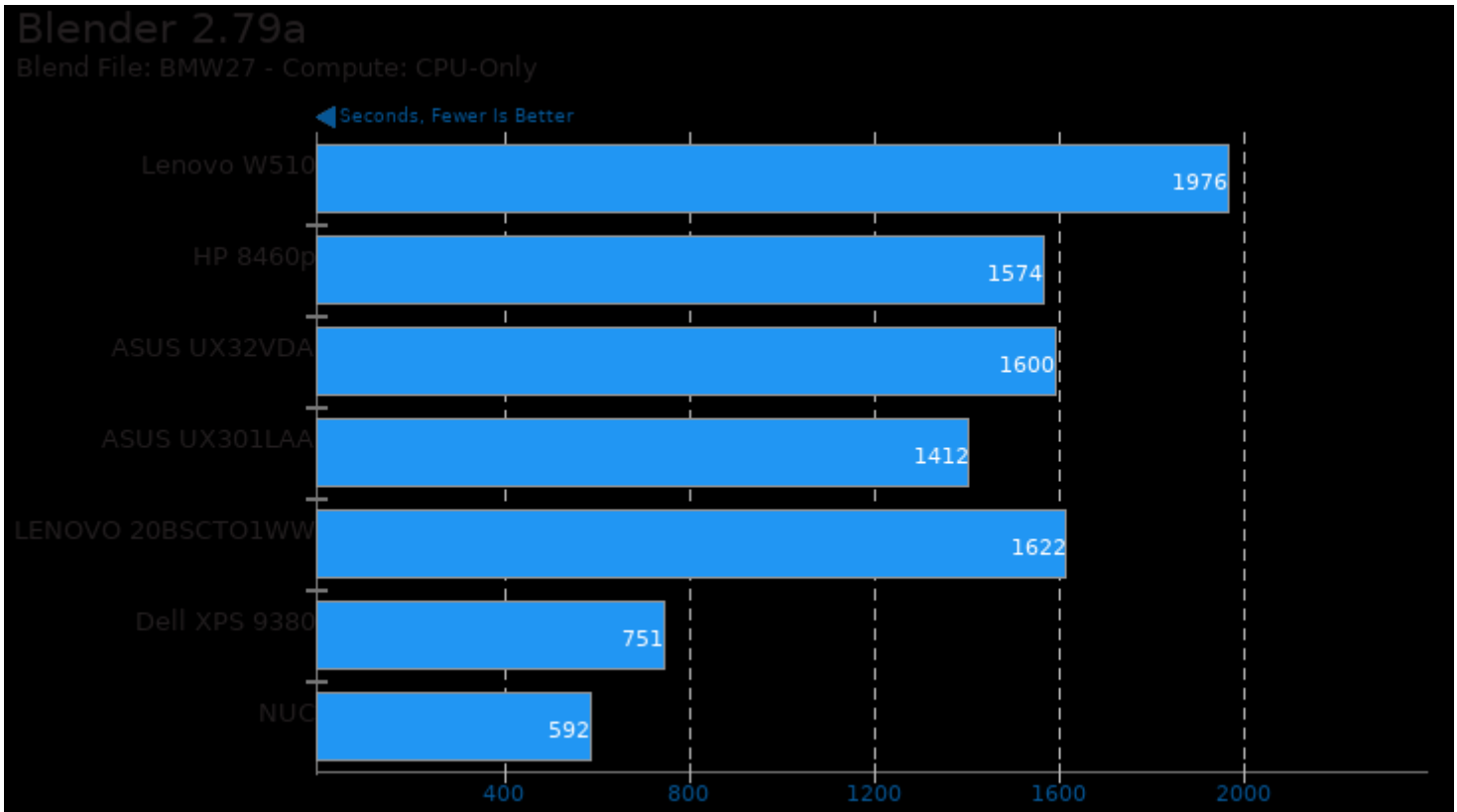

GIMP 2.10.6
Test: rotate
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.18, N = 3
38.31
HP 8460p
SE +/- 0.04, N = 3
24.30
ASUS UX32VDA
SE +/- 0.02, N = 3
22.82
ASUS UX301LAA
SE +/- 0.03, N = 3
21.48
LENOVO 20BSCTO1WW
SE +/- 0.03, N = 3
18.34
Dell XPS 9380
SE +/- 0.14, N = 3
13.78
9
18
27
36
45

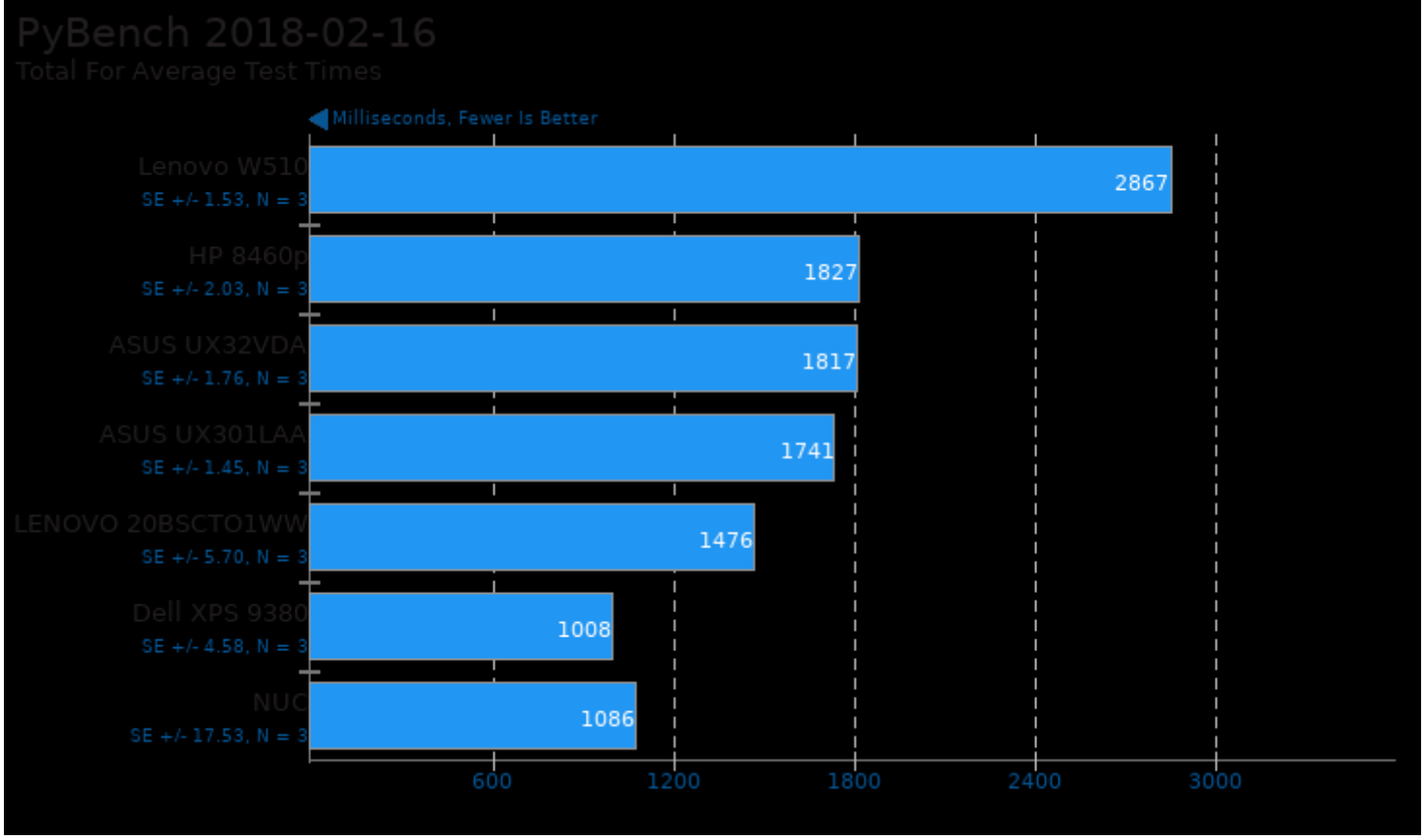

GIMP 2.10.6
Test: auto-levels
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.20, N = 3
47.06
HP 8460p
SE +/- 0.13, N = 3
33.31
ASUS UX32VDA
SE +/- 0.16, N = 3
29.89
ASUS UX301LAA
SE +/- 0.16, N = 3
27.89
LENOVO 20BSCTO1WW
SE +/- 0.10, N = 3
23.77
Dell XPS 9380
SE +/- 0.33, N = 3
17.74
11
22
33
44
55

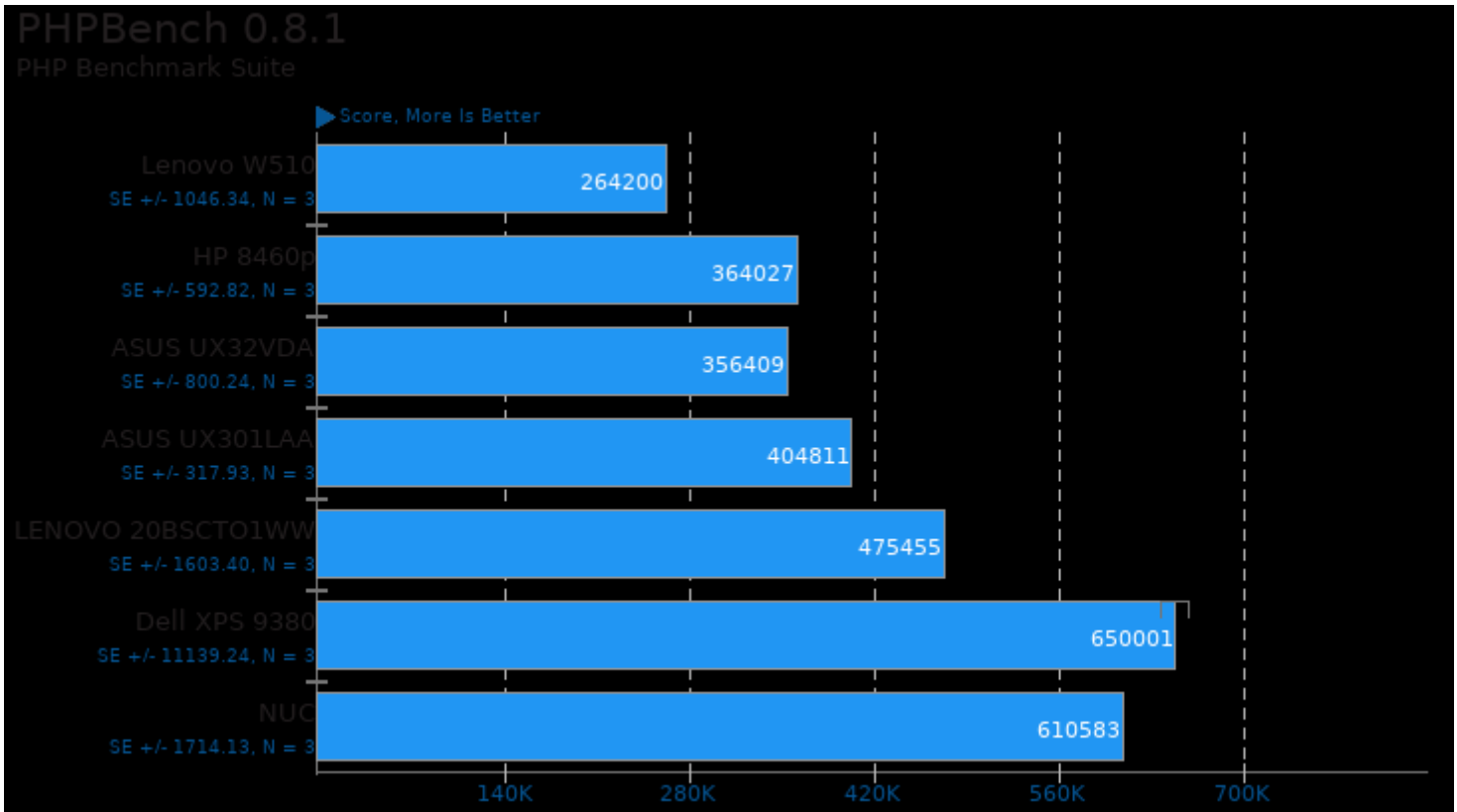

GIMP 2.10.6
Test: unsharp-mask
Seconds, Fewer Is Better
Lenovo W510
SE +/- 0.11, N = 3
54.66
HP 8460p
SE +/- 0.09, N = 3
38.20
ASUS UX32VDA
SE +/- 0.04, N = 3
32.92
ASUS UX301LAA
SE +/- 0.04, N = 3
30.92
LENOVO 20BSCTO1WW
SE +/- 0.46, N = 4
27.72
Dell XPS 9380
SE +/- 0.41, N = 3
21.26
12
24
36
48
60

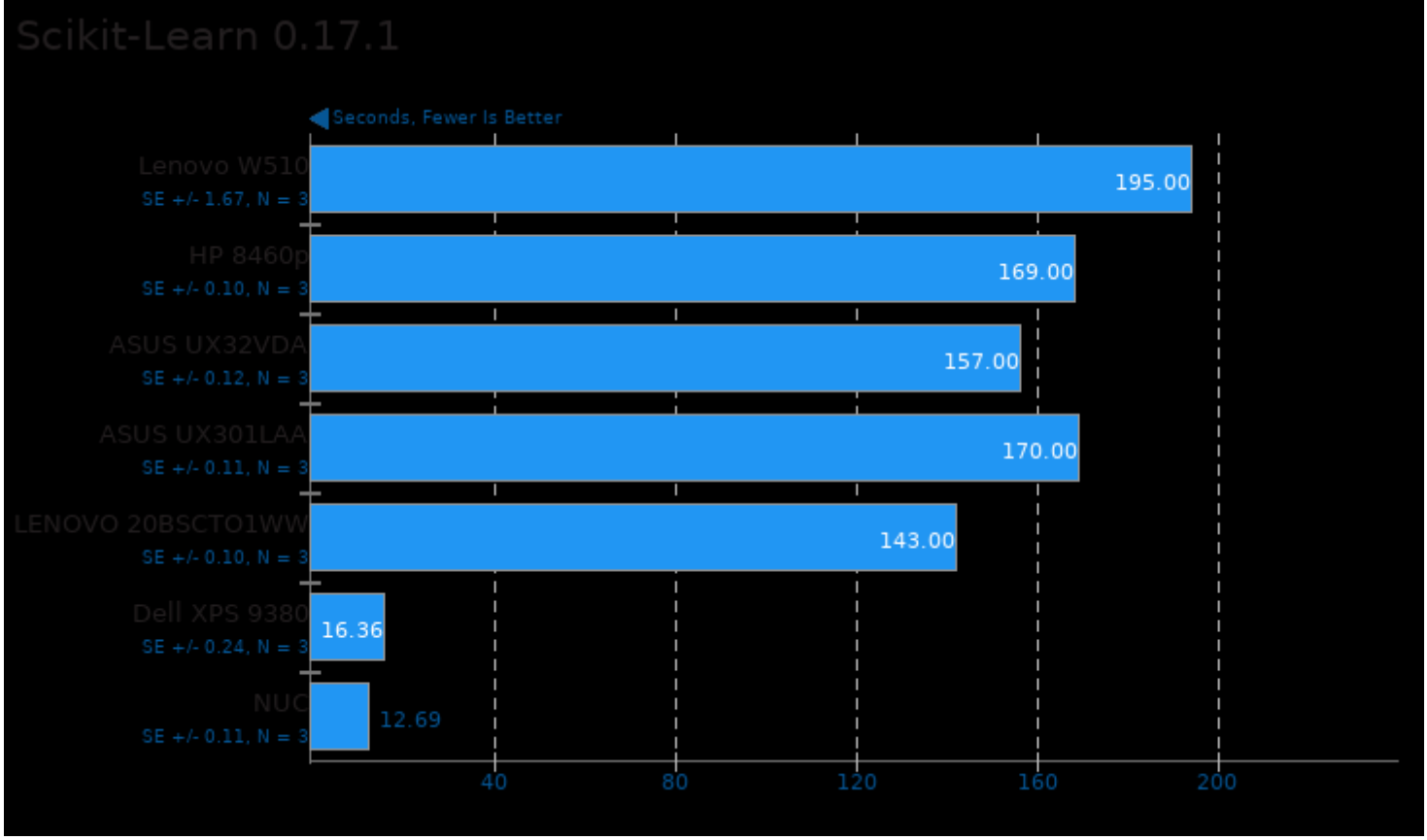

IndigoBench 4.0.64
Scene: Bedroom
M samples/s, More Is Better
Lenovo W510
SE +/- 0.00, N = 3
0.19
HP 8460p
SE +/- 0.00, N = 3
0.18
ASUS UX32VDA
SE +/- 0.00, N = 3
0.18
ASUS UX301LAA
SE +/- 0.00, N = 3
0.20
LENOVO 20BSCTO1WW
SE +/- 0.00, N = 3
0.20
Dell XPS 9380
SE +/- 0.00, N = 3
0.37
NUC
SE +/- 0.01, N = 3
0.49
0.1103
0.2206
0.3309
0.4412
0.5515

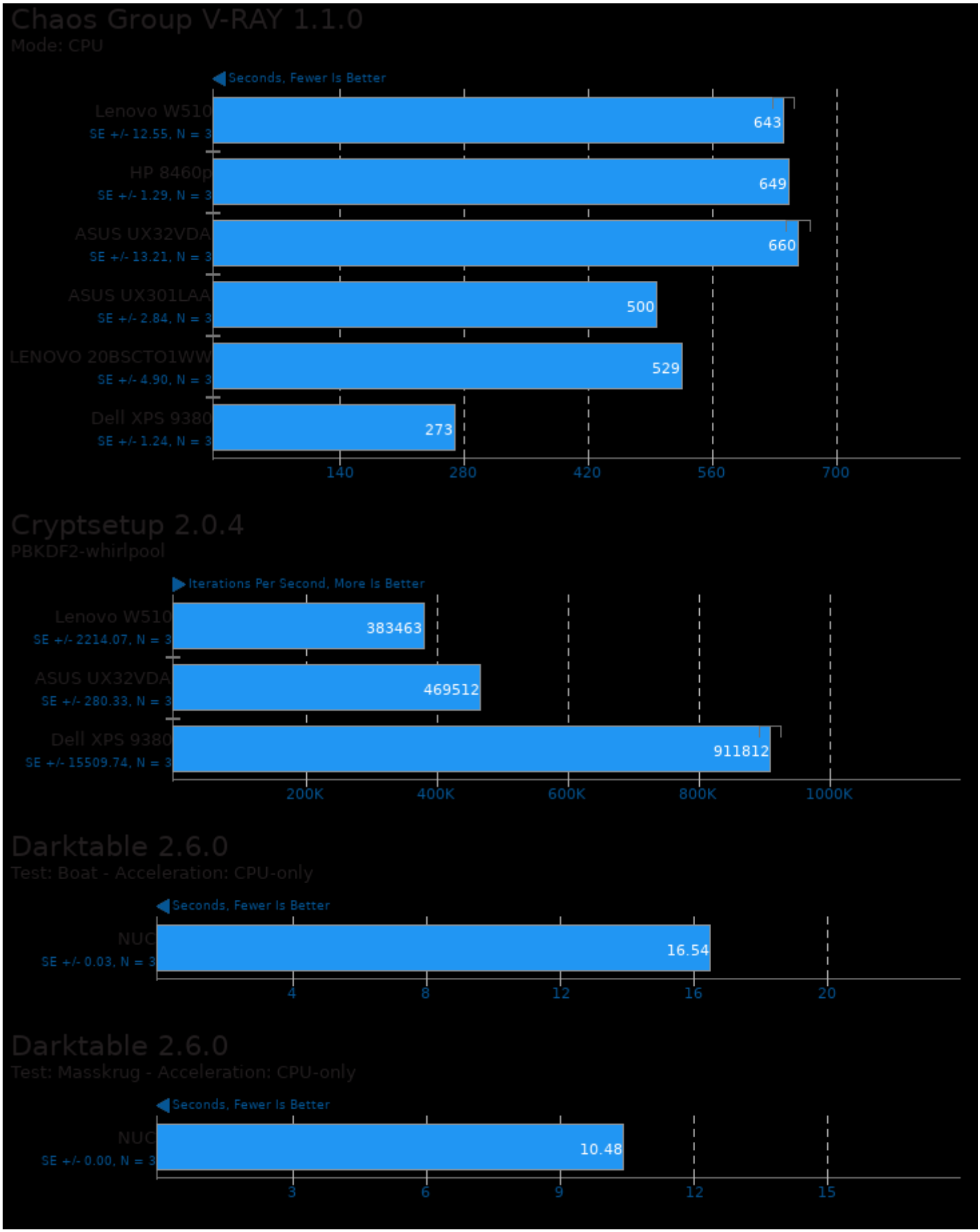

IndigoBench 4.0.64
Scene: Supercar
M samples/s, More Is Better
Lenovo W510
SE +/- 0.00, N = 3
0.44
HP 8460p
SE +/- 0.00, N = 3
0.38
ASUS UX32VDA
SE +/- 0.00, N = 3
0.40
ASUS UX301LAA
SE +/- 0.00, N = 3
0.45
LENOVO 20BSCTO1WW
SE +/- 0.01, N = 3
0.46
Dell XPS 9380
SE +/- 0.01, N = 3
0.86
NUC
SE +/- 0.01, N = 3
1.13
0.2543
0.5086
0.7629
1.0172
1.2715

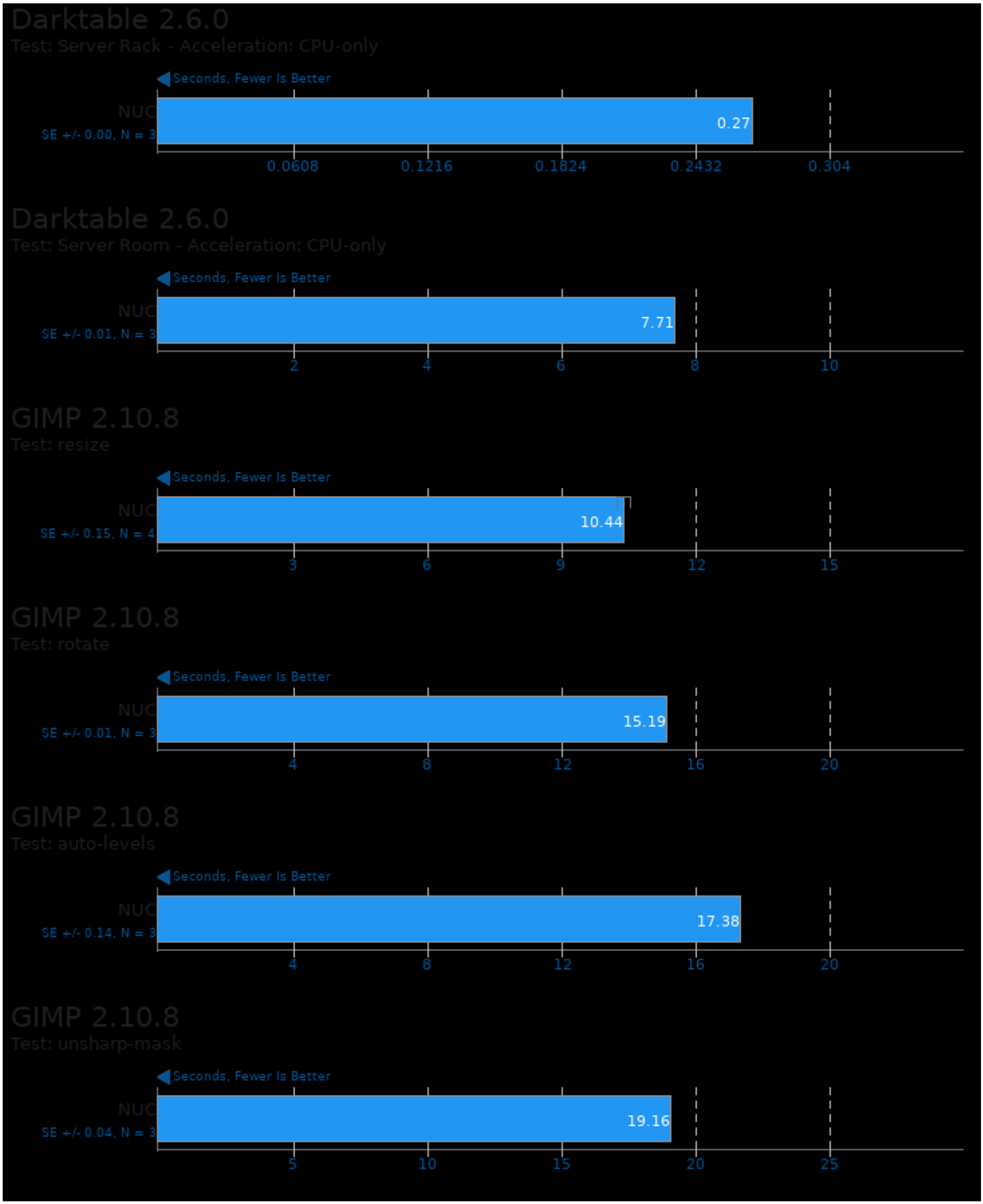

Blender 2.79a
Blend File: BMW27 - Compute: CPU-Only
Seconds, Fewer Is Better
Lenovo W510
1976
HP 8460p
1574
ASUS UX32VDA
1600
ASUS UX301LAA
1412
LENOVO 20BSCTO1WW
1622
Dell XPS 9380
751
NUC
592
400
800
1200
1600
2000


PyBench 2018-02-16
Total For Average Test Times
Milliseconds, Fewer Is Better
Lenovo W510
SE +/- 1.53, N = 3
2867
HP 8460p
SE +/- 2.03, N = 3
1827
ASUS UX32VDA
SE +/- 1.76, N = 3
1817
ASUS UX301LAA
SE +/- 1.45, N = 3
1741
LENOVO 20BSCTO1WW
SE +/- 5.70, N = 3
1476
Dell XPS 9380
SE +/- 4.58, N = 3
1008
NUC
SE +/- 17.53, N = 3
1086
600
1200
1800
2400
3000

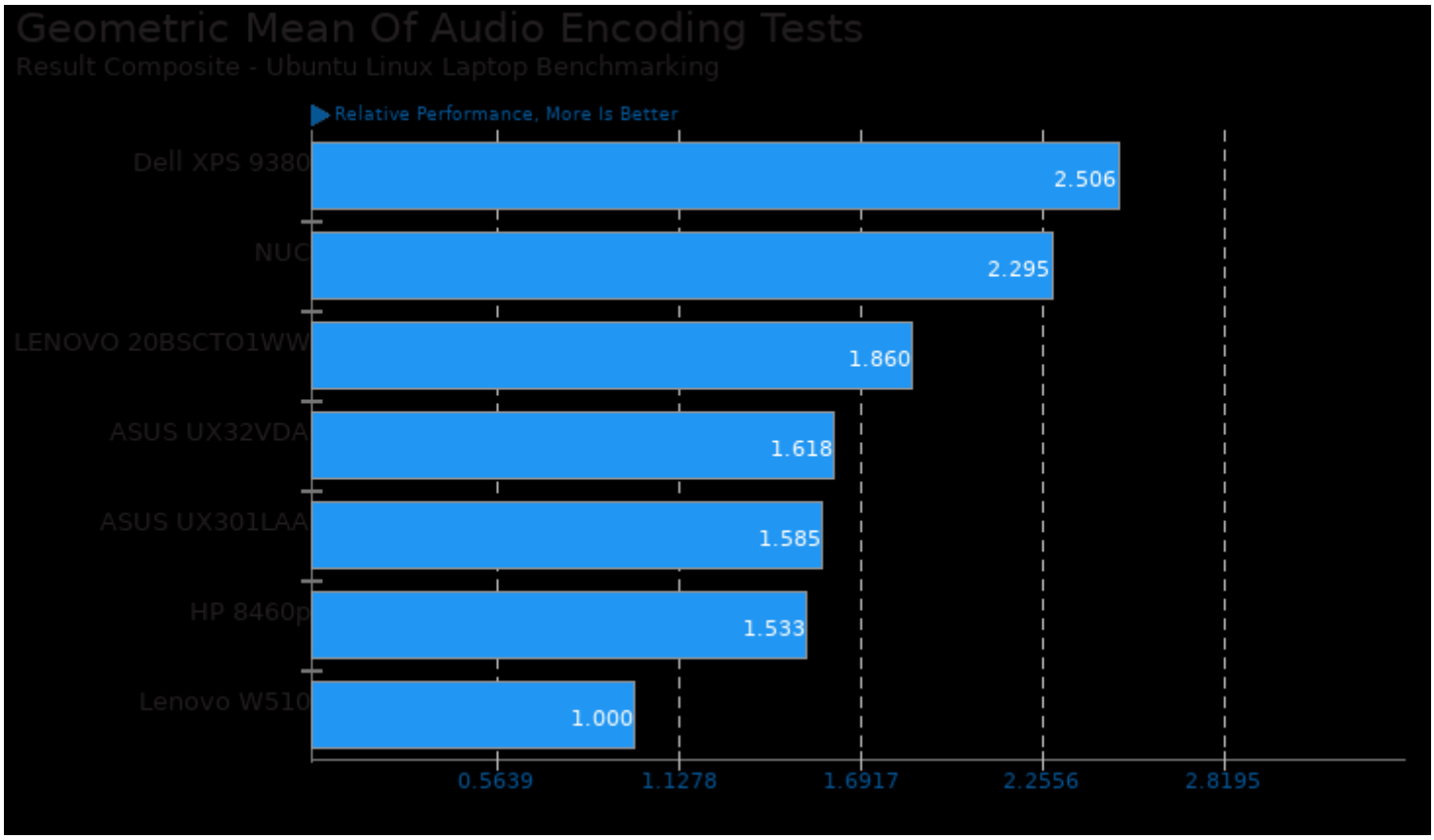

PHPBench 0.8.1
PHP Benchmark Suite
Score, More Is Better
Lenovo W510
SE +/- 1046.34, N = 3
264200
HP 8460p
SE +/- 592.82, N = 3
364027
ASUS UX32VDA
SE +/- 800.24, N = 3
356409
ASUS UX301LAA
SE +/- 317.93, N = 3
404811
LENOVO 20BSCTO1WW
SE +/- 1603.40, N = 3
475455
Dell XPS 9380
SE +/- 11139.24, N = 3
650001
NUC
SE +/- 1714.13, N = 3
610583
140K
280K
420K
560K
700K


Scikit-Learn 0.17.1
Seconds, Fewer Is Better
Lenovo W510
SE +/- 1.67, N = 3
195.00
HP 8460p
SE +/- 0.10, N = 3
169.00
ASUS UX32VDA
SE +/- 0.12, N = 3
157.00
ASUS UX301LAA
SE +/- 0.11, N = 3
170.00
LENOVO 20BSCTO1WW
SE +/- 0.10, N = 3
143.00
Dell XPS 9380
SE +/- 0.24, N = 3
16.36
NUC
SE +/- 0.11, N = 3
12.69
40
80
120
160
200

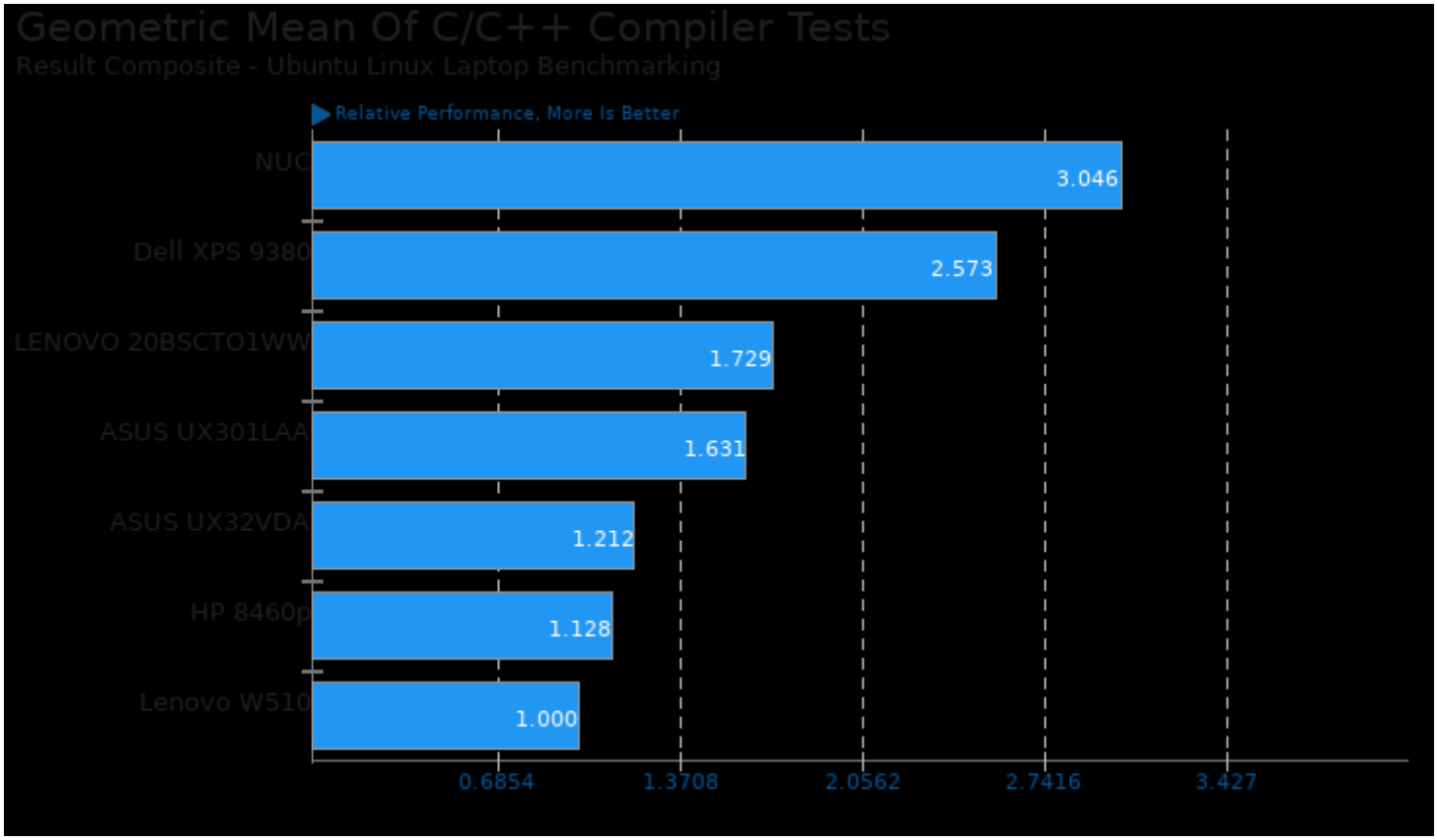

Chaos Group V-RAY 1.1.0
Mode: CPU
Seconds, Fewer Is Better
Lenovo W510
SE +/- 12.55, N = 3
643
HP 8460p
SE +/- 1.29, N = 3
649
ASUS UX32VDA
SE +/- 13.21, N = 3
660
ASUS UX301LAA
SE +/- 2.84, N = 3
500
LENOVO 20BSCTO1WW
SE +/- 4.90, N = 3
529
Dell XPS 9380
SE +/- 1.24, N = 3
273
140
280
420
560
700
Cryptsetup 2.0.4
PBKDF2-whirlpool
Iterations Per Second, More Is Better
Lenovo W510
SE +/- 2214.07, N = 3
383463
ASUS UX32VDA
SE +/- 280.33, N = 3
469512
Dell XPS 9380
SE +/- 15509.74, N = 3
911812
200K
400K
600K
800K
1000K
Darktable 2.6.0
Test: Boat - Acceleration: CPU-only
Seconds, Fewer Is Better
NUC
SE +/- 0.03, N = 3
16.54
4
8
12
16
20
Darktable 2.6.0
Test: Masskrug - Acceleration: CPU-only
Seconds, Fewer Is Better
NUC
SE +/- 0.00, N = 3
10.48
3
6
9
12
15


Darktable 2.6.0
Test: Server Rack - Acceleration: CPU-only
Seconds, Fewer Is Better
NUC
SE +/- 0.00, N = 3
0.27
0.0608
0.1216
0.1824
0.2432
0.304
Darktable 2.6.0
Test: Server Room - Acceleration: CPU-only
Seconds, Fewer Is Better
NUC
SE +/- 0.01, N = 3
7.71
2
4
6
8
10
GIMP 2.10.8
Test: resize
Seconds, Fewer Is Better
NUC
SE +/- 0.15, N = 4
10.44
3
6
9
12
15
GIMP 2.10.8
Test: rotate
Seconds, Fewer Is Better
NUC
SE +/- 0.01, N = 3
15.19
4
8
12
16
20
GIMP 2.10.8
Test: auto-levels
Seconds, Fewer Is Better
NUC
SE +/- 0.14, N = 3
17.38
4
8
12
16
20
GIMP 2.10.8
Test: unsharp-mask
Seconds, Fewer Is Better
NUC
SE +/- 0.04, N = 3
19.16
5
10
15
20
25

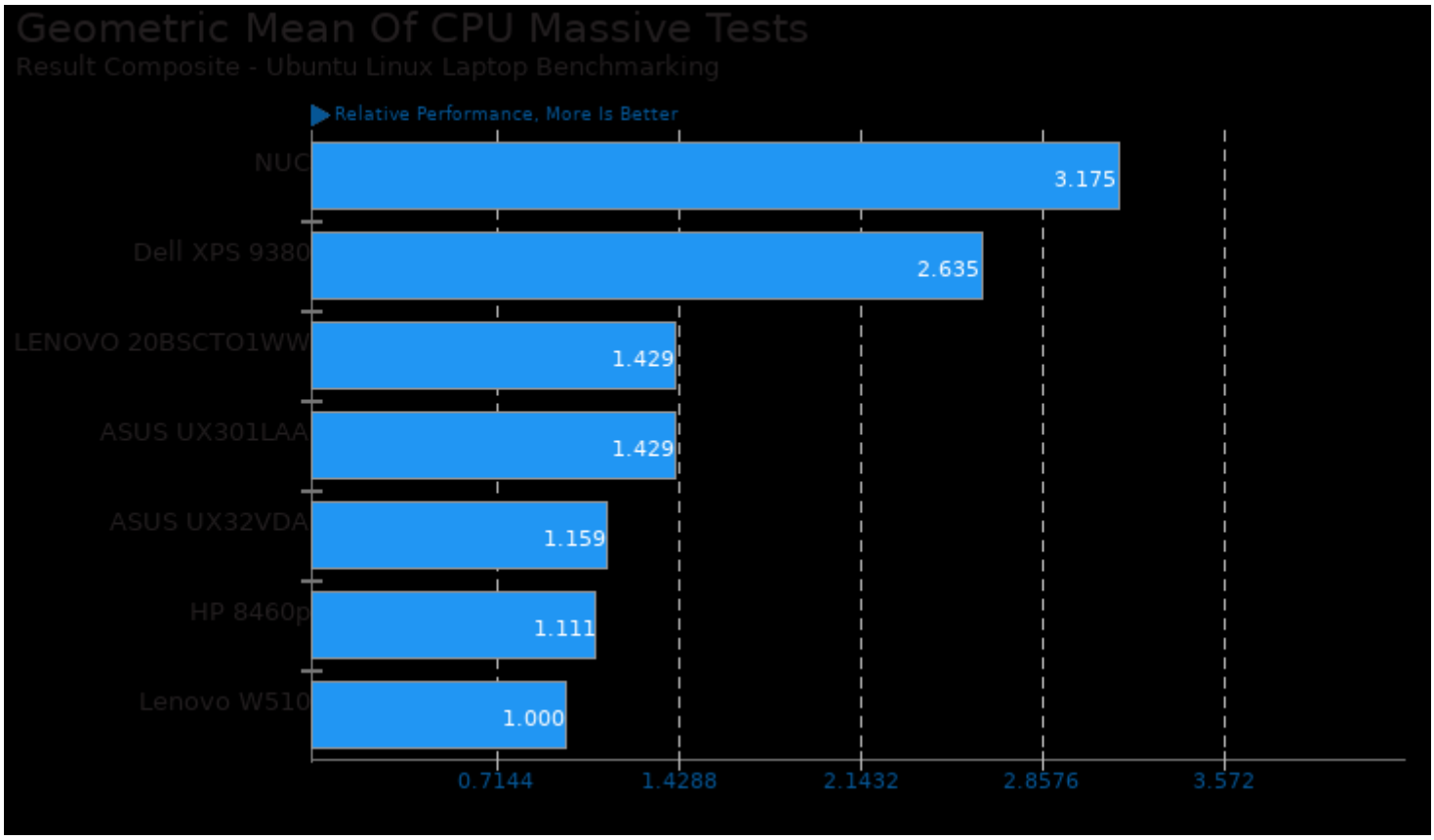
These geometric means are based upon test groupings / test suites for this result file.



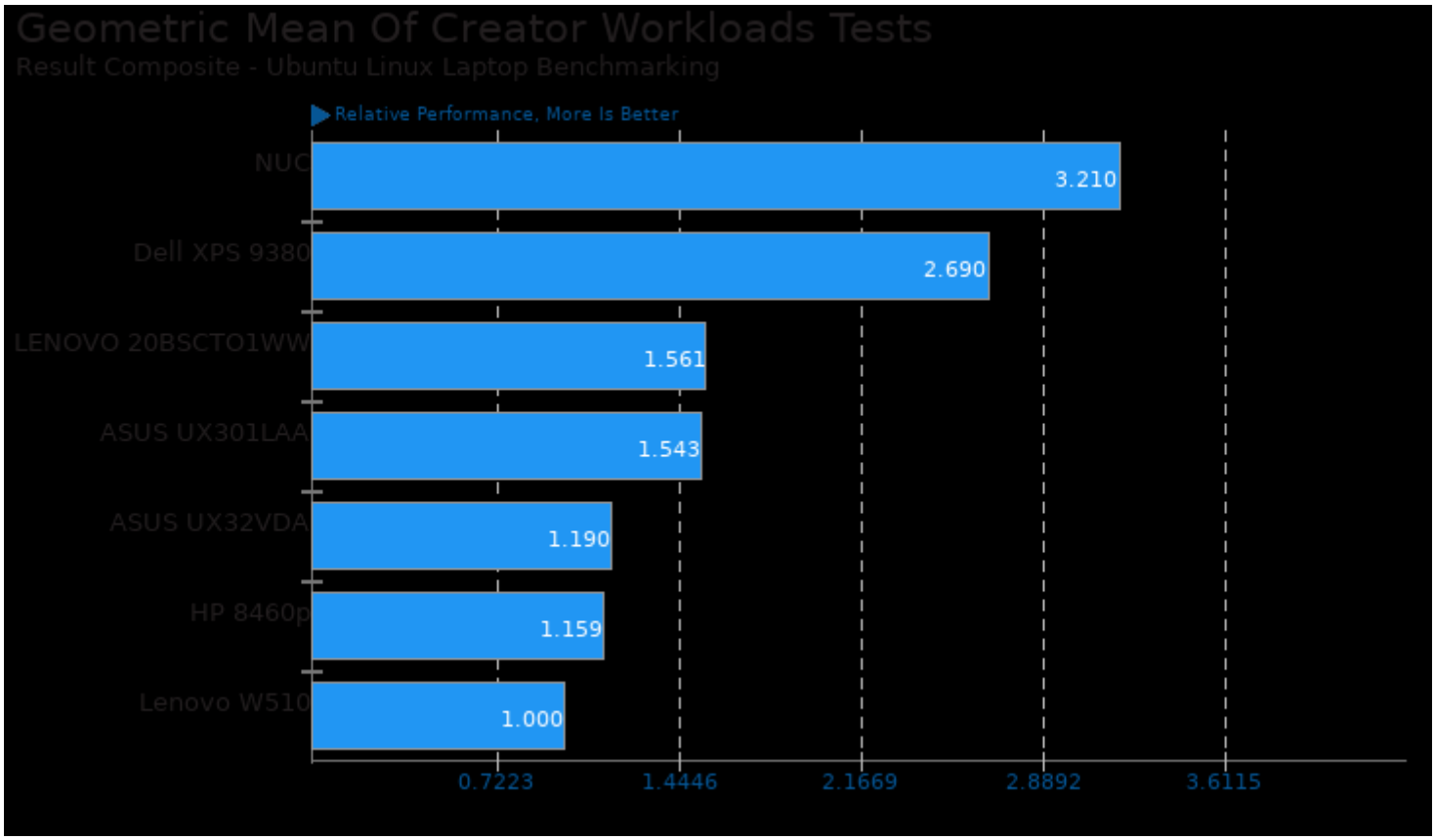
Geometric mean based upon tests: pts/encode-mp3 and pts/encode-flac



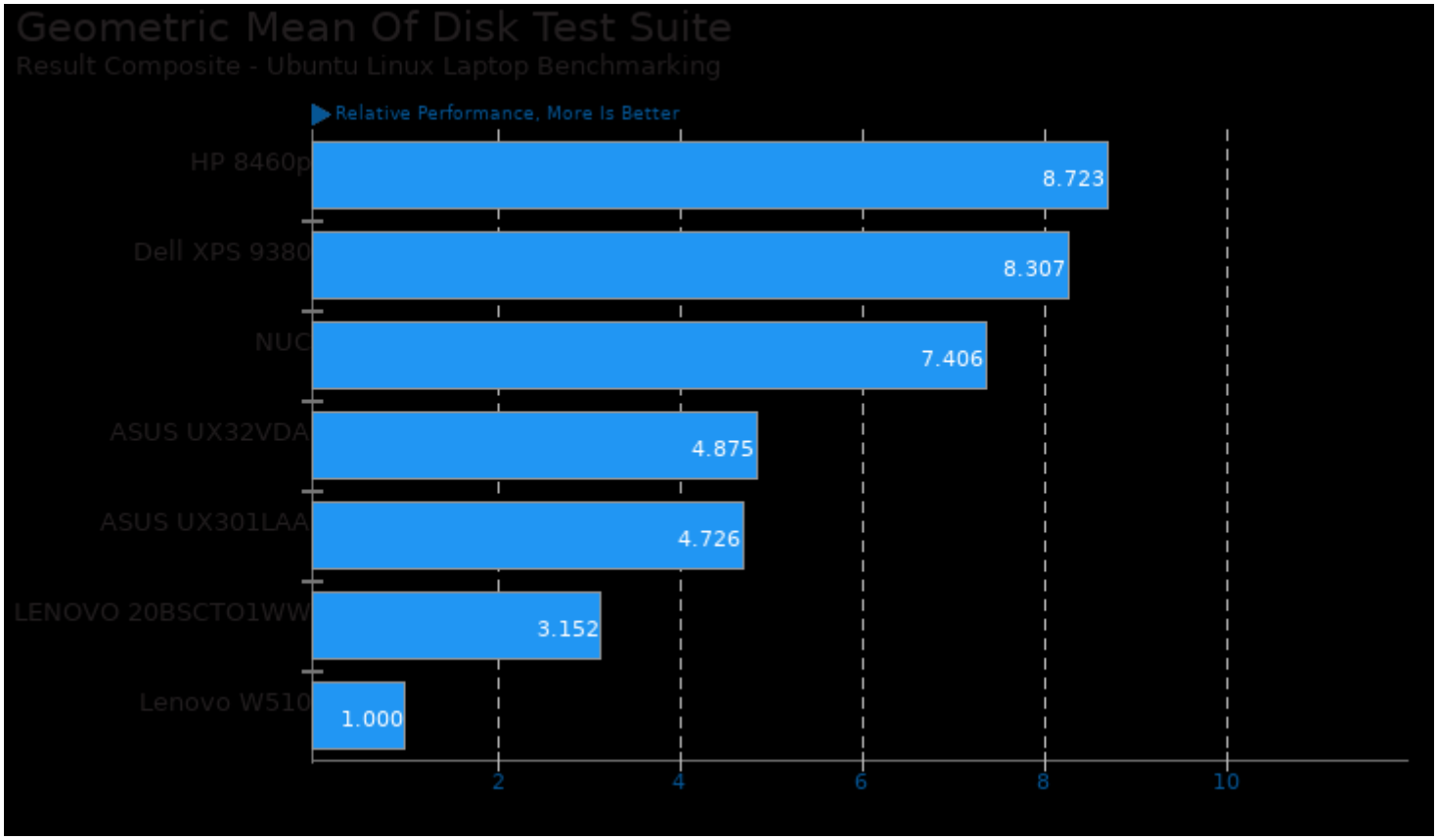
Geometric mean based upon tests: pts/encode-mp3, pts/encode-flac, pts/dav1d, pts/x265 and pts/compress-zstd



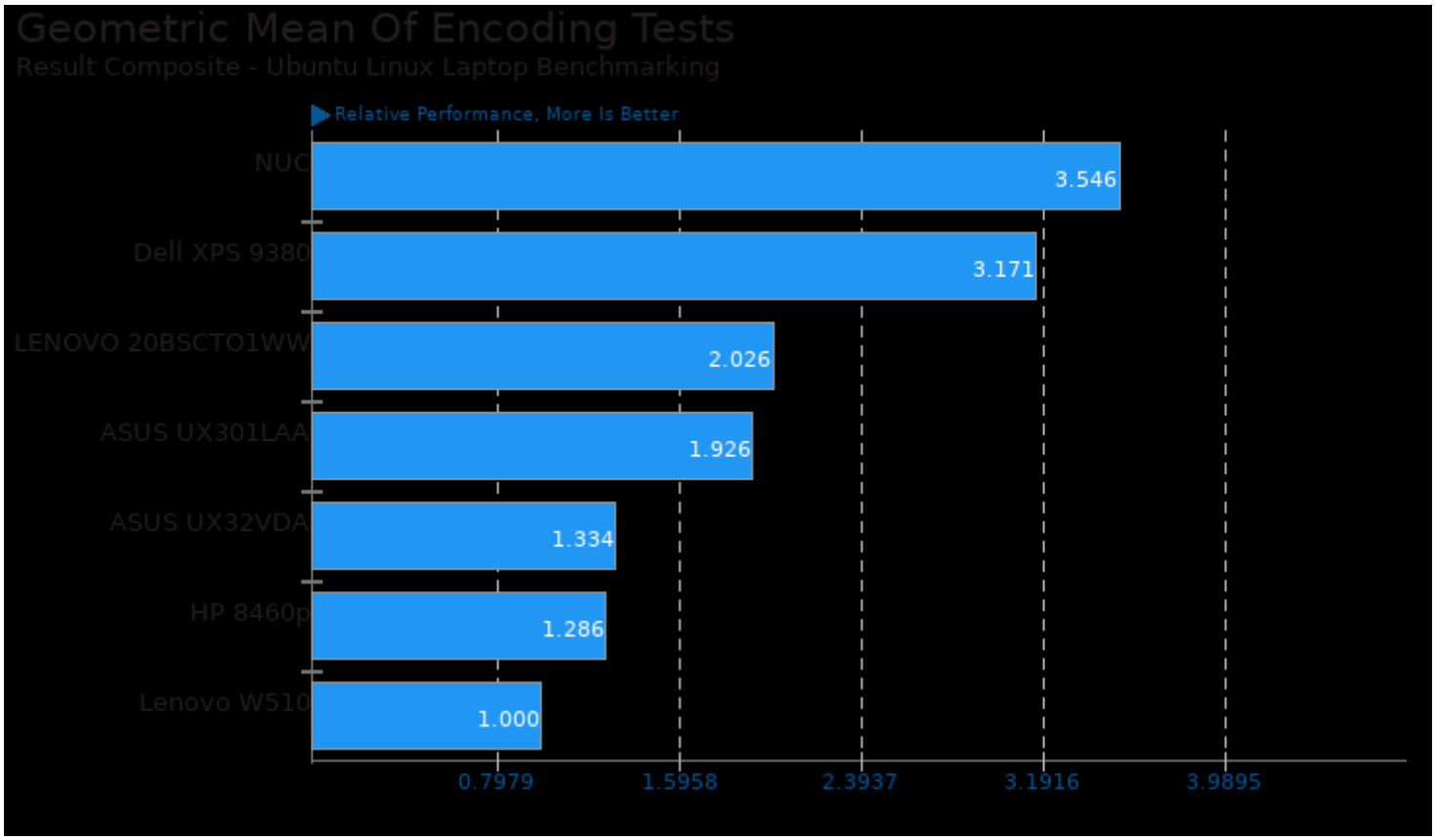
Geometric mean based upon tests: pts/build-linux-kernel, pts/compress-zstd, pts/dacapobench, pts/dav1d, pts/x265, pts/encode-flac, pts/encode-mp3, pts/go-benchmark, pts/phpbench, pts/rbenchmark, pts/rust-prime, pts/rust-mandel, pts/scikit-learn, pts/v-ray, pts/blender, system/cryptsetup and system/darktable



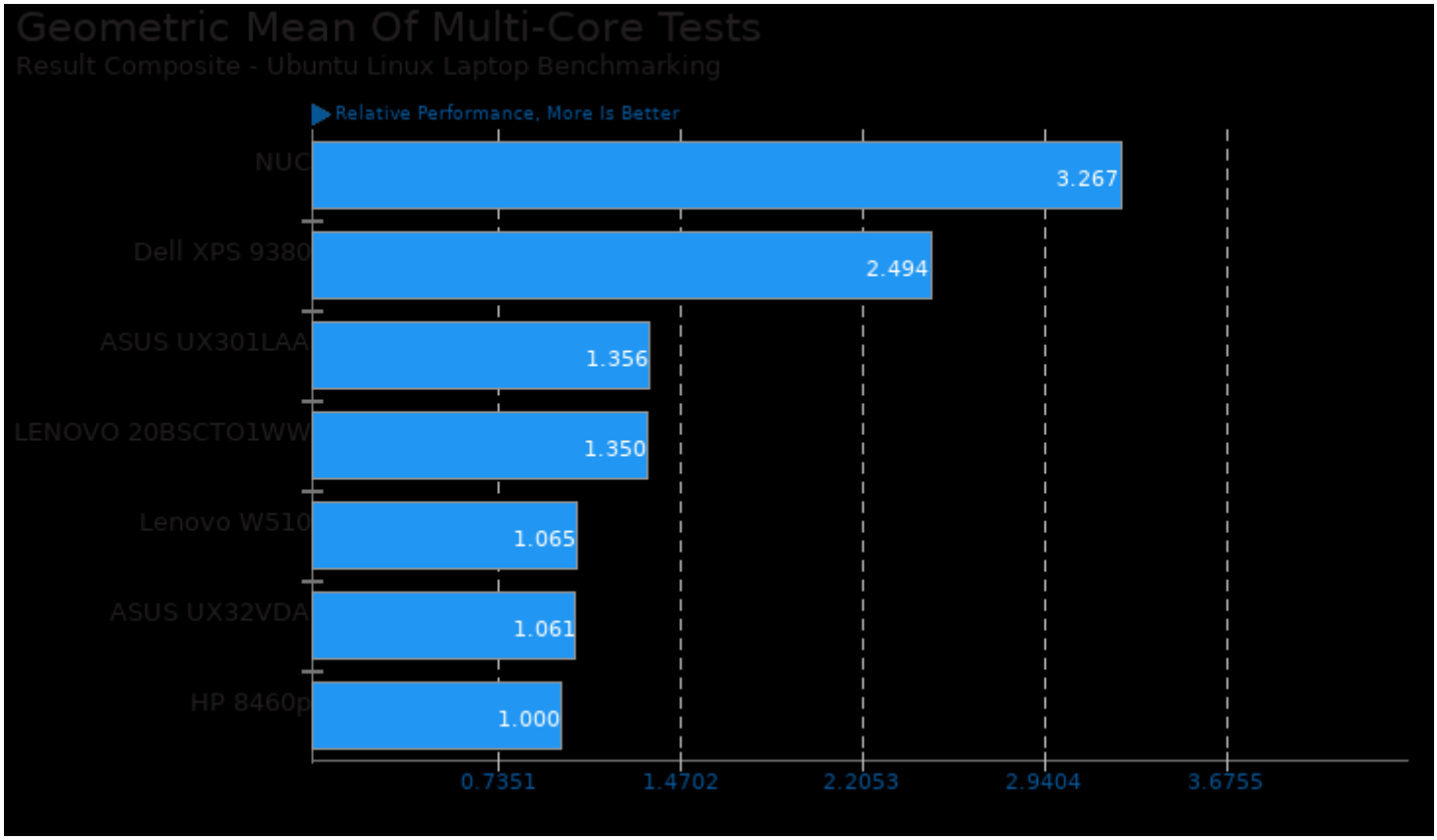
Geometric mean based upon tests: pts/blender, pts/v-ray, pts/indigobench, pts/x265, pts/dav1d, pts/encode-mp3, pts/encode-flac, system/gimp and system/darktable



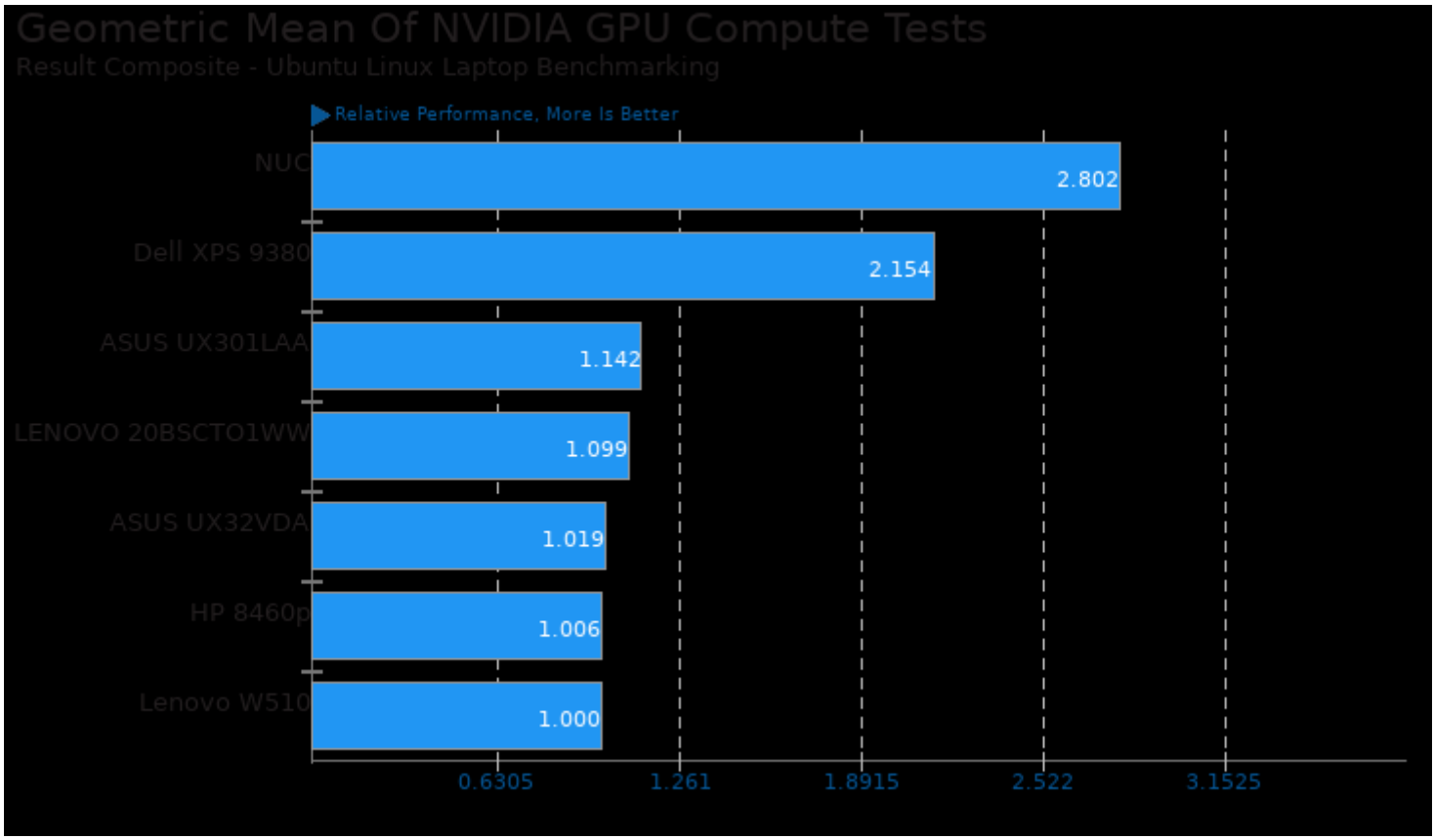
Geometric mean based upon tests: pts/sqlite and pts/fs-mark



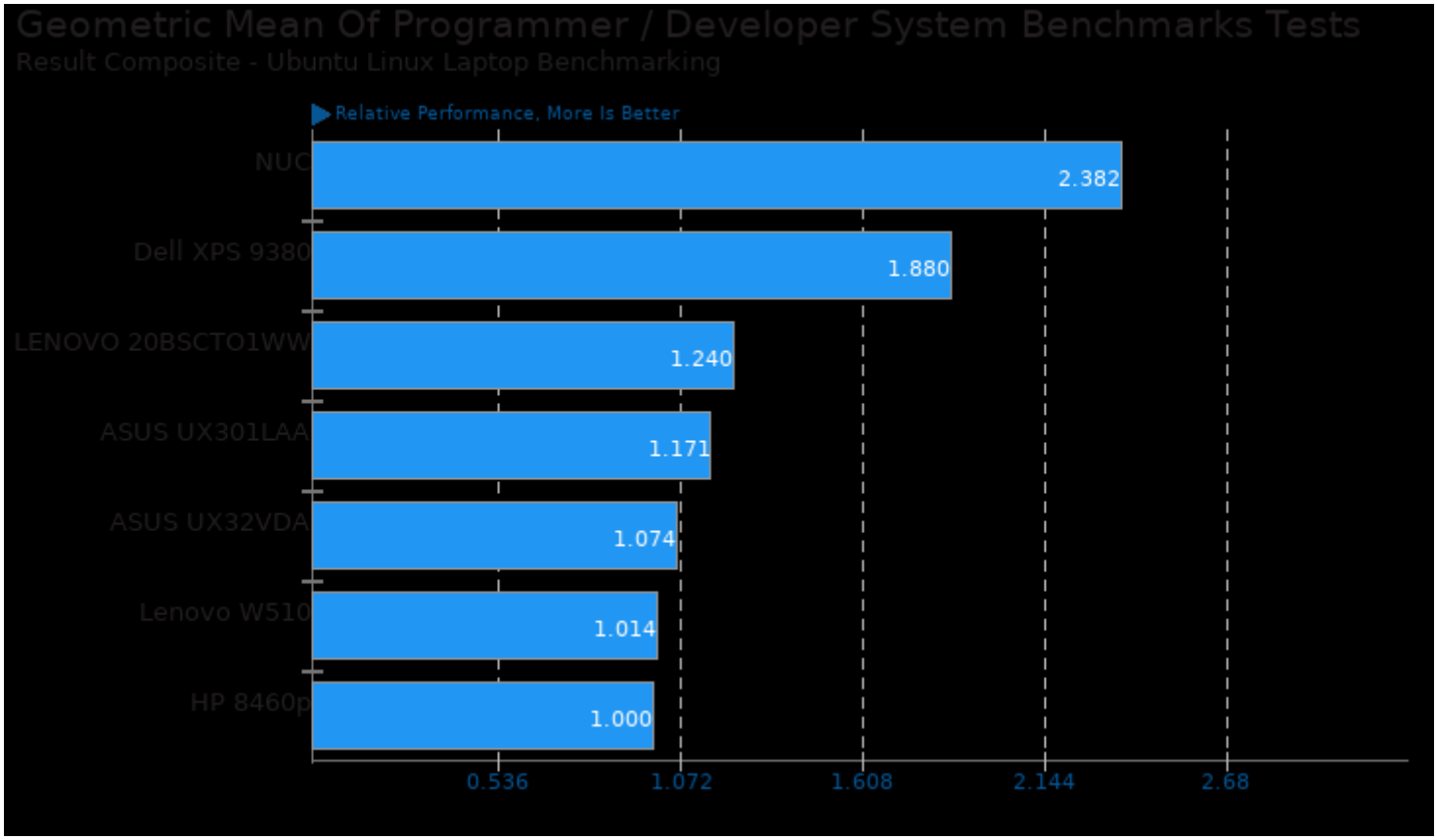
Geometric mean based upon tests: pts/encode-mp3, pts/encode-flac, pts/x265 and pts/dav1d



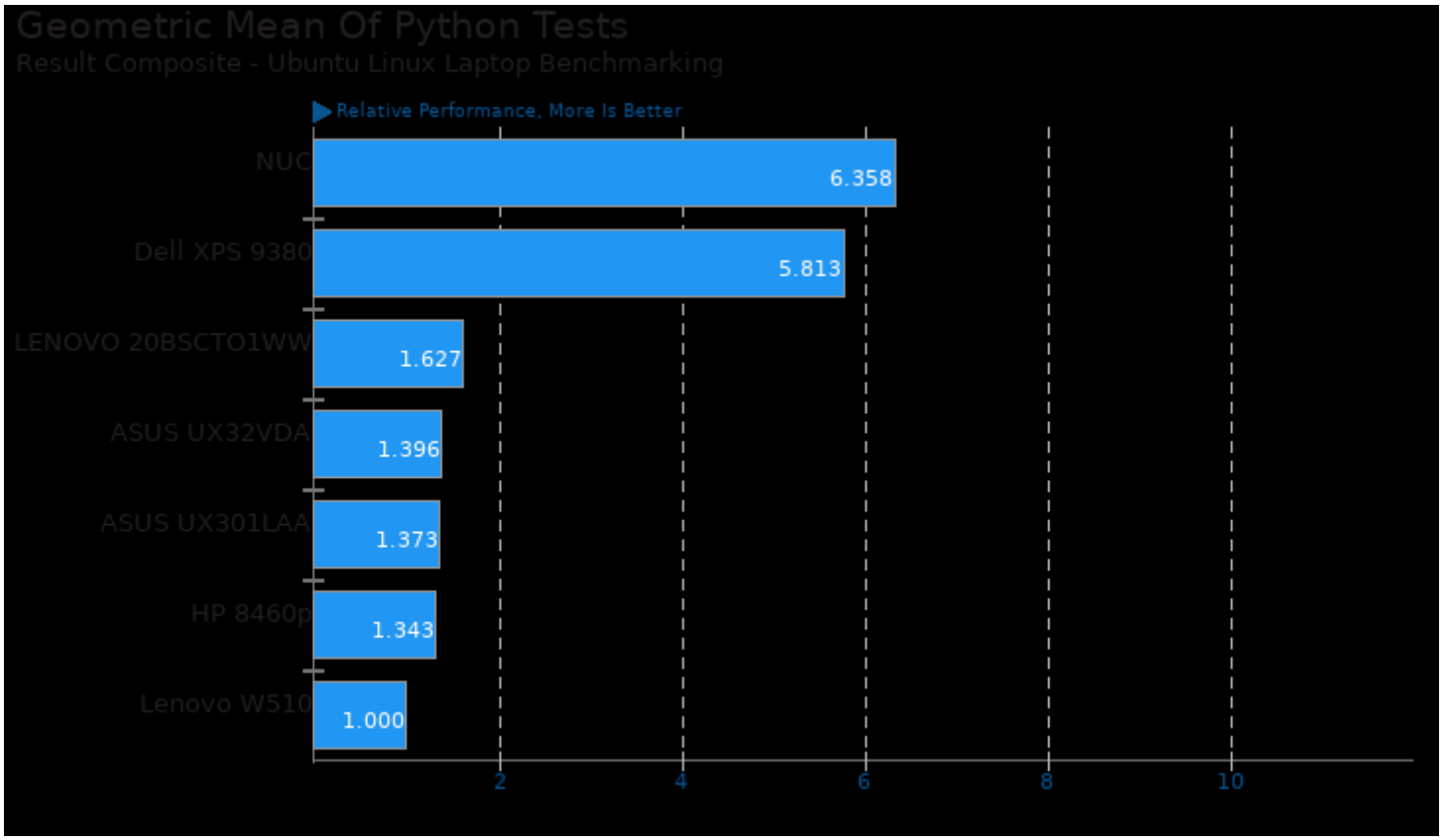
Geometric mean based upon tests: pts/blender, pts/x265, pts/dav1d, pts/compress-zstd, pts/build-linux-kernel, pts/rust-mandel, pts/rust-prime, pts/v-ray and pts/indigobench



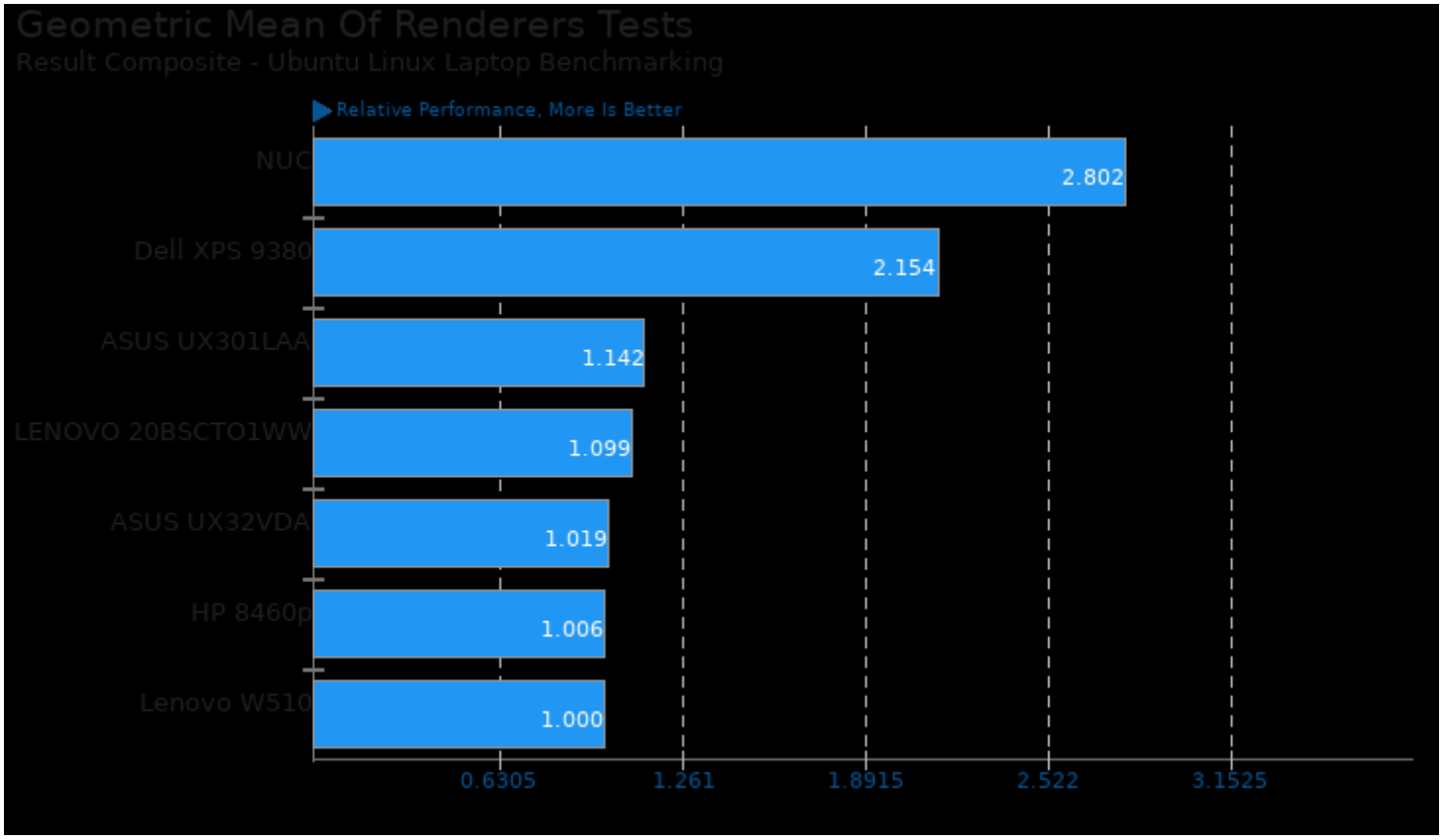
Geometric mean based upon tests: pts/indigobench, pts/v-ray and pts/blender



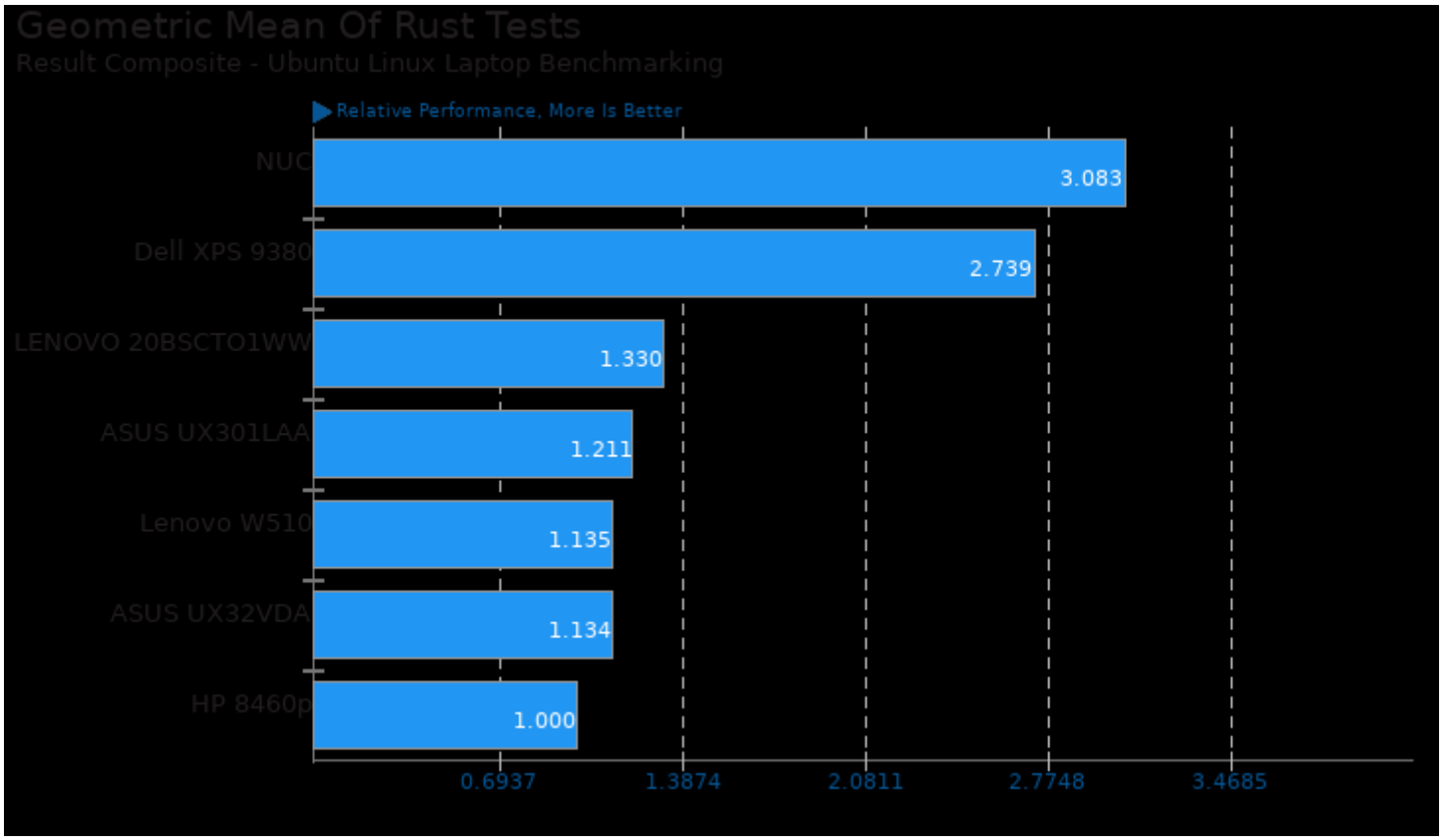
Geometric mean based upon tests: pts/compress-zstd, pts/pybench, system/cryptsetup and pts/build-linux-kernel



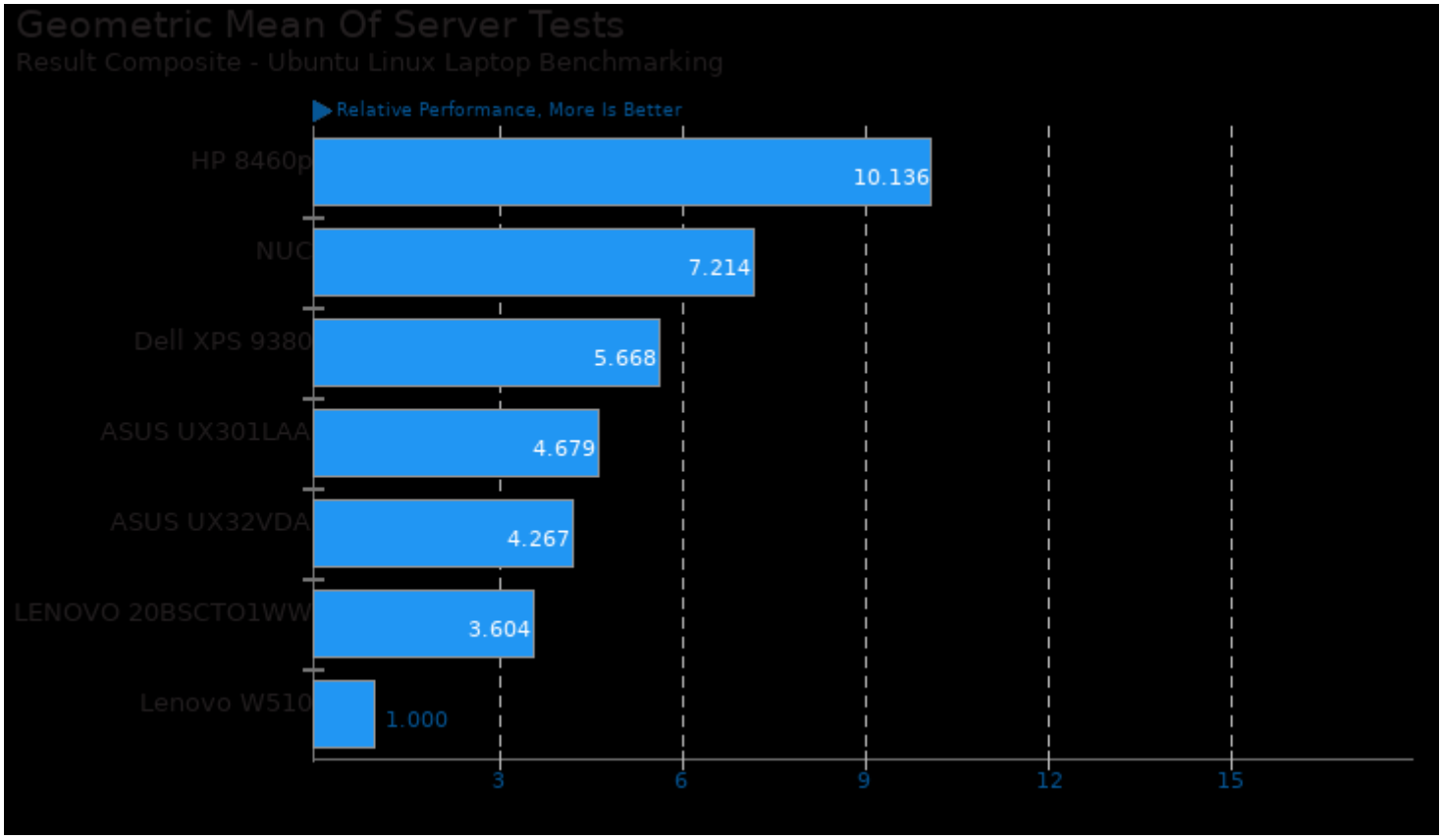
Geometric mean based upon tests: pts/pybench and pts/scikit-learn



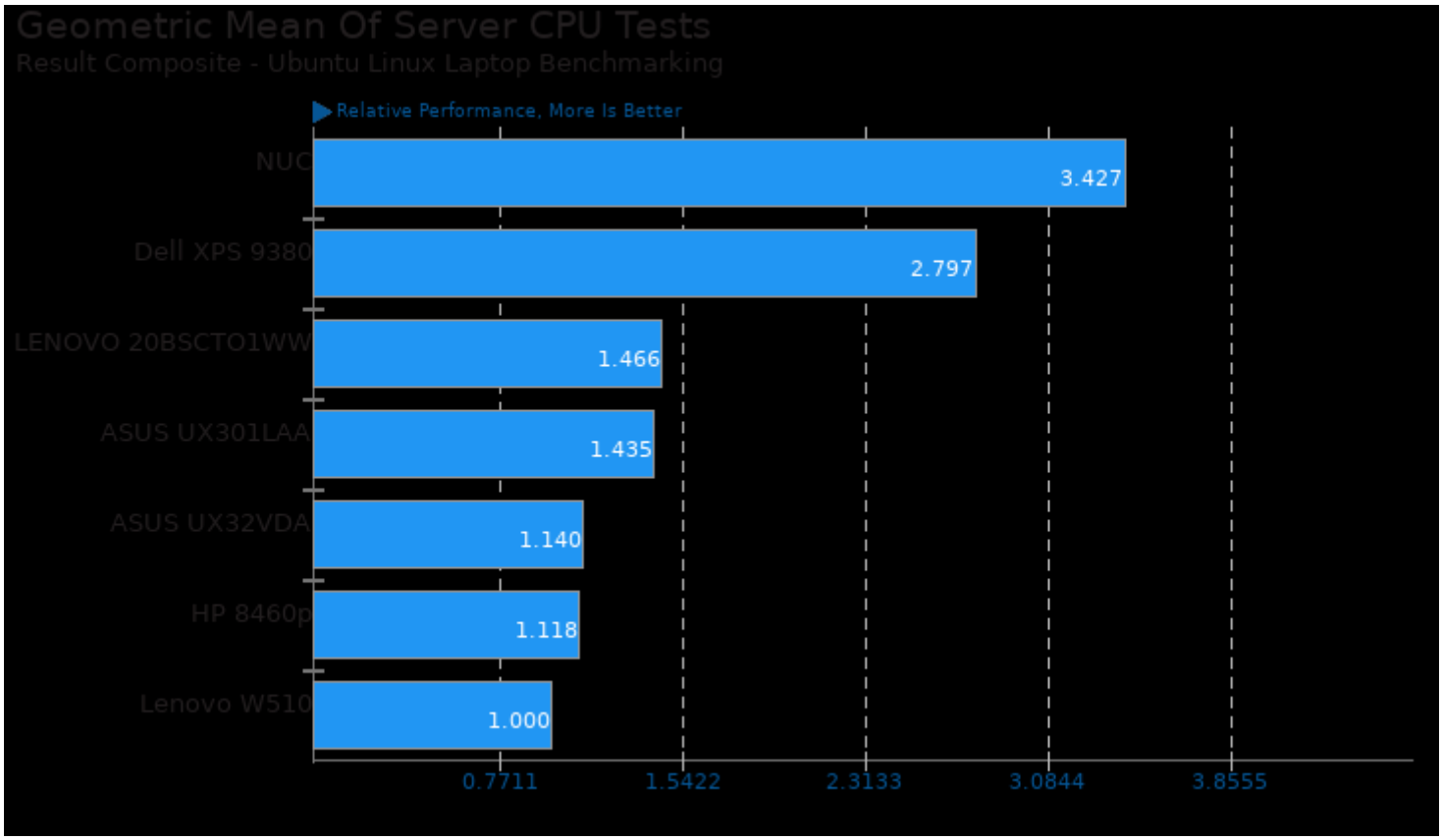
Geometric mean based upon tests: pts/blender, pts/v-ray and pts/indigobench



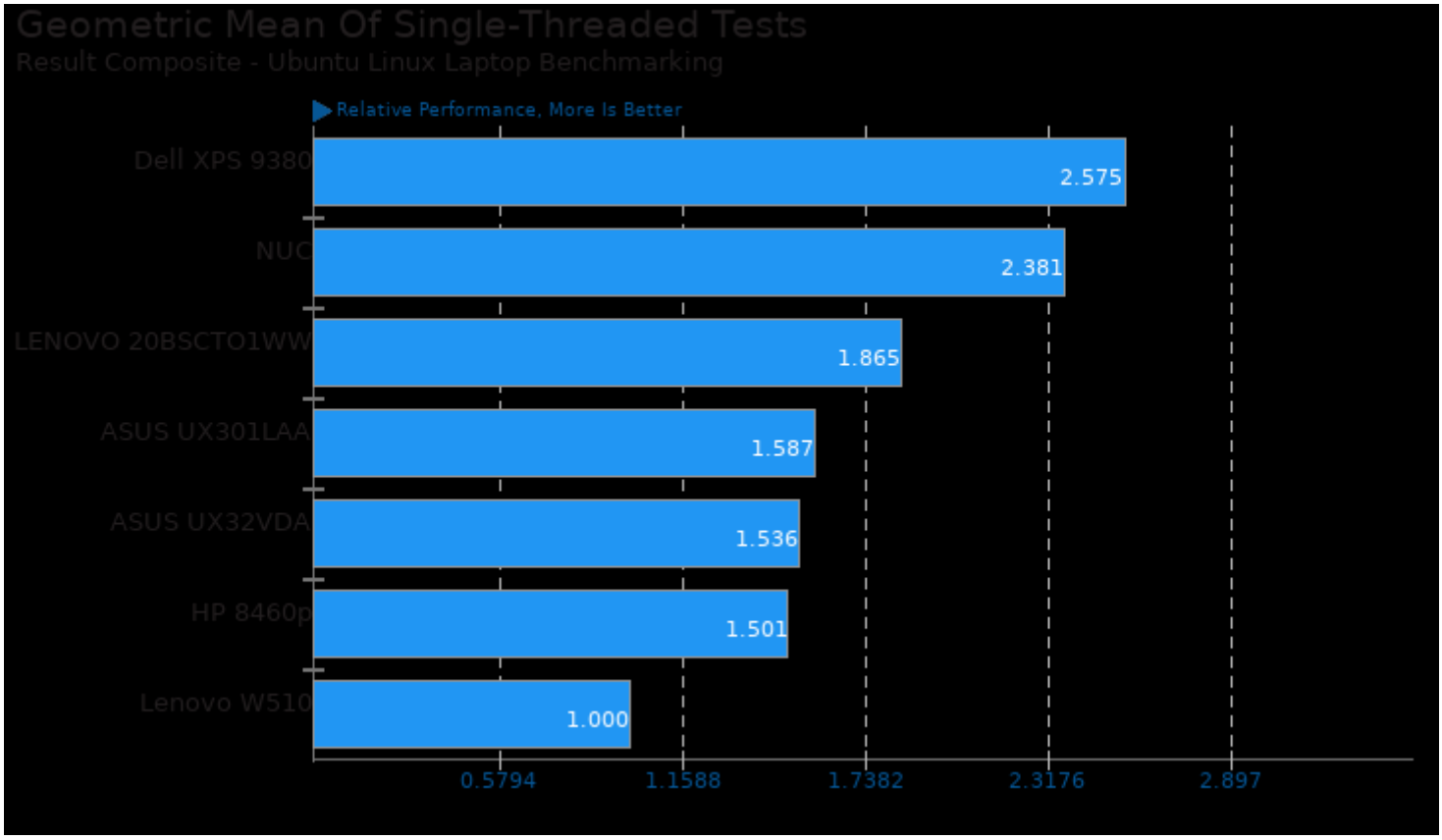
Geometric mean based upon tests: pts/rust-mandel and pts/rust-prime



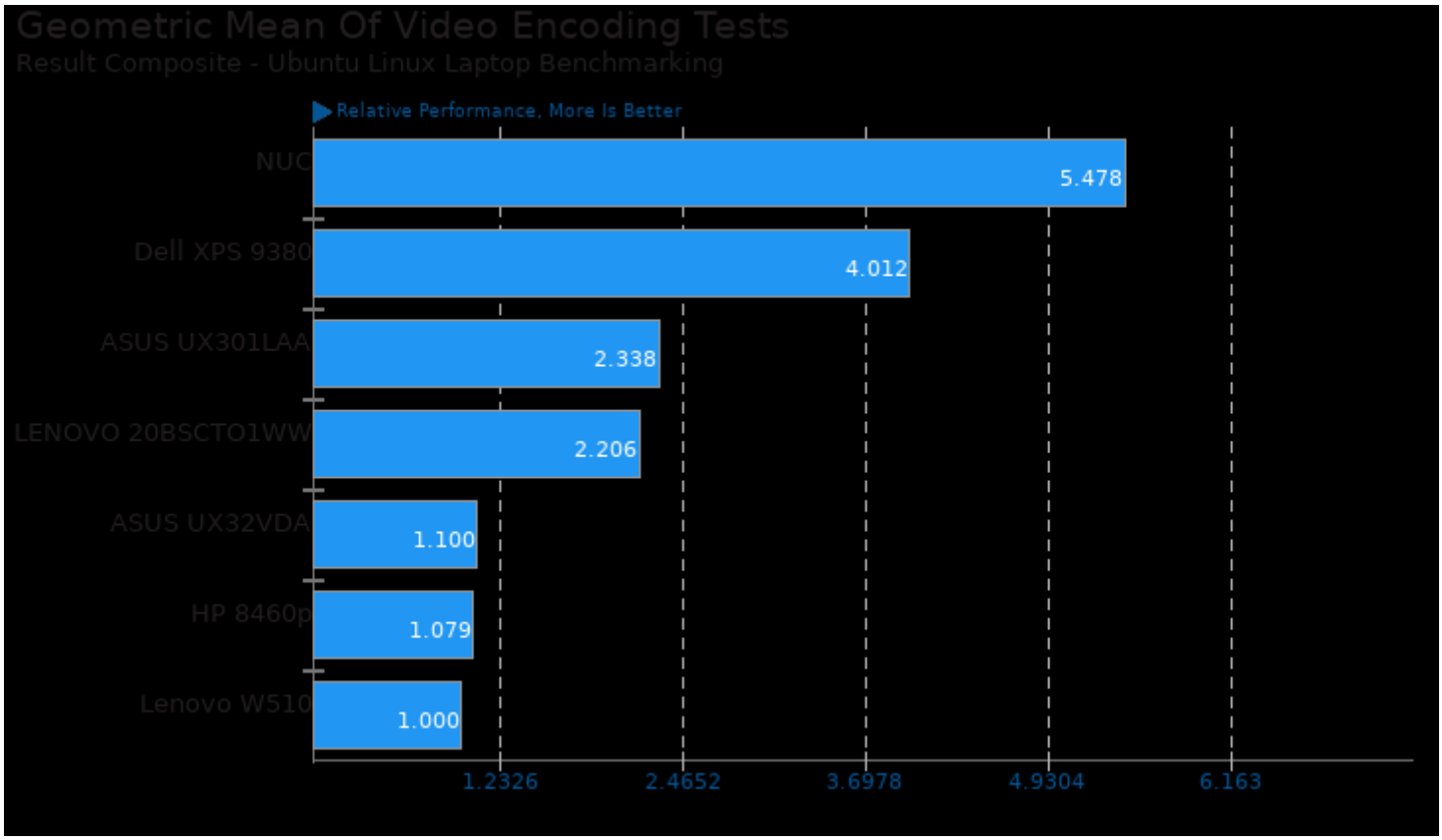
Geometric mean based upon tests: pts/phpbench and pts/sqlite



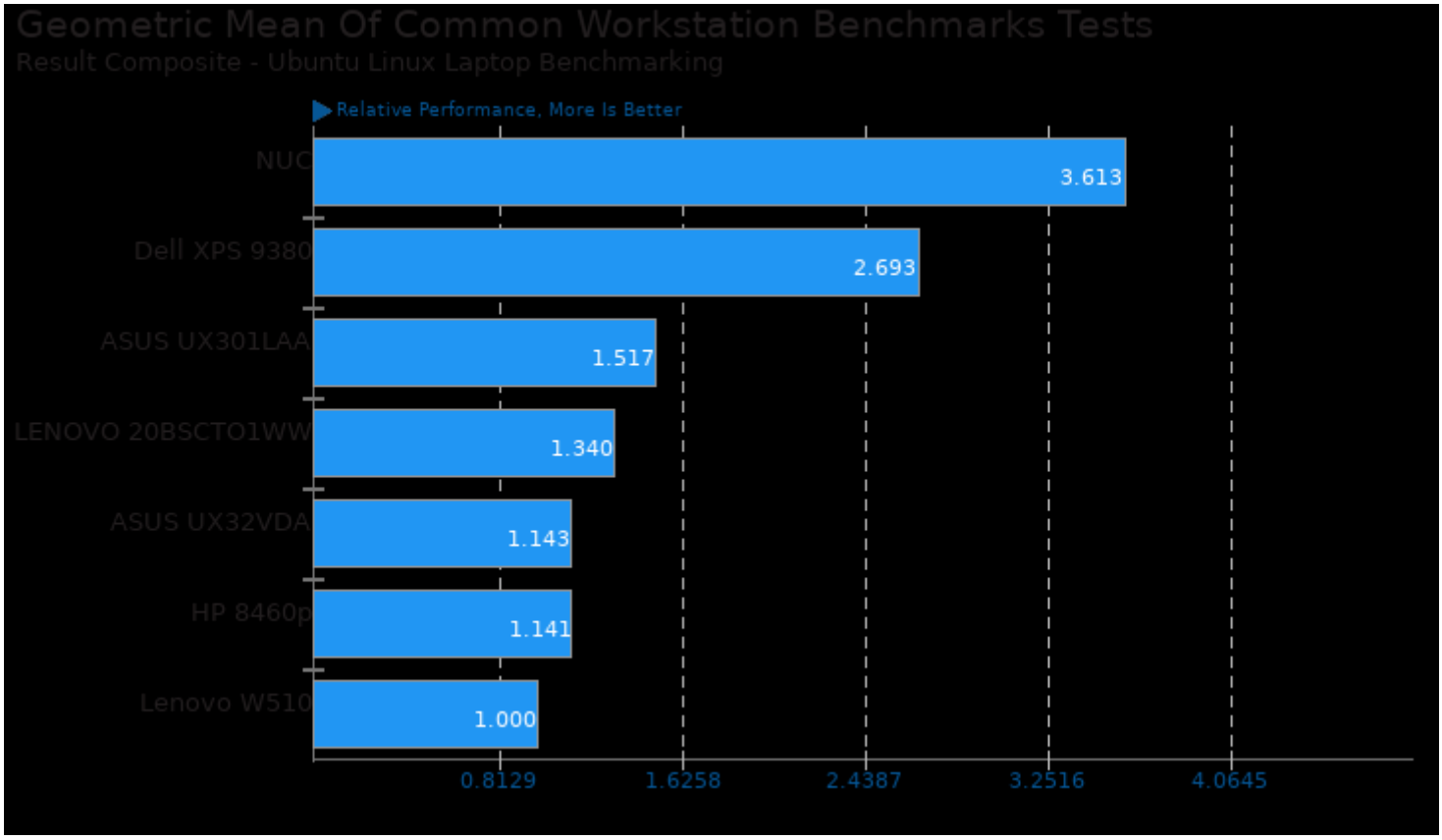
Geometric mean based upon tests: pts/dacapobench, pts/x265, pts/dav1d, pts/build-linux-kernel, pts/rust-mandel, pts/compress-zstd, system/gimp, pts/blender, pts/pybench, pts/phpbench and pts/scikit-learn



Geometric mean based upon tests: pts/encode-flac, pts/encode-mp3, pts/rbenchmark, pts/pybench and pts/phpbench



Geometric mean based upon tests: pts/x265 and pts/dav1d



Geometric mean based upon tests: pts/blender and pts/x265

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 23 May 2024 22:25.