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Laptop Benchmarks

AMD Ryzen 7 PRO 5850U testing with a HP 8A78 (F.04 BIOS) and AMD Cezanne 512MB on Ubuntu 22.04 via the Phoronix Test Suite.

Test Systems:

5850U Smoke

Processor: AMD Ryzen 7 PRO 5850U @ 1.90GHz (8 Cores / 16 Threads), Motherboard: HP 8A78 (F.04 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 16GB, Disk: 1024GB SK hynix PC711 HFS001TDE9X073N, Graphics: AMD Cezanne 512MB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8822CE 802.11ac PCIe

OS: Ubuntu 22.04, Kernel: 5.18.8-051808-generic (x86_64), Desktop: GNOME Shell 42.2, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 22.0.1 (LLVM 13.0.1 DRM 3.46), Vulkan: 1.2.204, Compiler: GCC 11.2.0, 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-bootstrap --enable-cet --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-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-gcn/usr --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
Disk Notes: NONE / errors=remount-ro,relatime,rw / Block Size: 4096
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0xa50000c
Graphics Notes: BAR1 / Visible vRAM Size: 512 MB - vBIOS Version: 113-CEZANNE-018
Java Notes: OpenJDK Runtime Environment (build 11.0.15+10-Ubuntu-0ubuntu0.22.04.1)
Python Notes: Python 3.10.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	5850U Smoke
LevelDB - Overwrite (MB/s)	46.6
LevelDB - Overwrite (us/Op)	37.98
LevelDB - Rand Fill (MB/s)	46.2
LevelDB - Rand Fill (us/Op)	38.247
LevelDB - Rand Read (us/Op)	5.232
LevelDB - Seq Fill (MB/s)	46.8
LevelDB - Seq Fill (us/Op)	37.819
Unpacking The Linux Kernel - linux-4.15.tar.xz (sec)	4.918
DDraceNetwork - 1920 x 1080 - Fullscreen - OpenGL 3.3 - Default - RaiNyMore2 (FPS)	372.03
DDraceNetwork - 1920 x 1080 - Fullscreen - OpenGL 3.3 - Default - Multeasymap (FPS)	499.53
Unvanquished - 1920 x 1080 - High (FPS)	252
Unvanquished - 1920 x 1080 - Ultra (FPS)	180.9
Unvanquished - 1920 x 1080 - Medium (FPS)	265.9
Warsow - 1920 x 1080 (FPS)	148.8
Xonotic - 1920 x 1080 - Low (FPS)	487.3075712
Xonotic - 1920 x 1080 - High (FPS)	253.2571187
Xonotic - 1920 x 1080 - Ultra (FPS)	219.6149987
Xonotic - 1920 x 1080 - Ultimate (FPS)	160.2490768
yquake2 - Vulkan - On - On - 1920 x 1080 (FPS)	99.7
yquake2 - Vulkan - Off - On - 1920 x 1080 (FPS)	100
yquake2 - Vulkan - On - Off - 1920 x 1080 (FPS)	507.6
yquake2 - Vulkan - Off - Off - 1920 x 1080 (FPS)	516.8
yquake2 - OpenGL 3.x - On - On - 1920 x 1080 (FPS)	557.3
yquake2 - OpenGL 3.x - Off - On - 1920 x 1080 (FPS)	566.8
yquake2 - OpenGL 3.x - On - Off - 1920 x 1080 (FPS)	1121
yquake2 - OpenGL 3.x - Off - Off - 1920 x 1080 (FPS)	1181
yquake2 - Software CPU - On - On - 1920 x 1080 (FPS)	102.2
yquake2 - OpenGL ES 3.x - On - On - 1920 x 1080 (FPS)	562.3
yquake2 - Software CPU - Off - On - 1920 x 1080 (FPS)	105.1
yquake2 - Software CPU - On - Off - 1920 x 1080 (FPS)	102.8
yquake2 - OpenGL ES 3.x - Off - On - 1920 x 1080 (FPS)	565.3
yquake2 - OpenGL ES 3.x - On - Off - 1920 x 1080 (FPS)	1105

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yquake2 - Software CPU - Off - Off - 1920 x 1080 (FPS)	105.2
yquake2 - OpenGL ES 3.x - Off - Off - 1920 x 1080 (FPS)	1168
yquake2 - S.C.C.L - On - On - 1920 x 1080 (FPS)	97
yquake2 - S.C.C.L - Off - On - 1920 x 1080 (FPS)	99
yquake2 - S.C.C.L - On - Off - 1920 x 1080 (FPS)	96.6
yquake2 - S.C.C.L - Off - Off - 1920 x 1080 (FPS)	98.8
GLmark2 - 1920 x 1080 (Score)	3849
ParaView - Many Spheres - 1920 x 1080 (Frames / Sec)	8.56
ParaView - Many Spheres - 1920 x 1080 (MiPolys / Sec)	858.235
ParaView - Wavelet Volume - 1920 x 1080 (Frames / Sec)	107.16
ParaView - Wavelet Volume - 1920 x 1080 (MiVoxels / Sec)	1715
ParaView - Wavelet Contour - 1920 x 1080 (Frames / Sec)	63.65
ParaView - Wavelet Contour - 1920 x 1080 (MiPolys / Sec)	663.348
GpuTest - GiMark - 1920 x 1080 - Fullscreen (Points)	3376
GpuTest - Plot3D - 1920 x 1080 - Fullscreen (Points)	28313
GpuTest - Furmark - 1920 x 1080 - Fullscreen (Points)	1355
GpuTest - TessMark - 1920 x 1080 - Fullscreen (Points)	7992
GpuTest - Triangle - 1920 x 1080 - Fullscreen (Points)	744069
GpuTest - Pixmark Piano - 1920 x 1080 - Fullscreen (Points)	627
GpuTest - Pixmark Volplosion - 1920 x 1080 - Fullscreen (Points)	1565
VKMark - 1920 x 1080 - Mailbox (VKMark Score)	5088
WireGuard + Linux Networking Stack Stress Test (sec)	266.475
QuantLib (MFLOPS)	3010
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	2.89646
WebP Image Encode - Q.1.L (Encode Time - sec)	14.503
WebP Image Encode - Q.1.H.C (Encode Time - sec)	5.935
WebP Image Encode - Q.1.L.H.C (Encode Time - sec)	31.85
simdjson - Kostya (GB/s)	3.36
simdjson - TopTweet (GB/s)	5.16
simdjson - LargeRand (GB/s)	1.16
simdjson - PartialTweets (GB/s)	4.59
simdjson - DistinctUserID (GB/s)	5.17
Xmrig - Monero - 1M (H/s)	2252
Xmrig - Wownero - 1M (H/s)	4432
Java Gradle Build - Reactor (sec)	179.164
DaCapo Benchmark - H2 (msec)	3368
DaCapo Benchmark - Jython (msec)	3938
DaCapo Benchmark - Tradesoap (msec)	4602
DaCapo Benchmark - Tradebeans (msec)	3843
LZ4 Compression - 1 - Compression Speed (MB/s)	8613
LZ4 Compression - 1 - D.S (MB/s)	9176
LZ4 Compression - 3 - Compression Speed (MB/s)	61.85
LZ4 Compression - 3 - D.S (MB/s)	9125
LZ4 Compression - 9 - Compression Speed (MB/s)	61.47
LZ4 Compression - 9 - D.S (MB/s)	8934
Zstd Compression - 3 - Compression Speed (MB/s)	1906
Zstd Compression - 8 - Compression Speed (MB/s)	229.5
Zstd Compression - 8 - D.S (MB/s)	3805

Laptop Benchmarks

Zstd Compression - 19 - Compression Speed (MB/s)	28.1
Zstd Compression - 19 - D.S (MB/s)	3380
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	24
Zstd Compression - 19, Long Mode - D.S (MB/s)	3433
JPEG XL libjxl - PNG - 5 (MP/s)	36.2
JPEG XL libjxl - PNG - 7 (MP/s)	8.26
JPEG XL libjxl - PNG - 8 (MP/s)	0.96
JPEG XL libjxl - JPEG - 5 (MP/s)	79.08
JPEG XL libjxl - JPEG - 7 (MP/s)	78.81
JPEG XL libjxl - JPEG - 8 (MP/s)	31.46
JPEG XL Decoding libjxl - 1 (MP/s)	59.26
JPEG XL Decoding libjxl - All (MP/s)	168.54
srsRAN - OFDM_Test (Samples / Second)	156700000
srsRAN - 4.P.1.P.M.6.Q (eNb Mb/s)	463.8
srsRAN - 4.P.1.P.M.6.Q (UE Mb/s)	160.3
srsRAN - 4.P.1.P.S.6.Q (eNb Mb/s)	452.1
srsRAN - 4.P.1.P.S.6.Q (UE Mb/s)	168.3
srsRAN - 4.P.1.P.M.2.Q (eNb Mb/s)	506.5
srsRAN - 4.P.1.P.M.2.Q (UE Mb/s)	168.9
srsRAN - 4.P.1.P.S.2.Q (eNb Mb/s)	492.6
srsRAN - 4.P.1.P.S.2.Q (UE Mb/s)	177
srsRAN - 5.P.T.5.P.S.6.Q (eNb Mb/s)	146
srsRAN - 5.P.T.5.P.S.6.Q (UE Mb/s)	72.9
LuaRadio - F.B.t.B.F.F (MiB/s)	1274
LuaRadio - F.D.F (MiB/s)	397.7
LuaRadio - Hilbert Transform (MiB/s)	115
LuaRadio - Complex Phase (MiB/s)	703.6
GNU Radio - F.B.t.B.F.F (MiB/s)	1031
GNU Radio - S.S.C (MiB/s)	2921
GNU Radio - FIR Filter (MiB/s)	998.7
GNU Radio - IIR Filter (MiB/s)	467.6
GNU Radio - F.D.F (MiB/s)	742.4
GNU Radio - Hilbert Transform (MiB/s)	610.9
Crafty - Elapsed Time (Nodes/s)	10102730
AOM AV1 - Speed 6 Realtime - Bosphorus 4K (FPS)	22.53
AOM AV1 - Speed 6 Two-Pass - Bosphorus 4K (FPS)	7.85
AOM AV1 - Speed 9 Realtime - Bosphorus 4K (FPS)	46.28
AOM AV1 - Speed 10 Realtime - Bosphorus 4K (FPS)	48.19
AOM AV1 - Speed 6 Realtime - Bosphorus 1080p (FPS)	44.78
AOM AV1 - Speed 6 Two-Pass - Bosphorus 1080p (FPS)	23.08
AOM AV1 - Speed 9 Realtime - Bosphorus 1080p (FPS)	135.52
AOM AV1 - Speed 10 Realtime - Bosphorus 1080p (FPS)	152.78
Embree - Pathtracer - Crown (FPS)	8.5103
Embree - Pathtracer ISPC - Crown (FPS)	7.8717
Embree - Pathtracer - Asian Dragon (FPS)	10.0604
Embree - Pathtracer ISPC - Asian Dragon (FPS)	9.2806
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)	18.995
SVT-AV1 - Preset 10 - Bosphorus 4K (FPS)	49.611

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SVT-AV1 - Preset 12 - Bosphorus 4K (FPS)	74.903
SVT-AV1 - Preset 8 - Bosphorus 1080p (FPS)	71.572
SVT-AV1 - Preset 10 - Bosphorus 1080p (FPS)	147.398
SVT-AV1 - Preset 12 - Bosphorus 1080p (FPS)	286.346
SVT-HEVC - 7 - Bosphorus 4K (FPS)	27.82
SVT-HEVC - 10 - Bosphorus 4K (FPS)	55.65
SVT-HEVC - 1 - Bosphorus 1080p (FPS)	5.83
SVT-HEVC - 7 - Bosphorus 1080p (FPS)	91.98
SVT-HEVC - 10 - Bosphorus 1080p (FPS)	186.1
SVT-VP9 - VMAF Optimized - Bosphorus 4K (FPS)	35.68
SVT-VP9 - VMAF Optimized - Bosphorus 1080p (FPS)	124.2
SVT-VP9 - P.S.O - Bosphorus 4K (FPS)	37.61
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS)	127.48
SVT-VP9 - V.Q.O - Bosphorus 4K (FPS)	31.14
SVT-VP9 - V.Q.O - Bosphorus 1080p (FPS)	102.37
VP9 libvpx Encoding - Speed 5 - Bosphorus 4K (FPS)	15.36
VP9 libvpx Encoding - Speed 5 - Bosphorus 1080p (FPS)	32.04
x264 - Bosphorus 4K (FPS)	19.76
x264 - Bosphorus 1080p (FPS)	92.53
x265 - Bosphorus 4K (FPS)	10.13
x265 - Bosphorus 1080p (FPS)	47.37
Coremark - CoreMark Size 666 - I.P.S (Iterations/Sec)	302381
7-Zip Compression - Compression Rating (MIPS)	54582
7-Zip Compression - D.R (MIPS)	51885
Stockfish - Total Time (Nodes/s)	18172502
asmFish - 1.H.M.2.D (Nodes/s)	22959078
Stargate Digital Audio Workstation - 44100 - 512 (Render Ratio)	2.54415
Stargate Digital Audio Workstation - 96000 - 512 (Render Ratio)	1.867167
Stargate Digital Audio Workstation - 44100 - 1024 (Render Ratio)	2.620208
Stargate Digital Audio Workstation - 480000 - 512 (Render Ratio)	2.489413
Stargate Digital Audio Workstation - 96000 - 1024 (Render Ratio)	1.931224
Stargate Digital Audio Workstation - 480000 - 1024 (Render Ratio)	2.563643
PJSIP - INVITE (Responses/sec)	4385
PJSIP - OPTIONS, Stateful (Responses/sec)	6555
PJSIP - OPTIONS, Stateless (Responses/sec)	68141
libavif avifenc - 2 (sec)	103.871
libavif avifenc - 6 (sec)	14.232
libavif avifenc - 6, Lossless (sec)	17.035
libavif avifenc - 10, Lossless (sec)	6.985
Timed FFmpeg Compilation - Time To Compile (sec)	71.625
Timed GDB GNU Debugger Compilation - Time To Compile (sec)	76.202
Timed Godot Game Engine Compilation - Time To Compile (sec)	160.255
Timed Linux Kernel Compilation - defconfig (sec)	129.505
Timed Mesa Compilation - Time To Compile (sec)	69.054
Timed PHP Compilation - Time To Compile (sec)	67.883
Build2 - Time To Compile (sec)	170.617
Parallel BZIP2 Compression - F.1.0.R.a.m.i.C (sec)	9.959
POV-Ray - Trace Time (sec)	62.013

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OSPRay Studio - 1 - 4K - 1 - Path Tracer (ms)	18074
OSPRay Studio - 3 - 4K - 1 - Path Tracer (ms)	21424
OSPRay Studio - 1 - 4K - 16 - Path Tracer (ms)	292937
OSPRay Studio - 1 - 4K - 32 - Path Tracer (ms)	584587
OSPRay Studio - 3 - 4K - 16 - Path Tracer (ms)	349958
OSPRay Studio - 3 - 4K - 32 - Path Tracer (ms)	696118
OSPRay Studio - 1 - 1080p - 1 - Path Tracer (ms)	4533
OSPRay Studio - 3 - 1080p - 1 - Path Tracer (ms)	5413
OSPRay Studio - 1 - 1080p - 16 - Path Tracer (ms)	76951
OSPRay Studio - 1 - 1080p - 32 - Path Tracer (ms)	149329
OSPRay Studio - 3 - 1080p - 16 - Path Tracer (ms)	91632
OSPRay Studio - 3 - 1080p - 32 - Path Tracer (ms)	177446
Numpy Benchmark (Score)	458.50
Timed Wasmer Compilation - Time To Compile (sec)	106.181
XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)	36.681
FLAC Audio Encoding - WAV To FLAC (sec)	12.14
LAME MP3 Encoding - WAV To MP3 (sec)	6.296
Opus Codec Encoding - WAV To Opus Encode (sec)	6.863
Ngspice - C2670 (sec)	144.116
Ngspice - C7552 (sec)	111.981
Radiance Benchmark - Serial (sec)	469.164
Radiance Benchmark - SMP Parallel (sec)	170.035
RNNoise (sec)	16.769
Google SynthMark - VoiceMark_100 (Voices)	814.152
SecureMark - SecureMark-TLS (marks)	290100
OpenSSL - SHA256 (byte/s)	9635100480
OpenSSL - RSA4096 (sign/s)	1839
OpenSSL - RSA4096 (verify/s)	118262
Liquid-DSP - 1 - 256 - 57 (samples/s)	70884000
Liquid-DSP - 4 - 256 - 57 (samples/s)	242460000
Liquid-DSP - 8 - 256 - 57 (samples/s)	389590000
Liquid-DSP - 16 - 256 - 57 (samples/s)	417130000
FinanceBench - Repo OpenMP (ms)	41598
FinanceBench - Bonds OpenMP (ms)	56826
Cryptsetup - PBKDF2-sha512 (Iterations/sec)	2099251
Cryptsetup - PBKDF2-whirlpool (Iterations/sec)	771011
Cryptsetup - A.X.2.E (MiB/s)	4643
Cryptsetup - A.X.2.D (MiB/s)	4640
Cryptsetup - S.X.2.E (MiB/s)	862
Cryptsetup - S.X.2.D (MiB/s)	857.3
Cryptsetup - T.X.2.E (MiB/s)	466.8
Cryptsetup - T.X.2.D (MiB/s)	473.2
Cryptsetup - A.X.5.E (MiB/s)	3887
Cryptsetup - A.X.5.D (MiB/s)	3936
Cryptsetup - S.X.5.E (MiB/s)	870
Cryptsetup - S.X.5.D (MiB/s)	856.1
Cryptsetup - T.X.5.E (MiB/s)	470.9
Cryptsetup - T.X.5.D (MiB/s)	473.5

Laptop Benchmarks

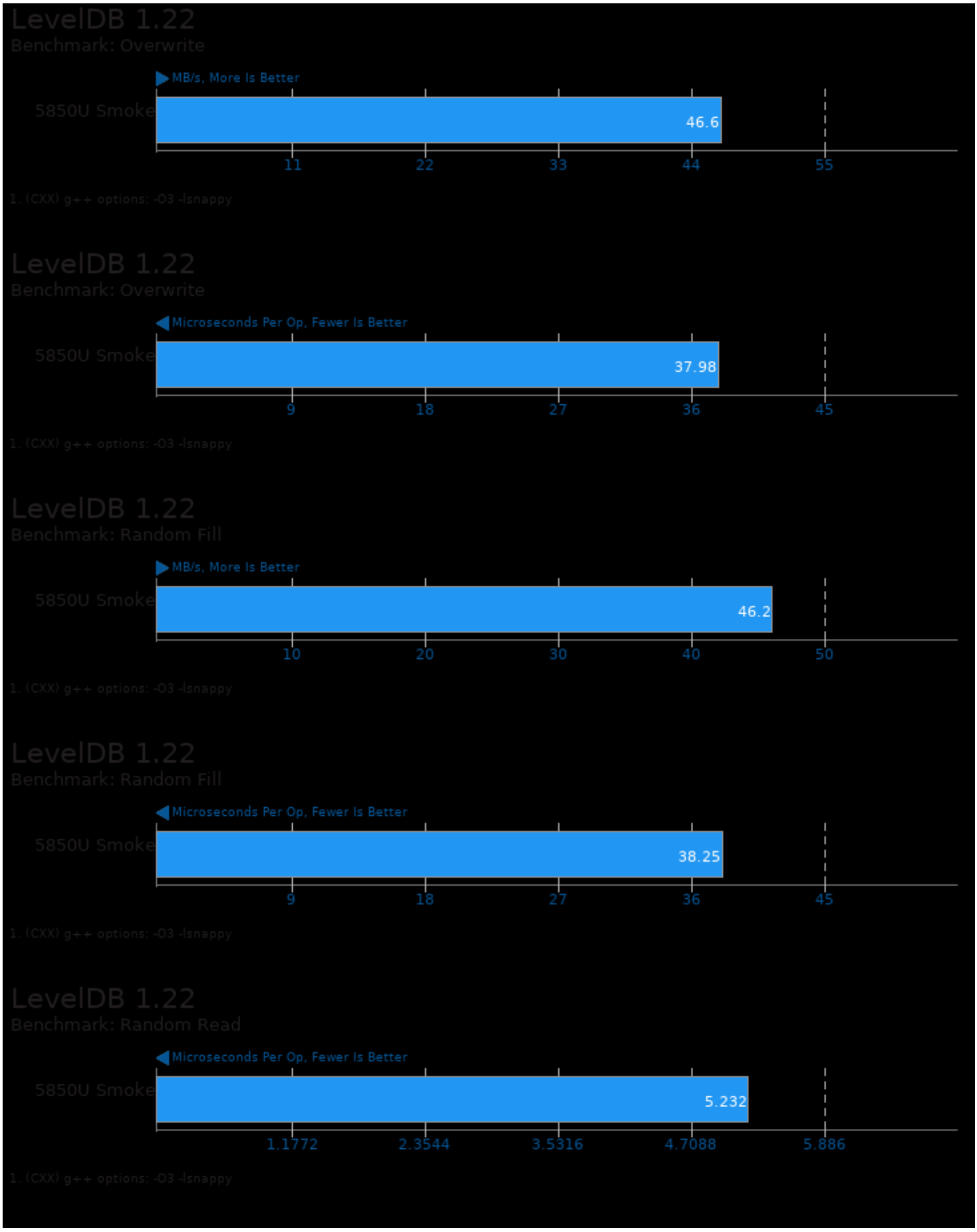
libjpeg-turbo tjbench - D.T (Megapixels/sec)	238.636076
KeyDB (Ops/sec)	234476
GROMACS - MPI CPU - water_GMX50_bare (Ns/Day)	0.671
TensorFlow Lite - SqueezeNet (us)	4232
TensorFlow Lite - Inception V4 (us)	62583
TensorFlow Lite - NASNet Mobile (us)	10973
TensorFlow Lite - Mobilenet Float (us)	3202
TensorFlow Lite - Mobilenet Quant (us)	4707
TensorFlow Lite - I.R.V (us)	57267
ASTC Encoder - Thorough (sec)	9.2211
ASTC Encoder - Exhaustive (sec)	89.1994
SQLite Speedtest - Timed Time - Size 1,000 (sec)	52.07
Darktable - Boat - CPU-only (sec)	6.553
Darktable - Masskrug - CPU-only (sec)	6.604
Darktable - Server Room - CPU-only (sec)	5.217
GIMP - resize (sec)	15.145
GIMP - rotate (sec)	13.928
GIMP - auto-levels (sec)	14.431
GIMP - unsharp-mask (sec)	16.607
LibreOffice - 2.D.T.P (sec)	6.617
OCRMyPDF - P.6.P.P.D (sec)	22.33
GNU Octave Benchmark (sec)	7.225
Google Draco - Lion (ms)	5615
Google Draco - Church Facade (ms)	7694
Redis - GET (Reqs/sec)	394967
Redis - SET (Reqs/sec)	380816
Mobile Neural Network - mobilenetV3 (ms)	1.636
Mobile Neural Network - squeezenetv1.1 (ms)	3.458
Mobile Neural Network - resnet-v2-50 (ms)	26.223
Mobile Neural Network - SqueezeNetV1.0 (ms)	6.344
Mobile Neural Network - MobileNetV2_224 (ms)	2.942
Mobile Neural Network - mobilenet-v1-1.0 (ms)	2.935
Mobile Neural Network - inception-v3 (ms)	37.972
NCNN - CPU - mobilenet (ms)	16.26
NCNN - CPU-v2-v2 - mobilenet-v2 (ms)	4.27
NCNN - CPU-v3-v3 - mobilenet-v3 (ms)	3.61
NCNN - CPU - shufflenet-v2 (ms)	2.89
NCNN - CPU - mnasnet (ms)	3.44
NCNN - CPU - efficientnet-b0 (ms)	5.77
NCNN - CPU - blazeface (ms)	1.38
NCNN - CPU - googlenet (ms)	14.2
NCNN - CPU - vgg16 (ms)	77.7
NCNN - CPU - resnet18 (ms)	16.61
NCNN - CPU - alexnet (ms)	15.12
NCNN - CPU - resnet50 (ms)	26.65
NCNN - CPU - yolov4-tiny (ms)	26.71
NCNN - CPU - squeezenet_ssd (ms)	21.46
NCNN - CPU - regnety_400m (ms)	7.62

Laptop Benchmarks

Blender - BMW27 - CPU-Only (sec)	220.88
Blender - Fishy Cat - CPU-Only (sec)	282.59
Blender - Pabellon Barcelona - CPU-Only (sec)	730.17
Sysbench - RAM / Memory (MiB/sec)	4225
Sysbench - CPU (Events/sec)	34828
Facebook RocksDB - Rand Read (Op/s)	40700700
Facebook RocksDB - Update Rand (Op/s)	394252
Facebook RocksDB - Read While Writing (Op/s)	1601172
Facebook RocksDB - R.R.W.R (Op/s)	1206487
PyBench - T.F.A.T.T (Milliseconds)	817
PyPerformance - json_loads (Milliseconds)	19.3
PyPerformance - crypto_pyaes (Milliseconds)	84.9
PyPerformance - regex_compile (Milliseconds)	132
PyPerformance - python_startup (Milliseconds)	6.9
PyPerformance - django_template (Milliseconds)	35.3
ONNX Runtime - GPT-2 - CPU - Standard (Inferences/min)	5268
ONNX Runtime - yolov4 - CPU - Standard (Inferences/min)	257
ONNX Runtime - bertsquad-12 - CPU - Standard (Inferences/min)	418
ONNX Runtime - fcn-resnet101-11 - CPU - Standard	41
ONNX Runtime - ArcFace ResNet-100 - CPU - Standard (Inferences/min)	882
ONNX Runtime - super-resolution-10 - CPU - Standard	2993
Appleseed - Emily (sec)	505.18487
Appleseed - Disney Material (sec)	327.083513
Appleseed - Material Tester (sec)	283.727242
PHPBench - P.B.S (Score)	563638
Selenium - ARES-6 - Firefox (ms)	30.29
Selenium - Kraken - Firefox (ms)	787
Selenium - Octane - Firefox (Geometric Mean)	31999
Selenium - Jetstream 2 - Firefox (Score)	120.238
Selenium - Speedometer - Firefox (Runs/min)	160
Selenium - ARES-6 - Google Chrome (ms)	12.91
Selenium - Kraken - Google Chrome (ms)	530.3
Selenium - Octane - Google Chrome (Geometric Mean)	65953
Selenium - PSPDFKit WASM - Firefox (Score)	2685
Selenium - Jetstream 2 - Google Chrome (Score)	197.436
Selenium - Speedometer - Google Chrome (Runs/min)	193
Selenium - PSPDFKit WASM - Google Chrome (Score)	2843
Selenium - W.i - Firefox (ms)	22.8
Selenium - W.c - Firefox (ms)	308.8
Selenium - W.i - Google Chrome (ms)	24.32
Selenium - W.c - Google Chrome (ms)	275.08
WavPack Audio Encoding - WAV To WavPack (sec)	12.285
Git - T.T.C.C.G.C (sec)	42.925
PyHPC Benchmarks - CPU - Numpy - 4194304 - Equation of State	1.685
PyHPC Benchmarks - CPU - Numpy - 4194304 - Isoneutral Mixing	2.584
Unpacking Firefox - firefox-84.0.source.tar.xz (sec)	15.62
Tesseract OCR - T.T.O.7.I (sec)	19.032

Laptop Benchmarks

BRL-CAD - V.P.M (VGR Performance Metric)	98654
Chaos Group V-RAY - CPU (vsamples)	7217
InfluxDB - 4 - 10000 - 2,5000,1 - 10000 (val/sec)	337416
InfluxDB - 64 - 10000 - 2,5000,1 - 10000 (val/sec)	348055


LevelDB 1.22
Benchmark: Overwrite
MB/s, More Is Better
5850U Smoke
46.6
11
22
33
44
55
1. (CXX) g++ options: -O3 -lsnappy
LevelDB 1.22
Benchmark: Overwrite
Microseconds Per Op, Fewer Is Better
5850U Smoke
37.98
9
18
27
36
45
1. (CXX) g++ options: -O3 -lsnappy
LevelDB 1.22
Benchmark: Random Fill
MB/s, More Is Better
5850U Smoke
46.2
10
20
30
40
50
1. (CXX) g++ options: -O3 -lsnappy
LevelDB 1.22
Benchmark: Random Fill
Microseconds Per Op, Fewer Is Better
5850U Smoke
38.25
9
18
27
36
45
1. (CXX) g++ options: -O3 -lsnappy
LevelDB 1.22
Benchmark: Random Read
Microseconds Per Op, Fewer Is Better
5850U Smoke
5.232
1.1772
2.3544
3.5316
4.7088
5.886
1. (CXX) g++ options: -O3 -lsnappy

LevelDB 1.22

Benchmark: Sequential Fill



1. (CXX) g++ options: -O3 -lsnappy

LevelDB 1.22

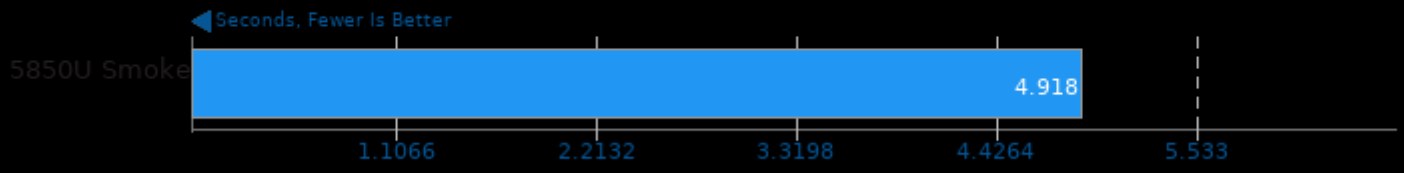
Benchmark: Sequential Fill



1. (CXX) g++ options: -O3 -lsnappy

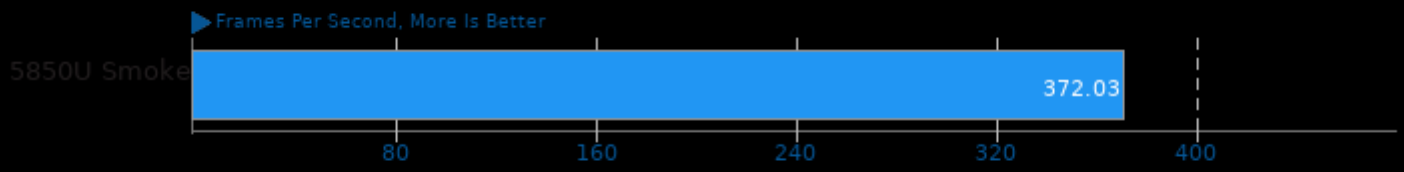
Unpacking The Linux Kernel

linux-4.15.tar.xz



DDraceNetwork 15.8.1

Resolution: 1920 x 1080 - Mode: Fullscreen - Renderer: OpenGL 3.3 - Zoom: Default - Demo: RaiNyMore2



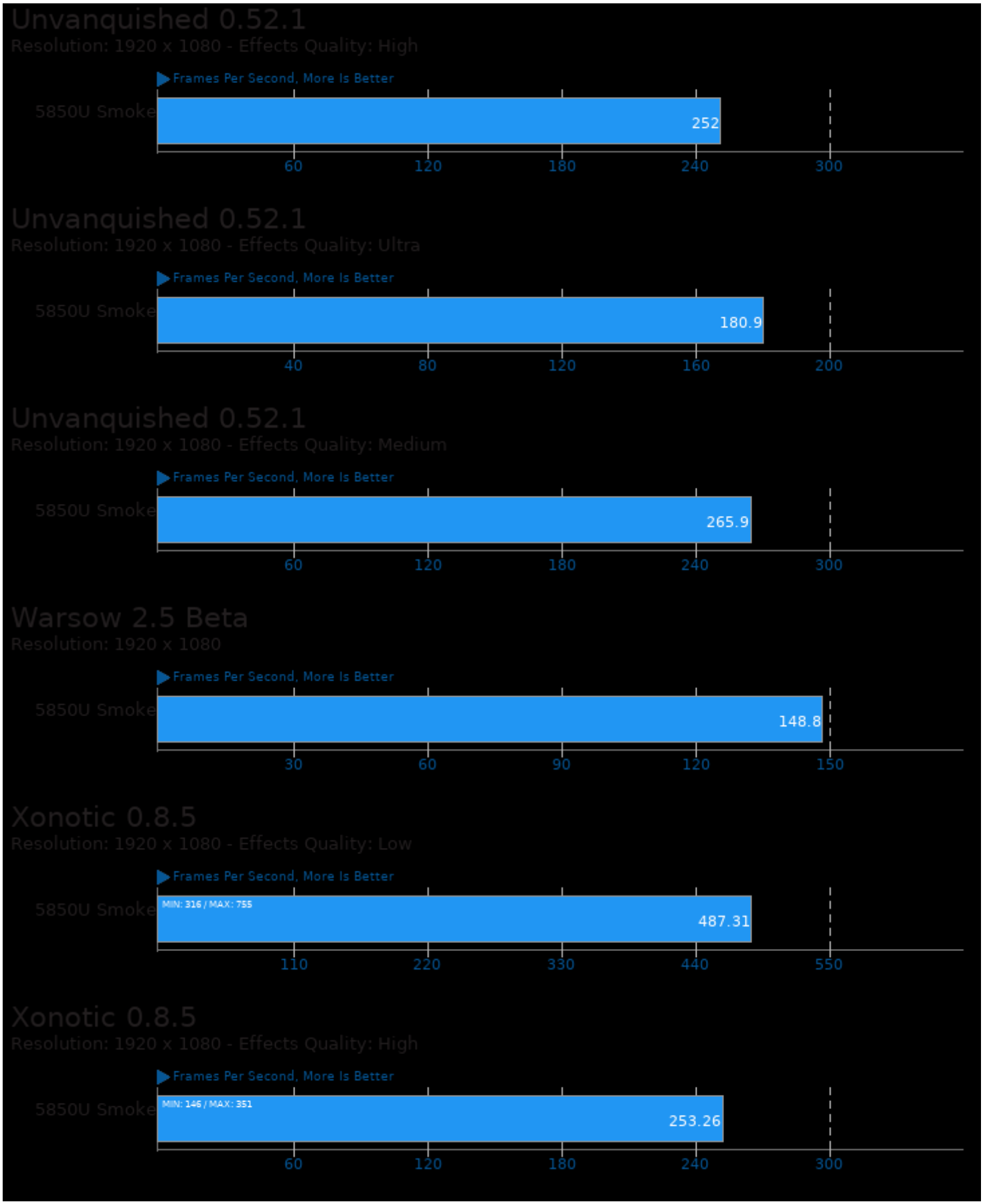
1. (CXX) g++ options: -O3 -lrt -lnotify -lgdk_pixbuf-2.0 -lgio-2.0 -lgobject-2.0 -lglib-2.0

DDraceNetwork 15.8.1

Resolution: 1920 x 1080 - Mode: Fullscreen - Renderer: OpenGL 3.3 - Zoom: Default - Demo: Multeasymap

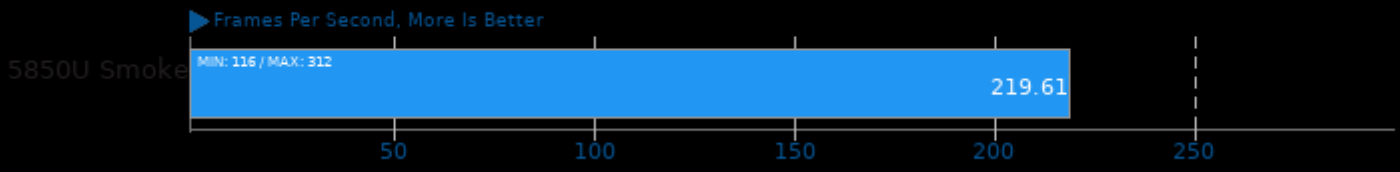


1. (CXX) g++ options: -O3 -lrt -lnotify -lgdk_pixbuf-2.0 -lgio-2.0 -lgobject-2.0 -lglib-2.0


Unvanquished 0.52.1
Resolution: 1920 x 1080 - Effects Quality: High
Frames Per Second, More Is Better
5850U Smoke
252
60
120
180
240
300
Unvanquished 0.52.1
Resolution: 1920 x 1080 - Effects Quality: Ultra
Frames Per Second, More Is Better
5850U Smoke
180.9
40
80
120
160
200
Unvanquished 0.52.1
Resolution: 1920 x 1080 - Effects Quality: Medium
Frames Per Second, More Is Better
5850U Smoke
265.9
60
120
180
240
300
Warsow 2.5 Beta
Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
148.8
30
60
90
120
150
Xonotic 0.8.5
Resolution: 1920 x 1080 - Effects Quality: Low
Frames Per Second, More Is Better
5850U Smoke
MIN: 316 / MAX: 755
487.31
110
220
330
440
550
Xonotic 0.8.5
Resolution: 1920 x 1080 - Effects Quality: High
Frames Per Second, More Is Better
5850U Smoke
MIN: 146 / MAX: 351
253.26
60
120
180
240
300

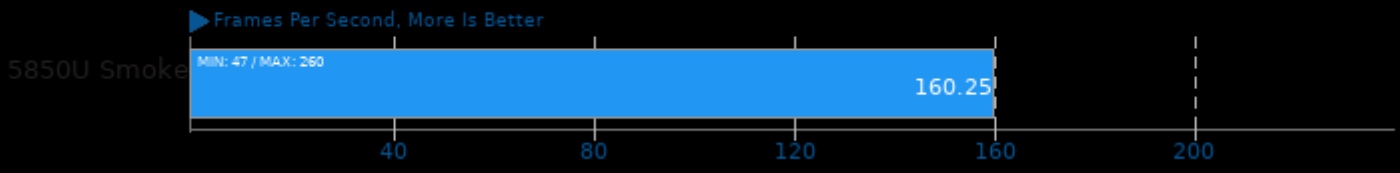
Xonotic 0.8.5

Resolution: 1920 x 1080 - Effects Quality: Ultra



Xonotic 0.8.5

Resolution: 1920 x 1080 - Effects Quality: Ultimate



yquake2 8.10

Renderer: Vulkan - AF: On - MSAA: On - Resolution: 1920 x 1080



1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf

yquake2 8.10

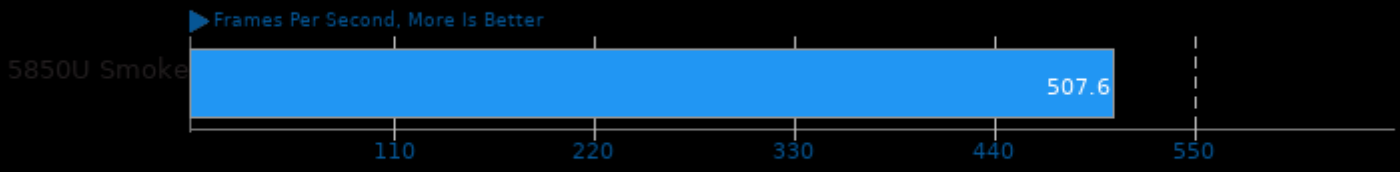
Renderer: Vulkan - AF: Off - MSAA: On - Resolution: 1920 x 1080



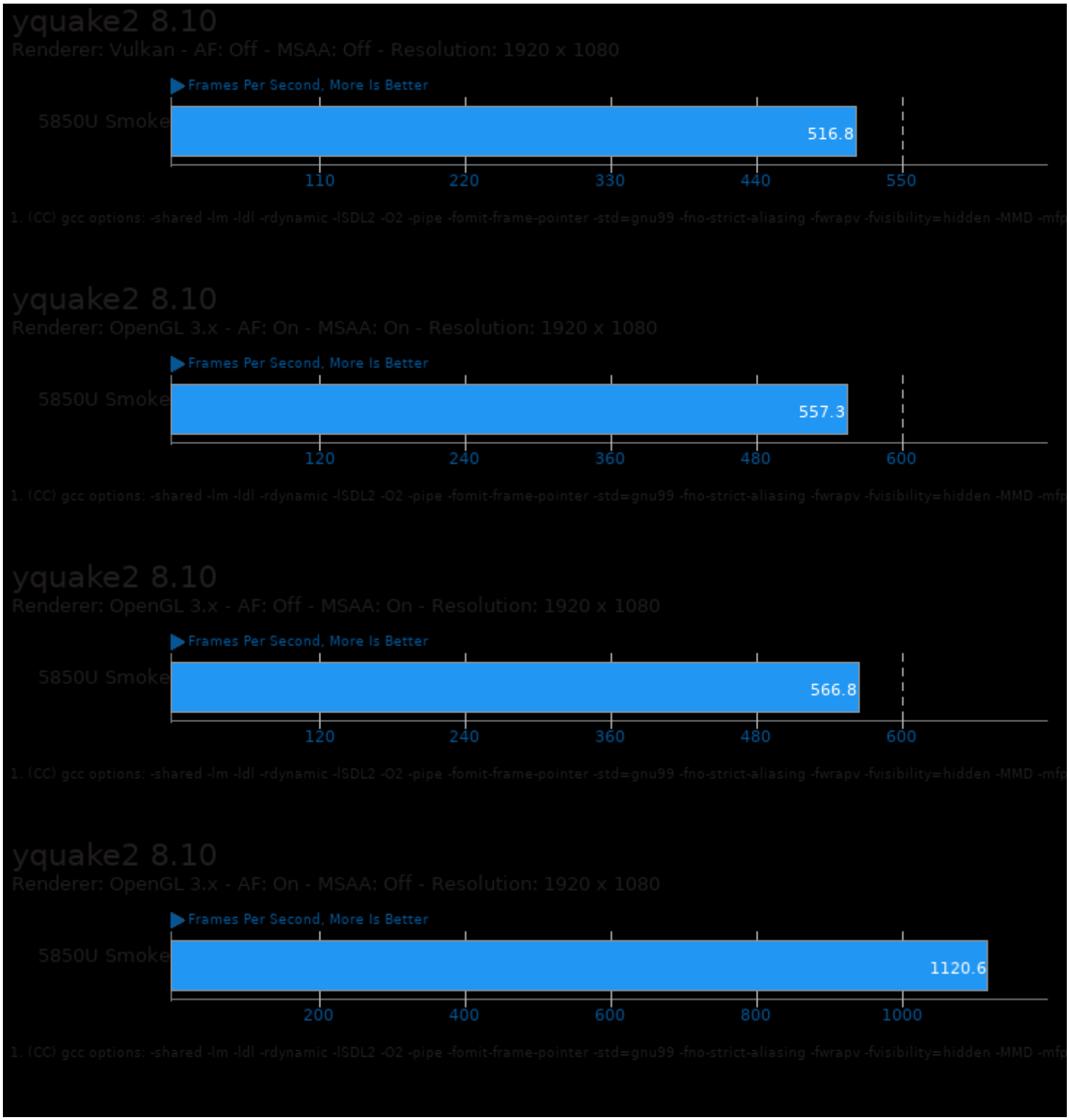
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf

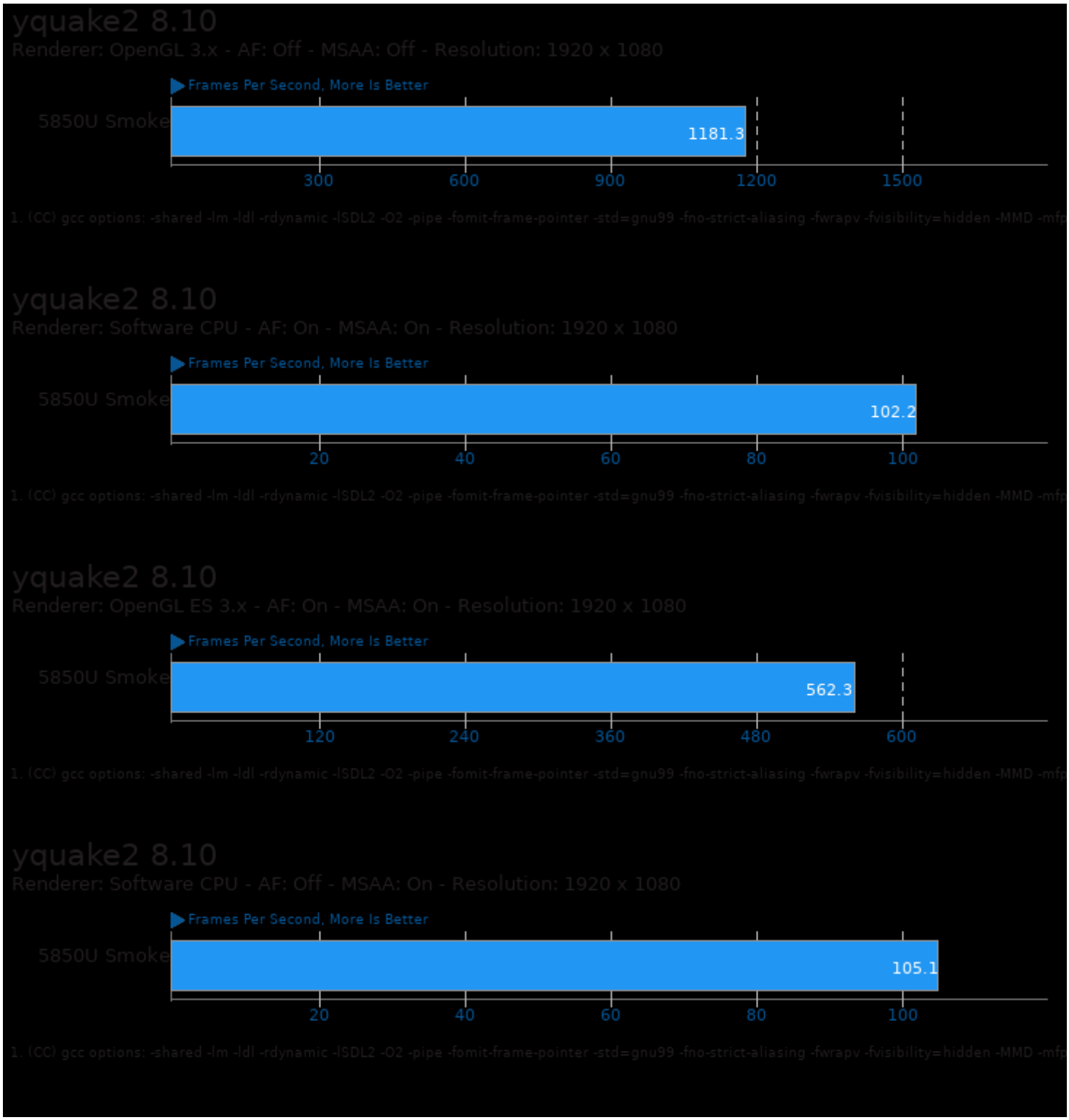
yquake2 8.10

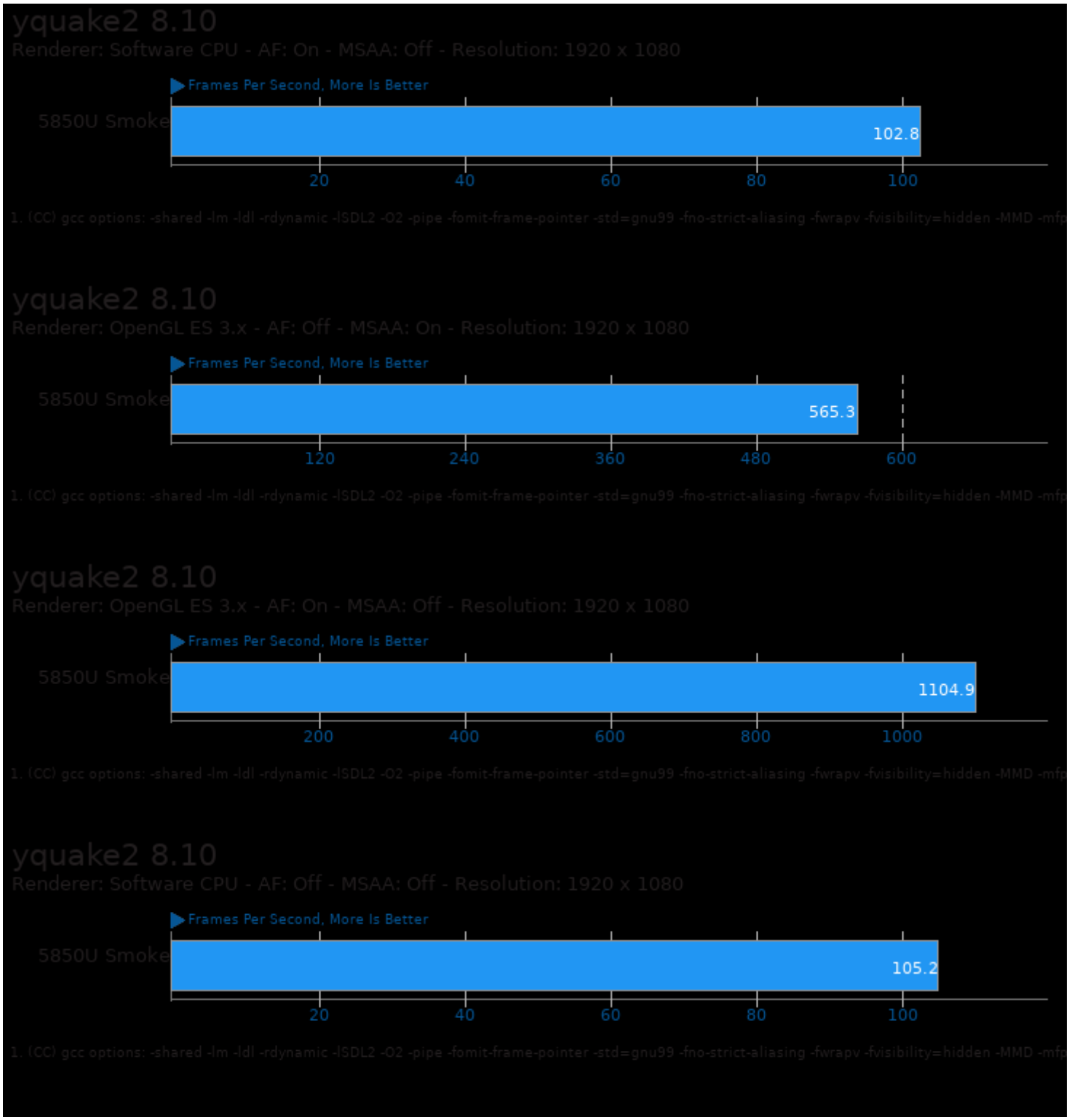
Renderer: Vulkan - AF: On - MSAA: Off - Resolution: 1920 x 1080

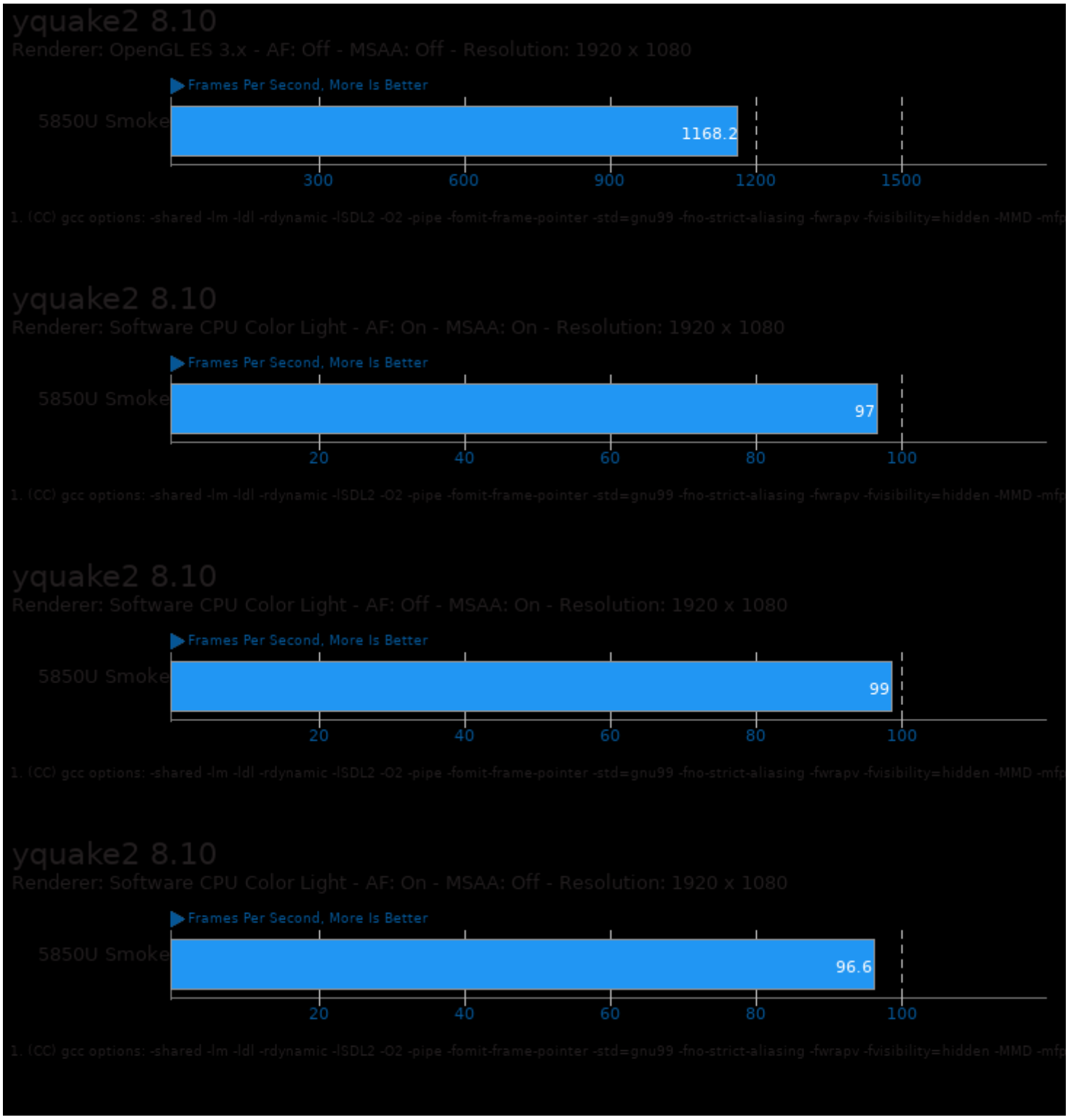


1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf


yquake2 8.10
Renderer: Vulkan - AF: Off - MSAA: Off - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
516.8
110
220
330
440
550
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: OpenGL 3.x - AF: On - MSAA: On - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
557.3
120
240
360
480
600
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: OpenGL 3.x - AF: Off - MSAA: On - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
566.8
120
240
360
480
600
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: OpenGL 3.x - AF: On - MSAA: Off - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
1120.6
200
400
600
800
1000
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf


yquake2 8.10
Renderer: OpenGL 3.x - AF: Off - MSAA: Off - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
1181.3
300
600
900
1200
1500
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: Software CPU - AF: On - MSAA: On - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
102.2
20
40
60
80
100
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: OpenGL ES 3.x - AF: On - MSAA: On - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
562.3
120
240
360
480
600
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: Software CPU - AF: Off - MSAA: On - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
105.1
20
40
60
80
100
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf


yquake2 8.10
Renderer: Software CPU - AF: On - MSAA: Off - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
102.8
20
40
60
80
100
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: OpenGL ES 3.x - AF: Off - MSAA: On - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
565.3
120
240
360
480
600
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: OpenGL ES 3.x - AF: On - MSAA: Off - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
1104.9
200
400
600
800
1000
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: Software CPU - AF: Off - MSAA: Off - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
105.2
20
40
60
80
100
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf


yquake2 8.10
Renderer: OpenGL ES 3.x - AF: Off - MSAA: Off - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
1168.2
300
600
900
1200
1500
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: Software CPU Color Light - AF: On - MSAA: On - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
97
20
40
60
80
100
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: Software CPU Color Light - AF: Off - MSAA: On - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
99
20
40
60
80
100
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf
yquake2 8.10
Renderer: Software CPU Color Light - AF: On - MSAA: Off - Resolution: 1920 x 1080
Frames Per Second, More Is Better
5850U Smoke
96.6
20
40
60
80
100
1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf

yquake2 8.10

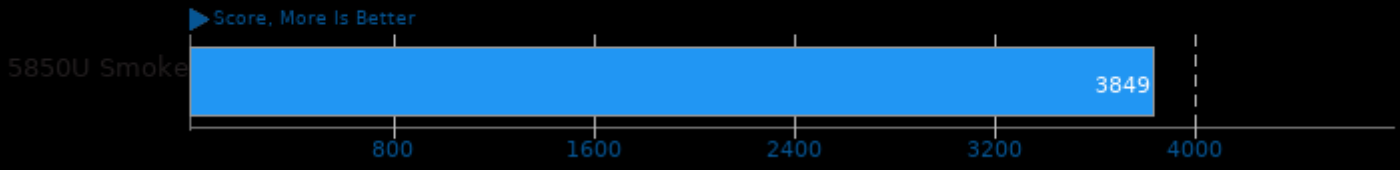
Renderer: Software CPU Color Light - AF: Off - MSAA: Off - Resolution: 1920 x 1080



1. (CC) gcc options: -shared -lm -ldl -rdynamic -lSDL2 -O2 -pipe -fomit-frame-pointer -std=gnu99 -fno-strict-aliasing -fwrapv -fvisibility=hidden -MMD -mf

GLmark2 2021.08.30

Resolution: 1920 x 1080



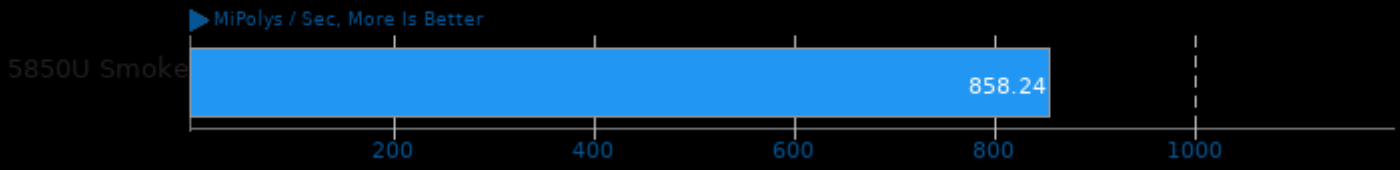
ParaView 5.10.1

Test: Many Spheres - Resolution: 1920 x 1080



ParaView 5.10.1

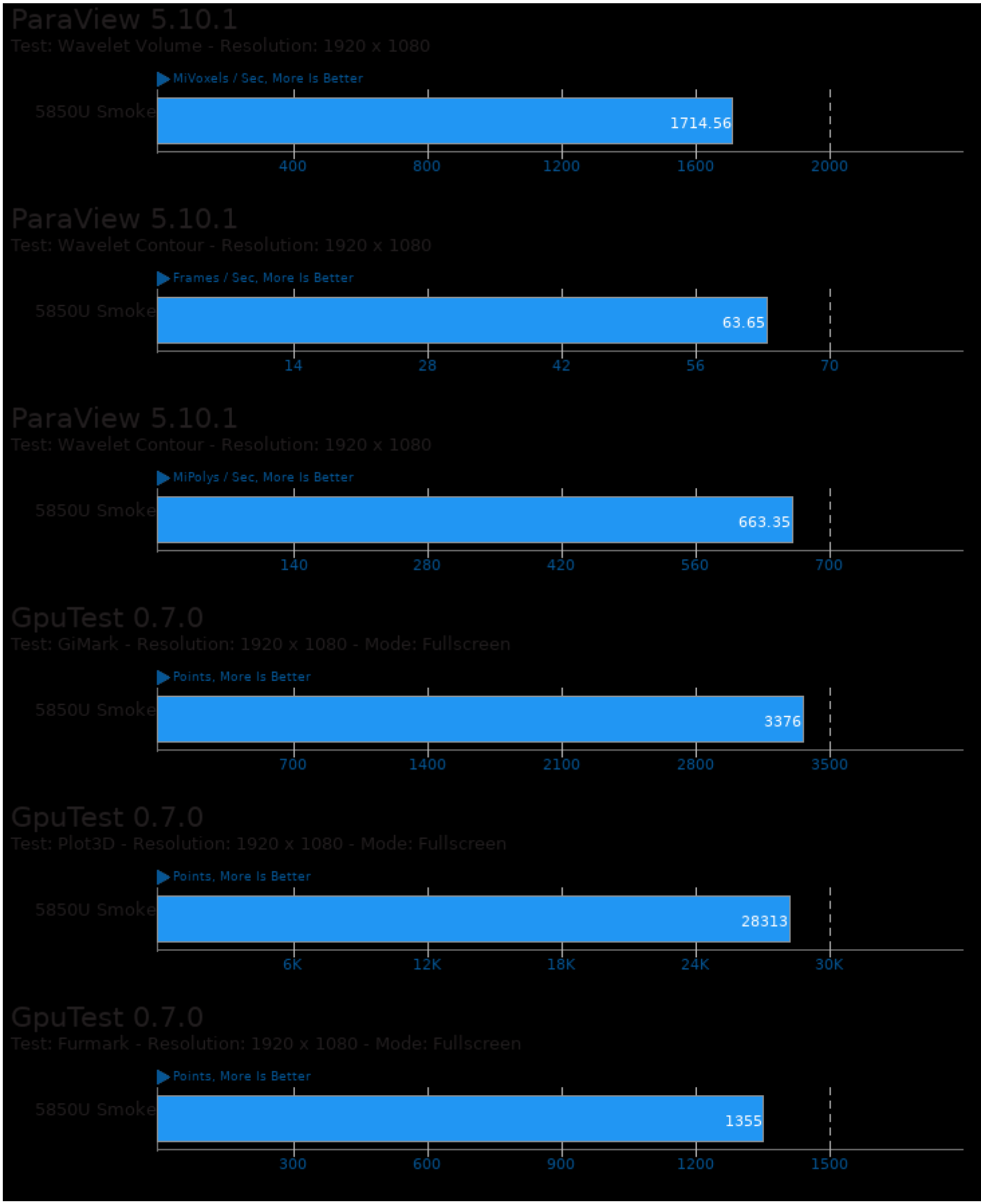
Test: Many Spheres - Resolution: 1920 x 1080



ParaView 5.10.1

Test: Wavelet Volume - Resolution: 1920 x 1080




ParaView 5.10.1
Test: Wavelet Volume - Resolution: 1920 x 1080
MiVoxels / Sec, More Is Better
5850U Smoke
1714.56
400
800
1200
1600
2000
ParaView 5.10.1
Test: Wavelet Contour - Resolution: 1920 x 1080
Frames / Sec, More Is Better
5850U Smoke
63.65
14
28
42
56
70
ParaView 5.10.1
Test: Wavelet Contour - Resolution: 1920 x 1080
MiPolys / Sec, More Is Better
5850U Smoke
663.35
140
280
420
560
700
GpuTest 0.7.0
Test: GiMark - Resolution: 1920 x 1080 - Mode: Fullscreen
Points, More Is Better
5850U Smoke
3376
700
1400
2100
2800
3500
GpuTest 0.7.0
Test: Plot3D - Resolution: 1920 x 1080 - Mode: Fullscreen
Points, More Is Better
5850U Smoke
28313
6K
12K
18K
24K
30K
GpuTest 0.7.0
Test: Furmark - Resolution: 1920 x 1080 - Mode: Fullscreen
Points, More Is Better
5850U Smoke
1355
300
600
900
1200
1500

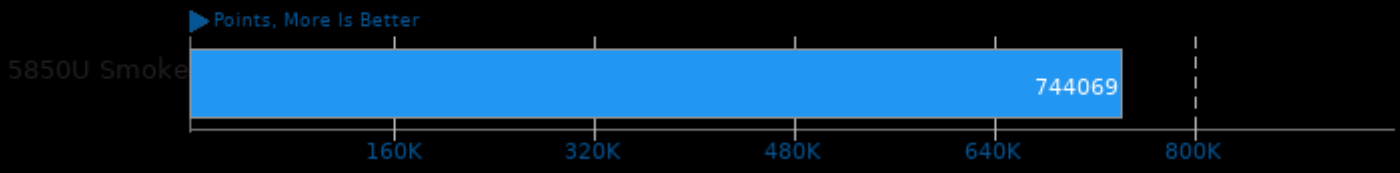
GpuTest 0.7.0

Test: TessMark - Resolution: 1920 x 1080 - Mode: Fullscreen



GpuTest 0.7.0

Test: Triangle - Resolution: 1920 x 1080 - Mode: Fullscreen



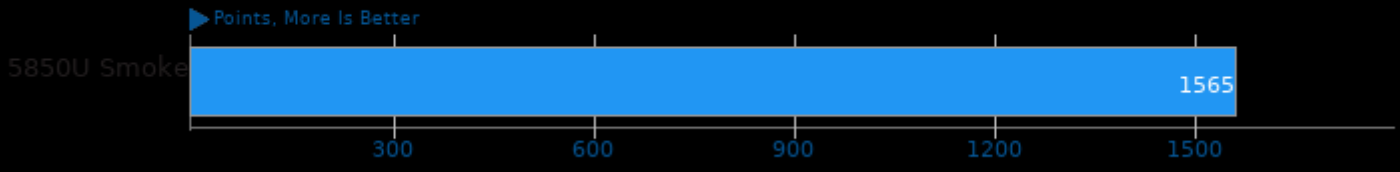
GpuTest 0.7.0

Test: Pixmark Piano - Resolution: 1920 x 1080 - Mode: Fullscreen



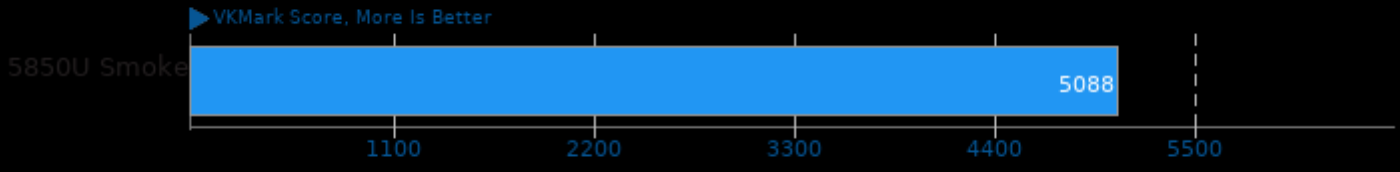
GpuTest 0.7.0

Test: Pixmark Volplosion - Resolution: 1920 x 1080 - Mode: Fullscreen



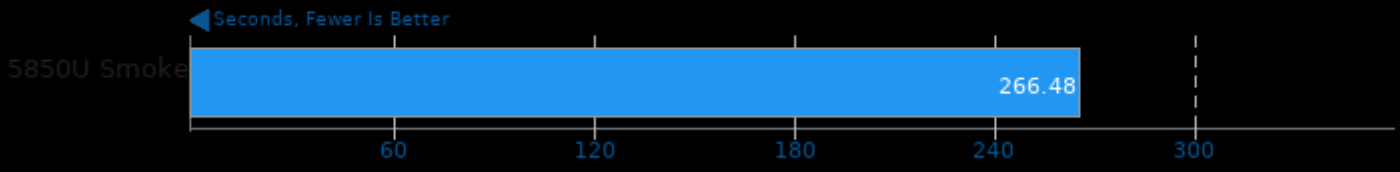
VKMark 2022-05-16

Resolution: 1920 x 1080 - Present Mode: Mailbox

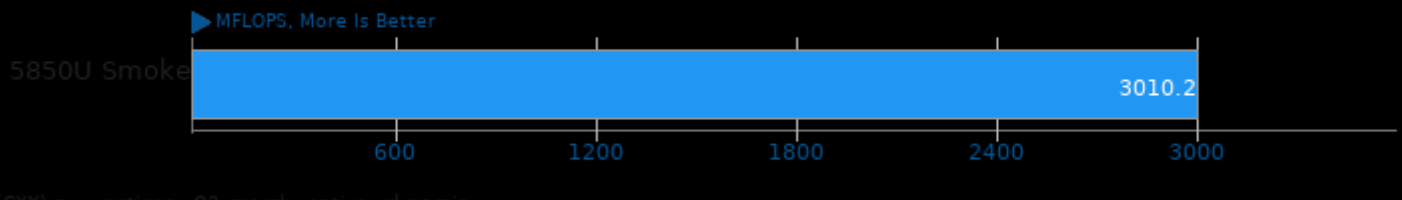


1. (CXX) g++ options: -pthread -ldl -std=c++14 -MD -MQ -MF

WireGuard + Linux Networking Stack Stress Test



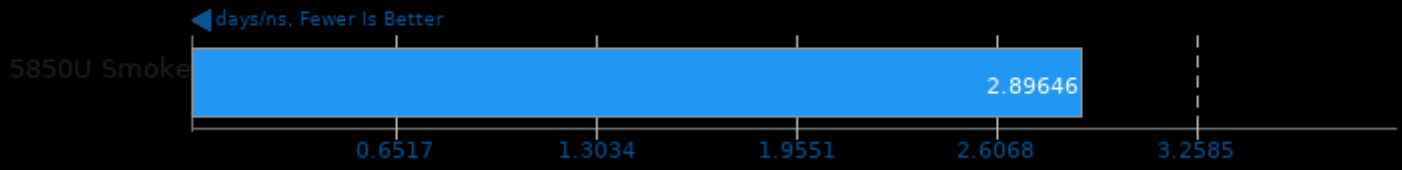
QuantLib 1.21



1. (CXX) g++ options: -O3 -march=native -rdynamic

NAMD 2.14

ATPase Simulation - 327,506 Atoms



WebP Image Encode 1.1

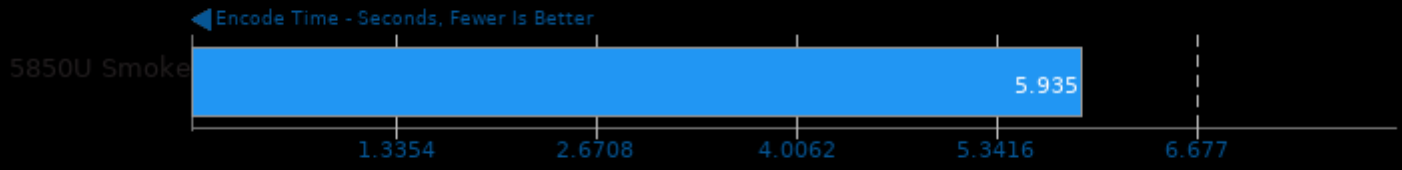
Encode Settings: Quality 100, Lossless



1. (CC) gcc options: -fvisibility=hidden -O2 -lm -ljpeg -lpng16 -ltiff

WebP Image Encode 1.1

Encode Settings: Quality 100, Highest Compression



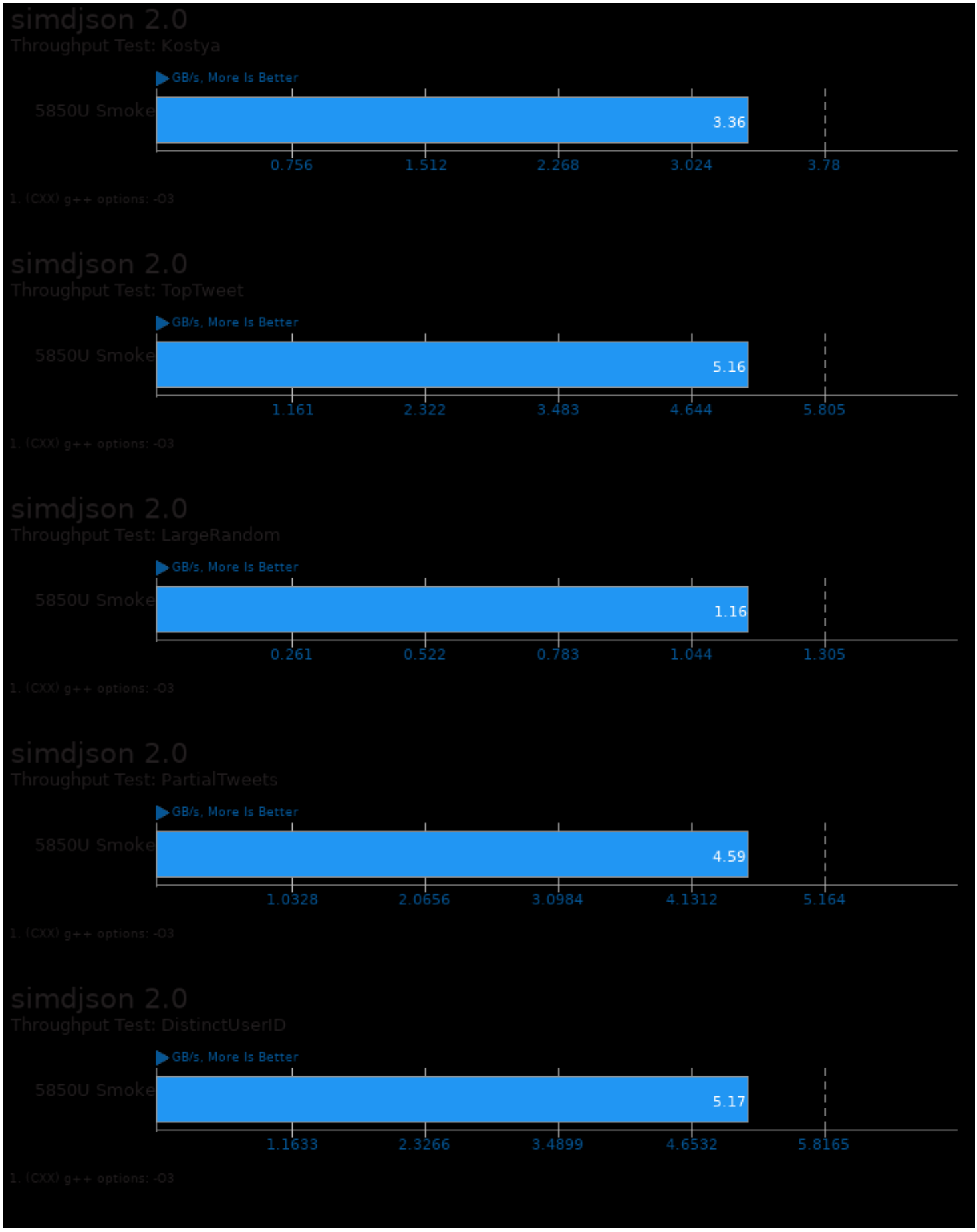
1. (CC) gcc options: -fvisibility=hidden -O2 -lm -ljpeg -lpng16 -ltiff

WebP Image Encode 1.1

Encode Settings: Quality 100, Lossless, Highest Compression

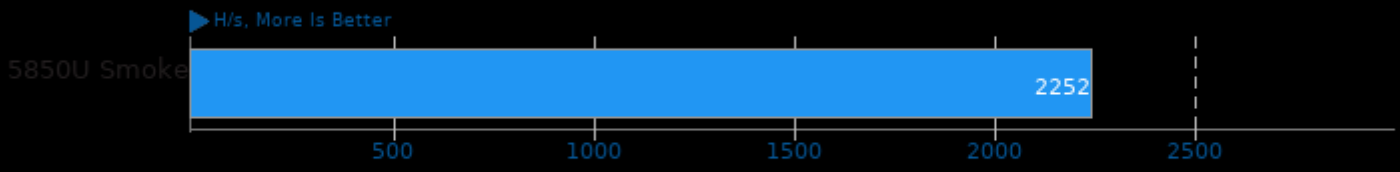


1. (CC) gcc options: -fvisibility=hidden -O2 -lm -ljpeg -lpng16 -ltiff


simdjson 2.0
Throughput Test: Kostya
GB/s, More Is Better
5850U Smoke
3.36
0.756
1.512
2.268
3.024
3.78
1. (CXX) g++ options: -O3
simdjson 2.0
Throughput Test: TopTweet
GB/s, More Is Better
5850U Smoke
5.16
1.161
2.322
3.483
4.644
5.805
1. (CXX) g++ options: -O3
simdjson 2.0
Throughput Test: LargeRandom
GB/s, More Is Better
5850U Smoke
1.16
0.261
0.522
0.783
1.044
1.305
1. (CXX) g++ options: -O3
simdjson 2.0
Throughput Test: PartialTweets
GB/s, More Is Better
5850U Smoke
4.59
1.0328
2.0656
3.0984
4.1312
5.164
1. (CXX) g++ options: -O3
simdjson 2.0
Throughput Test: DistinctUserID
GB/s, More Is Better
5850U Smoke
5.17
1.1633
2.3266
3.4899
4.6532
5.8165
1. (CXX) g++ options: -O3

Xmrig 6.12.1

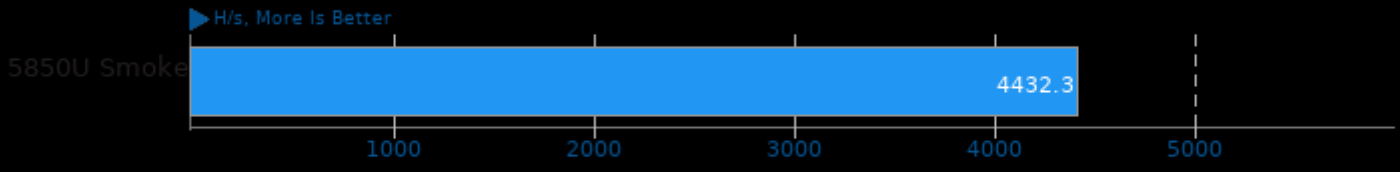
Variant: Monero - Hash Count: 1M



1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -lhwloc

Xmrig 6.12.1

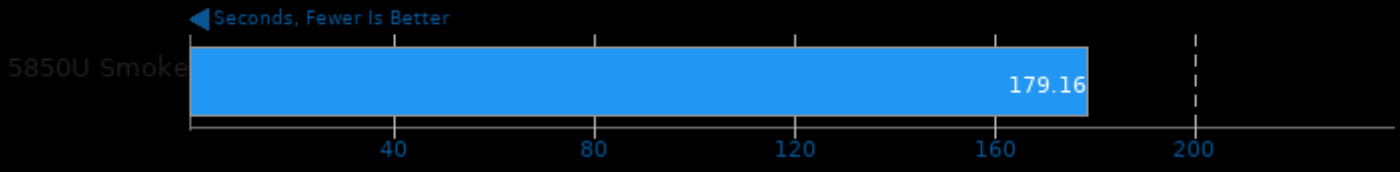
Variant: Wownero - Hash Count: 1M



1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -lhwloc

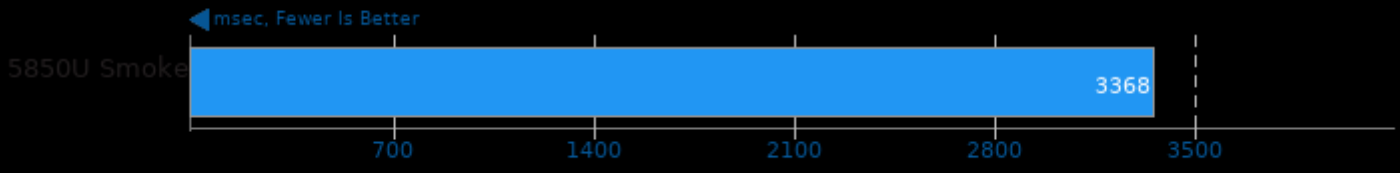
Java Gradle Build

Gradle Build: Reactor



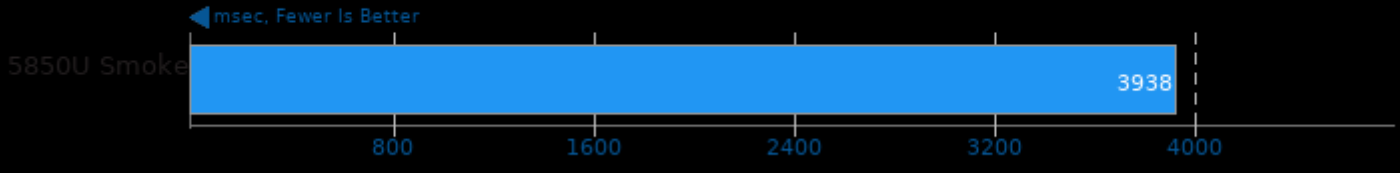
DaCapo Benchmark 9.12-MR1

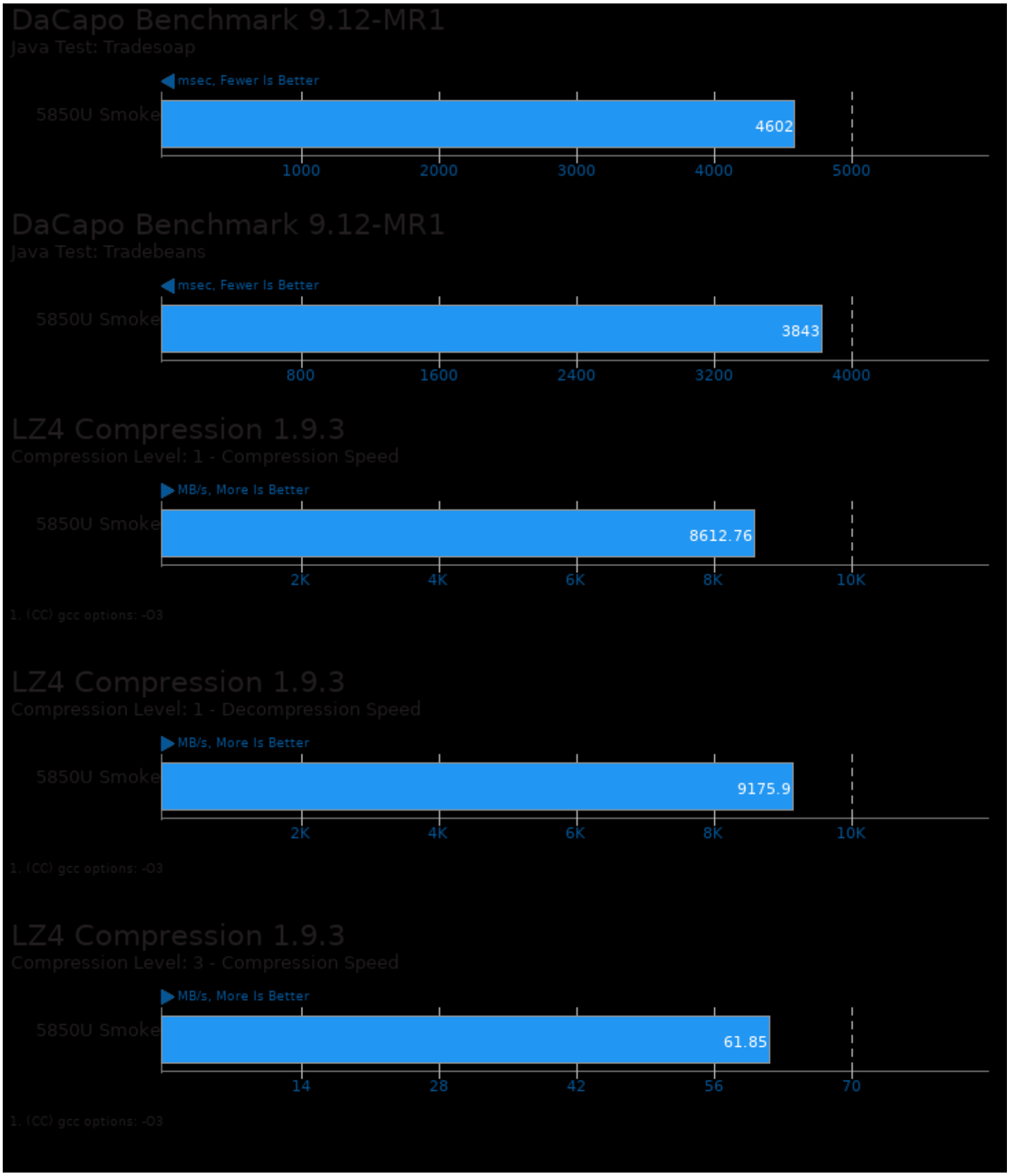
Java Test: H2

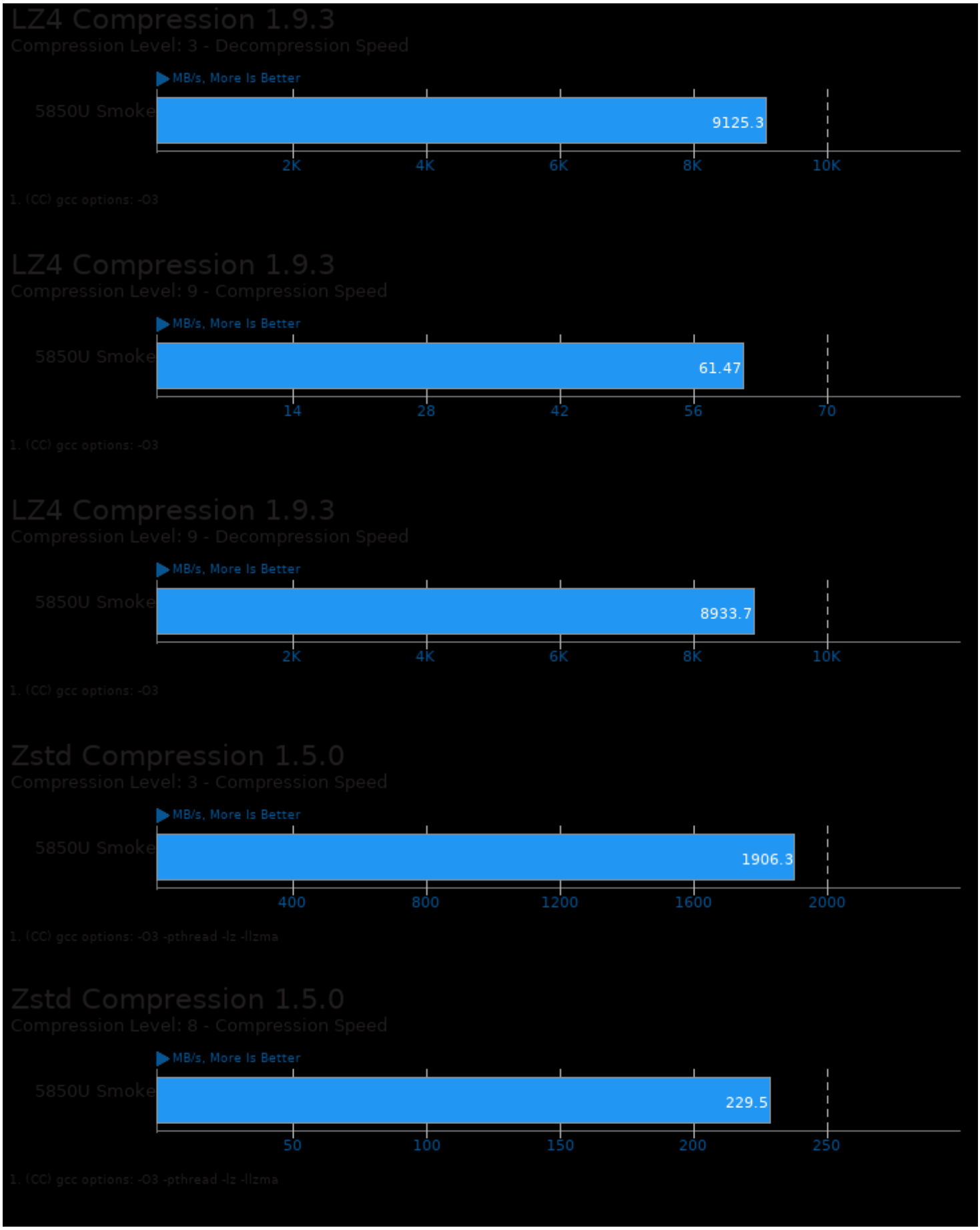


DaCapo Benchmark 9.12-MR1

Java Test: Jython

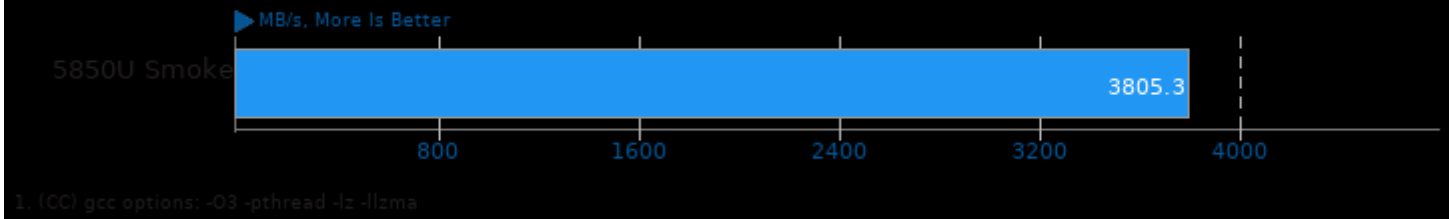



DaCapo Benchmark 9.12-MR1
Java Test: Tradesoap
msec, Fewer Is Better
5850U Smoke
4602
1000
2000
3000
4000
5000
DaCapo Benchmark 9.12-MR1
Java Test: Tradebeans
msec, Fewer Is Better
5850U Smoke
3843
800
1600
2400
3200
4000
LZ4 Compression 1.9.3
Compression Level: 1 - Compression Speed
MB/s, More Is Better
5850U Smoke
8612.76
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3
LZ4 Compression 1.9.3
Compression Level: 1 - Decompression Speed
MB/s, More Is Better
5850U Smoke
9175.9
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3
LZ4 Compression 1.9.3
Compression Level: 3 - Compression Speed
MB/s, More Is Better
5850U Smoke
61.85
14
28
42
56
70
1. (CC) gcc options: -O3


LZ4 Compression 1.9.3
Compression Level: 3 - Decompression Speed
MB/s, More Is Better
5850U Smoke
9125.3
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3
LZ4 Compression 1.9.3
Compression Level: 9 - Compression Speed
MB/s, More Is Better
5850U Smoke
61.47
14
28
42
56
70
1. (CC) gcc options: -O3
LZ4 Compression 1.9.3
Compression Level: 9 - Decompression Speed
MB/s, More Is Better
5850U Smoke
8933.7
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3
Zstd Compression 1.5.0
Compression Level: 3 - Compression Speed
MB/s, More Is Better
5850U Smoke
1906.3
400
800
1200
1600
2000
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 8 - Compression Speed
MB/s, More Is Better
5850U Smoke
229.5
50
100
150
200
250
1. (CC) gcc options: -O3 -pthread -lz -llzma

Zstd Compression 1.5.0

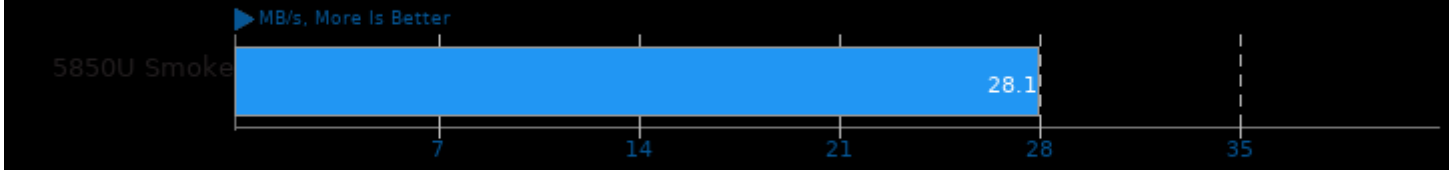
Compression Level: 8 - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma

Zstd Compression 1.5.0

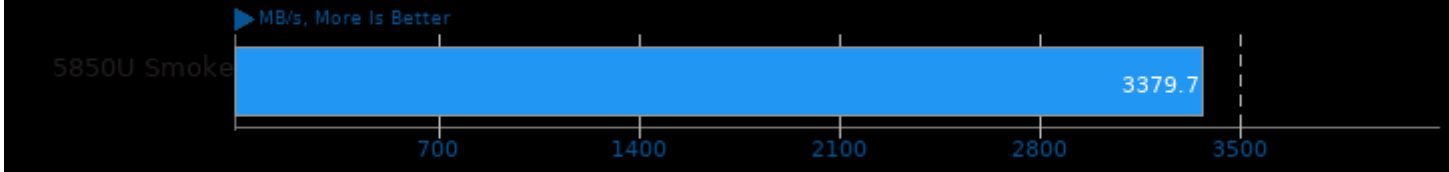
Compression Level: 19 - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma

Zstd Compression 1.5.0

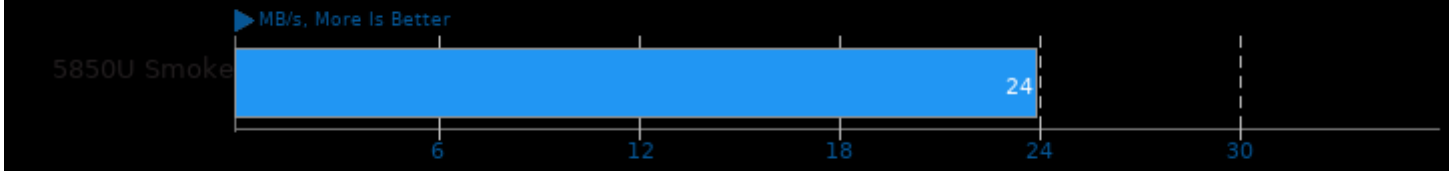
Compression Level: 19 - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma

Zstd Compression 1.5.0

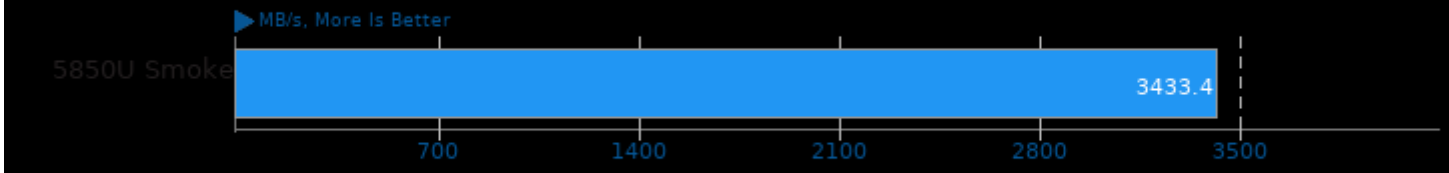
Compression Level: 19, Long Mode - Compression Speed



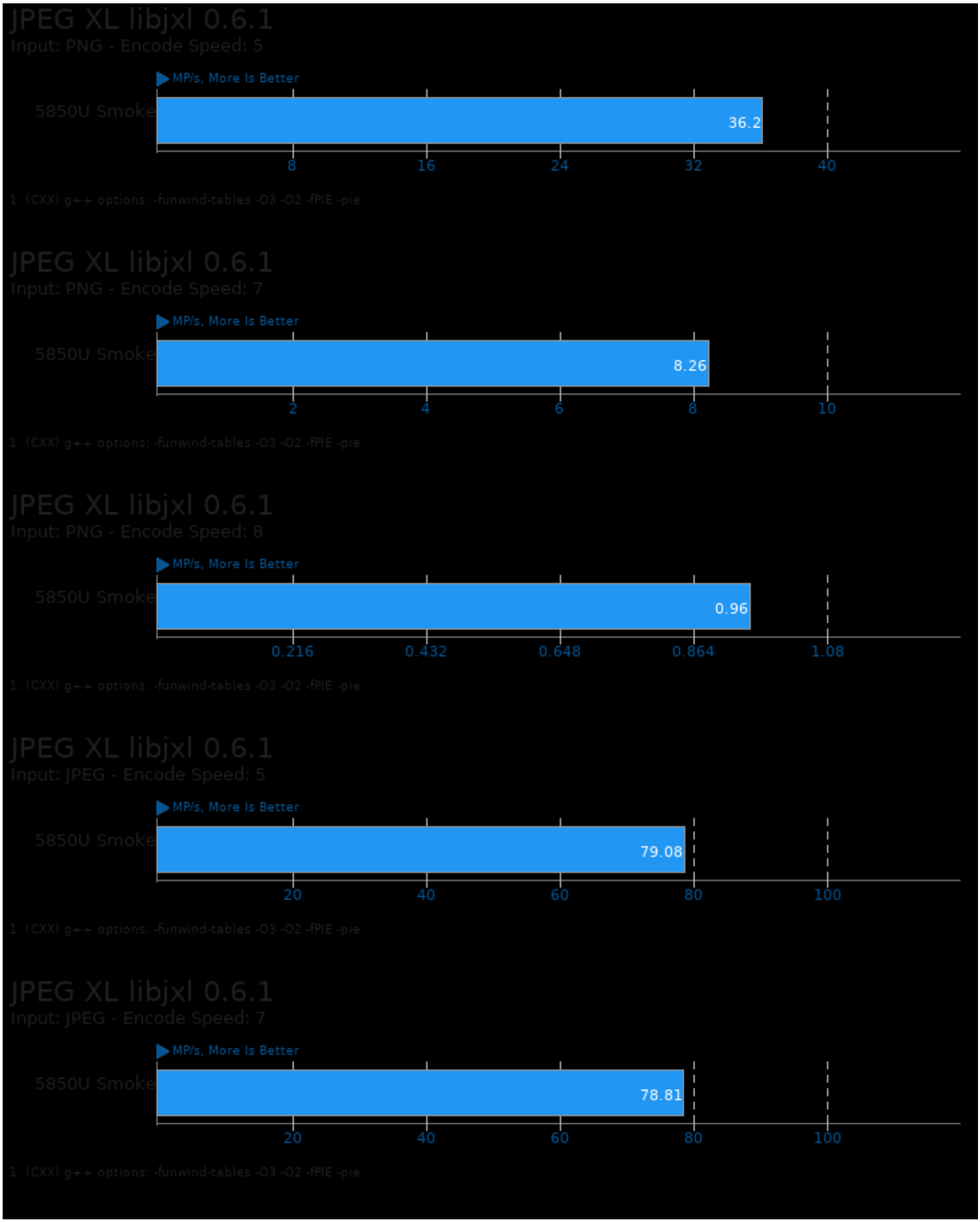
1. (CC) gcc options: -O3 -pthread -lz -llzma

Zstd Compression 1.5.0

Compression Level: 19, Long Mode - Decompression Speed

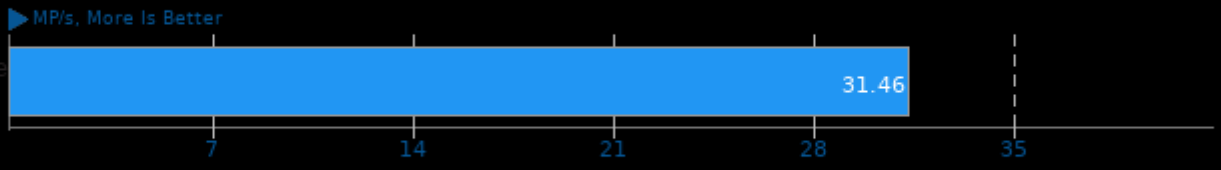


1. (CC) gcc options: -O3 -pthread -lz -llzma


JPEG XL libjxl 0.6.1
Input: PNG - Encode Speed: 5
MP/s, More Is Better
5850U Smoke
36.2
8
16
24
32
40
1. (CXX) g++ options: -funwind-tables -O3 -O2 -fPIE -pie
JPEG XL libjxl 0.6.1
Input: PNG - Encode Speed: 7
MP/s, More Is Better
5850U Smoke
8.26
2
4
6
8
10
1. (CXX) g++ options: -funwind-tables -O3 -O2 -fPIE -pie
JPEG XL libjxl 0.6.1
Input: PNG - Encode Speed: 8
MP/s, More Is Better
5850U Smoke
0.96
0.216
0.432
0.648
0.864
1.08
1. (CXX) g++ options: -funwind-tables -O3 -O2 -fPIE -pie
JPEG XL libjxl 0.6.1
Input: JPEG - Encode Speed: 5
MP/s, More Is Better
5850U Smoke
79.08
20
40
60
80
100
1. (CXX) g++ options: -funwind-tables -O3 -O2 -fPIE -pie
JPEG XL libjxl 0.6.1
Input: JPEG - Encode Speed: 7
MP/s, More Is Better
5850U Smoke
78.81
20
40
60
80
100
1. (CXX) g++ options: -funwind-tables -O3 -O2 -fPIE -pie

JPEG XL libjxl 0.6.1

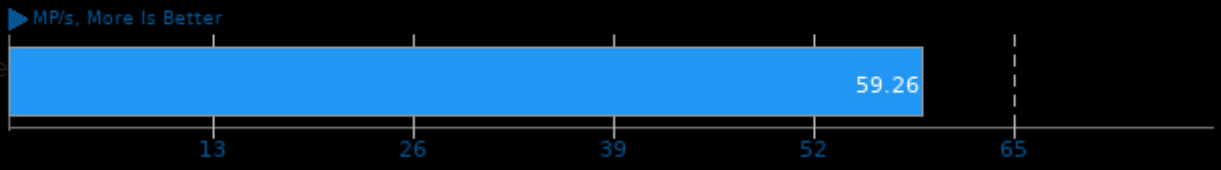
Input: JPEG - Encode Speed: 8



1. (CXX) g++ options: -funwind-tables -O3 -O2 -fPIE -pie

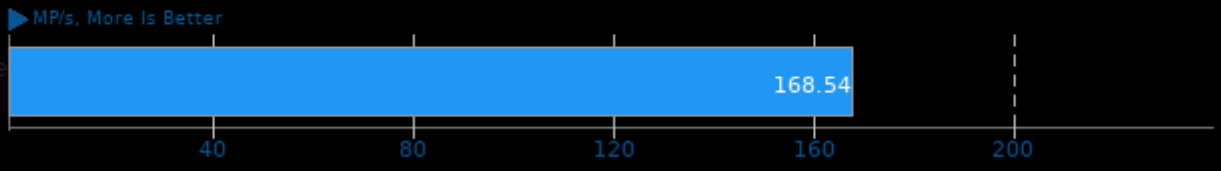
JPEG XL Decoding libjxl 0.6.1

CPU Threads: 1



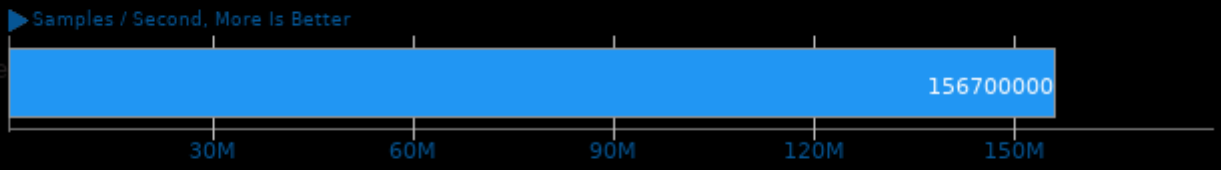
JPEG XL Decoding libjxl 0.6.1

CPU Threads: All



srsRAN 21.10

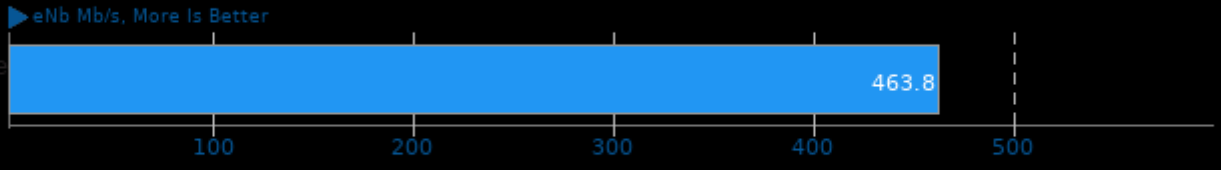
Test: OFDM_Test



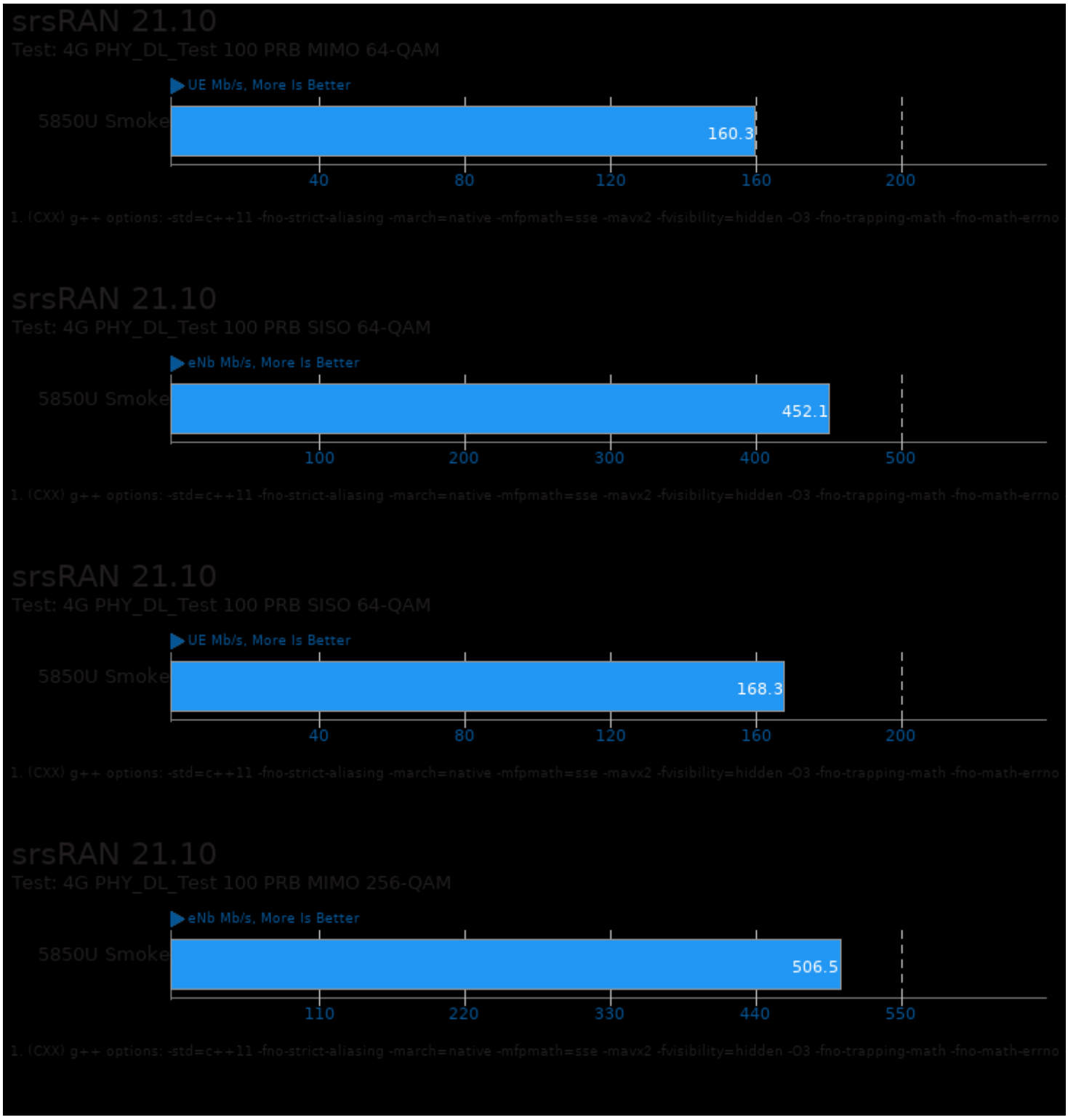
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

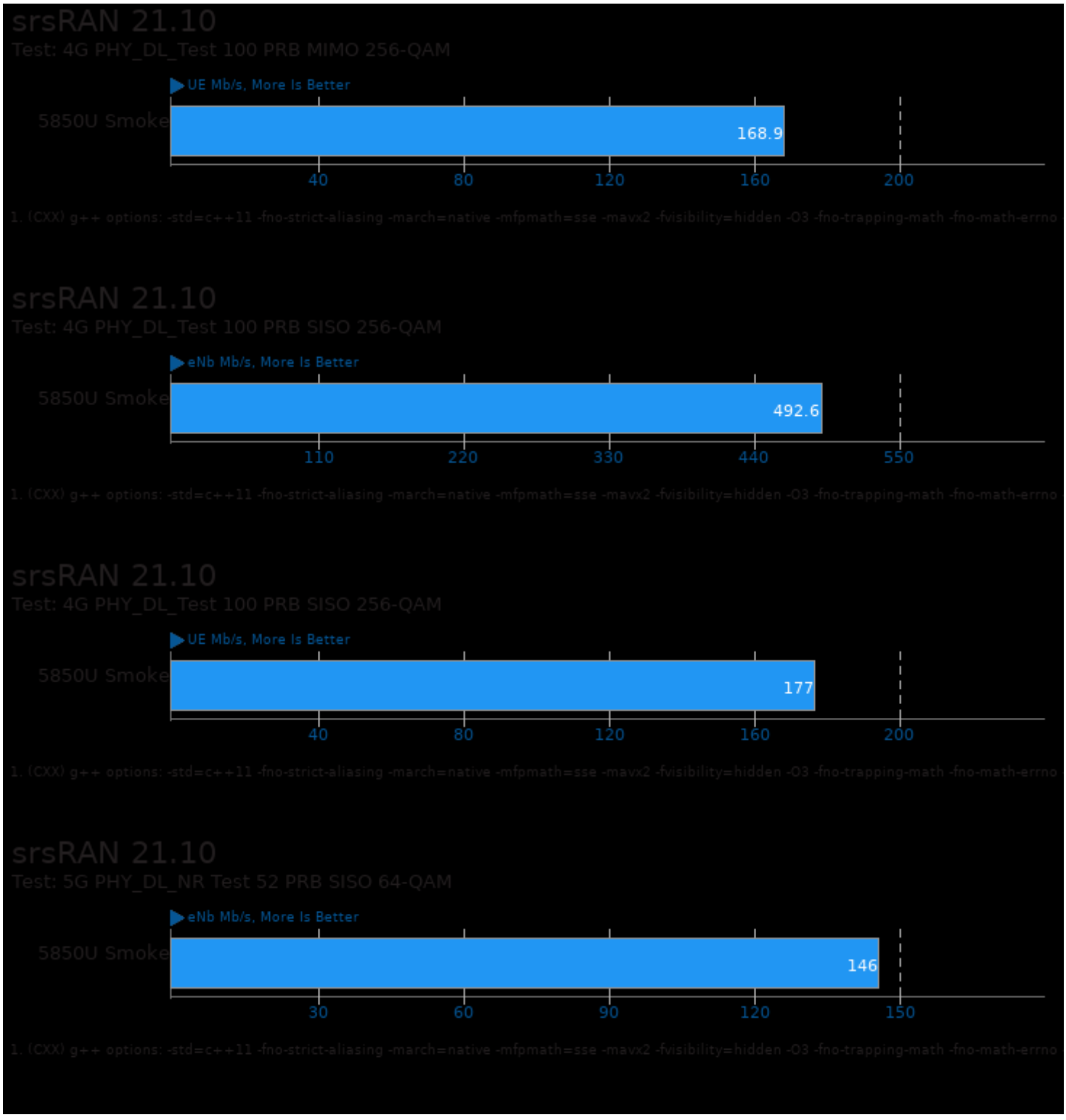
srsRAN 21.10

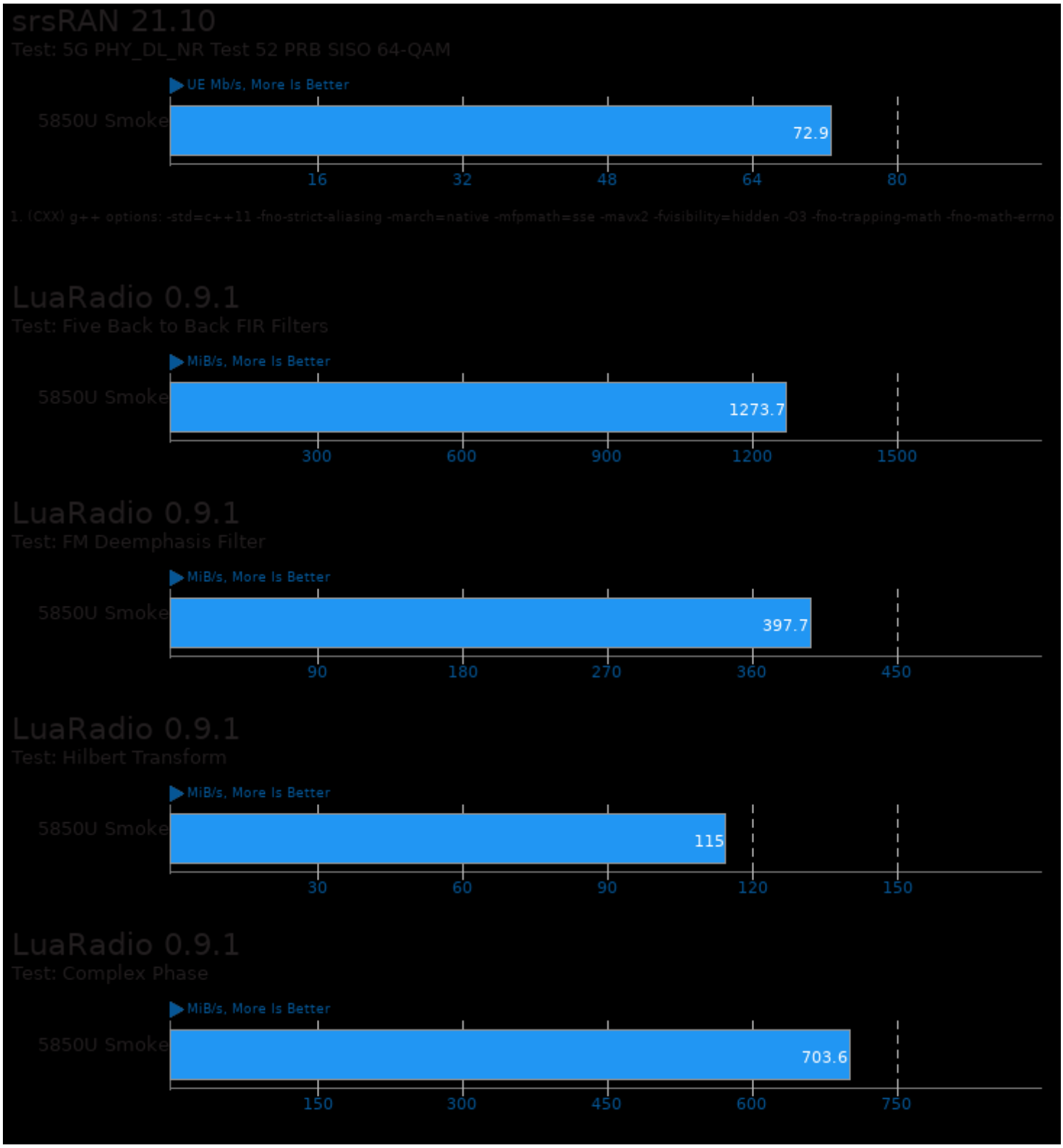
Test: 4G PHY_DL_Test 100 PRB MIMO 64-QAM

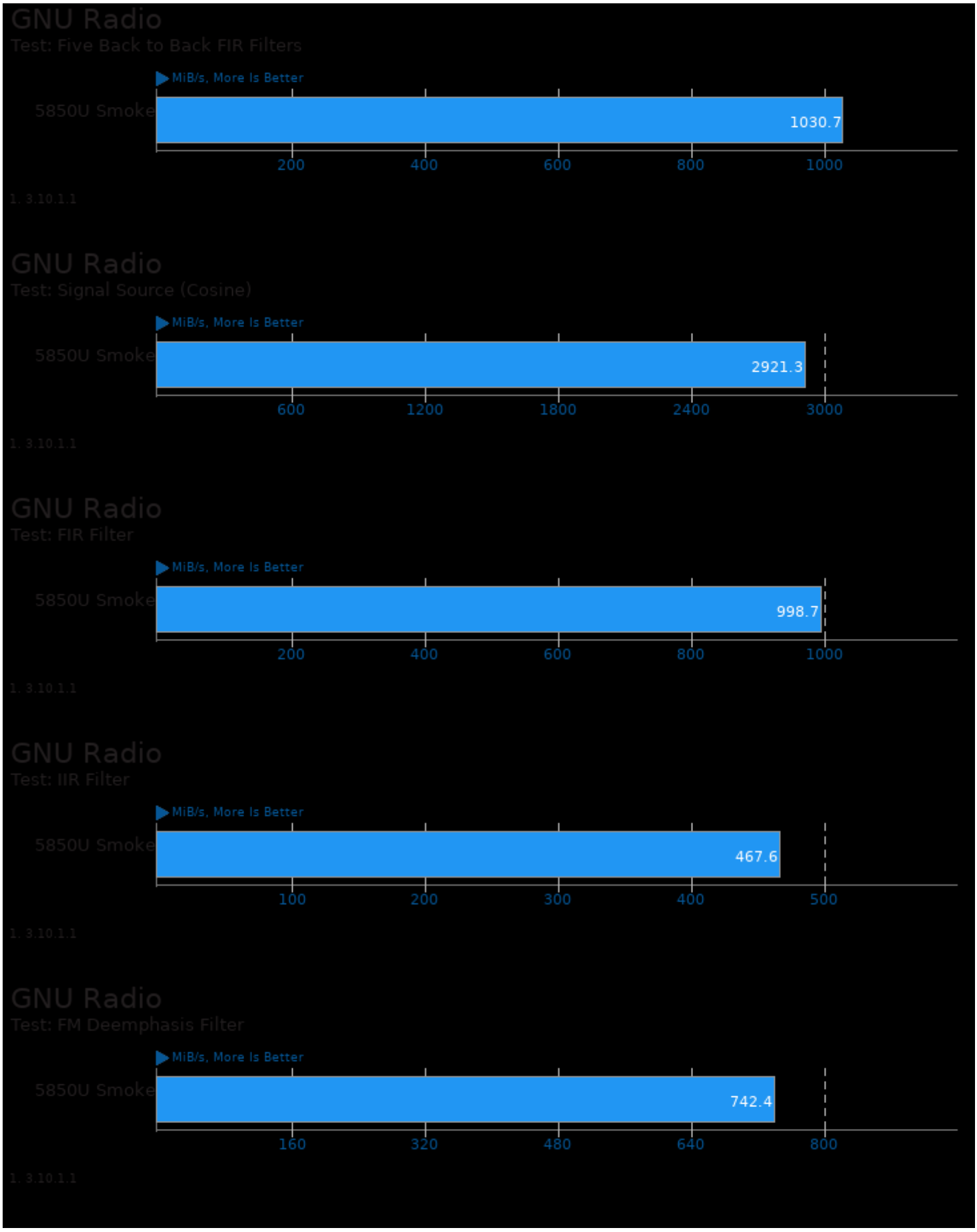


1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno


srsRAN 21.10
Test: 4G PHY_DL_Test 100 PRB MIMO 64-QAM
UE Mb/s, More Is Better
5850U Smoke
160.3
40
80
120
160
200
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.10
Test: 4G PHY_DL_Test 100 PRB SISO 64-QAM
eNb Mb/s, More Is Better
5850U Smoke
452.1
100
200
300
400
500
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.10
Test: 4G PHY_DL_Test 100 PRB SISO 64-QAM
UE Mb/s, More Is Better
5850U Smoke
168.3
40
80
120
160
200
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.10
Test: 4G PHY_DL_Test 100 PRB MIMO 256-QAM
eNb Mb/s, More Is Better
5850U Smoke
506.5
110
220
330
440
550
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno

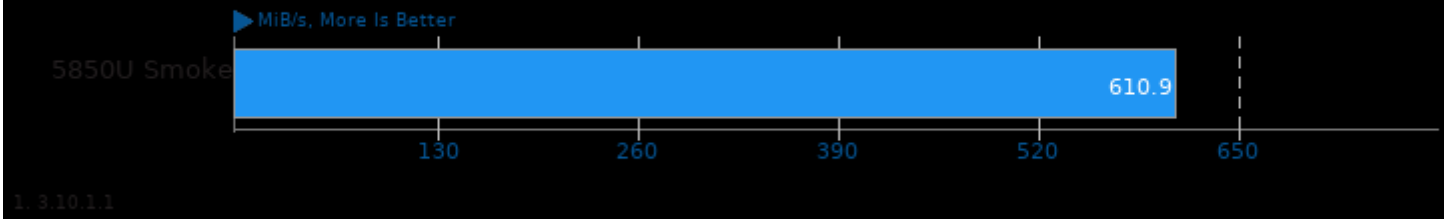

srsRAN 21.10
Test: 4G PHY_DL_Test 100 PRB MIMO 256-QAM
UE Mb/s, More Is Better
5850U Smoke
168.9
40
80
120
160
200
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.10
Test: 4G PHY_DL_Test 100 PRB SISO 256-QAM
eNb Mb/s, More Is Better
5850U Smoke
492.6
110
220
330
440
550
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.10
Test: 4G PHY_DL_Test 100 PRB SISO 256-QAM
UE Mb/s, More Is Better
5850U Smoke
177
40
80
120
160
200
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
srsRAN 21.10
Test: 5G PHY_DL_NR Test 52 PRB SISO 64-QAM
eNb Mb/s, More Is Better
5850U Smoke
146
30
60
90
120
150
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno


srsRAN 21.10
Test: 5G PHY_DL_NR Test 52 PRB SISO 64-QAM
UE Mb/s, More Is Better
5850U Smoke
72.9
16
32
48
64
80
1. (CXX) g++ options: -std=c++11 -fno-strict-aliasing -march=native -mfpmath=sse -mavx2 -fvisibility=hidden -O3 -fno-trapping-math -fno-math-errno
LuaRadio 0.9.1
Test: Five Back to Back FIR Filters
MiB/s, More Is Better
5850U Smoke
1273.7
300
600
900
1200
1500
LuaRadio 0.9.1
Test: FM Deemphasis Filter
MiB/s, More Is Better
5850U Smoke
397.7
90
180
270
360
450
LuaRadio 0.9.1
Test: Hilbert Transform
MiB/s, More Is Better
5850U Smoke
115
30
60
90
120
150
LuaRadio 0.9.1
Test: Complex Phase
MiB/s, More Is Better
5850U Smoke
703.6
150
300
450
600
750


GNU Radio
Test: Five Back to Back FIR Filters
MiB/s, More Is Better
5850U Smoke
1030.7
200
400
600
800
1000
1. 3.10.1.1
GNU Radio
Test: Signal Source (Cosine)
MiB/s, More Is Better
5850U Smoke
2921.3
600
1200
1800
2400
3000
1. 3.10.1.1
GNU Radio
Test: FIR Filter
MiB/s, More Is Better
5850U Smoke
998.7
200
400
600
800
1000
1. 3.10.1.1
GNU Radio
Test: IIR Filter
MiB/s, More Is Better
5850U Smoke
467.6
100
200
300
400
500
1. 3.10.1.1
GNU Radio
Test: FM Deemphasis Filter
MiB/s, More Is Better
5850U Smoke
742.4
160
320
480
640
800
1. 3.10.1.1

GNU Radio

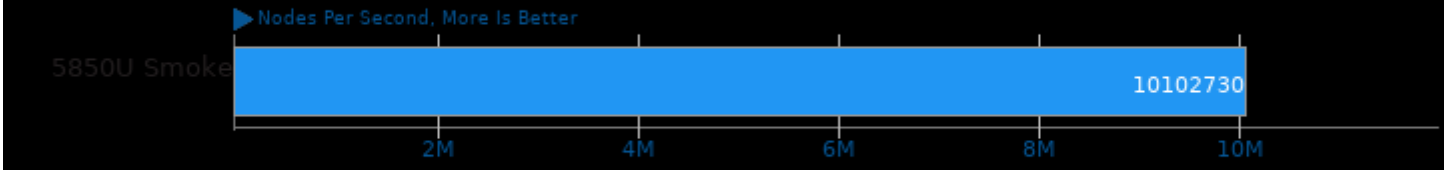
Test: Hilbert Transform



1. 3.10.1.1

Crafty 25.2

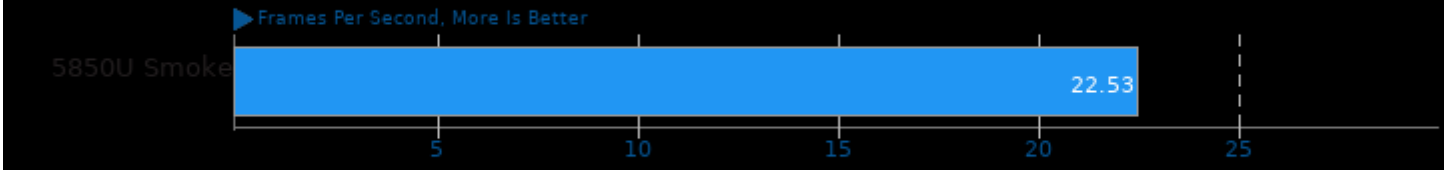
Elapsed Time



1. (CC) gcc options: -pthread -lstdc++ -fprofile-use -lm

AOM AV1 3.4

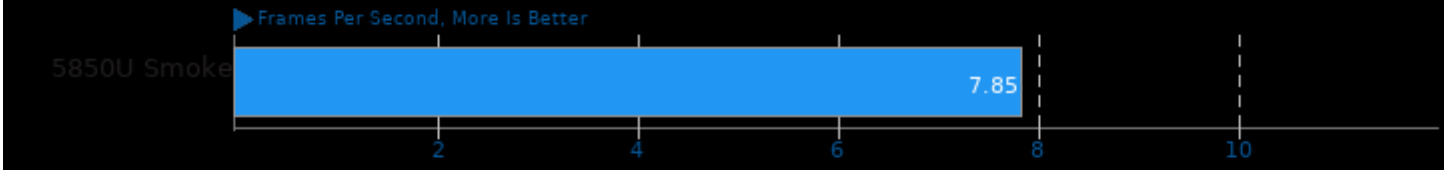
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm

AOM AV1 3.4

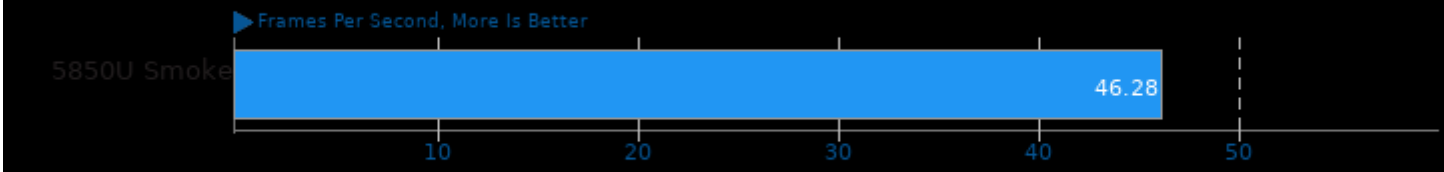
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K



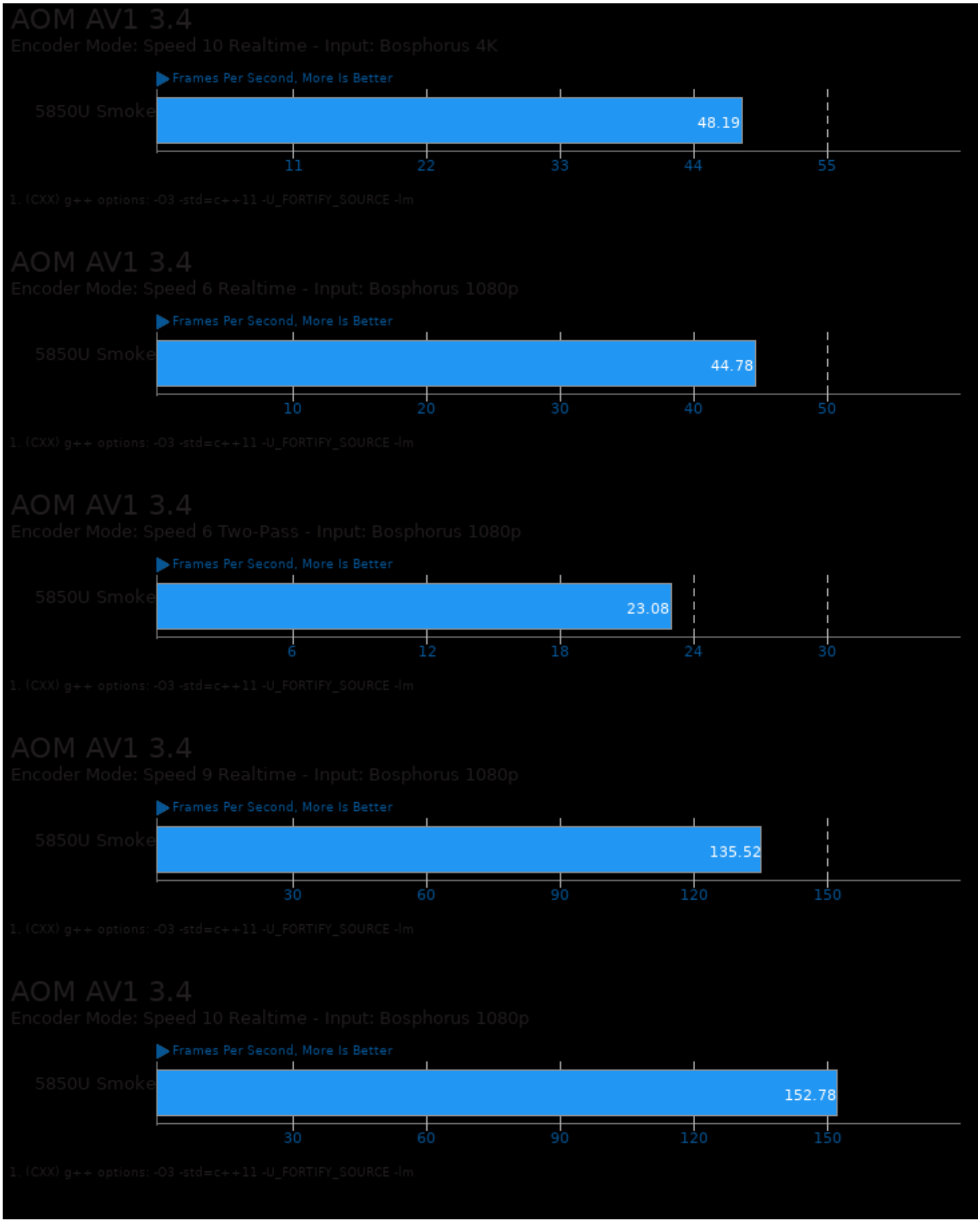
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm

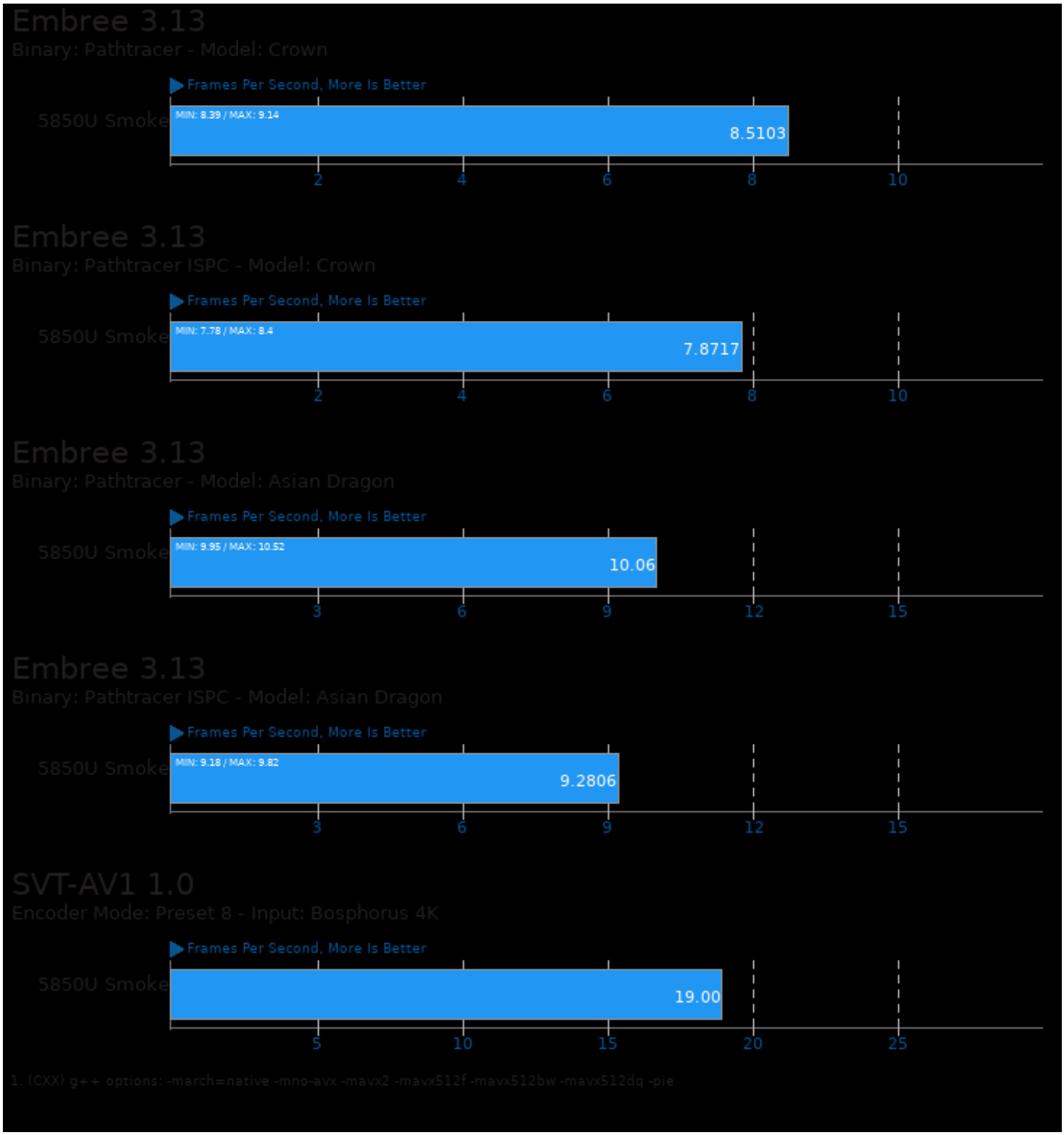
AOM AV1 3.4

Encoder Mode: Speed 9 Realtime - Input: Bosphorus 4K



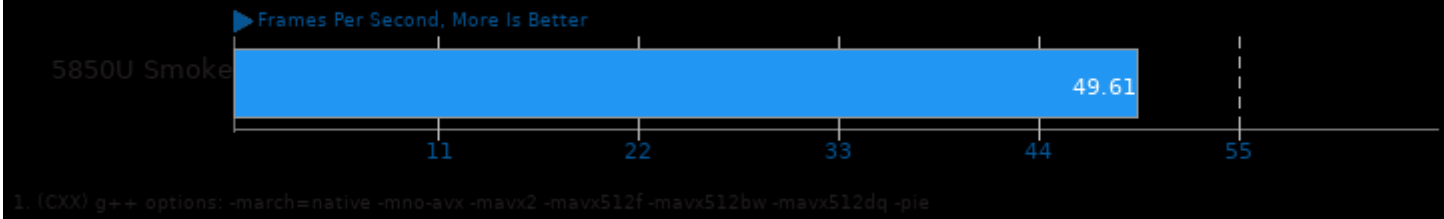
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm


AOM AV1 3.4
Encoder Mode: Speed 10 Realtime - Input: Bosphorus 4K
Frames Per Second, More Is Better
5850U Smoke
48.19
11
22
33
44
55
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm
AOM AV1 3.4
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
5850U Smoke
44.78
10
20
30
40
50
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm
AOM AV1 3.4
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 1080p
Frames Per Second, More Is Better
5850U Smoke
23.08
6
12
18
24
30
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm
AOM AV1 3.4
Encoder Mode: Speed 9 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
5850U Smoke
135.52
30
60
90
120
150
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm
AOM AV1 3.4
Encoder Mode: Speed 10 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
5850U Smoke
152.78
30
60
90
120
150
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm


Embree 3.13
Binary: Pathtracer - Model: Crown
Frames Per Second, More Is Better
5850U Smoke
MIN: 8.39 / MAX: 9.14
8.5103
2
4
6
8
10
Embree 3.13
Binary: Pathtracer ISPC - Model: Crown
Frames Per Second, More Is Better
5850U Smoke
MIN: 7.78 / MAX: 8.4
7.8717
2
4
6
8
10
Embree 3.13
Binary: Pathtracer - Model: Asian Dragon
Frames Per Second, More Is Better
5850U Smoke
MIN: 9.95 / MAX: 10.52
10.06
3
6
9
12
15
Embree 3.13
Binary: Pathtracer ISPC - Model: Asian Dragon
Frames Per Second, More Is Better
5850U Smoke
MIN: 9.18 / MAX: 9.82
9.2806
3
6
9
12
15
SVT-AV1 1.0
Encoder Mode: Preset 8 - Input: Bosphorus 4K
Frames Per Second, More Is Better
5850U Smoke
19.00
5
10
15
20
25
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

SVT-AV1 1.0

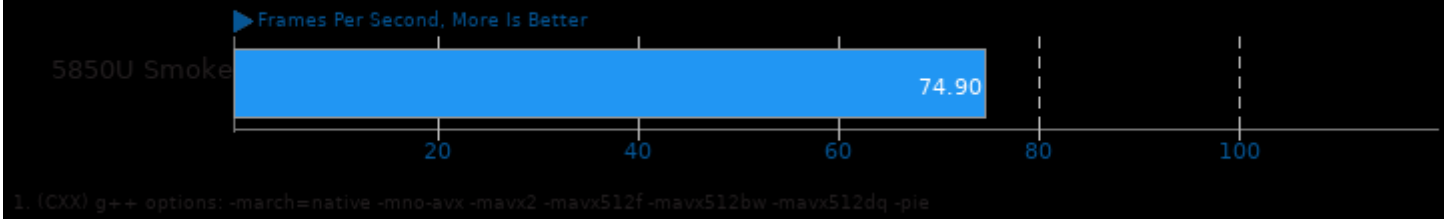
Encoder Mode: Preset 10 - Input: Bosphorus 4K



1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

SVT-AV1 1.0

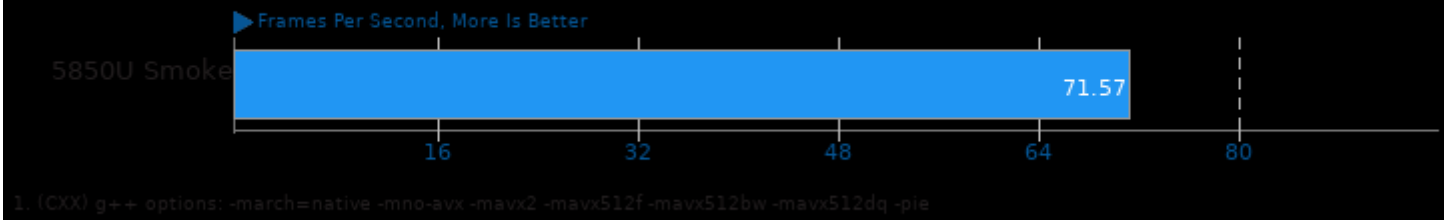
Encoder Mode: Preset 12 - Input: Bosphorus 4K



1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

SVT-AV1 1.0

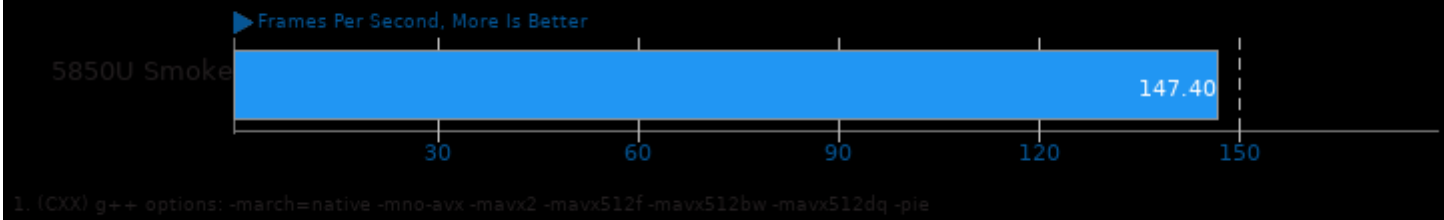
Encoder Mode: Preset 8 - Input: Bosphorus 1080p



1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

SVT-AV1 1.0

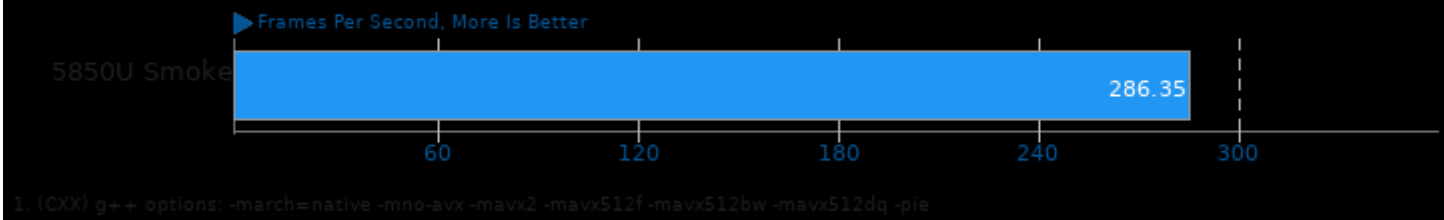
Encoder Mode: Preset 10 - Input: Bosphorus 1080p



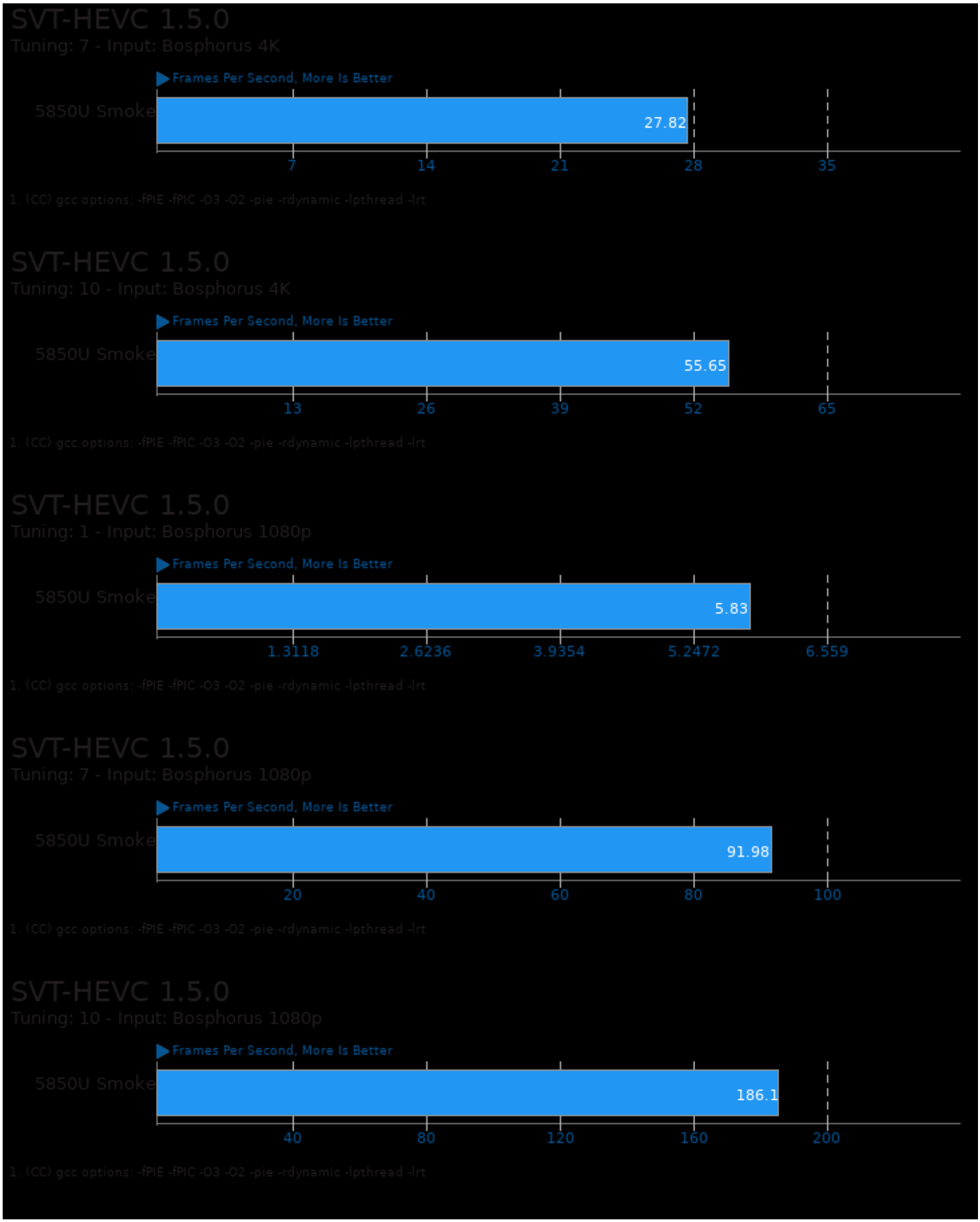
1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie

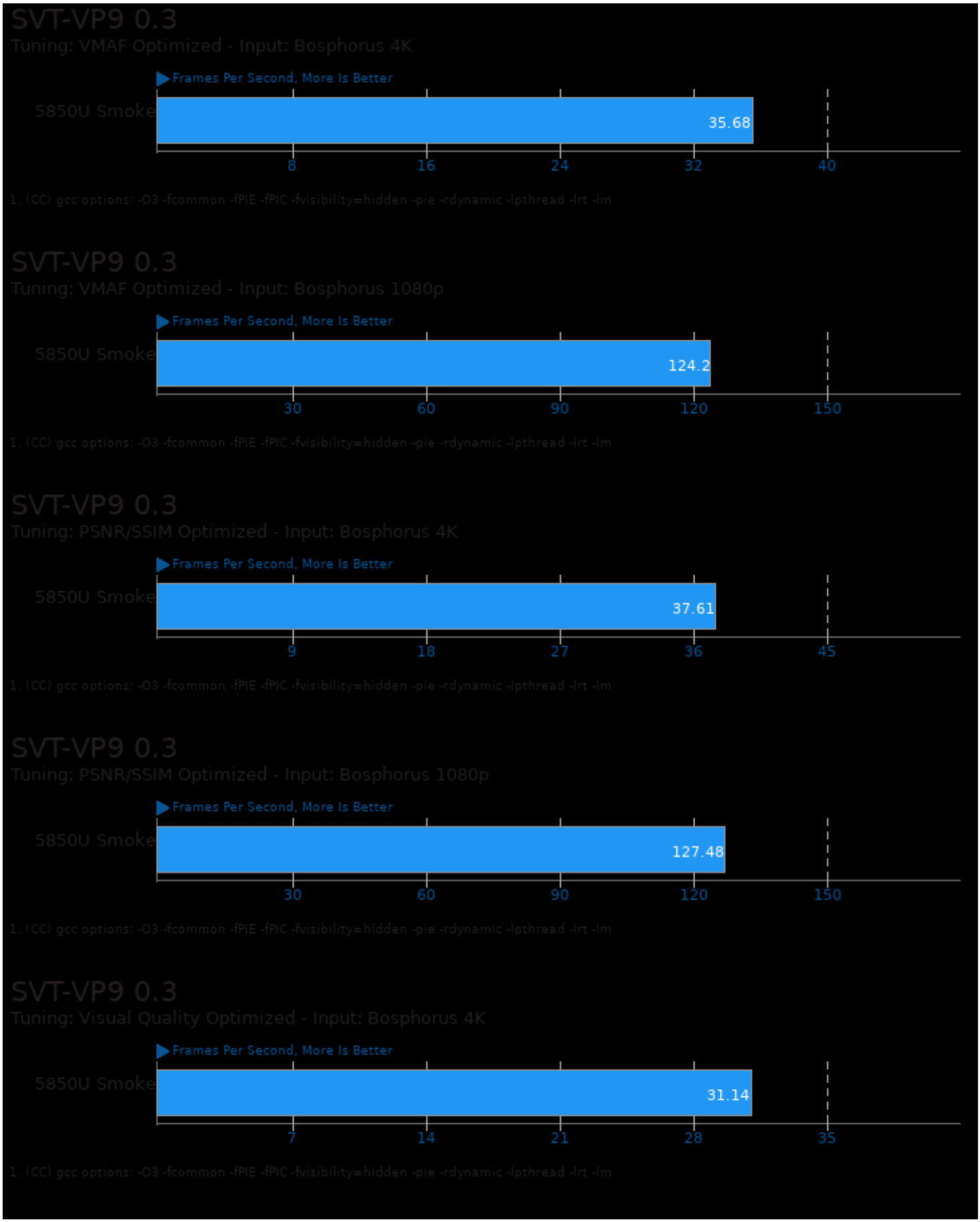
SVT-AV1 1.0

Encoder Mode: Preset 12 - Input: Bosphorus 1080p



1. (CXX) g++ options: -march=native -mno-avx -mavx2 -mavx512f -mavx512bw -mavx512dq -pie


SVT-HEVC 1.5.0
Tuning: 7 - Input: Bosphorus 4K
Frames Per Second, More Is Better
5850U Smoke
27.82
7
14
21
28
35
1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt
SVT-HEVC 1.5.0
Tuning: 10 - Input: Bosphorus 4K
Frames Per Second, More Is Better
5850U Smoke
55.65
13
26
39
52
65
1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt
SVT-HEVC 1.5.0
Tuning: 1 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
5850U Smoke
5.83
1.3118
2.6236
3.9354
5.2472
6.559
1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt
SVT-HEVC 1.5.0
Tuning: 7 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
5850U Smoke
91.98
20
40
60
80
100
1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt
SVT-HEVC 1.5.0
Tuning: 10 - Input: Bosphorus 1080p
Frames Per Second, More Is Better
5850U Smoke
186.1
40
80
120
160
200
1. (CC) gcc options: -fPIE -fPIC -O3 -O2 -pie -rdynamic -lpthread -lrt


SVT-VP9 0.3
Tuning: VMAF Optimized - Input: Bosphorus 4K
Frames Per Second, More Is Better
5850U Smoke
35.68
8
16
24
32
40
1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm
SVT-VP9 0.3
Tuning: VMAF Optimized - Input: Bosphorus 1080p
Frames Per Second, More Is Better
5850U Smoke
124.2
30
60
90
120
150
1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm
SVT-VP9 0.3
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 4K
Frames Per Second, More Is Better
5850U Smoke
37.61
9
18
27
36
45
1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm
SVT-VP9 0.3
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p
Frames Per Second, More Is Better
5850U Smoke
127.48
30
60
90
120
150
1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm
SVT-VP9 0.3
Tuning: Visual Quality Optimized - Input: Bosphorus 4K
Frames Per Second, More Is Better
5850U Smoke
31.14
7
14
21
28
35
1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

SVT-VP9 0.3

Tuning: Visual Quality Optimized - Input: Bosphorus 1080p



1. (CC) gcc options: -O3 -fcommon -fPIE -fPIC -fvisibility=hidden -pie -rdynamic -lpthread -lrt -lm

VP9 libvpx Encoding 1.10.0

Speed: Speed 5 - Input: Bosphorus 4K



1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

VP9 libvpx Encoding 1.10.0

Speed: Speed 5 - Input: Bosphorus 1080p



1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

x264 2022-02-22

Video Input: Bosphorus 4K



1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -flto

x264 2022-02-22

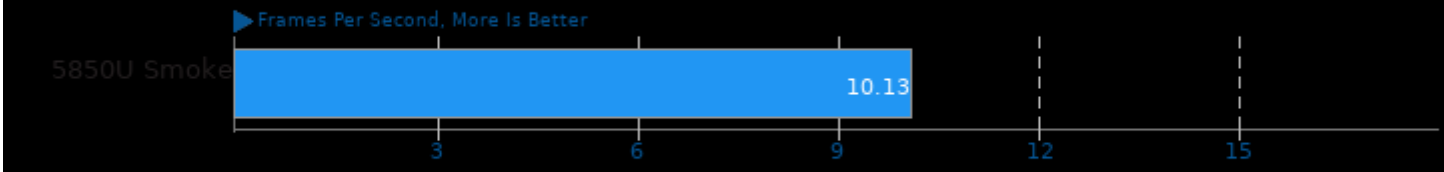
Video Input: Bosphorus 1080p



1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -flto

x265 3.4

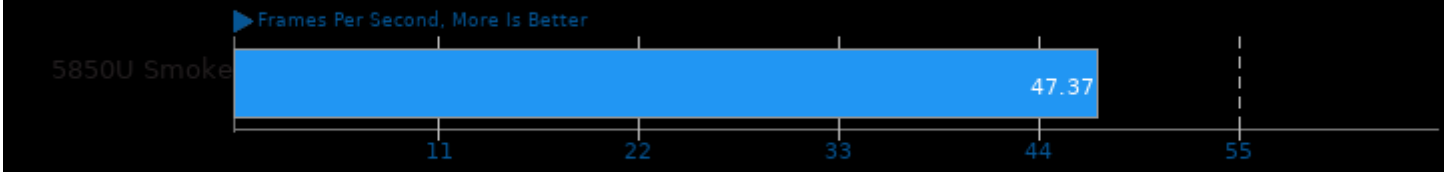
Video Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

x265 3.4

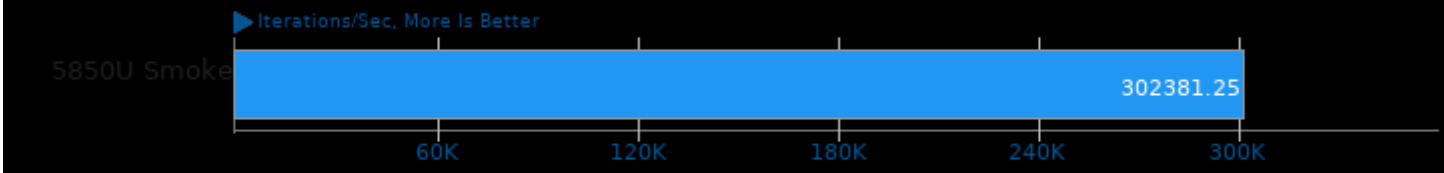
Video Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

Coremark 1.0

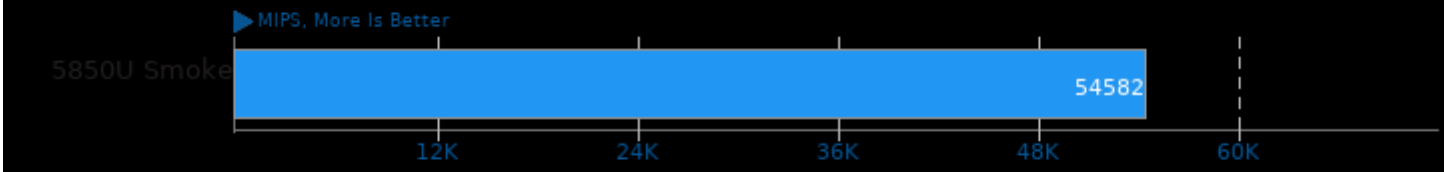
CoreMark Size 666 - Iterations Per Second



1. (CC) gcc options: -O2 -lrt" -lrt

7-Zip Compression 22.00

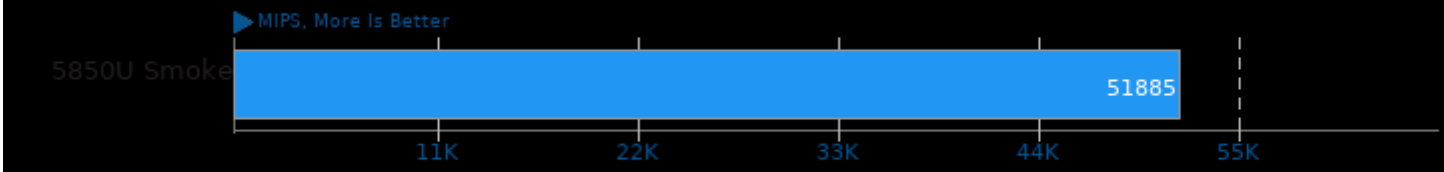
Test: Compression Rating



1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

7-Zip Compression 22.00

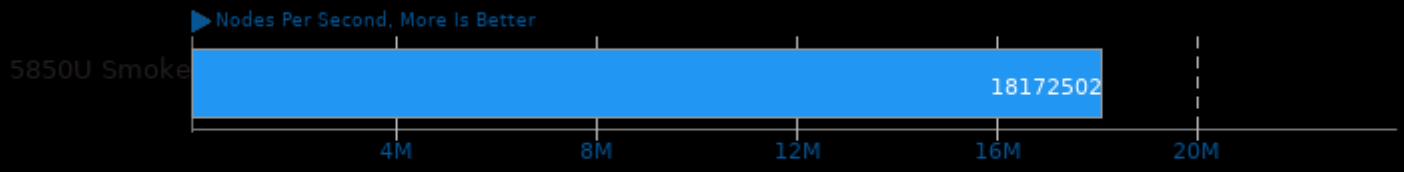
Test: Decompression Rating



1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

Stockfish 15

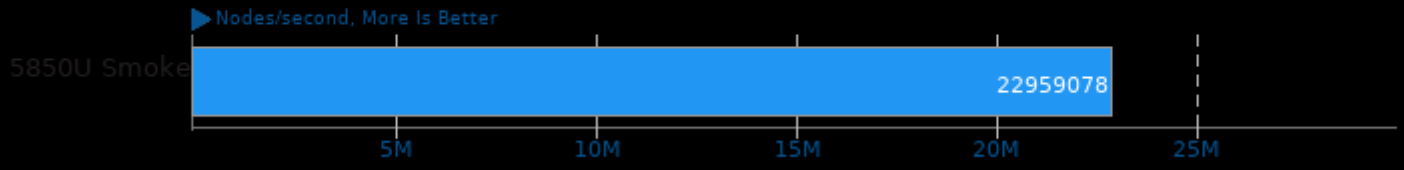
Total Time



1. (CXX) g++ options: -lgcov -m64 -lpthread -fno-exceptions -std=c++17 -fno-peel-loops -fno-tracer -pedantic -O3 -msse -msse3 -mpopcnt -mavx2 -msse

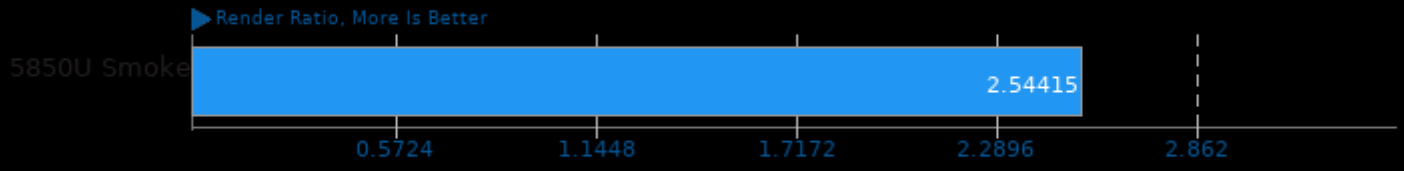
asmFish 2018-07-23

1024 Hash Memory, 26 Depth



Stargate Digital Audio Workstation 21.10.9

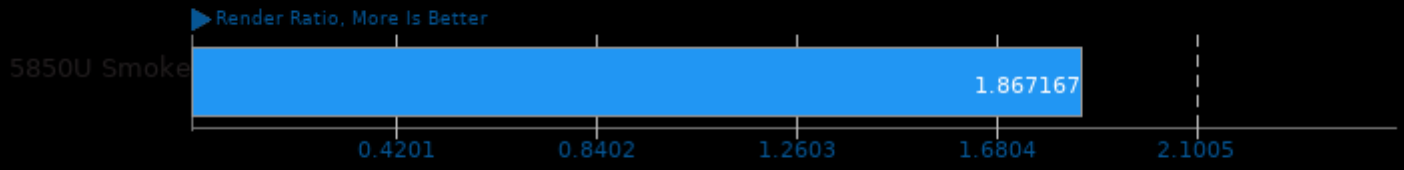
Sample Rate: 44100 - Buffer Size: 512



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

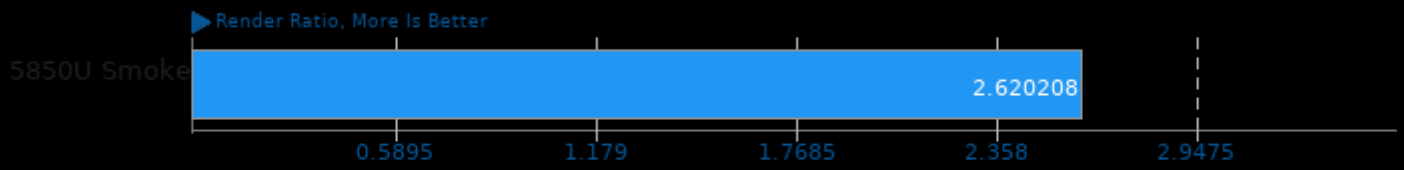
Sample Rate: 96000 - Buffer Size: 512



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

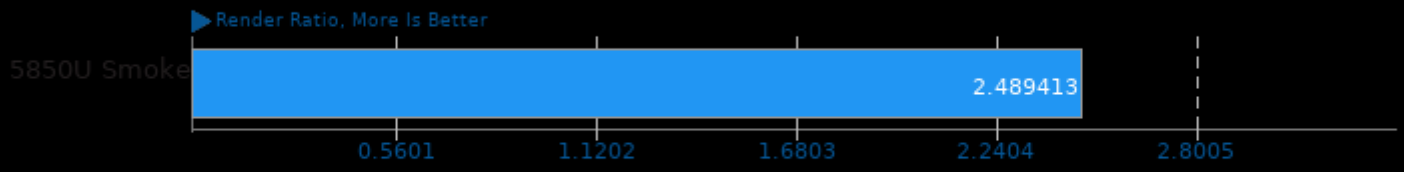
Sample Rate: 44100 - Buffer Size: 1024



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

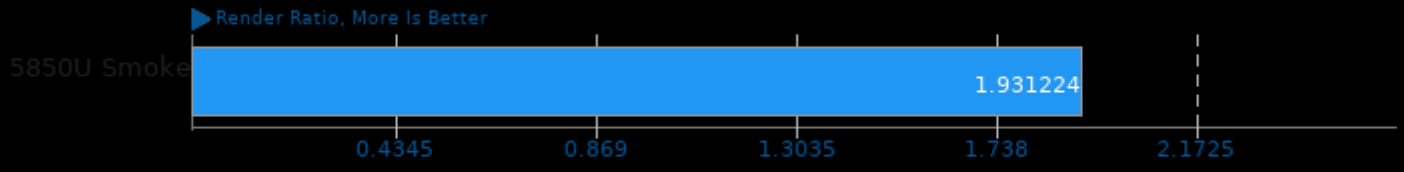
Sample Rate: 480000 - Buffer Size: 512



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

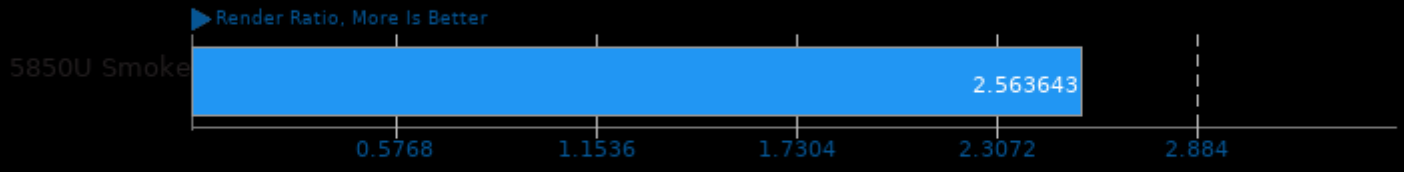
Sample Rate: 96000 - Buffer Size: 1024



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

Stargate Digital Audio Workstation 21.10.9

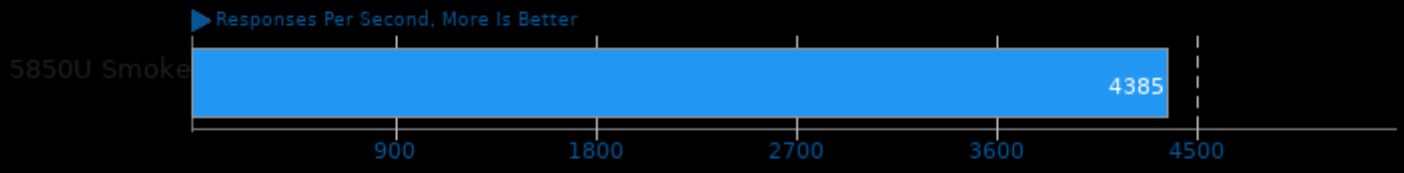
Sample Rate: 480000 - Buffer Size: 1024



1. (CXX) g++ options: -lpthread -lsndfile -lm -O3 -march=native -ffast-math -funroll-loops -fstrength-reduce -fstrict-aliasing -finline-functions

PJSIP 2.11

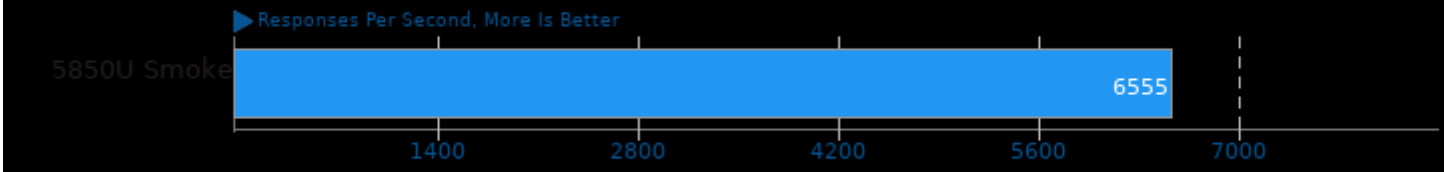
Method: INVITE



1. (CC) gcc options: -lSDL2 -lstdc++ -lssl -lcrypto -luuid -lm -lrt -lpthread -lasound -O2

PJSIP 2.11

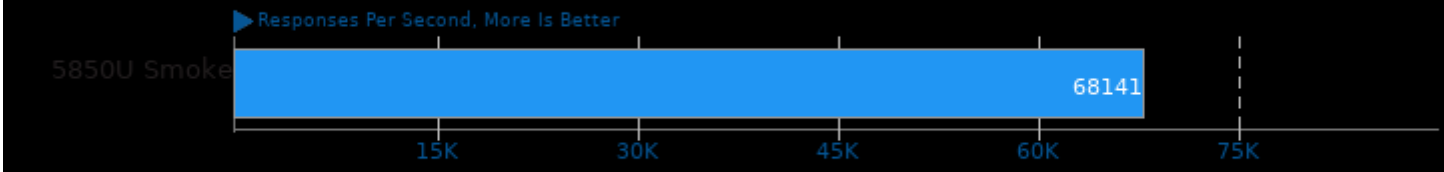
Method: OPTIONS, Stateful



1. (CC) gcc options: -lSDL2 -lstdc++ -lssl -lcrypto -luuid -lm -lrt -lpthread -lasound -O2

PJSIP 2.11

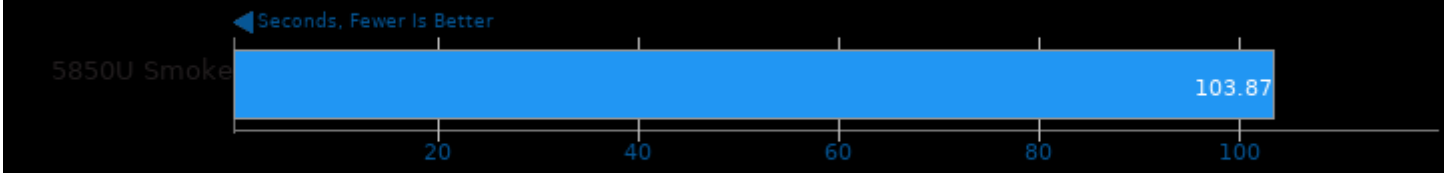
Method: OPTIONS, Stateless



1. (CC) gcc options: -lSDL2 -lstdc++ -lssl -lcrypto -luuid -lm -lrt -lpthread -lasound -O2

libavif avifenc 0.10

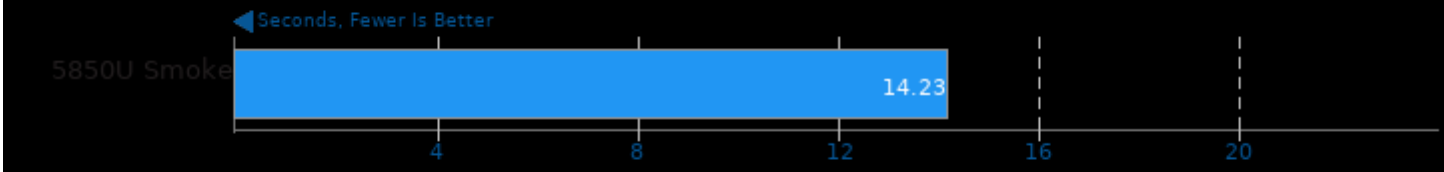
Encoder Speed: 2



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.10

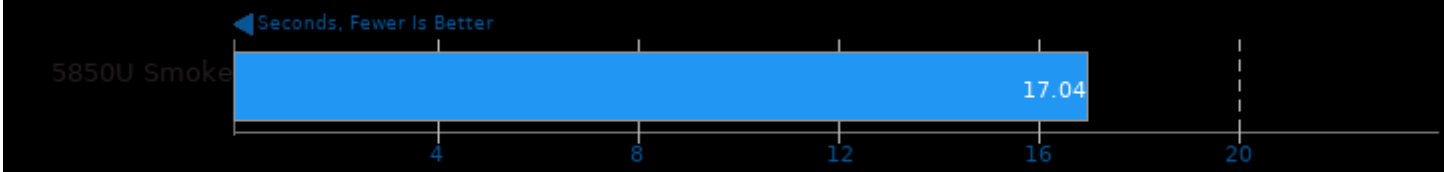
Encoder Speed: 6



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.10

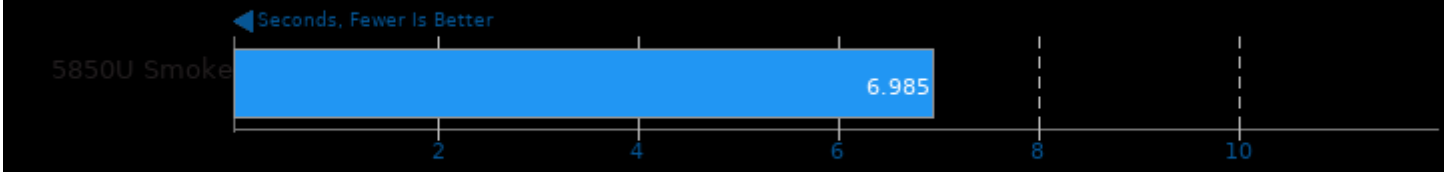
Encoder Speed: 6, Lossless



1. (CXX) g++ options: -O3 -fPIC -lm

libavif avifenc 0.10

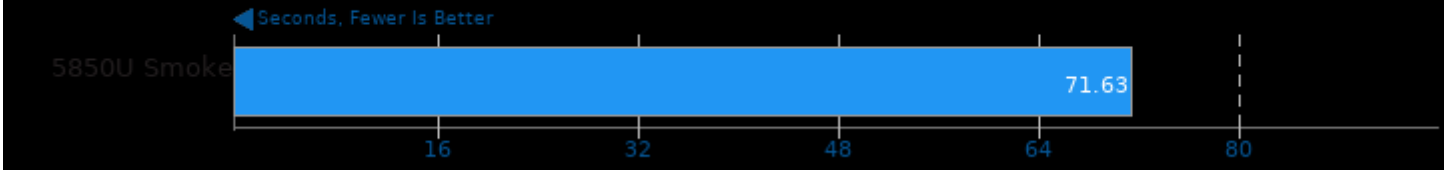
Encoder Speed: 10, Lossless



1. (CXX) g++ options: -O3 -fPIC -lm

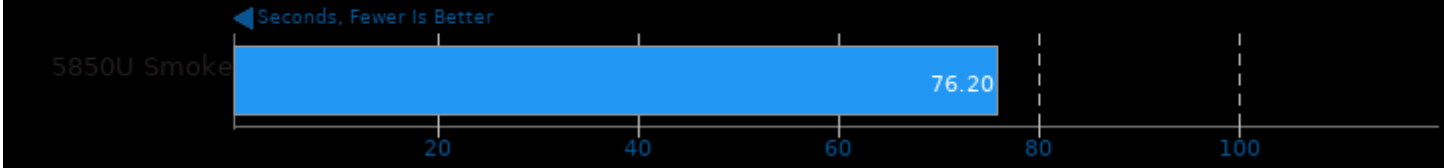
Timed FFmpeg Compilation 4.4

Time To Compile



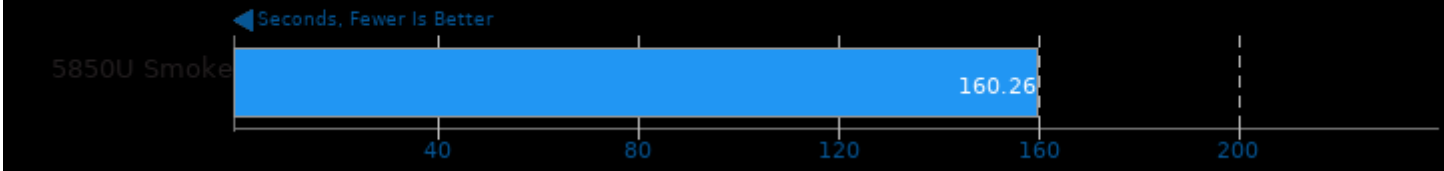
Timed GDB GNU Debugger Compilation 10.2

Time To Compile



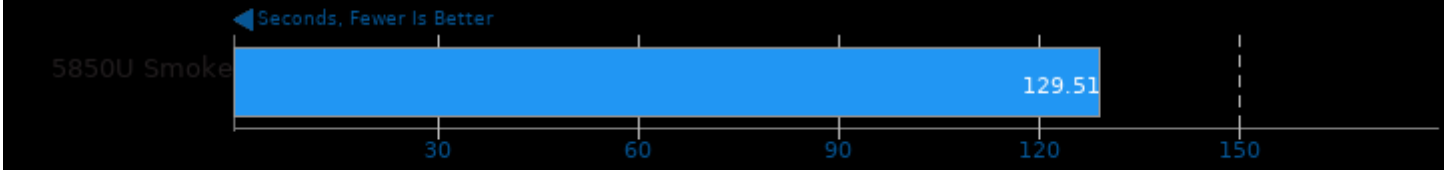
Timed Godot Game Engine Compilation 3.2.3

Time To Compile



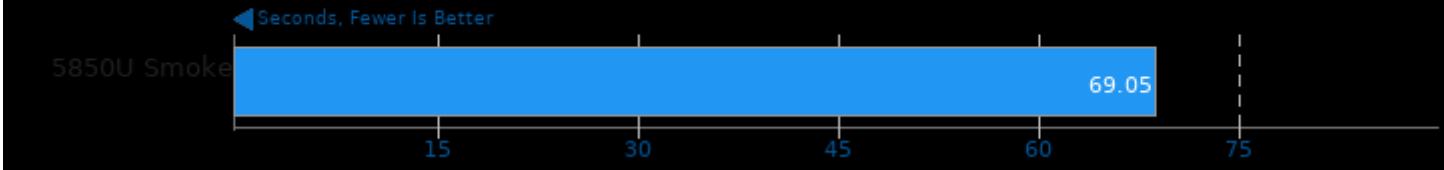
Timed Linux Kernel Compilation 5.18

Build: defconfig



Timed Mesa Compilation 21.0

Time To Compile



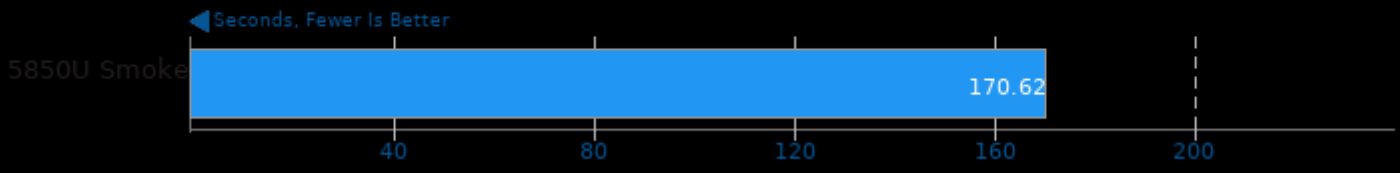
Timed PHP Compilation 7.4.2

Time To Compile



Build2 0.13

Time To Compile



Parallel BZIP2 Compression 1.1.13

FreeBSD-13.0-RELEASE-amd64-memstick.img Compression



1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread

POV-Ray 3.7.0.7

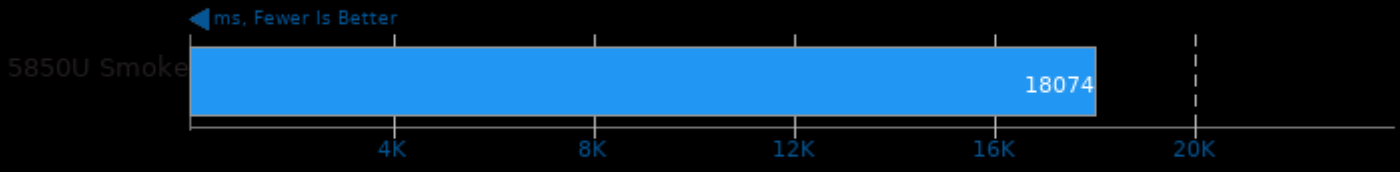
Trace Time



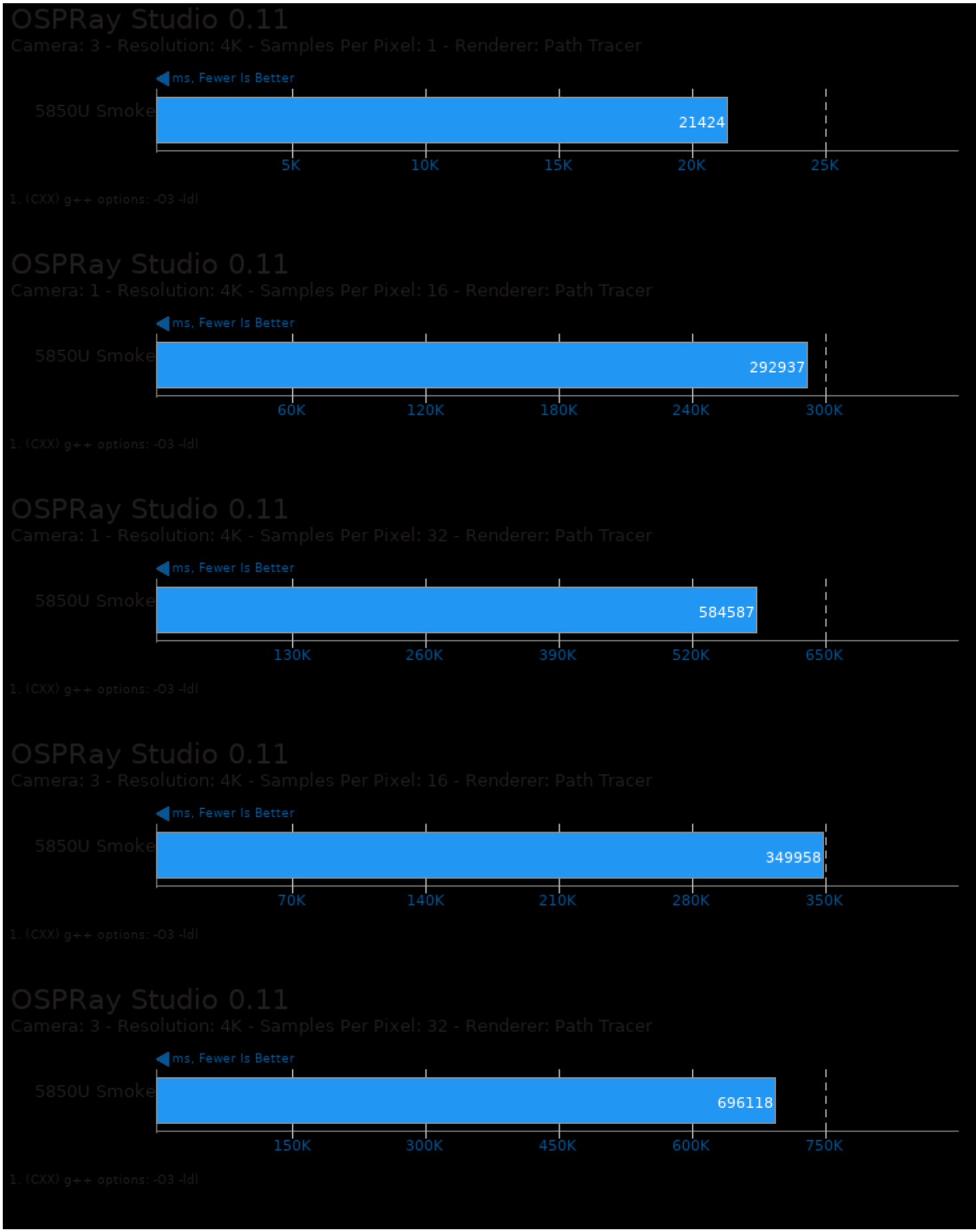
1. (CXX) g++ options: -pipe -O3 -ffast-math -march=native -R/usr/lib -lXpm -lSM -lICE -lX11 -ltiff -ljpeg -lpng -lz -lrt -lm -lboost_thread -lboost_system

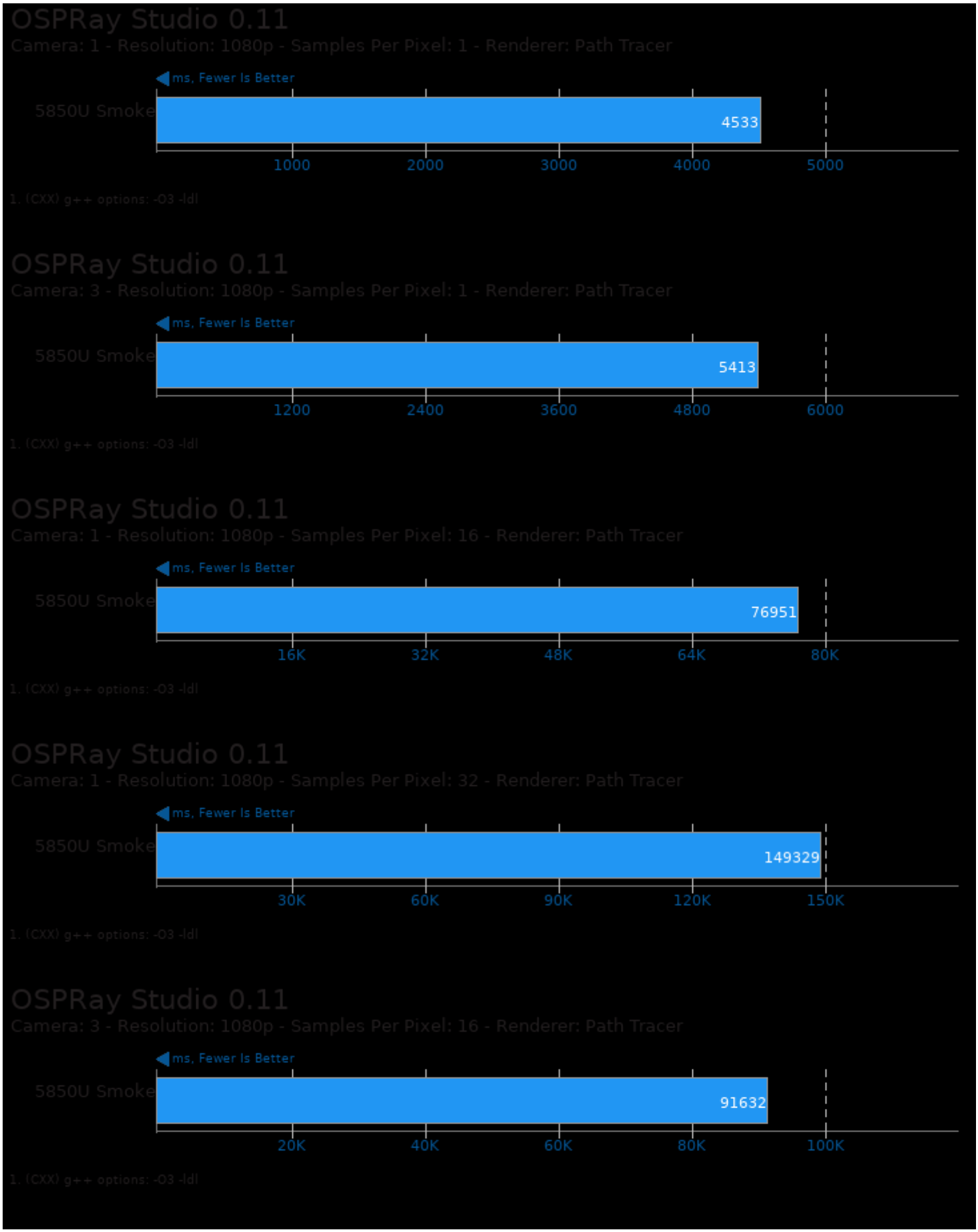
OSPRay Studio 0.11

Camera: 1 - Resolution: 4K - Samples Per Pixel: 1 - Renderer: Path Tracer



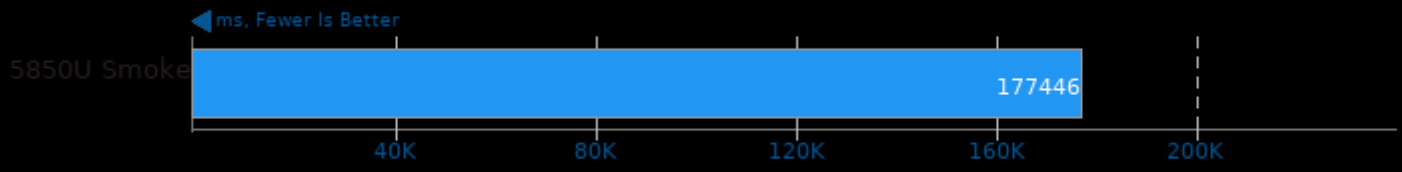
1. (CXX) g++ options: -O3 -ldl


OSPRay Studio 0.11
Camera: 3 - Resolution: 4K - Samples Per Pixel: 1 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
21424
5K
10K
15K
20K
25K
1. (CXX) g++ options: -O3 -ldl
OSPRay Studio 0.11
Camera: 1 - Resolution: 4K - Samples Per Pixel: 16 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
292937
60K
120K
180K
240K
300K
1. (CXX) g++ options: -O3 -ldl
OSPRay Studio 0.11
Camera: 1 - Resolution: 4K - Samples Per Pixel: 32 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
584587
130K
260K
390K
520K
650K
1. (CXX) g++ options: -O3 -ldl
OSPRay Studio 0.11
Camera: 3 - Resolution: 4K - Samples Per Pixel: 16 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
349958
70K
140K
210K
280K
350K
1. (CXX) g++ options: -O3 -ldl
OSPRay Studio 0.11
Camera: 3 - Resolution: 4K - Samples Per Pixel: 32 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
696118
150K
300K
450K
600K
750K
1. (CXX) g++ options: -O3 -ldl


OSPRay Studio 0.11
Camera: 1 - Resolution: 1080p - Samples Per Pixel: 1 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
4533
1000
2000
3000
4000
5000
1. (CXX) g++ options: -O3 -ldl
OSPRay Studio 0.11
Camera: 3 - Resolution: 1080p - Samples Per Pixel: 1 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
5413
1200
2400
3600
4800
6000
1. (CXX) g++ options: -O3 -ldl
OSPRay Studio 0.11
Camera: 1 - Resolution: 1080p - Samples Per Pixel: 16 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
76951
16K
32K
48K
64K
80K
1. (CXX) g++ options: -O3 -ldl
OSPRay Studio 0.11
Camera: 1 - Resolution: 1080p - Samples Per Pixel: 32 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
149329
30K
60K
90K
120K
150K
1. (CXX) g++ options: -O3 -ldl
OSPRay Studio 0.11
Camera: 3 - Resolution: 1080p - Samples Per Pixel: 16 - Renderer: Path Tracer
ms, Fewer Is Better
5850U Smoke
91632
20K
40K
60K
80K
100K
1. (CXX) g++ options: -O3 -ldl

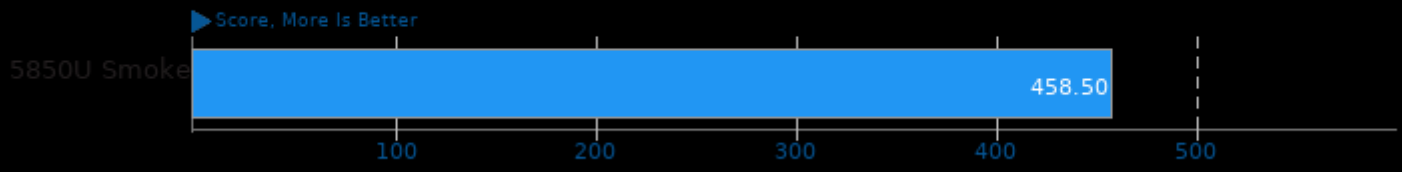
OSPRay Studio 0.11

Camera: 3 - Resolution: 1080p - Samples Per Pixel: 32 - Renderer: Path Tracer



1. (CXX) g++ options: -O3 -ldl

Numpy Benchmark



Timed Wasmer Compilation 2.2

Time To Compile



1. (CC) gcc options: -m64 -ldl -lxkbcommon -lgcc_s -lutil -lrt -lpthread -lm -lc -pie -nodefaultlibs

XZ Compression 5.2.4

Compressing ubuntu-16.04.3-server-i386.img, Compression Level 9



1. (CC) gcc options: -fvisibility=hidden -O2

FLAC Audio Encoding 1.3.3

WAV To FLAC



1. (CXX) g++ options: -fvisibility=hidden -logg -lm

LAME MP3 Encoding 3.100

WAV To MP3



1. (CC) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -lm

Opus Codec Encoding 1.3.1

WAV To Opus Encode



1. (CXX) g++ options: -fvisibility=hidden -logg -lm

Ngspice 34

Circuit: C2670



1. (CC) gcc options: -O0 -fopenmp -lm -lstdc++ -lfftw3 -lXaw -lXmu -lXt -lXext -lX11 -lXft -lfontconfig -lXrender -lfreetype -lSM -lICE

Ngspice 34

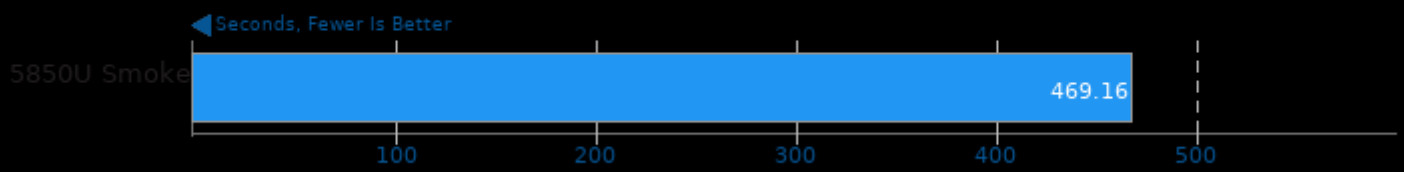
Circuit: C7552



1. (CC) gcc options: -O0 -fopenmp -lm -lstdc++ -lfftw3 -lXaw -lXmu -lXt -lXext -lX11 -lXft -lfontconfig -lXrender -lfreetype -lSM -lICE

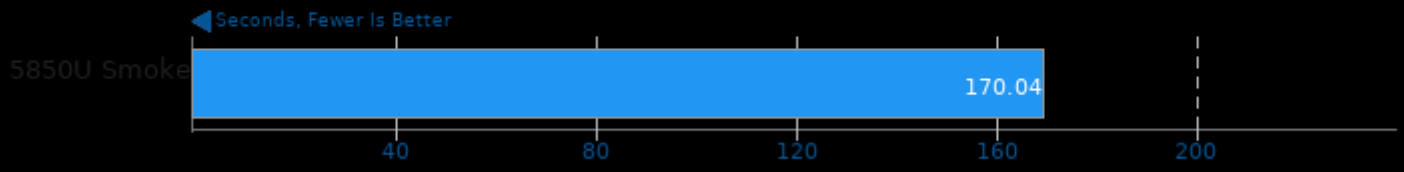
Radiance Benchmark 5.0

Test: Serial



Radiance Benchmark 5.0

Test: SMP Parallel



RNNoise 2020-06-28



1. (CC) gcc options: -O2 -pedantic -fvisibility=hidden

Google SynthMark 20201109

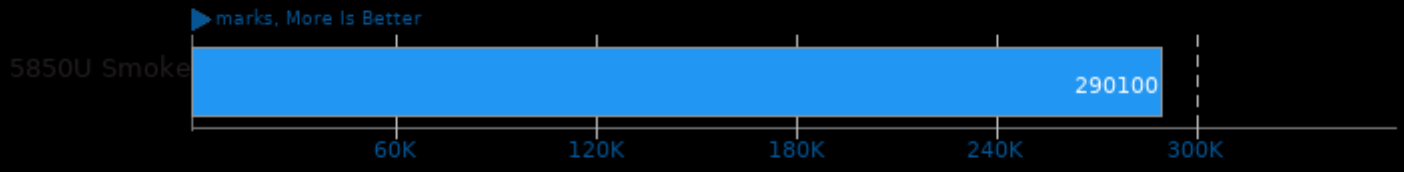
Test: VoiceMark_100



1. (CXX) g++ options: -lm -lpthread -std=c++11 -Ofast

SecureMark 1.0.4

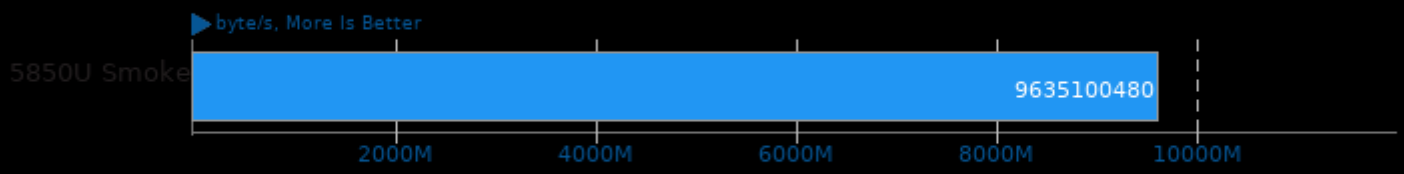
Benchmark: SecureMark-TLS



1. (CC) gcc options: -pedantic -O3

OpenSSL 3.0

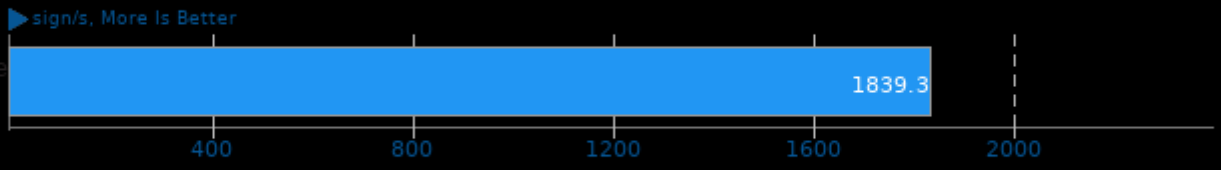
Algorithm: SHA256



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

OpenSSL 3.0

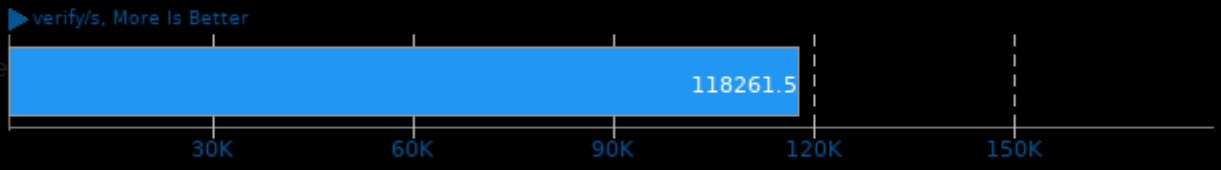
Algorithm: RSA4096



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

OpenSSL 3.0

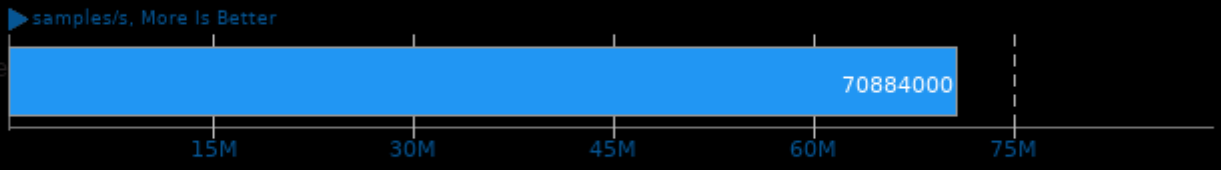
Algorithm: RSA4096



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

Liquid-DSP 2021.01.31

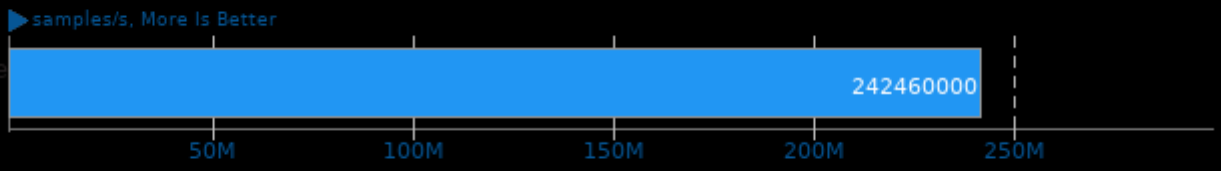
Threads: 1 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

Liquid-DSP 2021.01.31

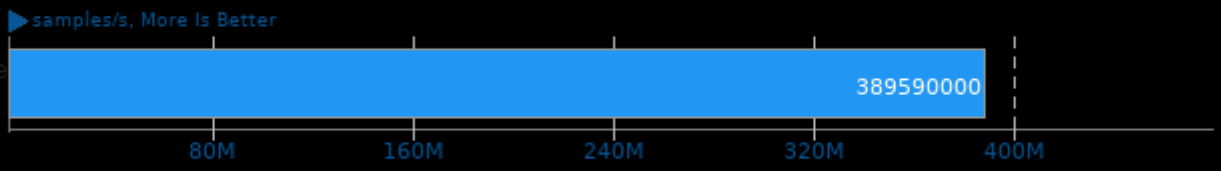
Threads: 4 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

Liquid-DSP 2021.01.31

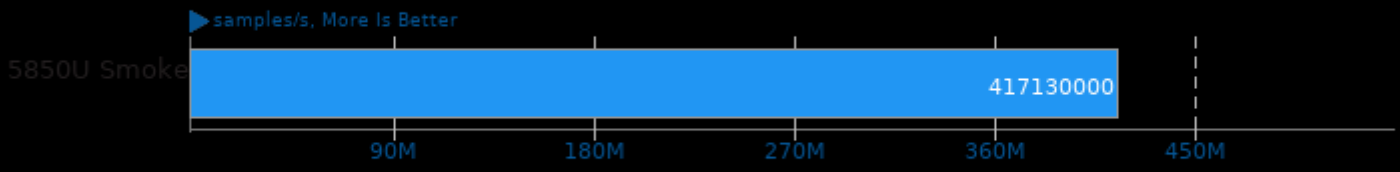
Threads: 8 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

Liquid-DSP 2021.01.31

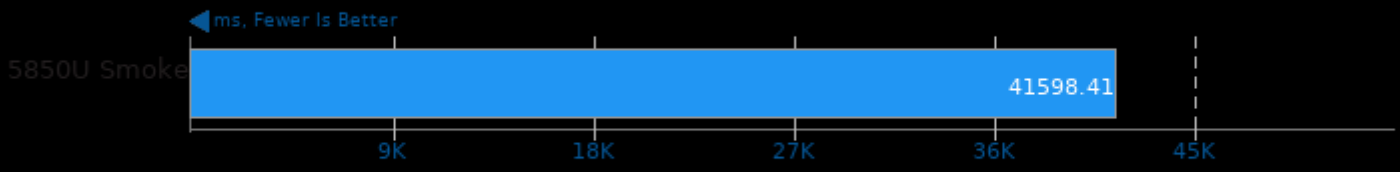
Threads: 16 - Buffer Length: 256 - Filter Length: 57



1. (CC) gcc options: -O3 -pthread -lm -lc -lliquid

FinanceBench 2016-07-25

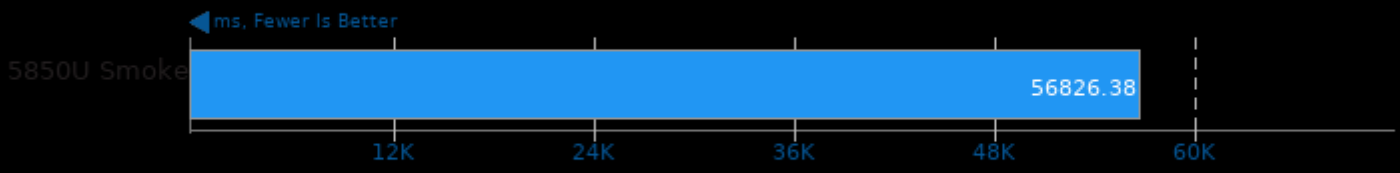
Benchmark: Repo OpenMP



1. (CXX) g++ options: -O3 -march=native -fopenmp

FinanceBench 2016-07-25

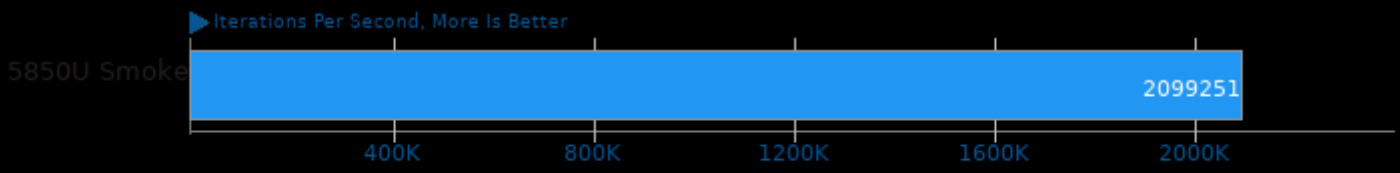
Benchmark: Bonds OpenMP



1. (CXX) g++ options: -O3 -march=native -fopenmp

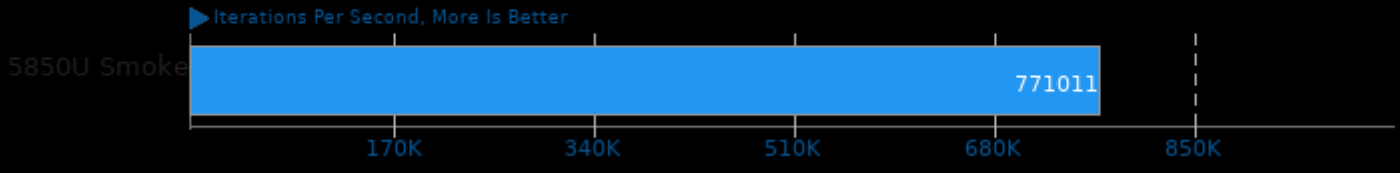
Cryptsetup

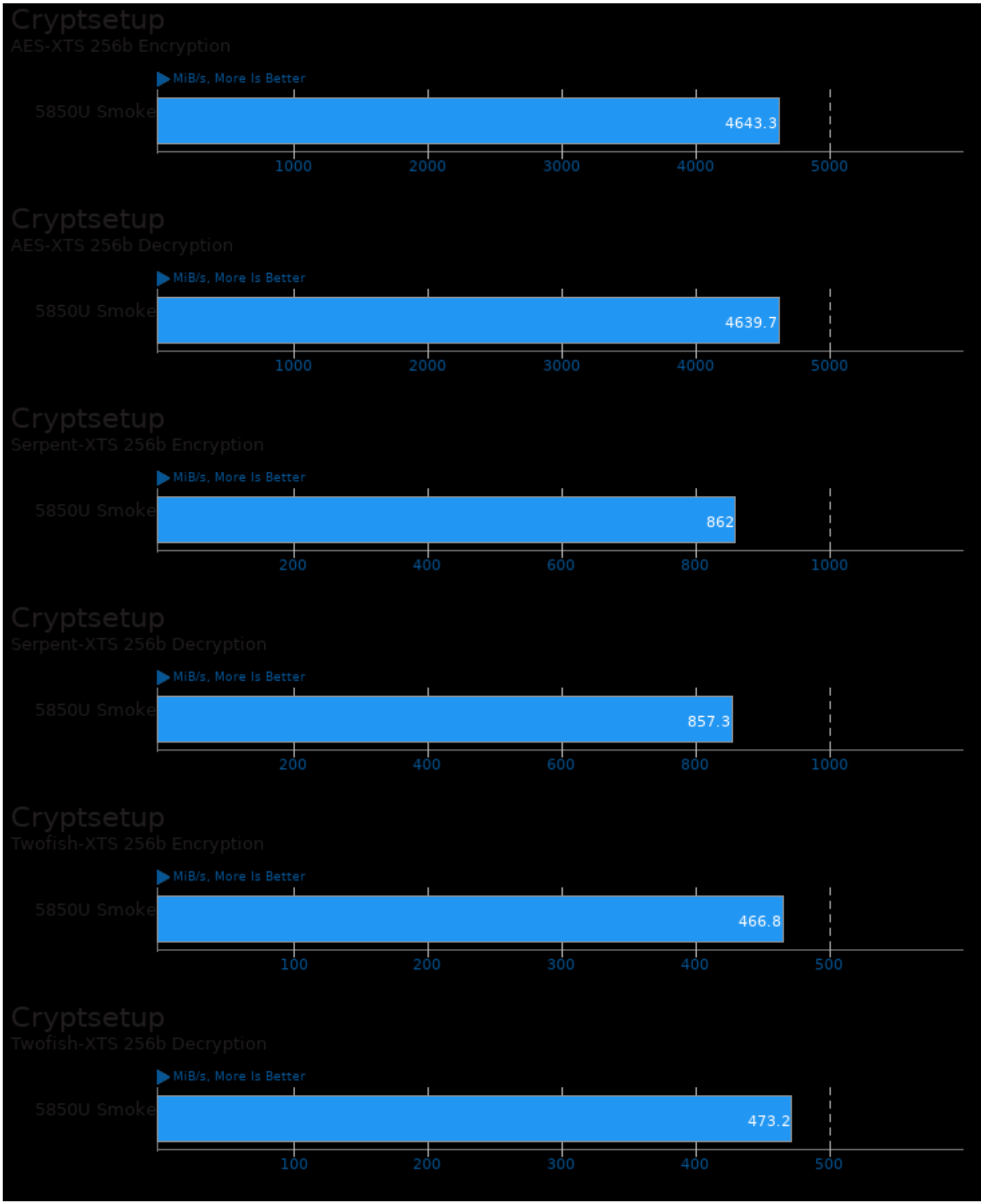
PBKDF2-sha512

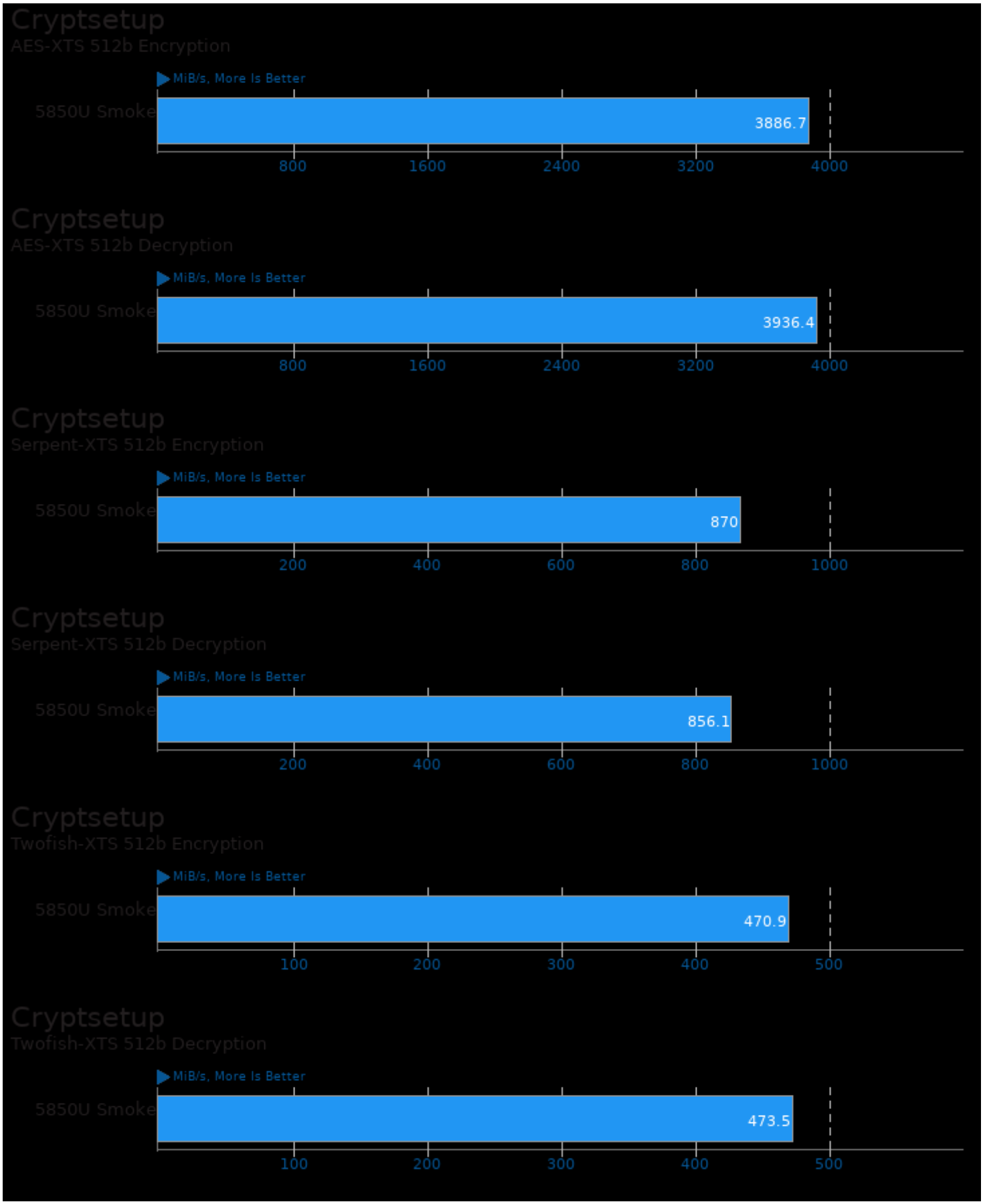


Cryptsetup

PBKDF2-whirlpool

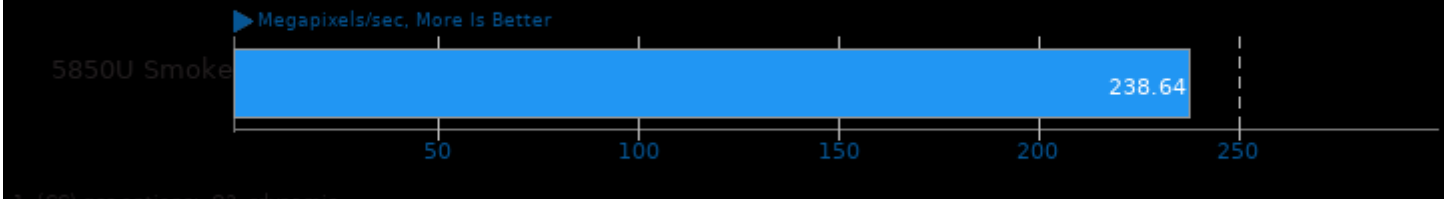



Cryptsetup
AES-XTS 256b Encryption
MiB/s, More Is Better
5850U Smoke
4643.3
1000
2000
3000
4000
5000
Cryptsetup
AES-XTS 256b Decryption
MiB/s, More Is Better
5850U Smoke
4639.7
1000
2000
3000
4000
5000
Cryptsetup
Serpent-XTS 256b Encryption
MiB/s, More Is Better
5850U Smoke
862
200
400
600
800
1000
Cryptsetup
Serpent-XTS 256b Decryption
MiB/s, More Is Better
5850U Smoke
857.3
200
400
600
800
1000
Cryptsetup
Twofish-XTS 256b Encryption
MiB/s, More Is Better
5850U Smoke
466.8
100
200
300
400
500
Cryptsetup
Twofish-XTS 256b Decryption
MiB/s, More Is Better
5850U Smoke
473.2
100
200
300
400
500


Cryptsetup
AES-XTS 512b Encryption
MiB/s, More Is Better
5850U Smoke
3886.7
800
1600
2400
3200
4000
Cryptsetup
AES-XTS 512b Decryption
MiB/s, More Is Better
5850U Smoke
3936.4
800
1600
2400
3200
4000
Cryptsetup
Serpent-XTS 512b Encryption
MiB/s, More Is Better
5850U Smoke
870
200
400
600
800
1000
Cryptsetup
Serpent-XTS 512b Decryption
MiB/s, More Is Better
5850U Smoke
856.1
200
400
600
800
1000
Cryptsetup
Twofish-XTS 512b Encryption
MiB/s, More Is Better
5850U Smoke
470.9
100
200
300
400
500
Cryptsetup
Twofish-XTS 512b Decryption
MiB/s, More Is Better
5850U Smoke
473.5
100
200
300
400
500

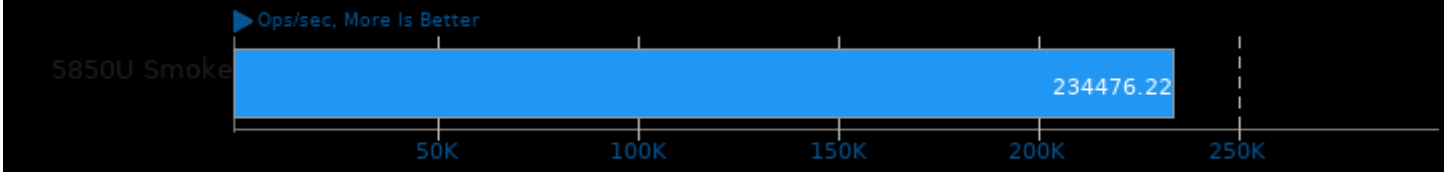
libjpeg-turbo tjbench 2.1.0

Test: Decompression Throughput



1. (CC) gcc options: -O3 -rdynamic

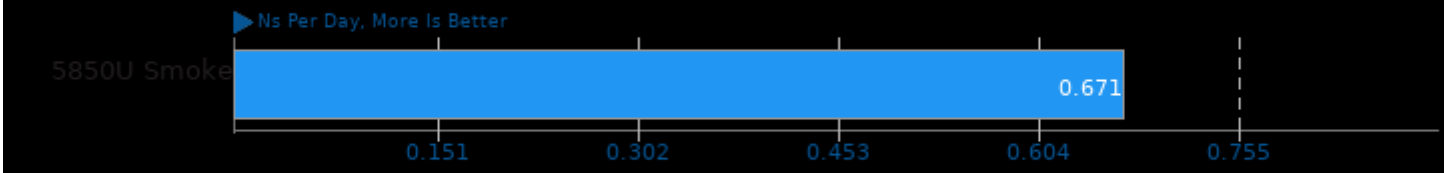
KeyDB 6.2.0



1. (CXX) g++ options: -O2 -levent_openssl -levent -lcrypto -lssl -lpthread -lz -lpcre

GROMACS 2022.1

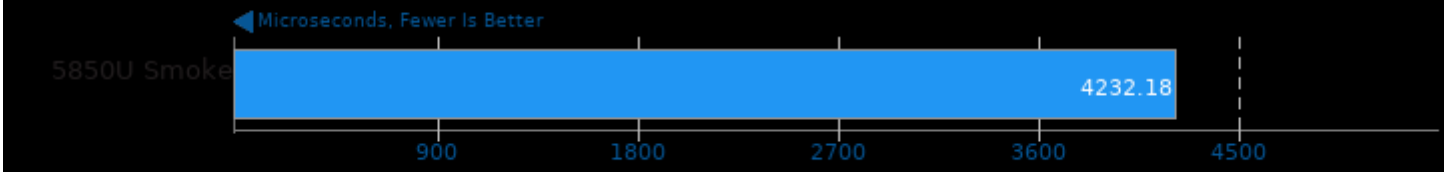
Implementation: MPI CPU - Input: water_GMX50_bare



1. (CXX) g++ options: -O3

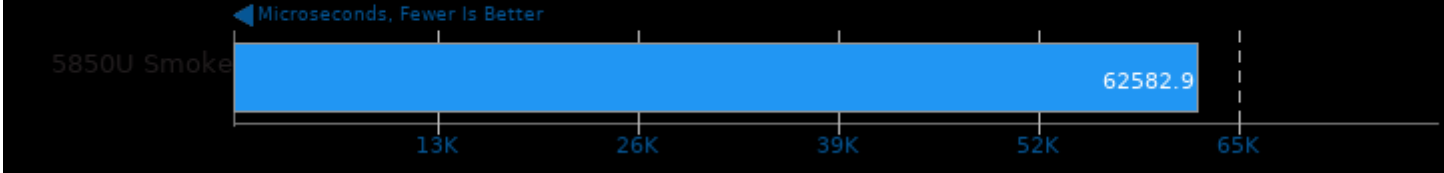
TensorFlow Lite 2022-05-18

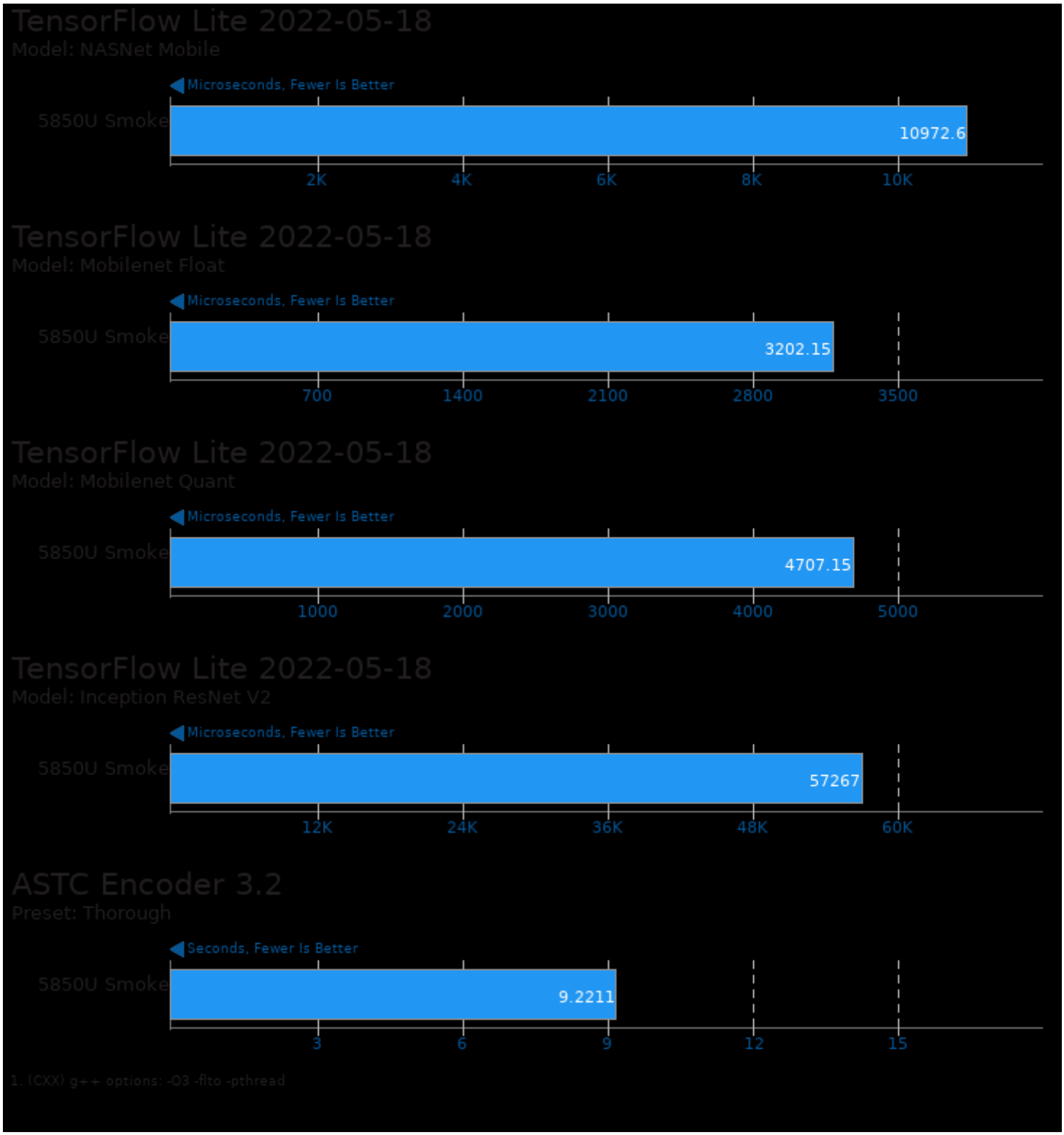
Model: SqueezeNet



TensorFlow Lite 2022-05-18

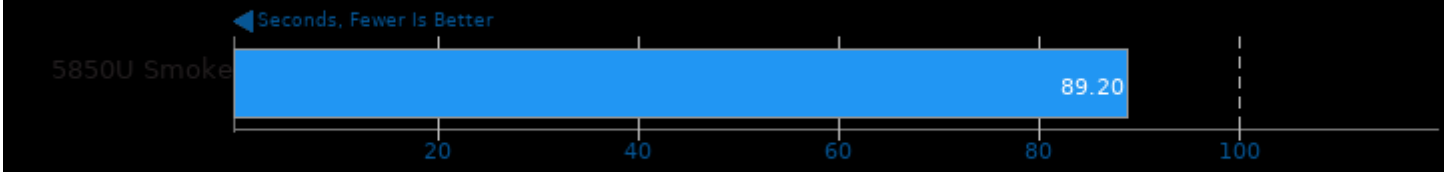
Model: Inception V4




TensorFlow Lite 2022-05-18
Model: NASNet Mobile
Microseconds, Fewer Is Better
5850U Smoke
10972.6
2K
4K
6K
8K
10K
TensorFlow Lite 2022-05-18
Model: Mobilenet Float
Microseconds, Fewer Is Better
5850U Smoke
3202.15
700
1400
2100
2800
3500
TensorFlow Lite 2022-05-18
Model: Mobilenet Quant
Microseconds, Fewer Is Better
5850U Smoke
4707.15
1000
2000
3000
4000
5000
TensorFlow Lite 2022-05-18
Model: Inception ResNet V2
Microseconds, Fewer Is Better
5850U Smoke
57267
12K
24K
36K
48K
60K
ASTC Encoder 3.2
Preset: Thorough
Seconds, Fewer Is Better
5850U Smoke
9.2211
3
6
9
12
15
1. (CXX) g++ options: -O3 -flto -pthread

ASTC Encoder 3.2

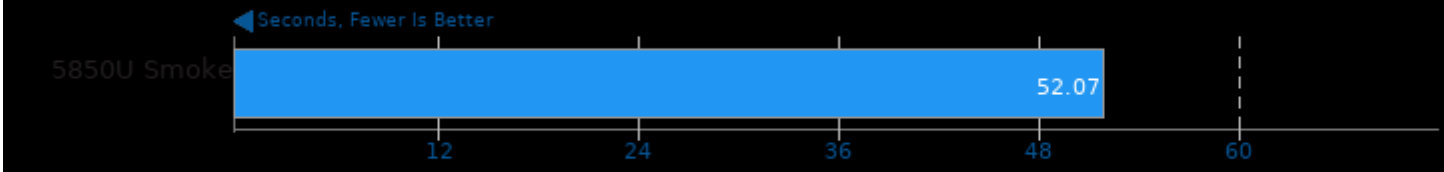
Preset: Exhaustive



1. (CXX) g++ options: -O3 -flto -pthread

SQLite Speedtest 3.30

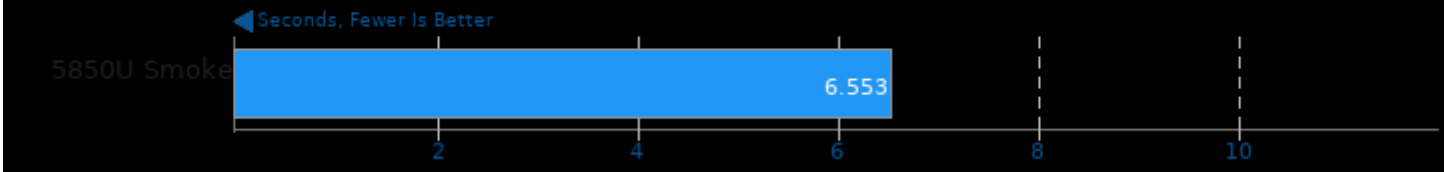
Timed Time - Size 1,000



1. (CC) gcc options: -O2 -lz

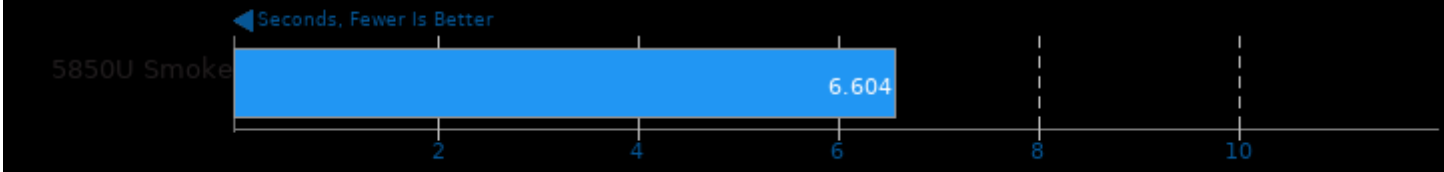
Darktable 3.8.1

Test: Boat - Acceleration: CPU-only



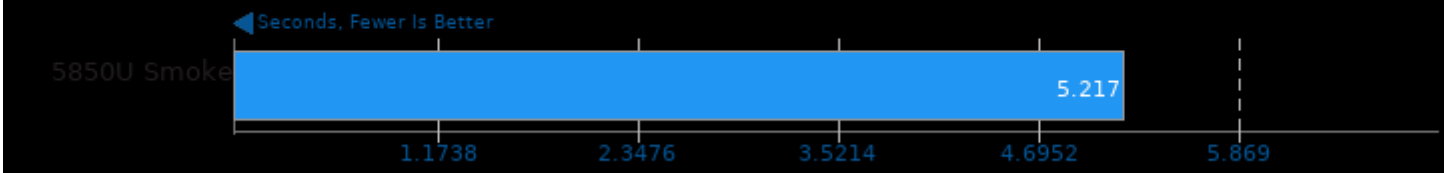
Darktable 3.8.1

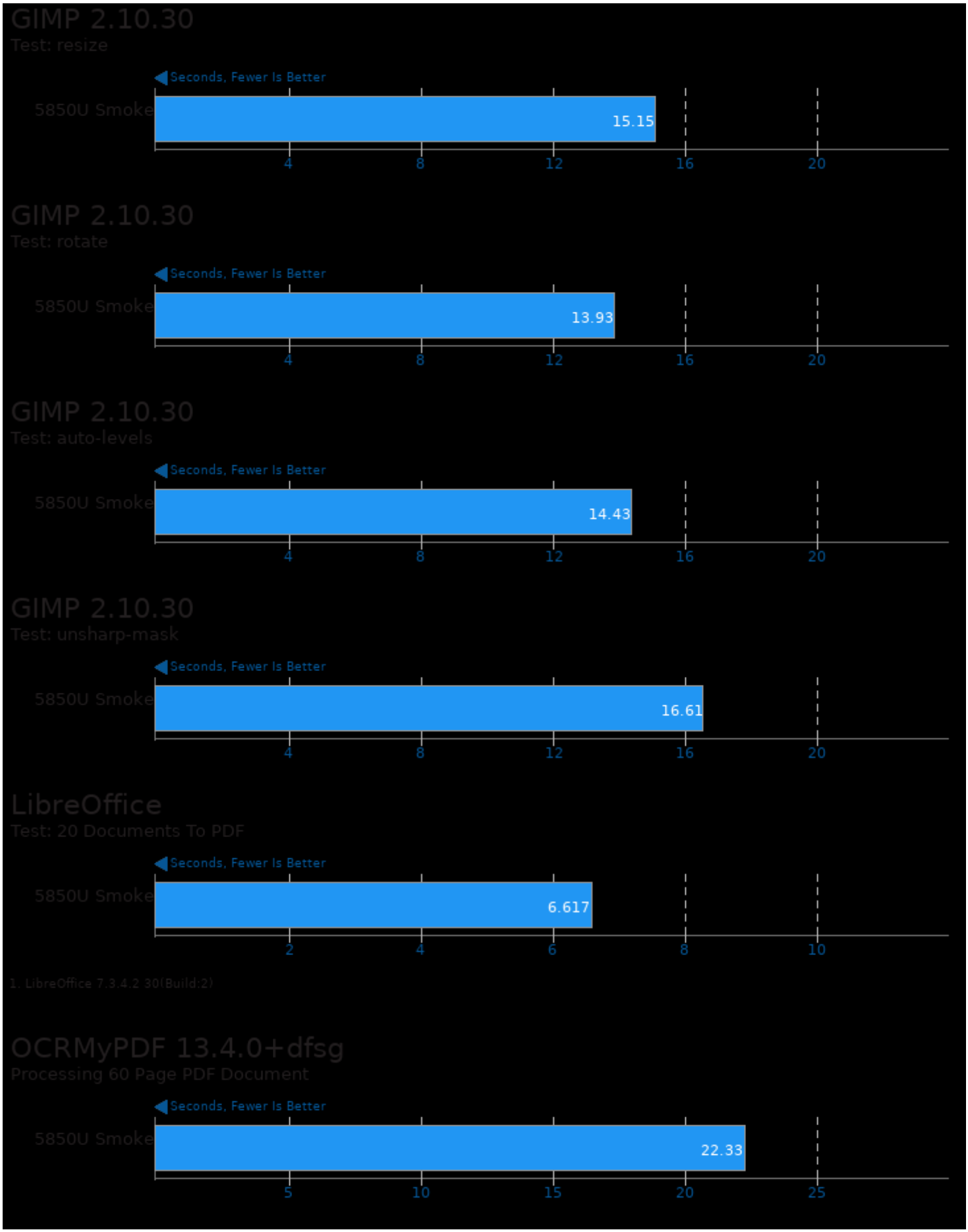
Test: Masskrug - Acceleration: CPU-only



Darktable 3.8.1

Test: Server Room - Acceleration: CPU-only



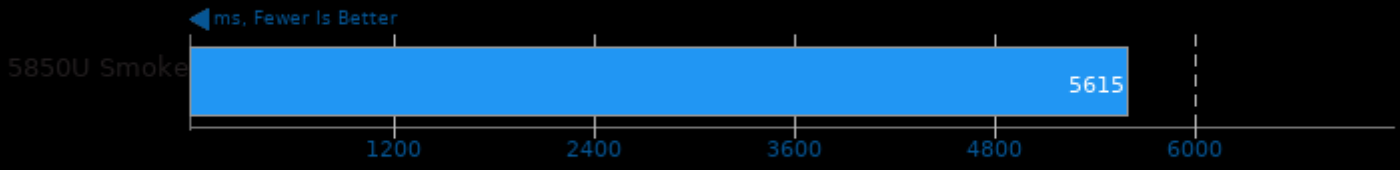

GIMP 2.10.30
Test: resize
Seconds, Fewer Is Better
5850U Smoke
15.15
4
8
12
16
20
GIMP 2.10.30
Test: rotate
Seconds, Fewer Is Better
5850U Smoke
13.93
4
8
12
16
20
GIMP 2.10.30
Test: auto-levels
Seconds, Fewer Is Better
5850U Smoke
14.43
4
8
12
16
20
GIMP 2.10.30
Test: unsharp-mask
Seconds, Fewer Is Better
5850U Smoke
16.61
4
8
12
16
20
LibreOffice
Test: 20 Documents To PDF
Seconds, Fewer Is Better
5850U Smoke
6.617
2
4
6
8
10
1. LibreOffice 7.3.4.2 30(Build:2)
OCRMyPDF 13.4.0+dfsg
Processing 60 Page PDF Document
Seconds, Fewer Is Better
5850U Smoke
22.33
5
10
15
20
25

GNU Octave Benchmark 6.4.0



Google Draco 1.5.0

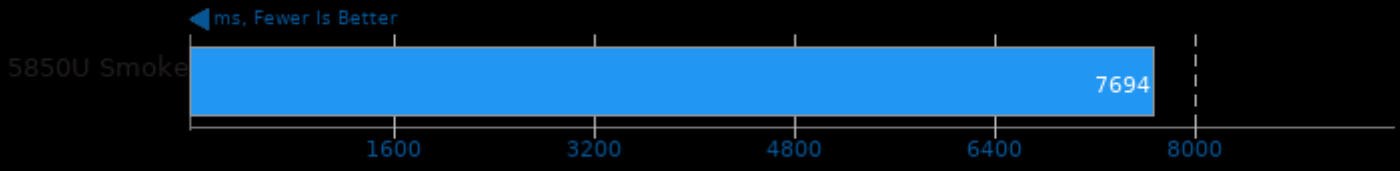
Model: Lion



1. (CXX) g++ options: -O3

Google Draco 1.5.0

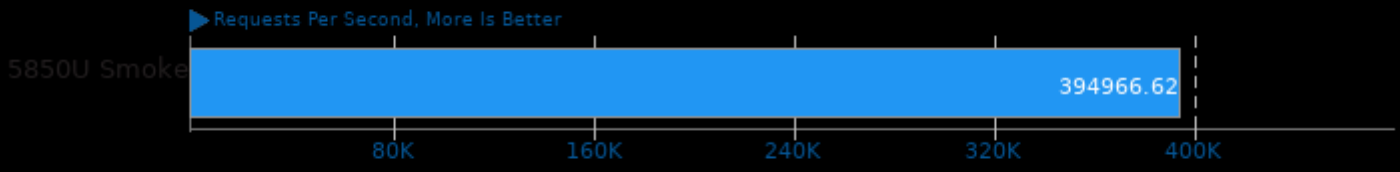
Model: Church Facade



1. (CXX) g++ options: -O3

Redis 6.0.9

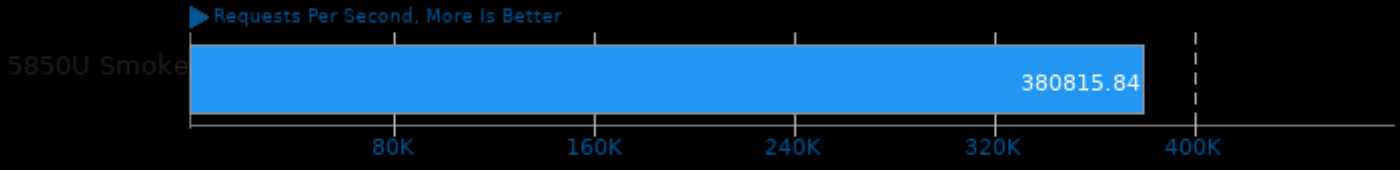
Test: GET



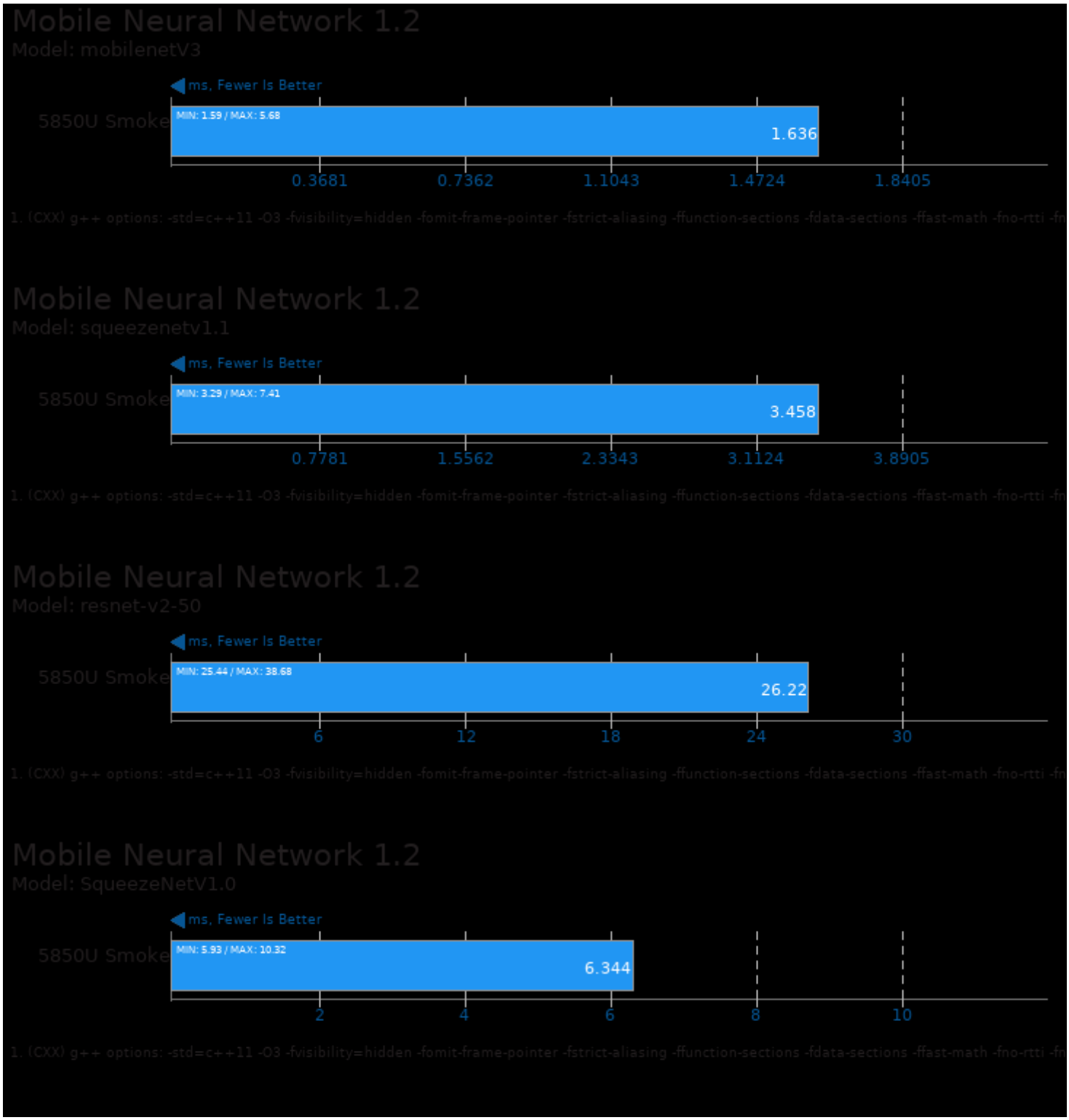
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

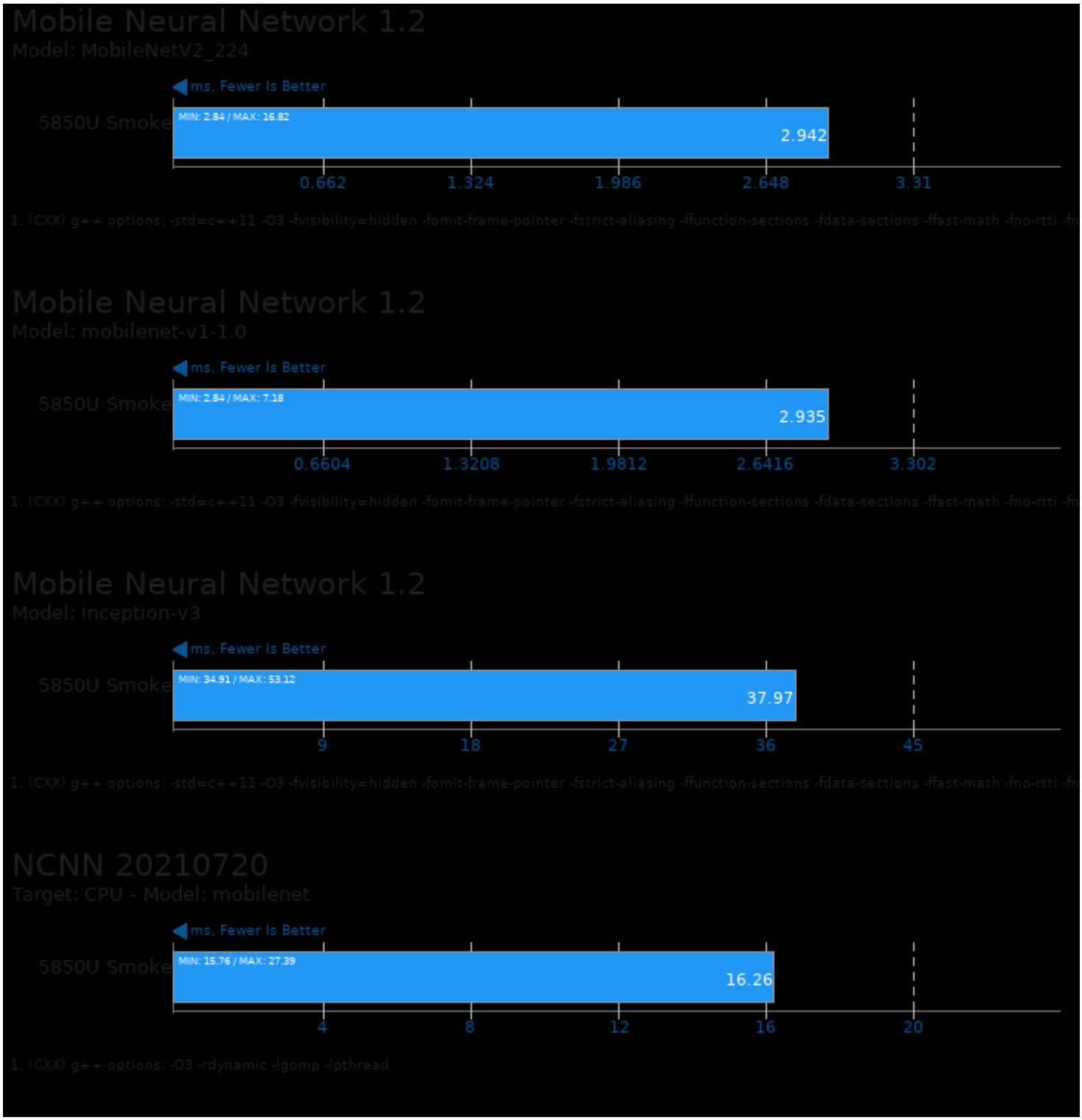
Redis 6.0.9

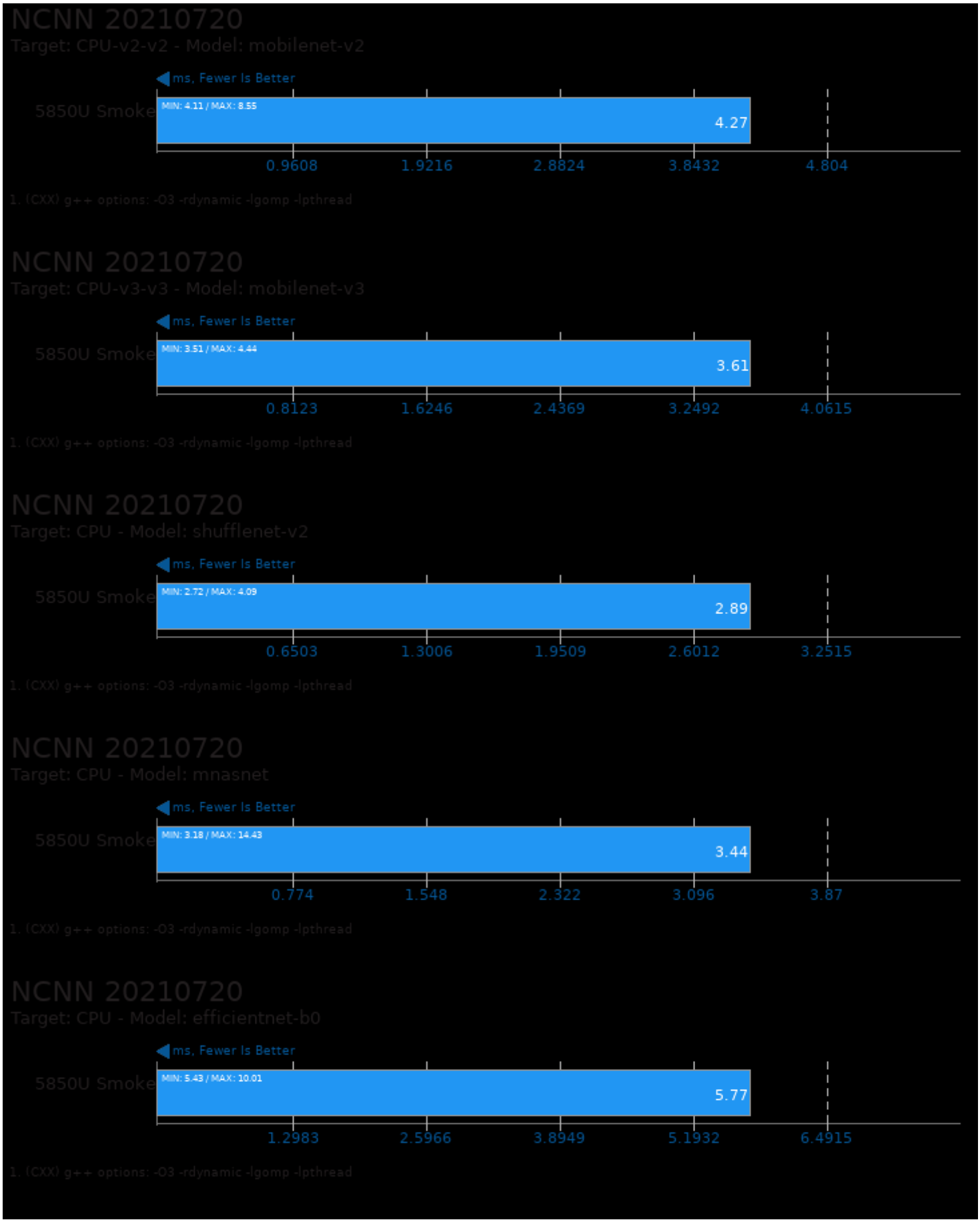
Test: SET

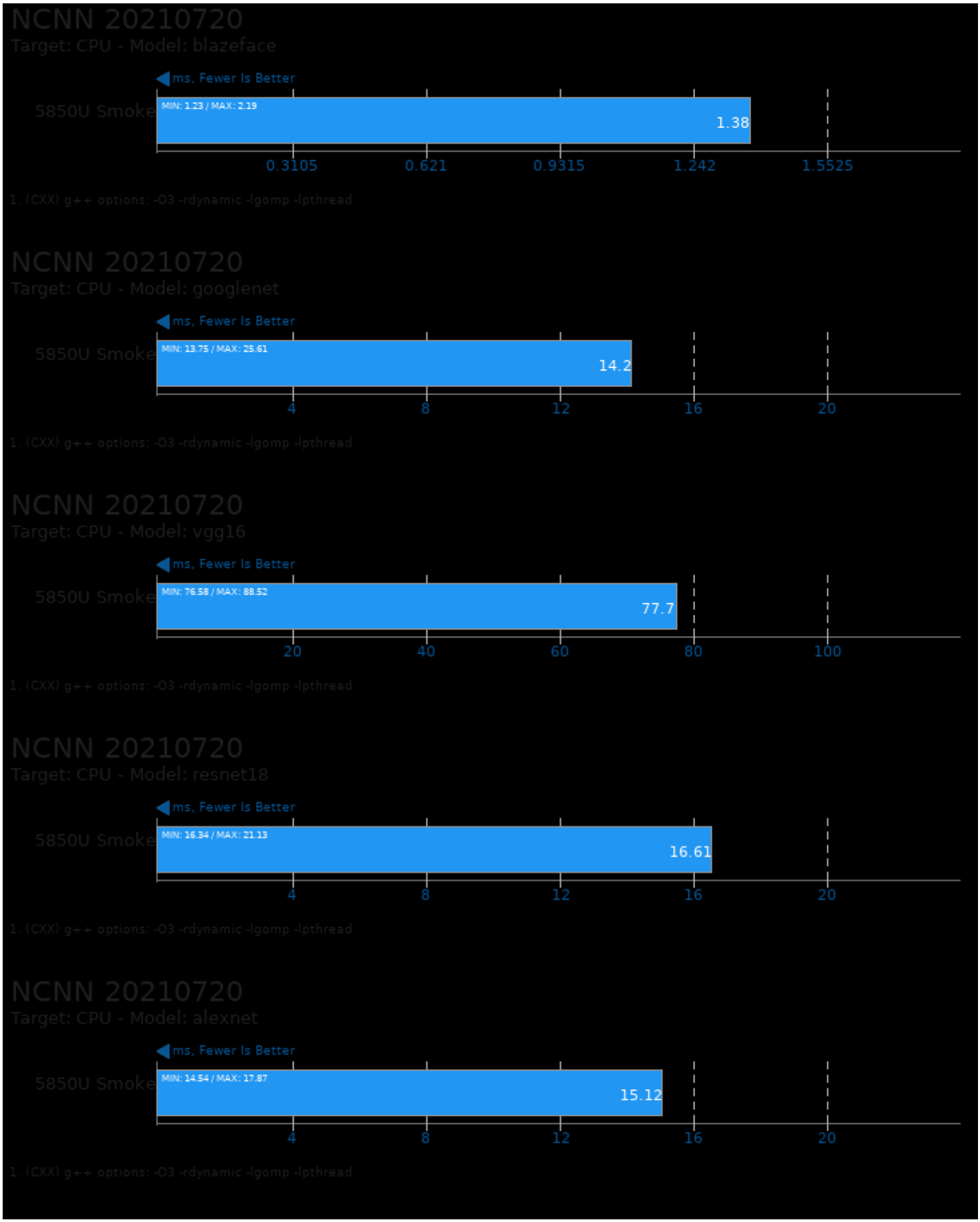


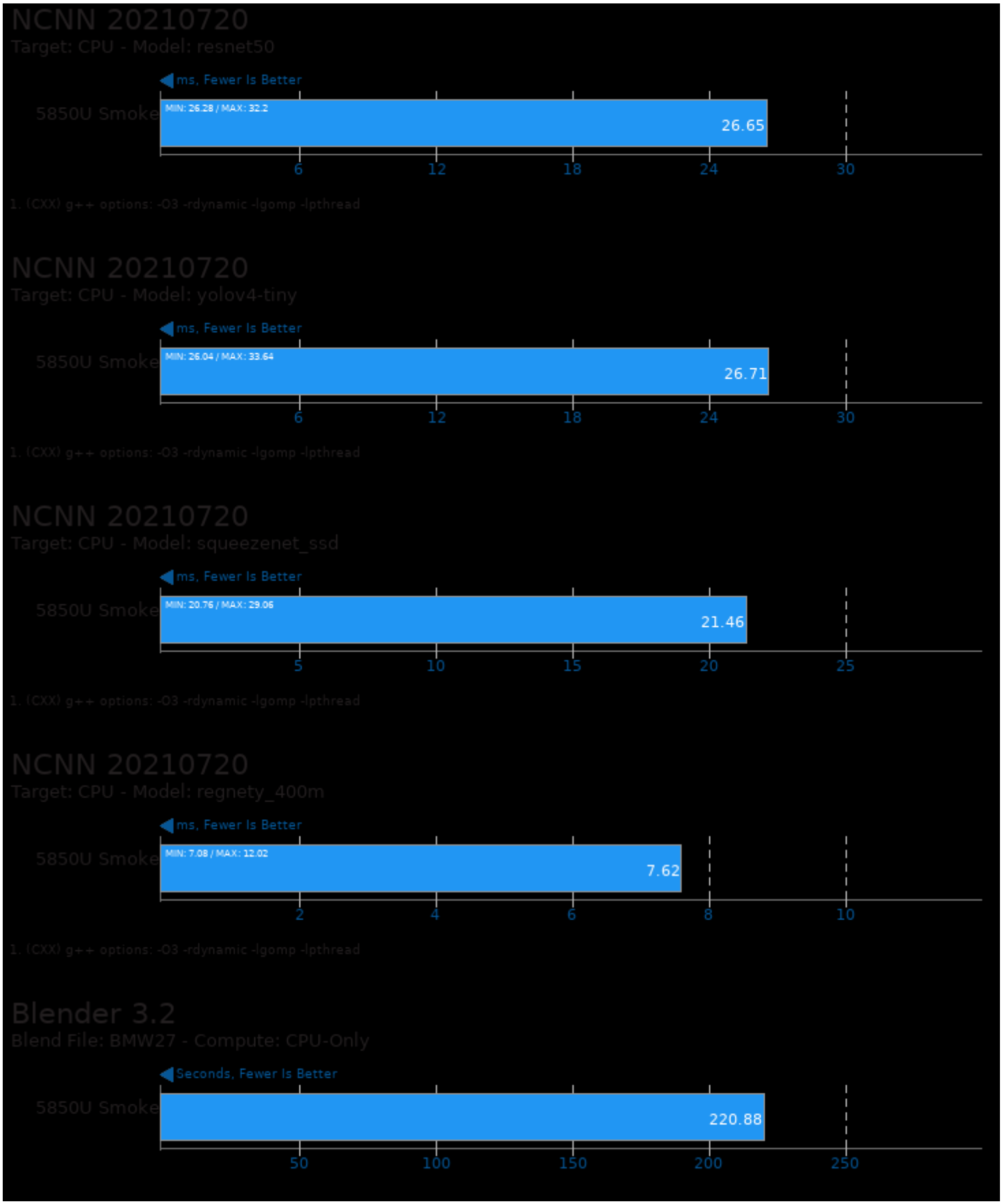
1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3


Mobile Neural Network 1.2
Model: mobilenetV3
ms, Fewer Is Better
5850U Smoke
MIN: 1.59 / MAX: 5.68
1.636
0.3681
0.7362
1.1043
1.4724
1.8405
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fn
Mobile Neural Network 1.2
Model: squeezenetv1.1
ms, Fewer Is Better
5850U Smoke
MIN: 3.29 / MAX: 7.41
3.458
0.7781
1.5562
2.3343
3.1124
3.8905
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fn
Mobile Neural Network 1.2
Model: resnet-v2-50
ms, Fewer Is Better
5850U Smoke
MIN: 25.44 / MAX: 38.68
26.22
6
12
18
24
30
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fn
Mobile Neural Network 1.2
Model: SqueezeNetV1.0
ms, Fewer Is Better
5850U Smoke
MIN: 5.93 / MAX: 10.32
6.344
2
4
6
8
10
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fn


Mobile Neural Network 1.2
Model: MobileNetV2_224
ms, Fewer Is Better
5850U Smoke
MIN: 2.84 / MAX: 16.82
2.942
0.662
1.324
1.986
2.648
3.31
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv
Mobile Neural Network 1.2
Model: mobilenet-v1-1.0
ms, Fewer Is Better
5850U Smoke
MIN: 2.84 / MAX: 7.18
2.935
0.6604
1.3208
1.9812
2.6416
3.302
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv
Mobile Neural Network 1.2
Model: inception-v3
ms, Fewer Is Better
5850U Smoke
MIN: 34.91 / MAX: 53.12
37.97
9
18
27
36
45
1. (CXX) g++ options: -std=c++11 -O3 -fvisibility=hidden -fomit-frame-pointer -fstrict-aliasing -ffunction-sections -fdata-sections -ffast-math -fno-rtti -fv
NCNN 20210720
Target: CPU - Model: mobilenet
ms, Fewer Is Better
5850U Smoke
MIN: 15.76 / MAX: 27.39
16.26
4
8
12
16
20
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread

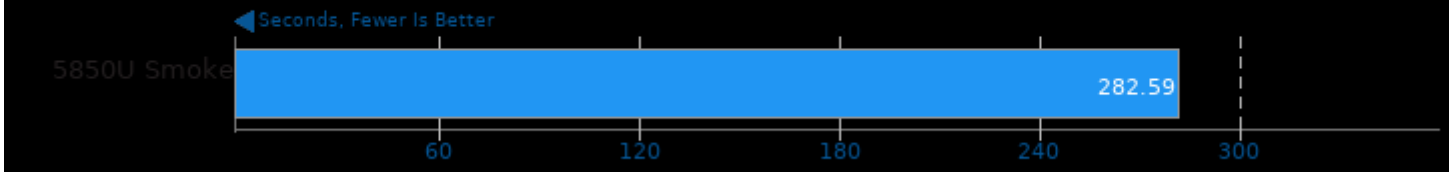

NCNN 20210720
Target: CPU-v2-v2 - Model: mobilenet-v2
ms, Fewer Is Better
5850U Smoke
MIN: 4.11 / MAX: 8.55
4.27
0.9608
1.9216
2.8824
3.8432
4.804
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU-v3-v3 - Model: mobilenet-v3
ms, Fewer Is Better
5850U Smoke
MIN: 3.51 / MAX: 4.44
3.61
0.8123
1.6246
2.4369
3.2492
4.0615
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: shufflenet-v2
ms, Fewer Is Better
5850U Smoke
MIN: 2.72 / MAX: 4.09
2.89
0.6503
1.3006
1.9509
2.6012
3.2515
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: mnasnet
ms, Fewer Is Better
5850U Smoke
MIN: 3.18 / MAX: 14.43
3.44
0.774
1.548
2.322
3.096
3.87
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: efficientnet-b0
ms, Fewer Is Better
5850U Smoke
MIN: 5.43 / MAX: 10.01
5.77
1.2983
2.5966
3.8949
5.1932
6.4915
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread


NCNN 20210720
Target: CPU - Model: blazeface
ms, Fewer Is Better
5850U Smoke
MIN: 1.23 / MAX: 2.19
1.38
0.3105
0.621
0.9315
1.242
1.5525
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: googlenet
ms, Fewer Is Better
5850U Smoke
MIN: 13.75 / MAX: 25.61
14.2
4
8
12
16
20
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: vgg16
ms, Fewer Is Better
5850U Smoke
MIN: 76.58 / MAX: 88.52
77.7
20
40
60
80
100
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: resnet18
ms, Fewer Is Better
5850U Smoke
MIN: 16.34 / MAX: 21.13
16.61
4
8
12
16
20
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: alexnet
ms, Fewer Is Better
5850U Smoke
MIN: 14.54 / MAX: 17.87
15.12
4
8
12
16
20
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread


NCNN 20210720
Target: CPU - Model: resnet50
ms, Fewer Is Better
5850U Smoke
MIN: 26.28 / MAX: 32.2
26.65
6
12
18
24
30
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: yolov4-tiny
ms, Fewer Is Better
5850U Smoke
MIN: 26.04 / MAX: 33.64
26.71
6
12
18
24
30
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: squeezenet_ssd
ms, Fewer Is Better
5850U Smoke
MIN: 20.76 / MAX: 29.06
21.46
5
10
15
20
25
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
NCNN 20210720
Target: CPU - Model: regnety_400m
ms, Fewer Is Better
5850U Smoke
MIN: 7.08 / MAX: 12.02
7.62
2
4
6
8
10
1. (CXX) g++ options: -O3 -rdynamic -lgomp -lpthread
Blender 3.2
Blend File: BMW27 - Compute: CPU-Only
Seconds, Fewer Is Better
5850U Smoke
220.88
50
100
150
200
250

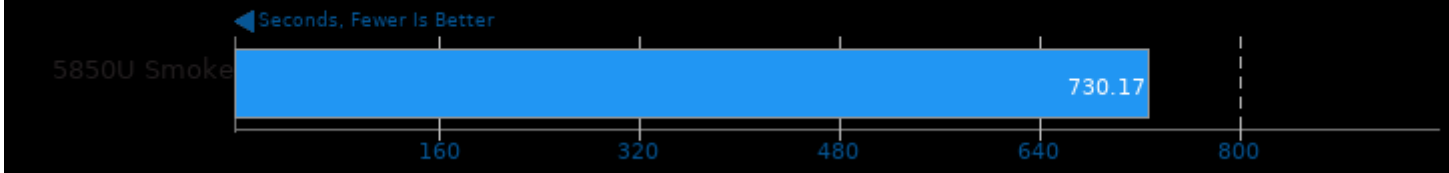
Blender 3.2

Blend File: Fishy Cat - Compute: CPU-Only



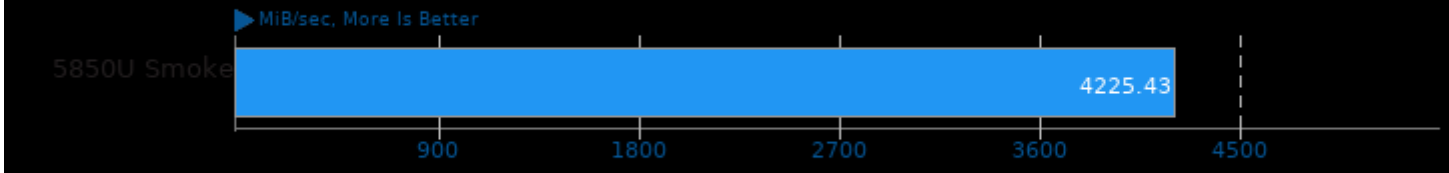
Blender 3.2

Blend File: Pabellon Barcelona - Compute: CPU-Only



Sysbench 1.0.20

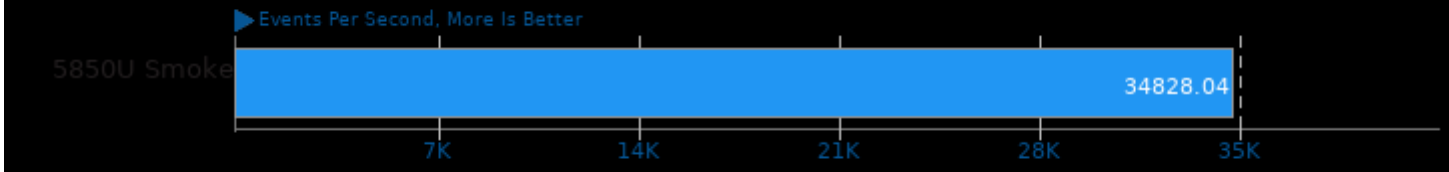
Test: RAM / Memory



1. (CC) gcc options: -O2 -funroll-loops -rdynamic -ldl -laio -lm

Sysbench 1.0.20

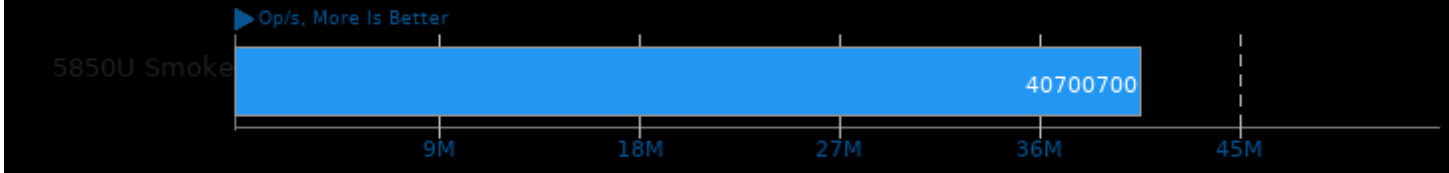
Test: CPU



1. (CC) gcc options: -O2 -funroll-loops -rdynamic -ldl -laio -lm

Facebook RocksDB 7.0.1

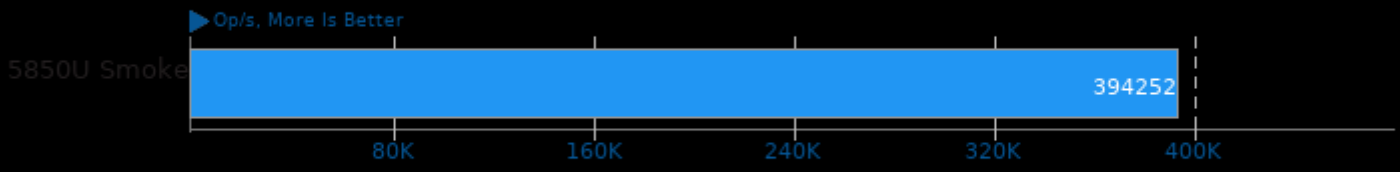
Test: Random Read



1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti -lpthread

Facebook RocksDB 7.0.1

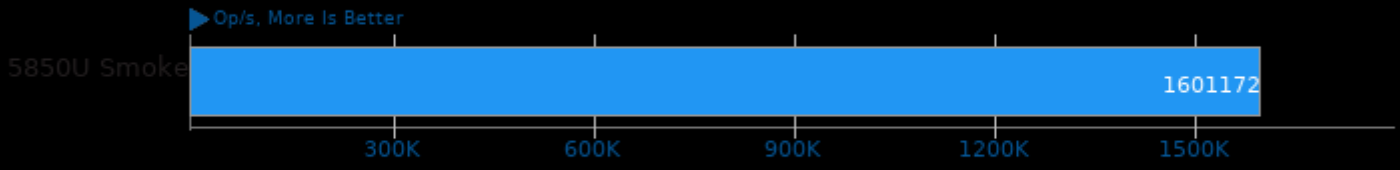
Test: Update Random



1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti -lpthread

Facebook RocksDB 7.0.1

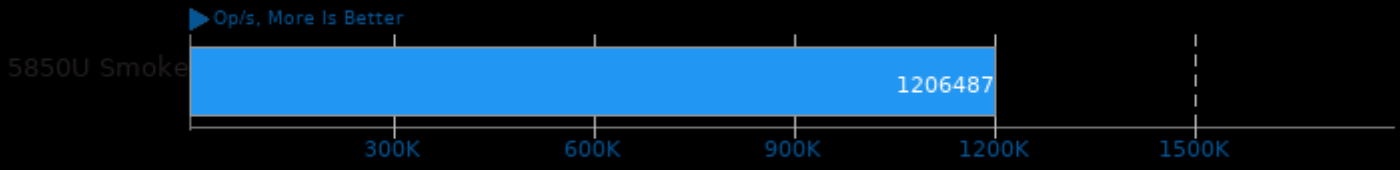
Test: Read While Writing



1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti -lpthread

Facebook RocksDB 7.0.1

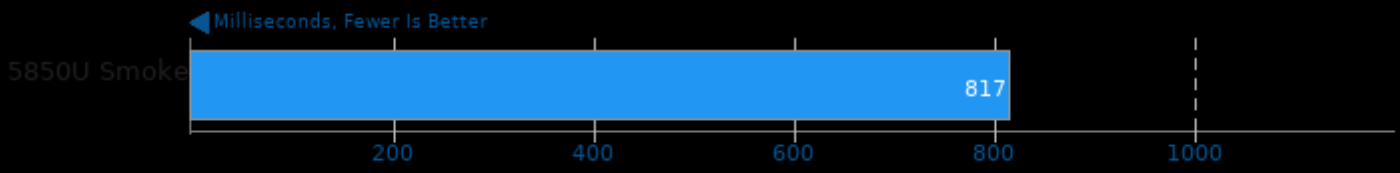
Test: Read Random Write Random



1. (CXX) g++ options: -O3 -march=native -pthread -fno-builtin-memcmp -fno-rtti -lpthread

PyBench 2018-02-16

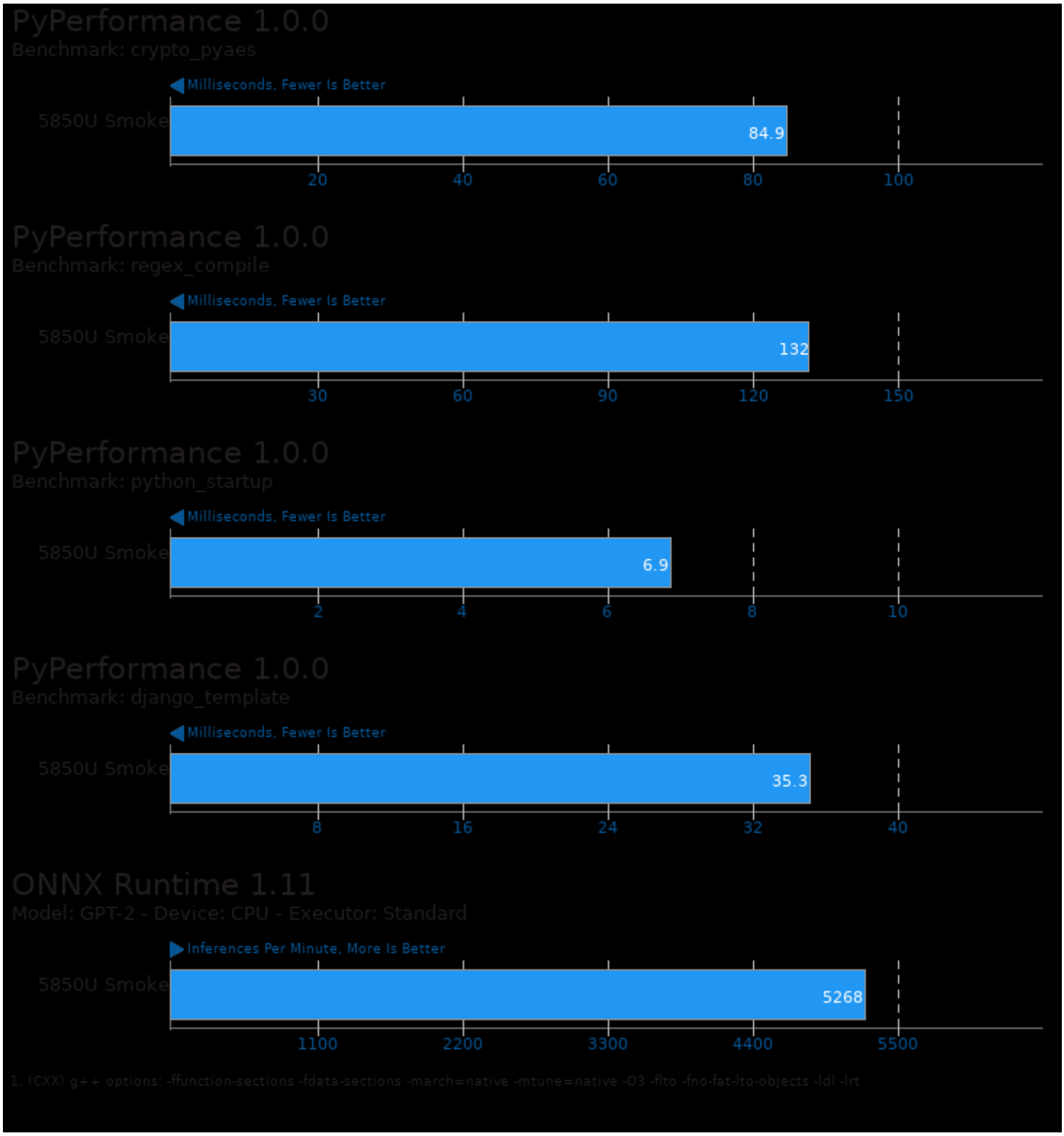
Total For Average Test Times



PyPerformance 1.0.0

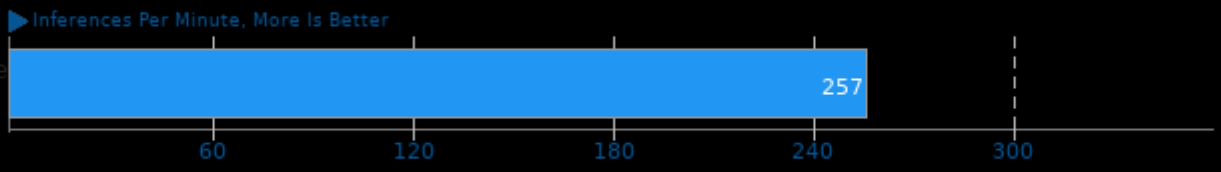
Benchmark: json_loads




PyPerformance 1.0.0
Benchmark: crypto_pyaes
Milliseconds, Fewer Is Better
5850U Smoke
84.9
20
40
60
80
100
PyPerformance 1.0.0
Benchmark: regex_compile
Milliseconds, Fewer Is Better
5850U Smoke
132
30
60
90
120
150
PyPerformance 1.0.0
Benchmark: python_startup
Milliseconds, Fewer Is Better
5850U Smoke
6.9
2
4
6
8
10
PyPerformance 1.0.0
Benchmark: django_template
Milliseconds, Fewer Is Better
5850U Smoke
35.3
8
16
24
32
40
ONNX Runtime 1.11
Model: GPT-2 - Device: CPU - Executor: Standard
Inferences Per Minute, More Is Better
5850U Smoke
5268
1100
2200
3300
4400
5500
1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -flto -fno-fat-lto-objects -ldl -lrt

ONNX Runtime 1.11

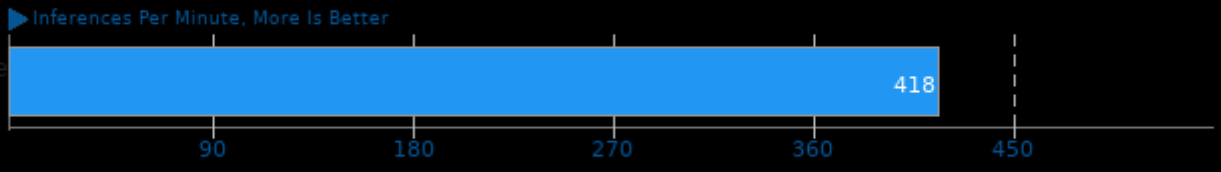
Model: yolov4 - Device: CPU - Executor: Standard



1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -flto -fno-fat-lto-objects -ldl -lrt

ONNX Runtime 1.11

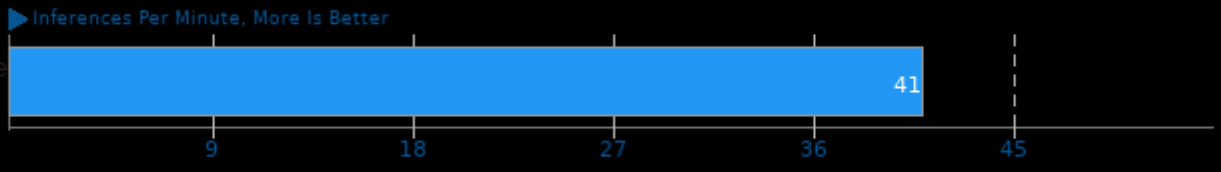
Model: bertsquad-12 - Device: CPU - Executor: Standard



1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -flto -fno-fat-lto-objects -ldl -lrt

ONNX Runtime 1.11

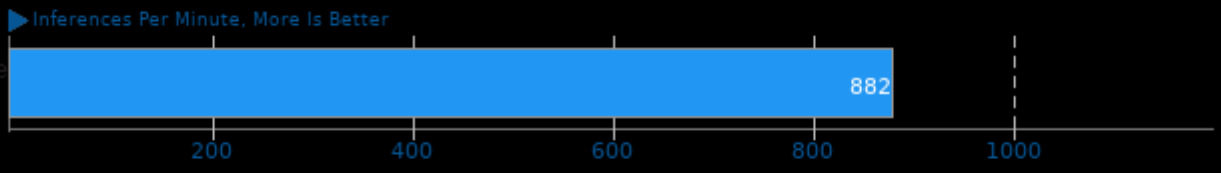
Model: fcn-resnet101-11 - Device: CPU - Executor: Standard



1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -flto -fno-fat-lto-objects -ldl -lrt

ONNX Runtime 1.11

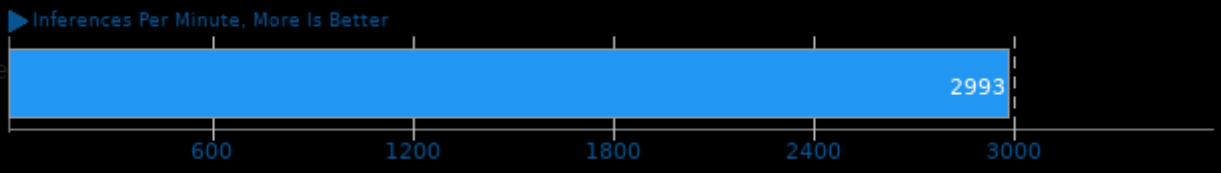
Model: ArcFace ResNet-100 - Device: CPU - Executor: Standard



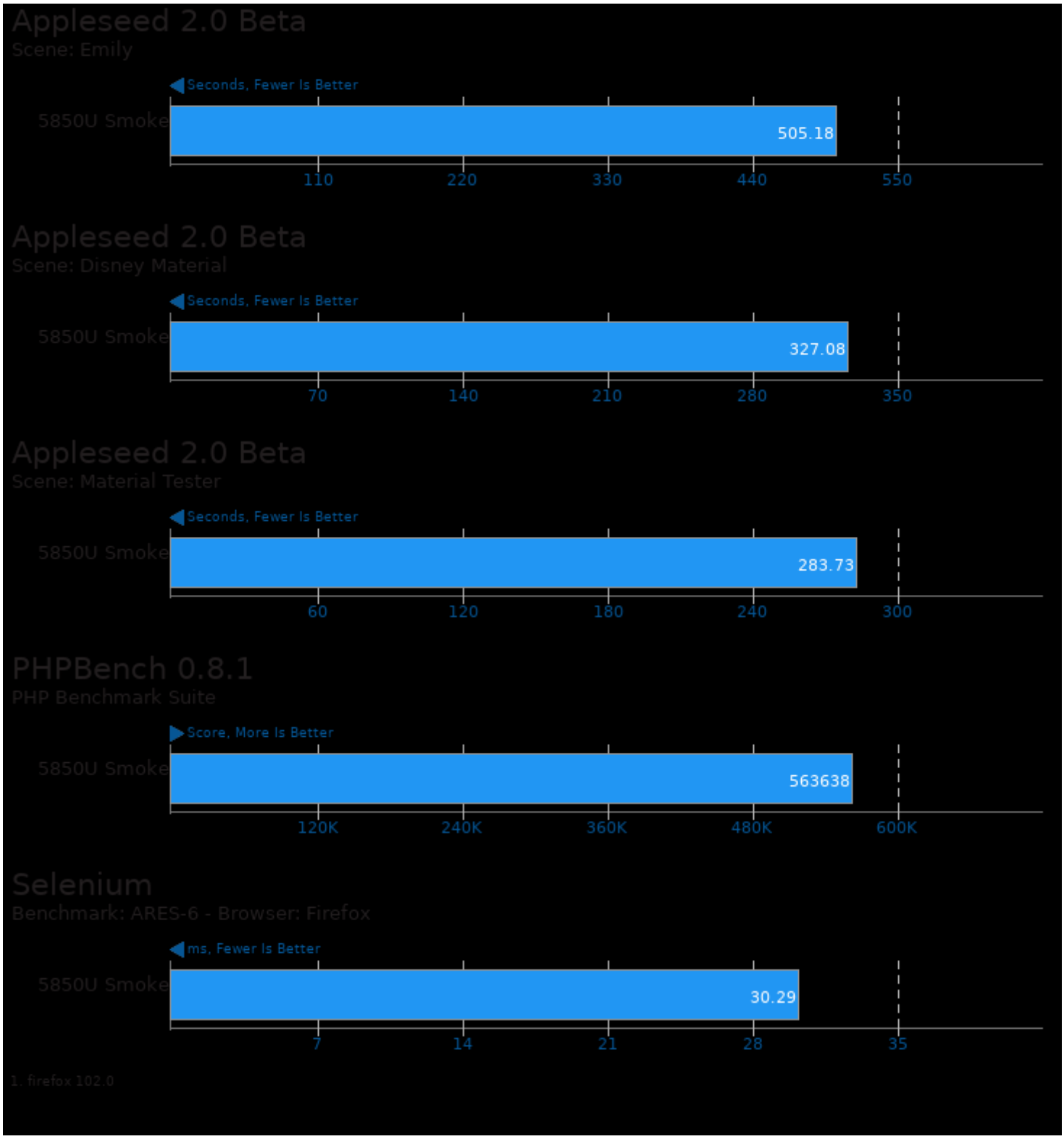
1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -flto -fno-fat-lto-objects -ldl -lrt

ONNX Runtime 1.11

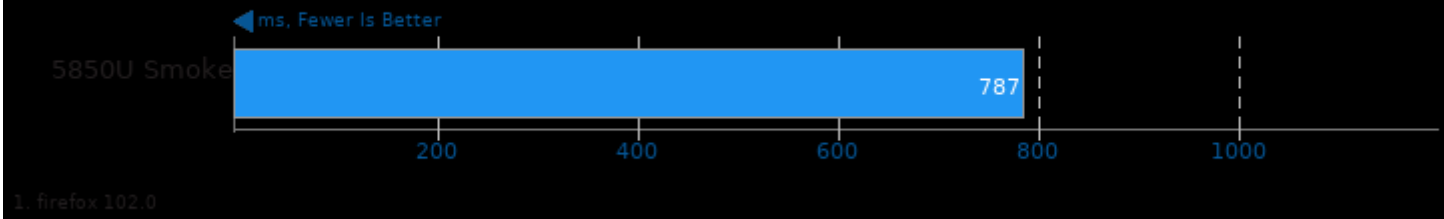
Model: super-resolution-10 - Device: CPU - Executor: Standard



1. (CXX) g++ options: -ffunction-sections -fdata-sections -march=native -mtune=native -O3 -flto -fno-fat-lto-objects -ldl -lrt

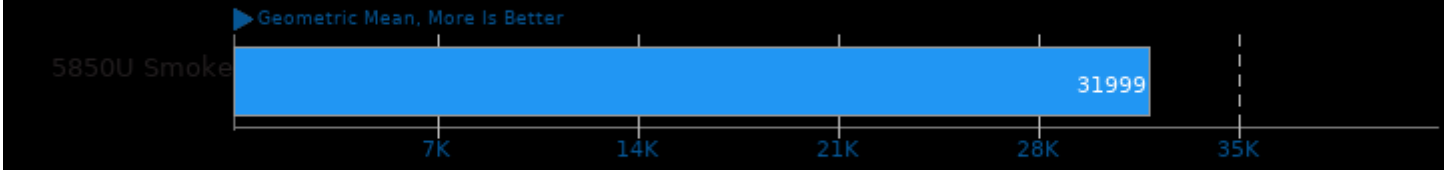

Appleseed 2.0 Beta
Scene: Emily
Seconds, Fewer Is Better
5850U Smoke
505.18
110
220
330
440
550
Appleseed 2.0 Beta
Scene: Disney Material
Seconds, Fewer Is Better
5850U Smoke
327.08
70
140
210
280
350
Appleseed 2.0 Beta
Scene: Material Tester
Seconds, Fewer Is Better
5850U Smoke
283.73
60
120
180
240
300
PHPBench 0.8.1
PHP Benchmark Suite
Score, More Is Better
5850U Smoke
563638
120K
240K
360K
480K
600K
Selenium
Benchmark: ARES-6 - Browser: Firefox
ms, Fewer Is Better
5850U Smoke
30.29
7
14
21
28
35
1. firefox 102.0

Selenium
Benchmark: Kraken - Browser: Firefox



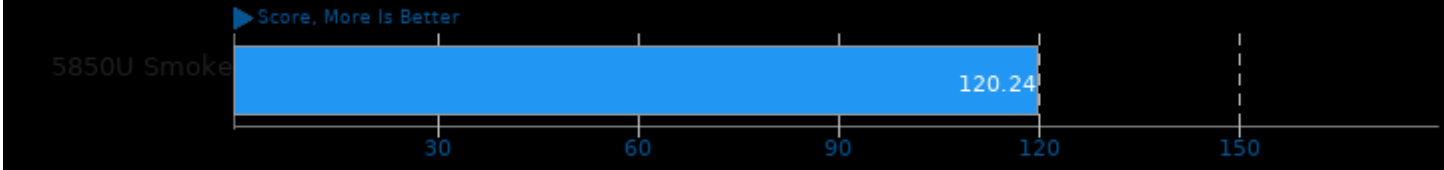
1. firefox 102.0

Selenium
Benchmark: Octane - Browser: Firefox



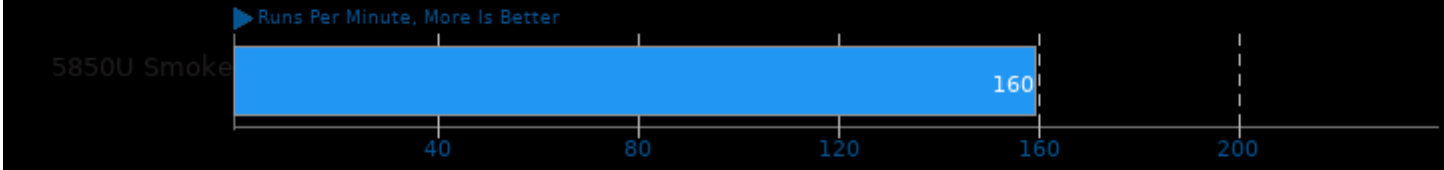
1. firefox 102.0

Selenium
Benchmark: Jetstream 2 - Browser: Firefox



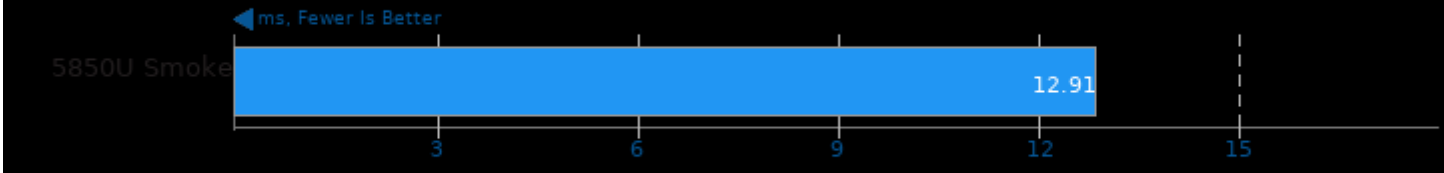
1. firefox 102.0

Selenium
Benchmark: Speedometer - Browser: Firefox



1. firefox 102.0

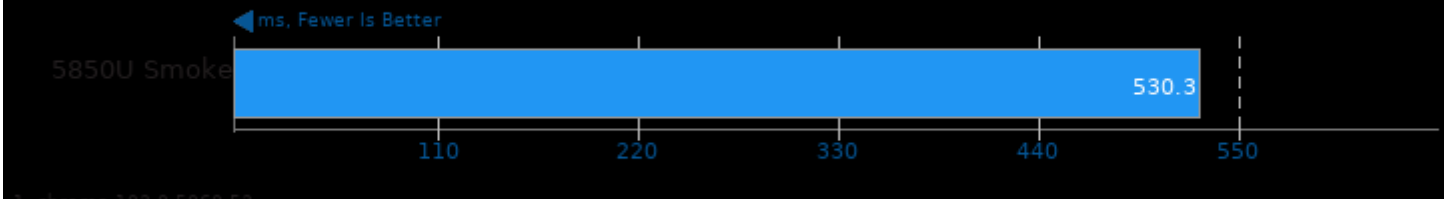
Selenium
Benchmark: ARES-6 - Browser: Google Chrome



1. chrome 103.0.5060.53

Selenium

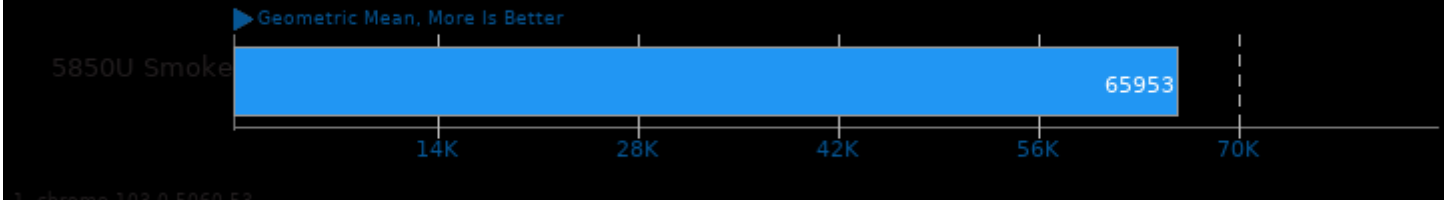
Benchmark: Kraken - Browser: Google Chrome



1. chrome 103.0.5060.53

Selenium

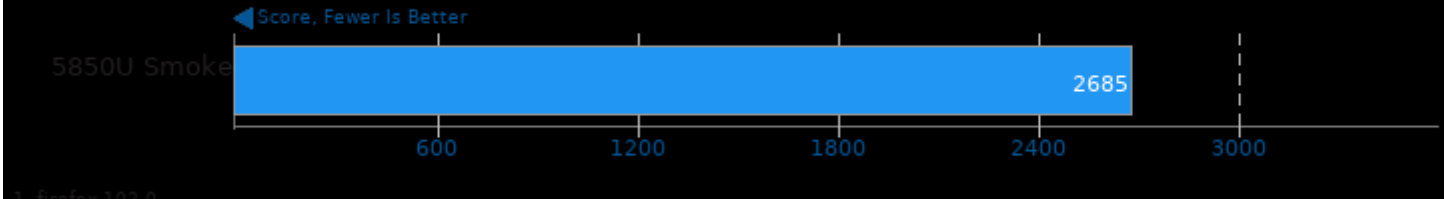
Benchmark: Octane - Browser: Google Chrome



1. chrome 103.0.5060.53

Selenium

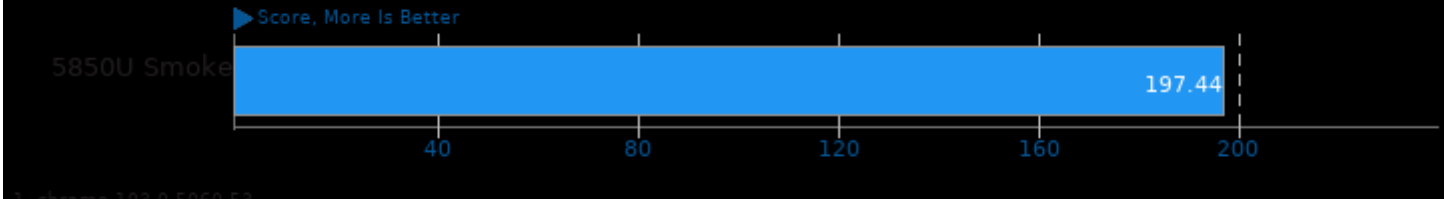
Benchmark: PSPDFKit WASM - Browser: Firefox



1. firefox 102.0

Selenium

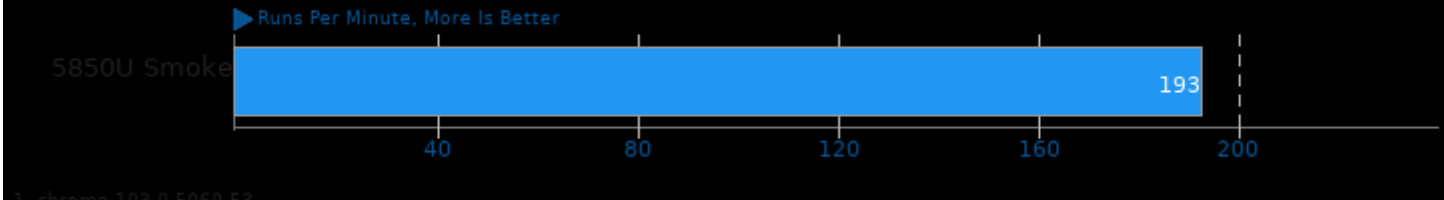
Benchmark: Jetstream 2 - Browser: Google Chrome



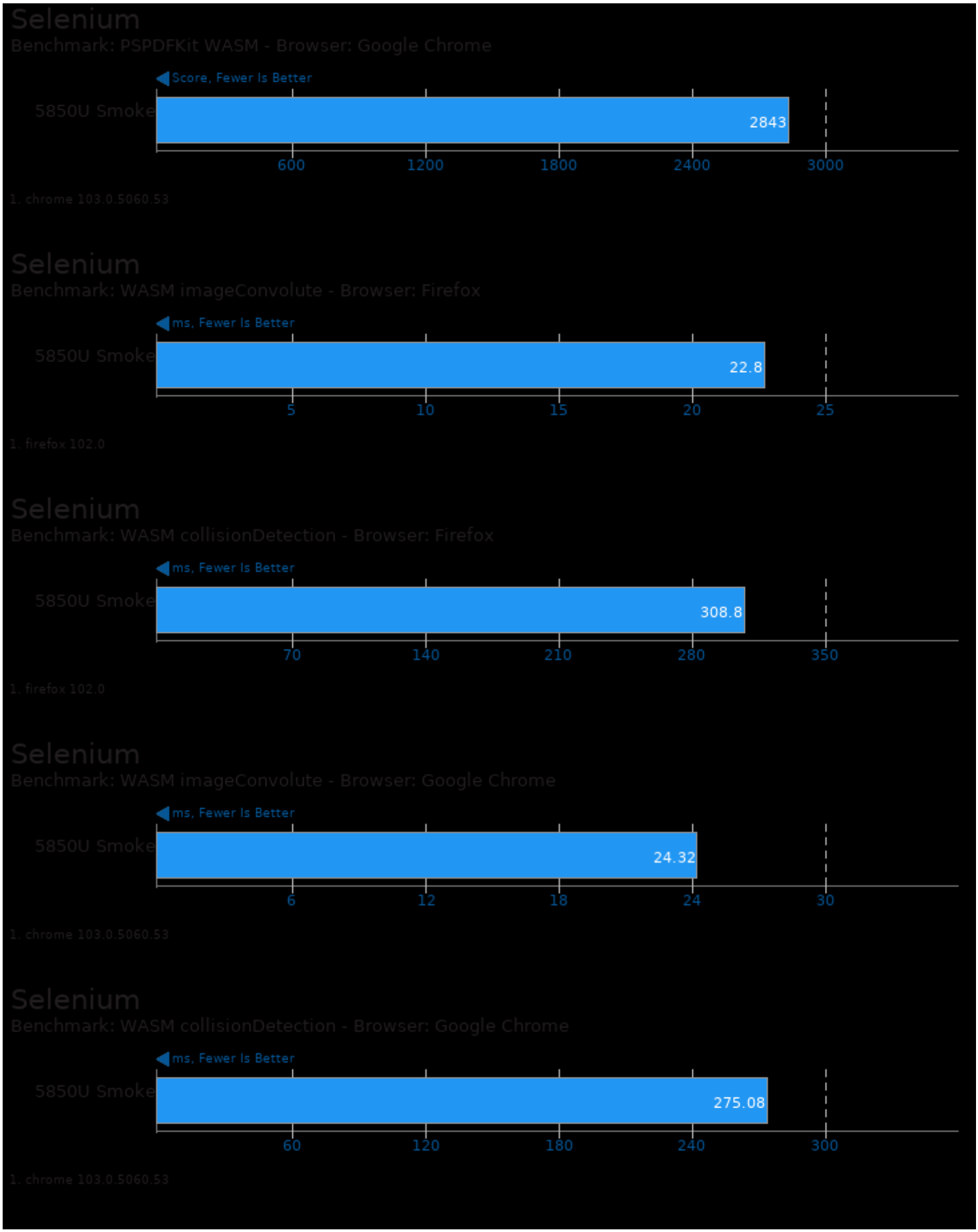
1. chrome 103.0.5060.53

Selenium

Benchmark: Speedometer - Browser: Google Chrome

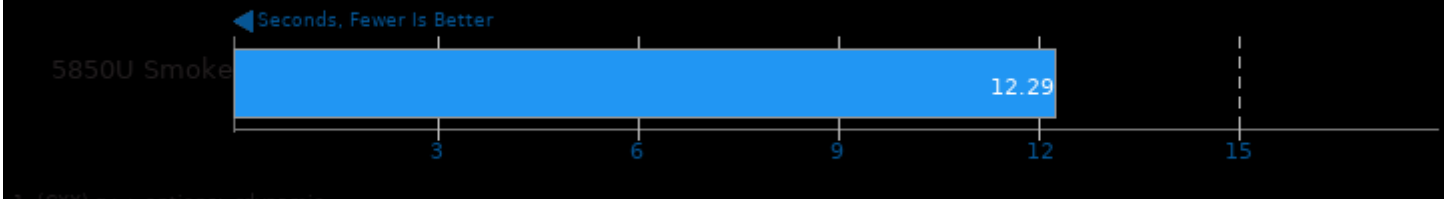


1. chrome 103.0.5060.53


Selenium
Benchmark: PSPDFKit WASM - Browser: Google Chrome
Score, Fewer Is Better
5850U Smoke
2843
600
1200
1800
2400
3000
1. chrome 103.0.5060.53
Selenium
Benchmark: WASM imageConvolute - Browser: Firefox
ms, Fewer Is Better
5850U Smoke
22.8
5
10
15
20
25
1. firefox 102.0
Selenium
Benchmark: WASM collisionDetection - Browser: Firefox
ms, Fewer Is Better
5850U Smoke
308.8
70
140
210
280
350
1. firefox 102.0
Selenium
Benchmark: WASM imageConvolute - Browser: Google Chrome
ms, Fewer Is Better
5850U Smoke
24.32
6
12
18
24
30
1. chrome 103.0.5060.53
Selenium
Benchmark: WASM collisionDetection - Browser: Google Chrome
ms, Fewer Is Better
5850U Smoke
275.08
60
120
180
240
300
1. chrome 103.0.5060.53

WavPack Audio Encoding 5.3

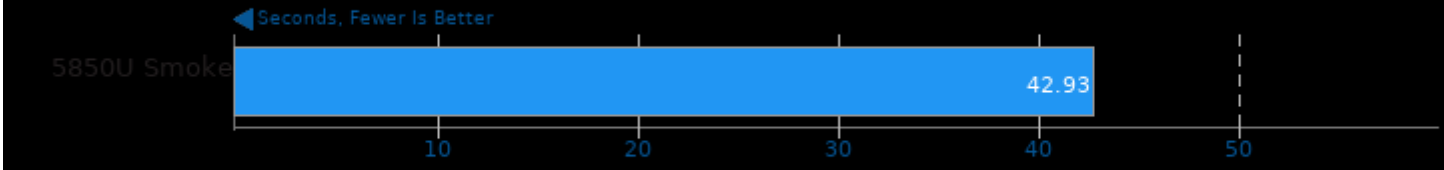
WAV To WavPack



1. (CXX) g++ options: -rdynamic

Git

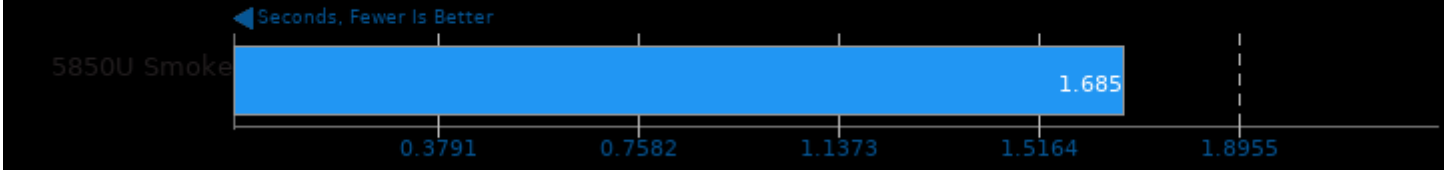
Time To Complete Common Git Commands



1. git version 2.34.1

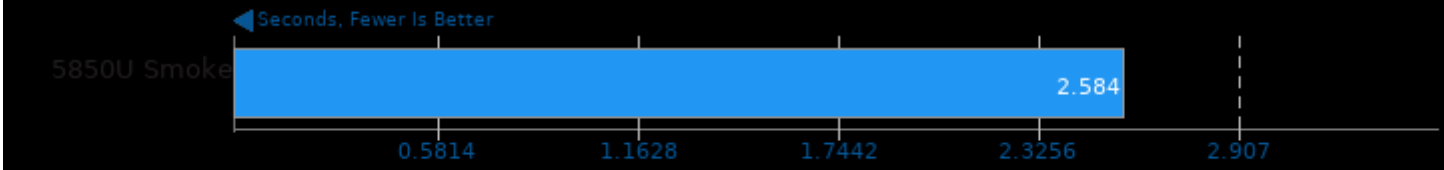
PyHPC Benchmarks 3.0

Device: CPU - Backend: Numpy - Project Size: 4194304 - Benchmark: Equation of State



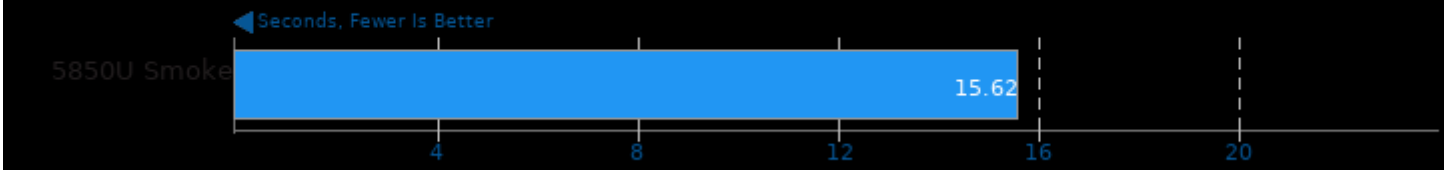
PyHPC Benchmarks 3.0

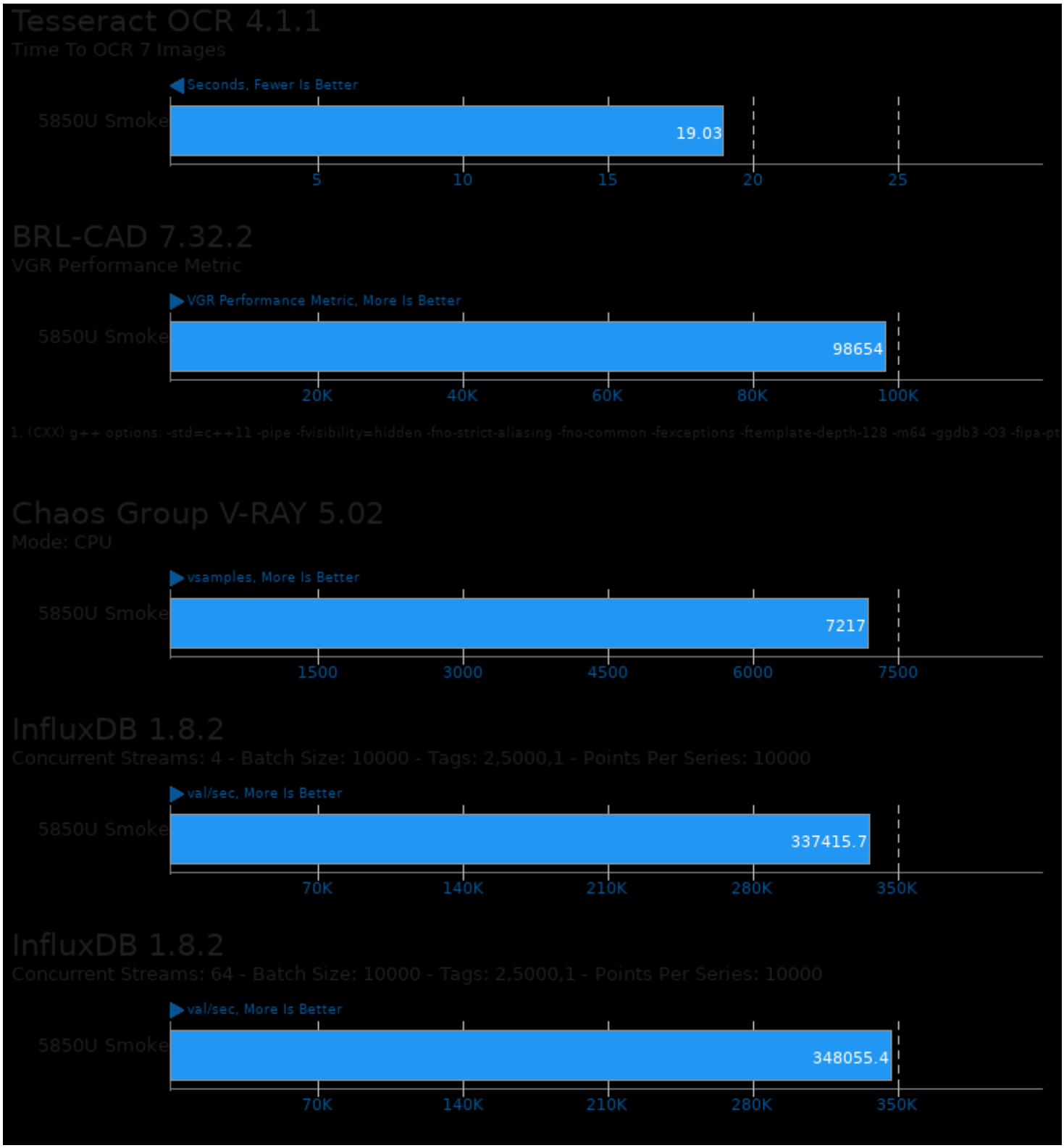
Device: CPU - Backend: Numpy - Project Size: 4194304 - Benchmark: Isoneutral Mixing



Unpacking Firefox 84.0

Extracting: firefox-84.0.source.tar.xz





This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 07:03.