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AMD Ryzen 7 5700G Linux Benchmarks

run with XMP@4000MT and pastes (TX13 and Kryonaut) applied

Automated Executive Summary

Streacom DB4 - 5700G had the most wins, coming in first place for 77% of the tests.

Based on the geometric mean of all complete results, the fastest (Streacom DB4 - 5700G) was 1.035x the speed of the slowest (Michael - Ryzen 7 5700G).

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

Ngspice (Circuit: C7552) at 1.424x
ctx_clock (Context Switch Time) at 1.25x
VP9 libvpx Encoding (Speed: Speed 5 - Input: Bosphorus 4K) at 1.19x
Ngspice (Circuit: C2670) at 1.167x
PJSIP (Method: INVITE) at 1.162x
Zstd Compression (Compression Level: 19 - Decompression Speed) at 1.149x
QuantLib at 1.117x
VP9 libvpx Encoding (Speed: Speed 5 - Input: Bosphorus 1080p) at 1.114x
PHPBench (PHP Benchmark Suite) at 1.094x
SVT-HEVC (Tuning: 10 - Input: Bosphorus 1080p) at 1.091x.

Test Systems:

Michael - Ryzen 7 5700G

Processor: AMD Ryzen 7 5700G @ 3.80GHz (8 Cores / 16 Threads), Motherboard: ASUS TUF GAMING B550M-PLUS (WI-FI) (2423 BIOS), Chipset: AMD Renoir Root Complex, Memory: 16GB, Disk: 1000GB Samsung SSD 980 PRO 1TB + 500GB, Graphics: ASUS AMD Cezanne 512MB (2000/1800MHz), Audio: AMD Device 1637, Monitor: LG Ultra HD, Network: Realtek RTL8125 2.5GbE + Intel Wi-Fi 6 AX200

OS: Ubuntu 21.04, Kernel: 5.11.0-25-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server 1.20.11 + Wayland, OpenGL: 4.6 Mesa 21.3.0-devel (git-0092edf 2021-08-14 hirsute-oibaf-ppa) (LLVM 12.0.1), Vulkan: 1.2.185, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0xa50000c
Python Notes: Python 3.9.5
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Streacom DB4 - 5700G

Processor: AMD Ryzen 7 5700G @ 3.80GHz (8 Cores / 16 Threads), Motherboard: Gigabyte B550I AORUS PRO AX (F14 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 32GB, Disk: 1000GB Samsung SSD 980 1TB + 64GB Seagate STORAGE DEVICE, Graphics: Gigabyte AMD Cezanne 512MB (2000/2000MHz), Audio: AMD Renoir Radeon HD Audio, Monitor: O243AT, Network: Realtek RTL8125 2.5GbE + Intel Wi-Fi 6 AX200

OS: Ubuntu 21.10, Kernel: 5.13.0-25-generic (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.13, OpenGL: 4.6 Mesa 21.2.2 (LLVM 12.0.1), OpenCL: OpenCL 1.1 Mesa 21.2.2, Vulkan: 1.2.182, Compiler: GCC 11.2.0 + Clang 13.0.0-2, 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-ZPT0kp/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-ZPT0kp/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
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0xa50000c
Python Notes: Python 3.9.7
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	Michael - Ryzen 7 5700G	Streacom DB4 - 5700G
dav1d - Summer Nature 4K (FPS/Watt)	**2.761**	**2.81**
Normalized	98.26%	100%

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dav1d - S.N.1 (FPS/Watt)	**14.832**	**15.588**
Normalized	95.15%	100%
OSPray - San Miguel - SciVis (FPS/Watt)	**0.367**	**0.356**
Normalized	100%	97%
OSPray - San Miguel - Path Tracer (FPS/Watt)	0.018	0.018
OSPray - M.R - SciVis (FPS/Watt)	0.191	0.191
OSPray - M.R - Path Tracer (FPS/Watt)	**6.398**	**6.206**
Normalized	100%	97%
dav1d - Summer Nature 4K (FPS)	**115.73**	**123.65**
Normalized	93.59%	100%
Standard Deviation	0.3%	0.1%
dav1d - S.N.1 (FPS)	**430.85**	**461.34**
Normalized	93.39%	100%
Standard Deviation	0.8%	0.2%
OSPray - San Miguel - SciVis (FPS)	**15.38**	**15.625**
Normalized	98.43%	100%
Standard Deviation	0%	0%
OSPray - San Miguel - Path Tracer (FPS)	**1.26**	**1.30**
Normalized	96.92%	100%
Standard Deviation	0.3%	0.5%
OSPray - M.R - SciVis (FPS)	**11.76**	**12.05**
Normalized	97.59%	100%
Standard Deviation	0%	0%
OSPray - M.R - Path Tracer (FPS)	166.67	166.67
Standard Deviation	0%	0%
Natron - Spaceship (FPS)	2.8	2.8
Standard Deviation	2.1%	2%
Natron - Spaceship (FPS/Watt)	**0.044**	**0.043**
Normalized	100%	97.73%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 4K (FPS)	**3.44**	**3.65**
Normalized	94.25%	100%
Standard Deviation	0.3%	0.2%
AOM AV1 - Speed 6 Realtime - Bosphorus 4K (FPS)	**13.03**	**13.49**
Normalized	96.59%	100%
Standard Deviation	0.3%	0.3%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 4K (FPS/Watt)	**0.07**	**0.068**
Normalized	100%	97.14%
AOM AV1 - Speed 6 Realtime - Bosphorus 4K	**0.287**	**0.279**
Normalized	100%	97.21%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 4K (FPS/Watt)	0.127	0.127
AOM AV1 - Speed 6 Two-Pass - Bosphorus 4K (FPS)	**6.37**	**6.84**
Normalized	93.13%	100%
Standard Deviation	1.5%	0.5%
AOM AV1 - Speed 8 Realtime - Bosphorus 4K (FPS)	**38.58**	**40.94**
Normalized	94.24%	100%
Standard Deviation	0.5%	0.3%
AOM AV1 - Speed 4 Two-Pass - Bosphorus 1080p	**6.44**	**6.74**
Normalized	95.55%	100%
Standard Deviation	0.1%	0.7%
AOM AV1 - Speed 6 Realtime - Bosphorus 1080p	**22.85**	**24.20**
Normalized	94.42%	100%
Standard Deviation	0.1%	0.3%

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AOM AV1 - Speed 6 Two-Pass - Bosphorus 1080p	**17.57**	**18.66**
Normalized	94.16%	100%
Standard Deviation	0.3%	0.4%
Embree - Pathtracer - Crown (FPS)	**12.3111**	**12.6865**
Normalized	97.04%	100%
Standard Deviation	0.7%	0.6%
Embree - Pathtracer ISPC - Crown (FPS)	**11.4847**	**11.6586**
Normalized	98.51%	100%
Standard Deviation	0.4%	0.4%
Embree - Pathtracer - Asian Dragon (FPS)	**14.3630**	**14.8965**
Normalized	96.42%	100%
Standard Deviation	0.6%	0.3%
Embree - Pathtracer ISPC - Asian Dragon (FPS)	**13.0636**	**13.5264**
Normalized	96.58%	100%
Standard Deviation	0.3%	0.9%
SVT-AV1 - Preset 4 - Bosphorus 4K (FPS)	**1.421**	**1.501**
Normalized	94.67%	100%
Standard Deviation	0.4%	0.2%
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS)	**13.701**	**14.52**
Normalized	94.36%	100%
Standard Deviation	1%	0.4%
SVT-AV1 - Preset 4 - Bosphorus 1080p (FPS)	**4.763**	**4.980**
Normalized	95.64%	100%
Standard Deviation	0.8%	0.2%
SVT-AV1 - Preset 8 - Bosphorus 1080p (FPS)	**44.578**	**48.531**
Normalized	91.85%	100%
Standard Deviation	0.7%	0.5%
SVT-HEVC - 7 - Bosphorus 1080p (FPS)	**73.08**	**78.65**
Normalized	92.92%	100%
Standard Deviation	1.7%	0.6%
SVT-HEVC - 10 - Bosphorus 1080p (FPS)	**154.17**	**168.19**
Normalized	91.66%	100%
Standard Deviation	0.7%	0.9%
SVT-VP9 - VMAF Optimized - Bosphorus 1080p (FPS)	**102.57**	**109.45**
Normalized	93.71%	100%
Standard Deviation	2%	1.1%
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS)	**105.35**	**112.11**
Normalized	93.97%	100%
Standard Deviation	0.9%	0.4%
VP9 libvpx Encoding - Speed 5 - Bosphorus 4K (FPS)	**13.58**	**16.16**
Normalized	84.03%	100%
Standard Deviation	1.6%	1.6%
AOM AV1 - Speed 8 Realtime - Bosphorus 4K	**0.859**	**0.86**
Normalized	99.88%	100%
VP9 libvpx Encoding - Speed 5 - Bosphorus 1080p	**29.80**	**33.21**
Normalized	89.73%	100%
Standard Deviation	1%	2.6%
x265 - Bosphorus 4K (FPS)	**10.31**	**11.03**
Normalized	93.47%	100%
Standard Deviation	1.7%	2%
x265 - Bosphorus 1080p (FPS)	**47.61**	**48.31**
Normalized	98.55%	100%
Standard Deviation	2%	1%

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AOM AV1 - Speed 4 Two-Pass - Bosphorus 1080p (FPS/Watt)	0.163	0.156
Normalized	100%	95.71%
AOM AV1 - Speed 6 Realtime - Bosphorus 1080p (FPS/Watt)	0.444	0.443
Normalized	100%	99.77%
AOM AV1 - Speed 6 Two-Pass - Bosphorus 1080p (FPS/Watt)	0.402	0.388
Normalized	100%	96.52%
Embree - Pathtracer - Crown (FPS/Watt)	0.167	0.176
Normalized	94.89%	100%
Embree - Pathtracer ISPC - Crown (FPS/Watt)	0.167	0.16
Normalized	100%	95.81%
Embree - Pathtracer - Asian Dragon (FPS/Watt)	0.205	0.207
Normalized	99.03%	100%
Embree - Pathtracer ISPC - Asian Dragon (FPS/Watt)	0.183	0.185
Normalized	98.92%	100%
SVT-AV1 - Preset 4 - Bosphorus 4K (FPS/Watt)	0.024	0.025
Normalized	96%	100%
SVT-AV1 - Preset 8 - Bosphorus 4K (FPS/Watt)	0.263	0.272
Normalized	96.69%	100%
SVT-AV1 - Preset 4 - Bosphorus 1080p (FPS/Watt)	0.084	0.085
Normalized	98.82%	100%
SVT-AV1 - Preset 8 - Bosphorus 1080p (FPS/Watt)	0.974	0.994
Normalized	97.99%	100%
SVT-HEVC - 7 - Bosphorus 1080p (FPS/Watt)	1.692	1.806
Normalized	93.69%	100%
SVT-HEVC - 10 - Bosphorus 1080p (FPS/Watt)	4.793	4.963
Normalized	96.57%	100%
SVT-VP9 - VMAF Optimized - Bosphorus 1080p (FPS/Watt)	3.119	3.169
Normalized	98.42%	100%
SVT-VP9 - P.S.O - Bosphorus 1080p (FPS/Watt)	3.173	3.158
Normalized	100%	99.53%
VP9 libvpx Encoding - Speed 5 - Bosphorus 4K (FPS/Watt)	0.366	0.374
Normalized	97.86%	100%
VP9 libvpx Encoding - Speed 5 - Bosphorus 1080p (FPS/Watt)	0.816	0.864
Normalized	94.44%	100%
x265 - Bosphorus 4K (FPS/Watt)	0.226	0.217
Normalized	100%	96.02%
x265 - Bosphorus 1080p (FPS/Watt)	1.044	0.988
Normalized	100%	94.64%
Intel Open Image Denoise - RT.ldr_alb_nrm.3840x2160 (Images / Sec/Watt)	0.009	0.008
Normalized	100%	88.89%
Intel Open Image Denoise - RT.ldr_alb_nrm.3840x2160 (Images / Sec)	0.31	0.32
Normalized	96.88%	100%
Standard Deviation	0.4%	0.8%

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ONNX Runtime - super-resolution-10 - OpenMP CPU (Inferences/min/Watt)	**130.105**	**126.605**
Normalized	100%	97.31%
ONNX Runtime - fcn-resnet101-11 - OpenMP CPU (Inferences/min)	**69**	**71**
Normalized	97.18%	100%
Standard Deviation	0%	0%
ONNX Runtime - super-resolution-10 - OpenMP CPU (Inferences/min)	**5528**	**5676**
Normalized	97.39%	100%
Standard Deviation	2.5%	0.6%
ONNX Runtime - fcn-resnet101-11 - OpenMP CPU (Inferences/min/Watt)	**1.541**	**1.51**
Normalized	100%	97.99%
Chia Blockchain VDF - Square Plain C++ (IPS)	**202967**	**206333**
Normalized	98.37%	100%
Standard Deviation	0.4%	0.4%
Chia Blockchain VDF - Square Plain C++ (IPS/Watt)	**12142**	**11160**
Normalized	100%	91.91%
Coremark - CoreMark Size 666 - I.P.S (Iterations/Sec/Watt)	**7280**	**6683**
Normalized	100%	91.79%
Coremark - CoreMark Size 666 - I.P.S (Iterations/Sec)	**398054**	**405510**
Normalized	98.16%	100%
Standard Deviation	0.1%	0.2%
IndigoBench - CPU - Bedroom (M samples/s/Watt)	**0.028**	**0.027**
Normalized	100%	96.43%
IndigoBench - CPU - Supercar (M samples/s/Watt)	**0.057**	**0.056**
Normalized	100%	98.25%
IndigoBench - CPU - Bedroom (M samples/s)	**2.167**	**2.195**
Normalized	98.72%	100%
Standard Deviation	0.5%	0.1%
IndigoBench - CPU - Supercar (M samples/s)	**4.423**	**4.461**
Normalized	99.15%	100%
Standard Deviation	0.2%	0.4%
SecureMark - SecureMark-TLS (marks/Watt)	**17563**	**15941**
Normalized	100%	90.76%
SecureMark - SecureMark-TLS (marks)	**316834**	**307290**
Normalized	100%	96.99%
Standard Deviation	0.3%	0.7%
LZ4 Compression - 9 - Compression Speed (MB/s)	**66.70**	**65.80**
Normalized	100%	98.65%
Standard Deviation	2.4%	0.1%
Zstd Compression - 19 - D.S (MB/s/Watt)	**106.546**	**109.631**
Normalized	97.19%	100%
Zstd Compression - 3, Long Mode - D.S (MB/s/Watt)	**237.581**	**218.863**
Normalized	100%	92.12%
Zstd Compression - 19, Long Mode - D.S (MB/s/Watt)	**107.086**	**98.789**
Normalized	100%	92.25%
LZ4 Compression - 3 - Compression Speed (MB/s)	**68.15**	**67.39**
Normalized	100%	98.88%
Standard Deviation	2.8%	0.1%
Zstd Compression - 19 - Compression Speed (MB/s)	**30.0**	**32.2**
Normalized	93.17%	100%

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Standard Deviation	1.6%	0.5%
Zstd Compression - 19 - D.S (MB/s)	**3359**	**3860**
Normalized	87.02%	100%
Standard Deviation	0.4%	1.1%
Zstd Compression - 3, Long Mode - D.S (MB/s)	**4437**	**4646**
Normalized	95.49%	100%
Standard Deviation	0.2%	1.6%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	**25.6**	**27.8**
Normalized	92.09%	100%
Standard Deviation	0.8%	1.5%
Zstd Compression - 19, Long Mode - D.S (MB/s)	**3580**	**3623**
Normalized	98.81%	100%
Standard Deviation	0.4%	14.6%
QuantLib (MFLOPS)	**3111**	**3476**
Normalized	89.51%	100%
Standard Deviation	0.5%	1.5%
QuantLib (MFLOPS/Watt)	**160.898**	**172.4**
Normalized	93.33%	100%
7-Zip Compression - C.S.T (MIPS/Watt)	**802.755**	**787.59**
Normalized	100%	98.11%
7-Zip Compression - C.S.T (MIPS)	**44004**	**45011**
Normalized	97.76%	100%
Standard Deviation	1%	0.5%
LibRaw - P.P.B (Mpix/sec)	**48.02**	**50.15**
Normalized	95.75%	100%
Standard Deviation	0.3%	0.1%
LibRaw - P.P.B (Mpix/sec/Watt)	**1.235**	**1.2**
Normalized	100%	97.17%
Etcpak - DXT1 (Mpx/s/Watt)	**147.503**	**123.091**
Normalized	100%	83.45%
Etcpak - DXT1 (Mpx/s)	**1462**	**1475**
Normalized	99.14%	100%
Standard Deviation	0.8%	0.2%
Etcpak - ETC2 (Mpx/s)	**228.760**	**229.048**
Normalized	99.87%	100%
Standard Deviation	0.3%	0%
Etcpak - ETC2 (Mpx/s/Watt)	**16.046**	**14.249**
Normalized	100%	88.8%
Stockfish - Total Time (Nodes/s)	**28348320**	**28201873**
Normalized	100%	99.48%
Standard Deviation	2%	1.4%
Stockfish - Total Time (Nodes/s/Watt)	**413318**	**403384**
Normalized	100%	97.6%
asmFish - 1.H.M.2.D (Nodes/s)	**33563123**	**33155850**
Normalized	100%	98.79%
Standard Deviation	1.4%	1.5%
asmFish - 1.H.M.2.D (Nodes/s/Watt)	**416689**	**408550**
Normalized	100%	98.05%
GROMACS - MPI CPU - water_GMX50_bare (Ns/Day)	**0.796**	**0.802**
Normalized	99.25%	100%
Standard Deviation	0.1%	0.4%

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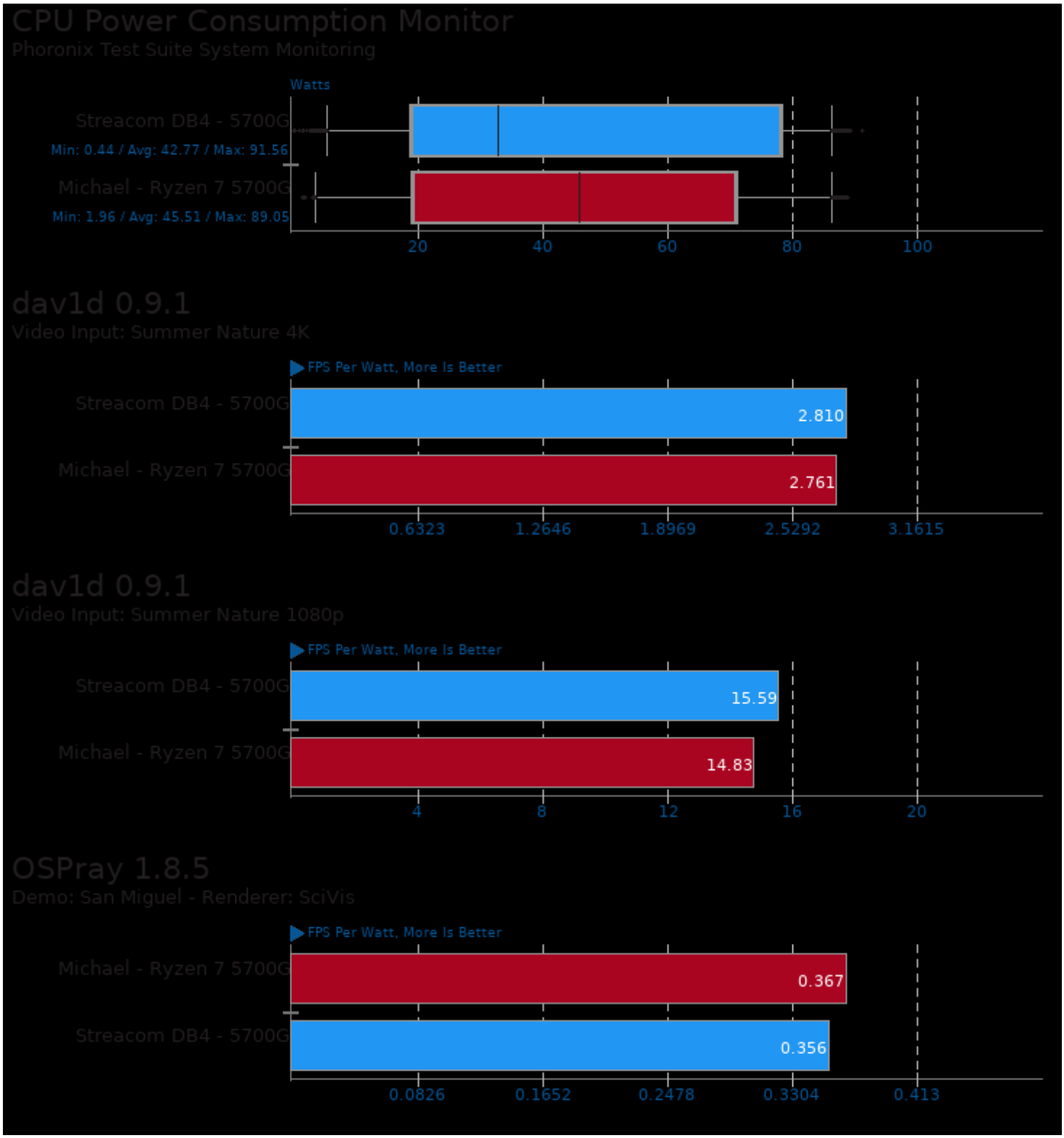
GROMACS - MPI CPU - water_GMX50_bare (Ns/Day/Watt)	0.015	0.015
PJSIP - INVITE (Responses/sec/Watt)	**155.432**	**146.109**
Normalized	100%	94%
PJSIP - OPTIONS, Stateful (Responses/sec/Watt)	**478.265**	**399.554**
Normalized	100%	83.54%
PJSIP - OPTIONS, Stateless (Responses/sec/Watt)	**1600**	**1811**
Normalized	88.34%	100%
PJSIP - INVITE (Responses/sec)	**4192**	**4871**
Normalized	86.06%	100%
Standard Deviation	1.8%	1%
PJSIP - OPTIONS, Stateful (Responses/sec)	**3496**	**3682**
Normalized	94.95%	100%
Standard Deviation	1.1%	0.1%
PJSIP - OPTIONS, Stateless (Responses/sec)	**80100**	**87379**
Normalized	91.67%	100%
Standard Deviation	2.3%	0.3%
Liquid-DSP - 2 - 256 - 57 (samples/s/Watt)	**4946892**	**4562111**
Normalized	100%	92.22%
Liquid-DSP - 4 - 256 - 57 (samples/s/Watt)	**6321434**	**6030218**
Normalized	100%	95.39%
Liquid-DSP - 8 - 256 - 57 (samples/s/Watt)	**9344255**	**8949476**
Normalized	100%	95.78%
Liquid-DSP - 32 - 256 - 57 (samples/s/Watt)	**10316942**	**9938528**
Normalized	100%	96.33%
Liquid-DSP - 2 - 256 - 57 (samples/s)	**152306667**	**150620000**
Normalized	100%	98.89%
Standard Deviation	0%	0.1%
Liquid-DSP - 4 - 256 - 57 (samples/s)	**294143333**	**291690000**
Normalized	100%	99.17%
Standard Deviation	0.6%	0.6%
Liquid-DSP - 8 - 256 - 57 (samples/s)	**521266667**	**524090000**
Normalized	99.46%	100%
Standard Deviation	0.5%	0.5%
Liquid-DSP - 16 - 256 - 57 (samples/s)	**535743333**	**532770000**
Normalized	100%	99.45%
Standard Deviation	0.2%	0%
Liquid-DSP - 32 - 256 - 57 (samples/s)	**538673333**	**534266667**
Normalized	100%	99.18%
Standard Deviation	0.2%	0%
Liquid-DSP - 16 - 256 - 57 (samples/s/Watt)	**10396363**	**9988471**
Normalized	100%	96.08%
PHPBench - P.B.S (Score/Watt)	**41146**	**38840**
Normalized	100%	94.4%
PHPBench - P.B.S (Score)	**816745**	**893756**
Normalized	91.38%	100%
Standard Deviation	1.2%	0.6%
BRL-CAD - V.P.M (VGR Performance Metric)	**144232**	**143461**
Normalized	100%	99.47%
BRL-CAD - V.P.M (VGR Performance Metric/Watt)	**1842**	**1800**
Normalized	100%	97.69%
ctx_clock - C.S.T (Clocks)	**152**	**190**
Normalized	100%	80%
Standard Deviation		0%

AMD Ryzen 7 5700G Linux Benchmarks

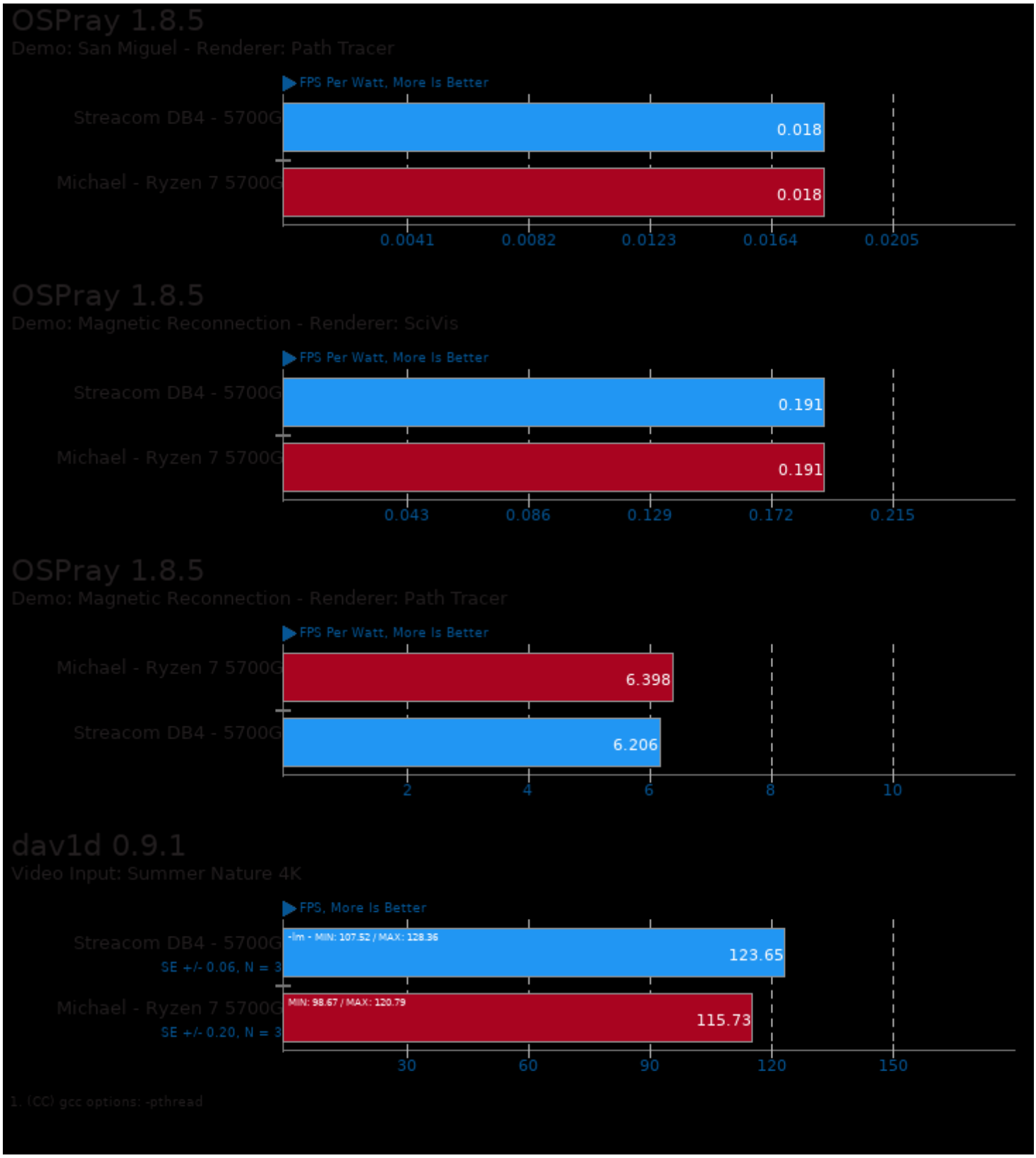
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	**1.99710**	**1.96739**
Normalized	98.51%	100%
Standard Deviation	1%	0.1%
TNN - CPU - DenseNet (ms)	**2723**	**2785**
Normalized	100%	97.77%
Standard Deviation	0.2%	0%
TNN - CPU - MobileNet v2 (ms)	**232.549**	**244.699**
Normalized	100%	95.03%
Standard Deviation	0.6%	0.1%
TNN - CPU - SqueezeNet v1.1 (ms)	**218.009**	**219.082**
Normalized	100%	99.51%
Standard Deviation	0.5%	0%
Xcompact3d Incompact3d - i.i.1.C.P.D (sec)	**48.0793600**	**45.9715576**
Normalized	95.62%	100%
Standard Deviation	2.4%	0.9%
libavif avifenc - 2 (sec)	**32.947**	**32.366**
Normalized	98.24%	100%
Standard Deviation	0.6%	0.3%
libavif avifenc - 6, Lossless (sec)	**50.880**	**50.891**
Normalized	100%	99.98%
Standard Deviation	0.3%	0.2%
libavif avifenc - 10, Lossless (sec)	**5.394**	**5.294**
Normalized	98.15%	100%
Standard Deviation	0.8%	0.3%
Timed Apache Compilation - Time To Compile (sec)	**19.546**	**19.177**
Normalized	98.11%	100%
Standard Deviation	1.1%	0.4%
Timed FFmpeg Compilation - Time To Compile (sec)	**52.428**	**50.990**
Normalized	97.26%	100%
Standard Deviation	0.4%	0.2%
Timed GDB GNU Debugger Compilation - Time To Compile (sec)	**61.865**	**63.223**
Normalized	100%	97.85%
Standard Deviation	0.4%	0.2%
Timed Godot Game Engine Compilation - Time To Compile (sec)	**127.793**	**117.352**
Normalized	91.83%	100%
Standard Deviation	0.4%	0.2%
Timed LLVM Compilation - Ninja (sec)	**706.327**	**659.243**
Normalized	93.33%	100%
Standard Deviation	0%	0.2%
Timed LLVM Compilation - Unix Makefiles (sec)	**726.263**	**676.714**
Normalized	93.18%	100%
Standard Deviation	0.8%	0.9%
Timed MPlayer Compilation - Time To Compile (sec)	**33.985**	**33.820**
Normalized	99.51%	100%
Standard Deviation	0.2%	0.4%
DeepSpeech - CPU (sec)	**67.51692**	**66.21751**
Normalized	98.08%	100%
Standard Deviation	0.7%	0.4%
Ngspice - C2670 (sec)	**159.976**	**137.032**
Normalized	85.66%	100%
Standard Deviation	0.8%	2%
Ngspice - C7552 (sec)	**159.918**	**112.335**
Normalized	70.25%	100%

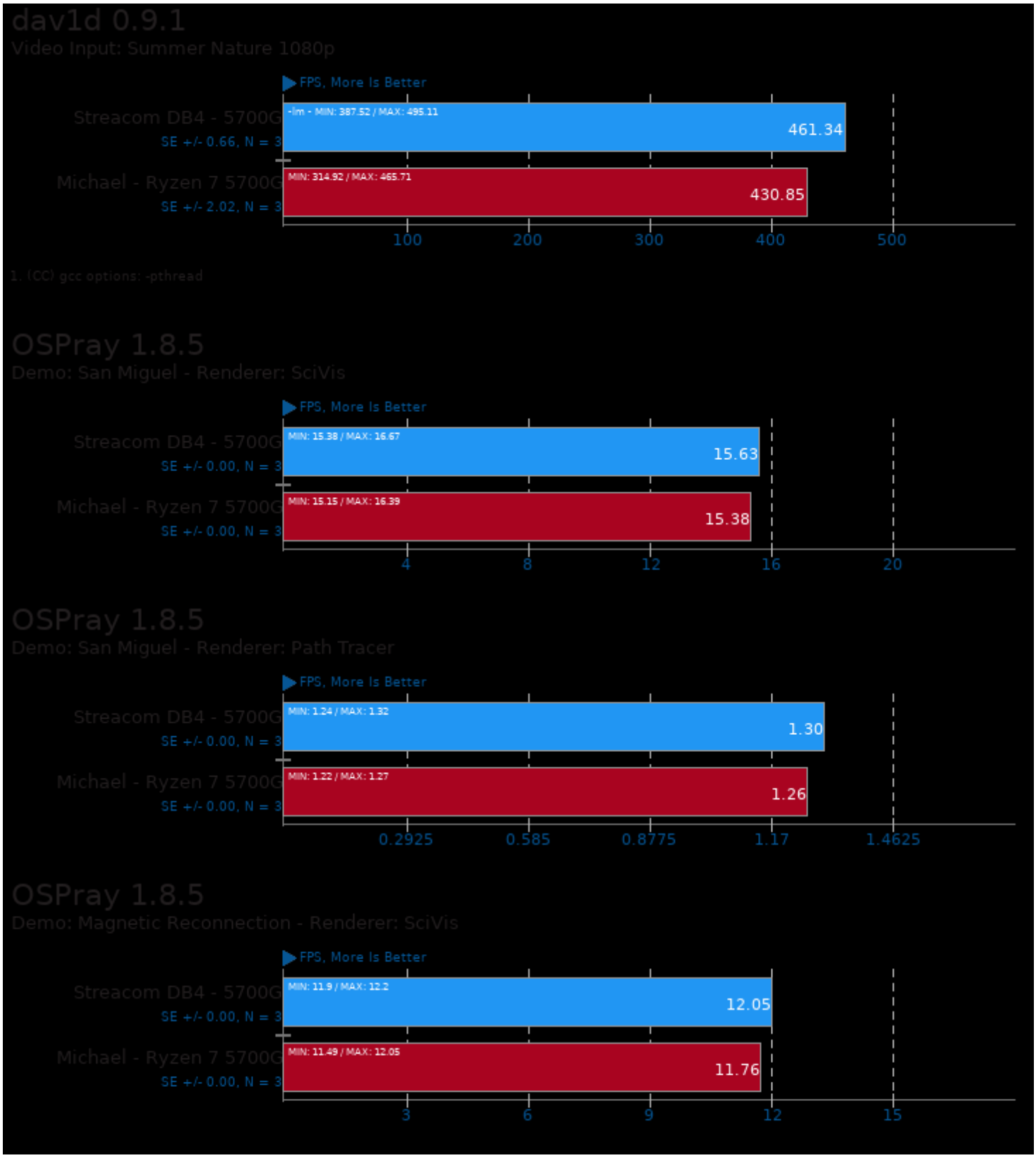
AMD Ryzen 7 5700G Linux Benchmarks

Standard Deviation	1.9%	0.3%
RNNoise (sec)	**15.868**	**15.842**
Normalized	99.84%	100%
Standard Deviation	0.7%	0.1%
LibreOffice - 2.D.T.P (sec)	**6.038**	**5.933**
Normalized	98.26%	100%
Standard Deviation	3.8%	3.8%
OCRMyPDF - P.6.P.P.D (sec)	**18.135**	**17.915**
Normalized	98.79%	100%
Standard Deviation	0.6%	0.3%
OpenSCAD - Pistol (sec)	**84.584**	**79.261**
Normalized	93.71%	100%
Standard Deviation	0.2%	0.3%
OpenSCAD - Mini-ITX Case (sec)	**37.038**	**35.291**
Normalized	95.28%	100%
Standard Deviation	0.8%	0.4%
OpenSCAD - P.M.S (sec)	**7.117**	**6.929**
Normalized	97.36%	100%
Standard Deviation	1.7%	1.1%
OpenSCAD - L.P.C.S (sec)	**15.065**	**14.436**
Normalized	95.82%	100%
Standard Deviation	0.7%	0.4%
RawTherapee - T.B.T (sec)	**60.449**	**62.625**
Normalized	100%	96.53%
Standard Deviation	0.1%	0.1%
Blender - BMW27 - CPU-Only (sec)	**146.89**	**148.17**
Normalized	100%	99.14%
Standard Deviation	0.2%	0.4%
Appleseed - Emily (sec)	**353.86663**	**351.403512**
Normalized	99.3%	100%
Appleseed - Disney Material (sec)	**219.217196**	**227.201556**
Normalized	100%	96.49%
Appleseed - Material Tester (sec)	**191.276737**	**197.468193**
Normalized	100%	96.86%
WavPack Audio Encoding - WAV To WavPack (sec)	**11.774**	**11.702**
Normalized	99.39%	100%
Standard Deviation	0.8%	0.3%
Git - T.T.C.C.G.C (sec)	**43.765**	**42.436**
Normalized	96.96%	100%
Standard Deviation	0.3%	0.3%

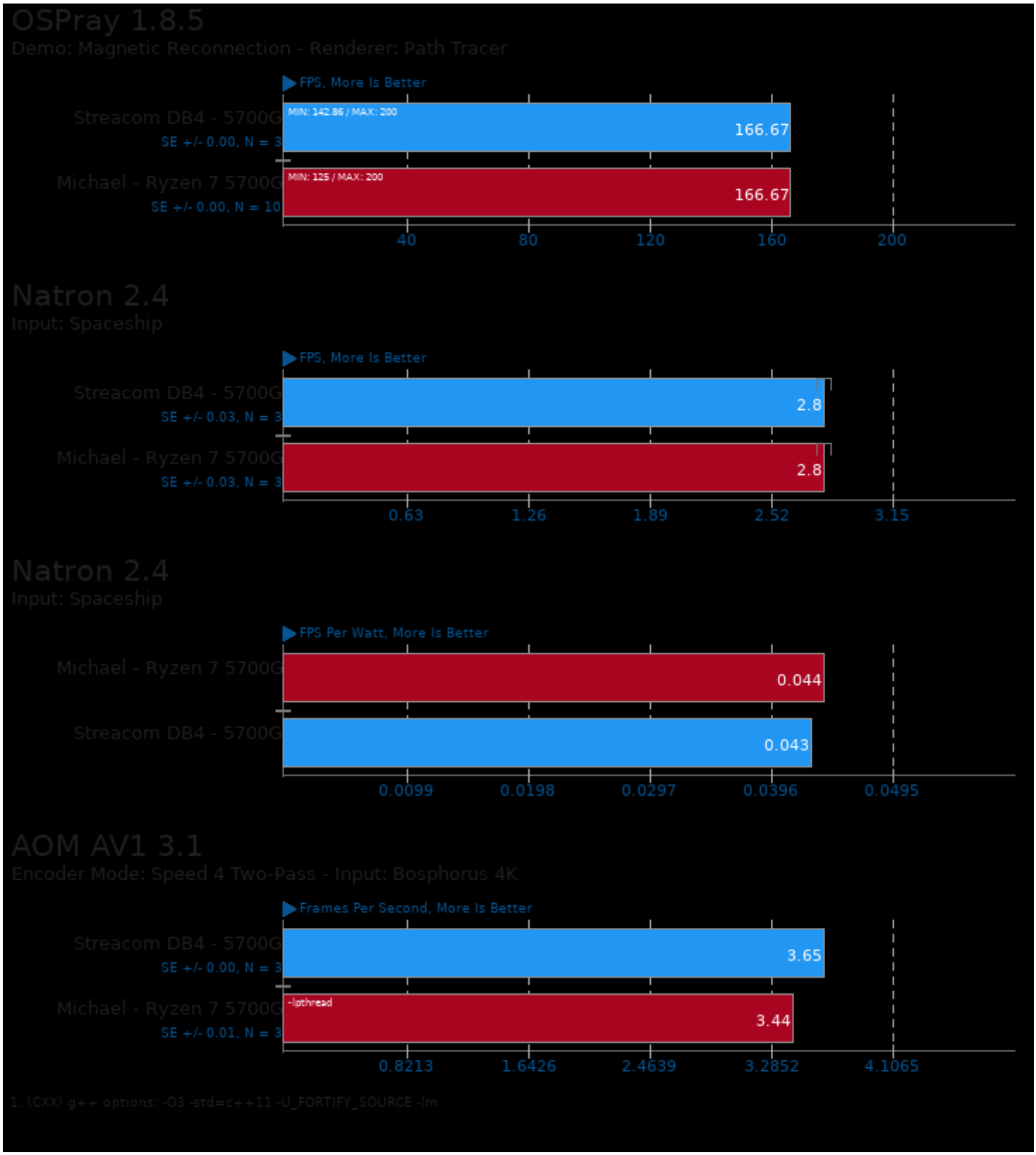

CPU Power Consumption Monitor
Phoronix Test Suite System Monitoring
Watts
Streacom DB4 - 5700G
Min: 0.44 / Avg: 42.77 / Max: 91.56
Michael - Ryzen 7 5700G
Min: 1.96 / Avg: 45.51 / Max: 89.05
20
40
60
80
100
dav1d 0.9.1
Video Input: Summer Nature 4K
FPS Per Watt, More Is Better
Streacom DB4 - 5700G
2.810
Michael - Ryzen 7 5700G
2.761
0.6323
1.2646
1.8969
2.5292
3.1615
dav1d 0.9.1
Video Input: Summer Nature 1080p
FPS Per Watt, More Is Better
Streacom DB4 - 5700G
15.59
Michael - Ryzen 7 5700G
14.83
4
8
12
16
20
OSPray 1.8.5
Demo: San Miguel - Renderer: SciVis
FPS Per Watt, More Is Better
Michael - Ryzen 7 5700G
0.367
Streacom DB4 - 5700G
0.356
0.0826
0.1652
0.2478
0.3304
0.413

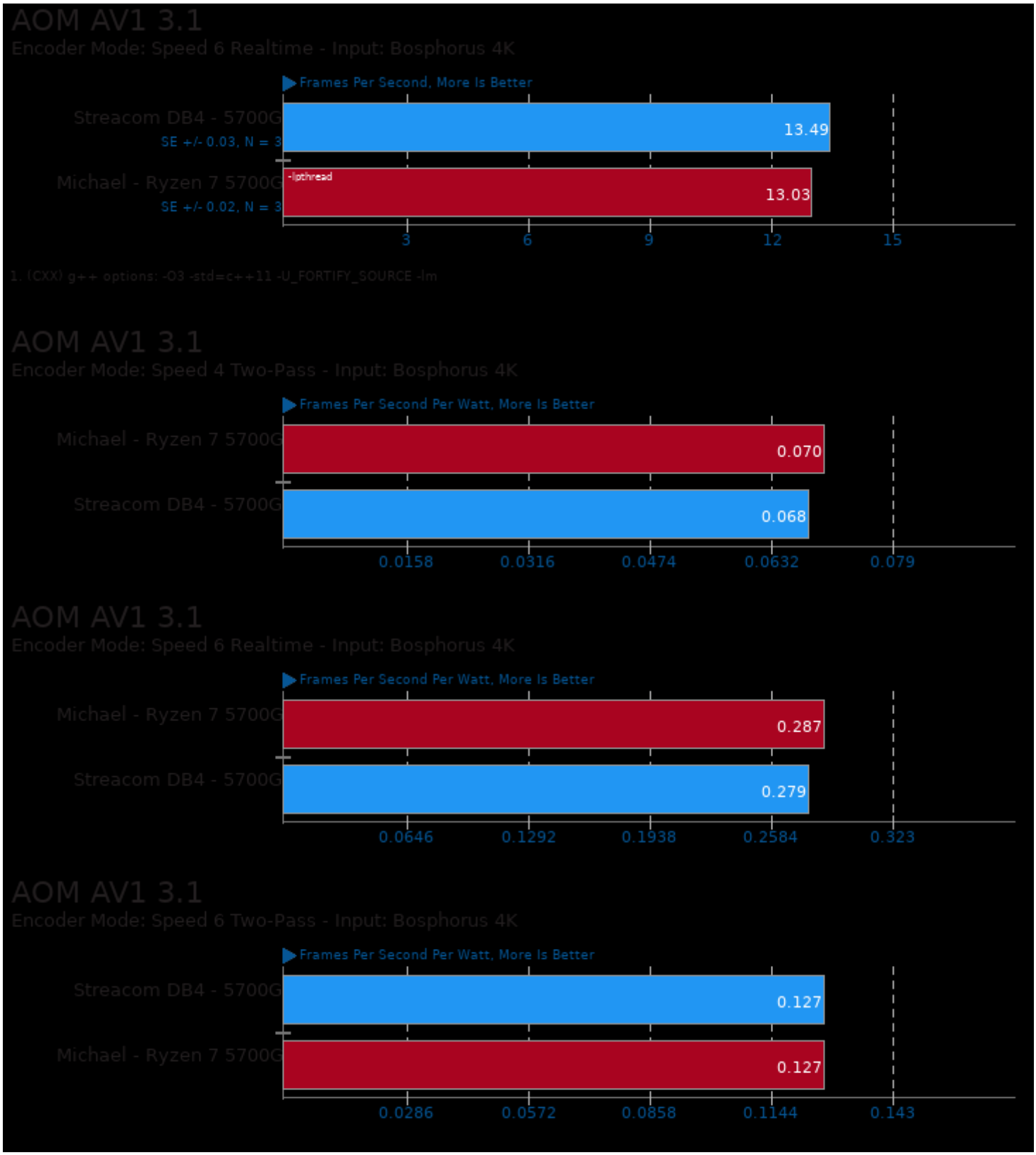
AMD Ryzen 7 5700G Linux Benchmarks

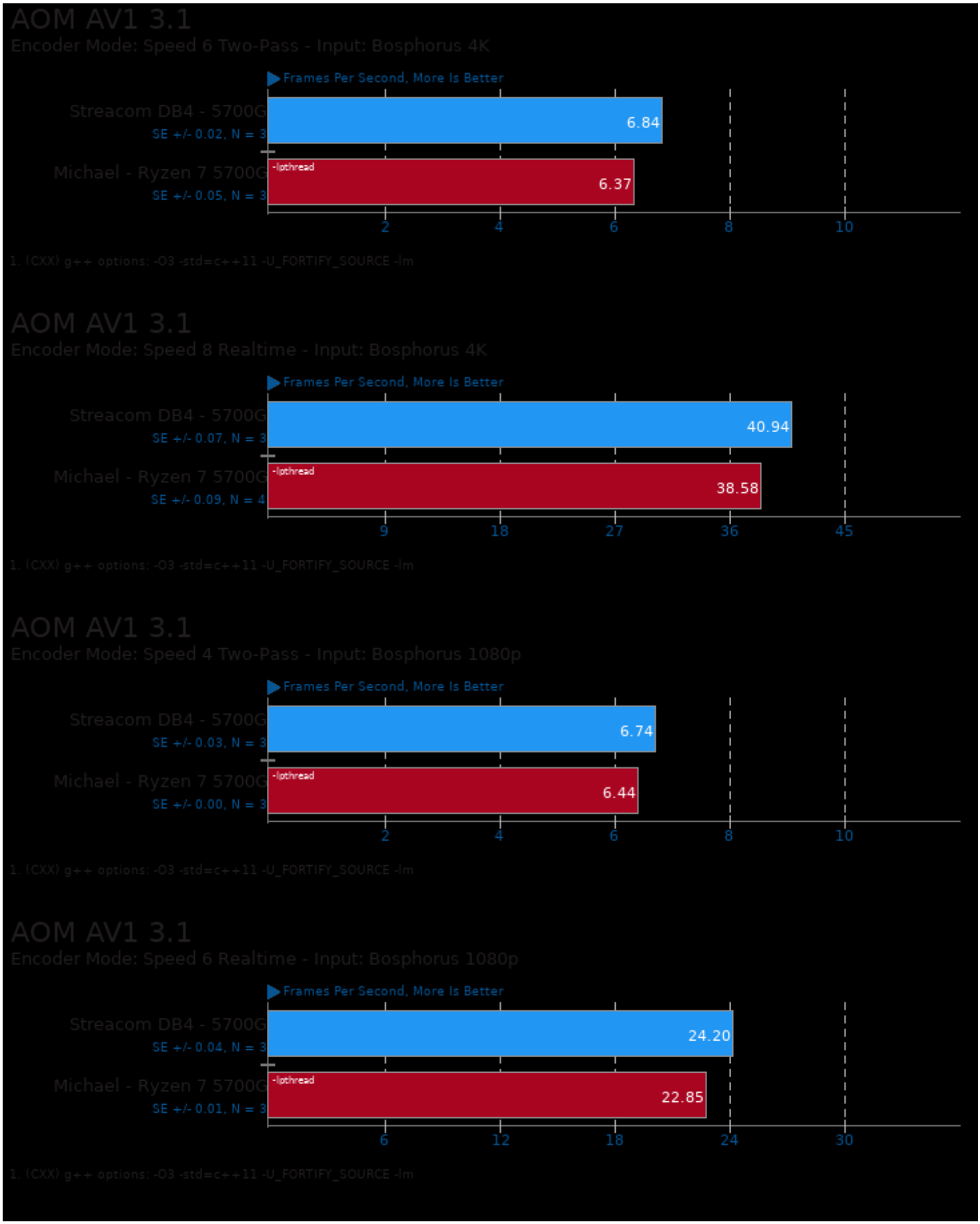


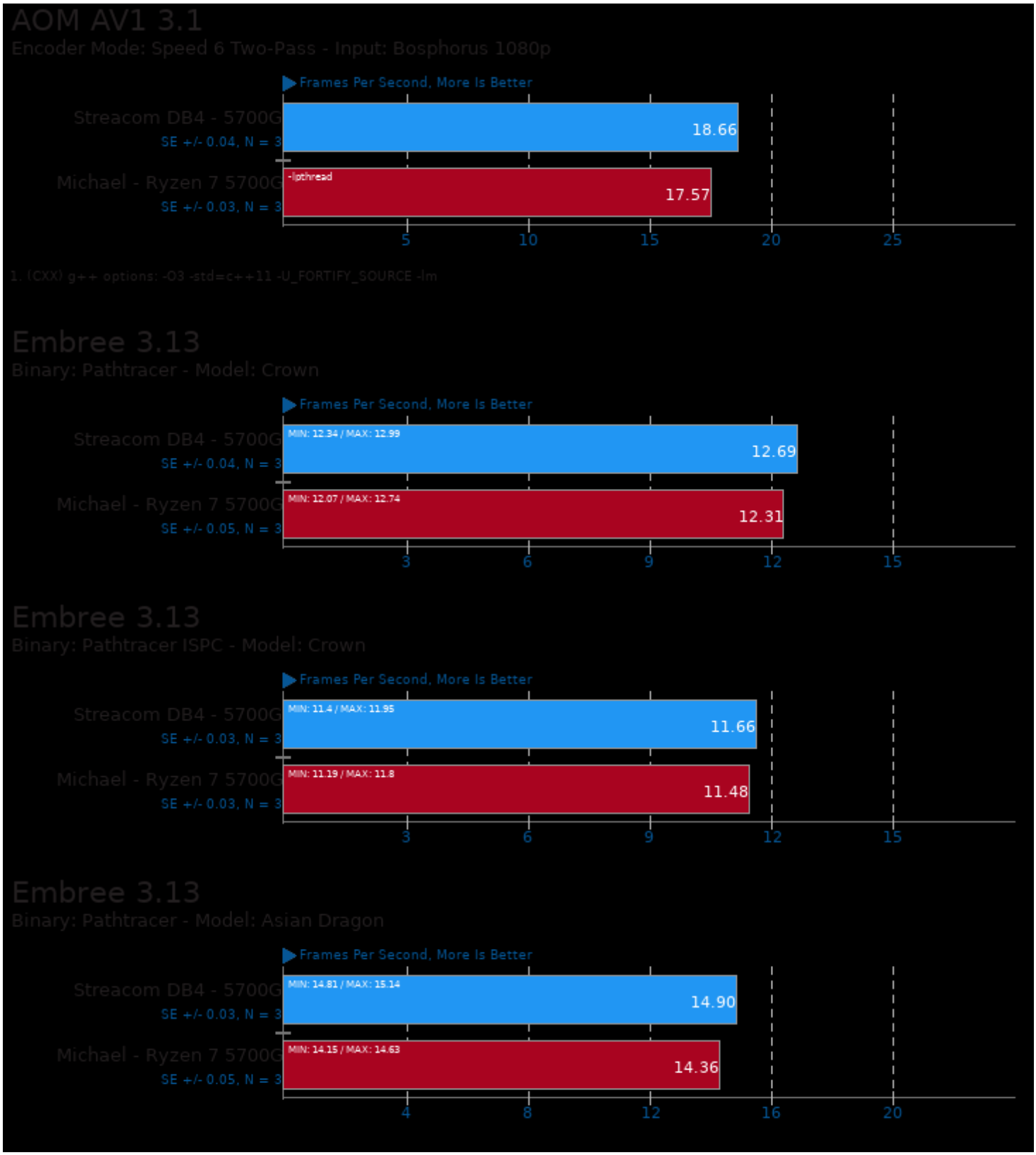

dav1d 0.9.1
Video Input: Summer Nature 1080p
FPS, More Is Better
Streacom DB4 - 5700G
-lm - MIN: 387.52 / MAX: 495.11
SE +/- 0.66, N = 3
461.34
Michael - Ryzen 7 5700G
MIN: 314.92 / MAX: 465.71
SE +/- 2.02, N = 3
430.85
100
200
300
400
500
1. (CC) gcc options: -pthread
OSPray 1.8.5
Demo: San Miguel - Renderer: SciVis
FPS, More Is Better
Streacom DB4 - 5700G
MIN: 15.38 / MAX: 16.67
SE +/- 0.00, N = 3
15.63
Michael - Ryzen 7 5700G
MIN: 15.15 / MAX: 16.39
SE +/- 0.00, N = 3
15.38
4
8
12
16
20
OSPray 1.8.5
Demo: San Miguel - Renderer: Path Tracer
FPS, More Is Better
Streacom DB4 - 5700G
MIN: 1.24 / MAX: 1.32
SE +/- 0.00, N = 3
1.30
Michael - Ryzen 7 5700G
MIN: 1.22 / MAX: 1.27
SE +/- 0.00, N = 3
1.26
0.2925
0.585
0.8775
1.17
1.4625
OSPray 1.8.5
Demo: Magnetic Reconnection - Renderer: SciVis
FPS, More Is Better
Streacom DB4 - 5700G
MIN: 11.9 / MAX: 12.2
SE +/- 0.00, N = 3
12.05
Michael - Ryzen 7 5700G
MIN: 11.49 / MAX: 12.05
SE +/- 0.00, N = 3
11.76
3
6
9
12
15

AMD Ryzen 7 5700G Linux Benchmarks

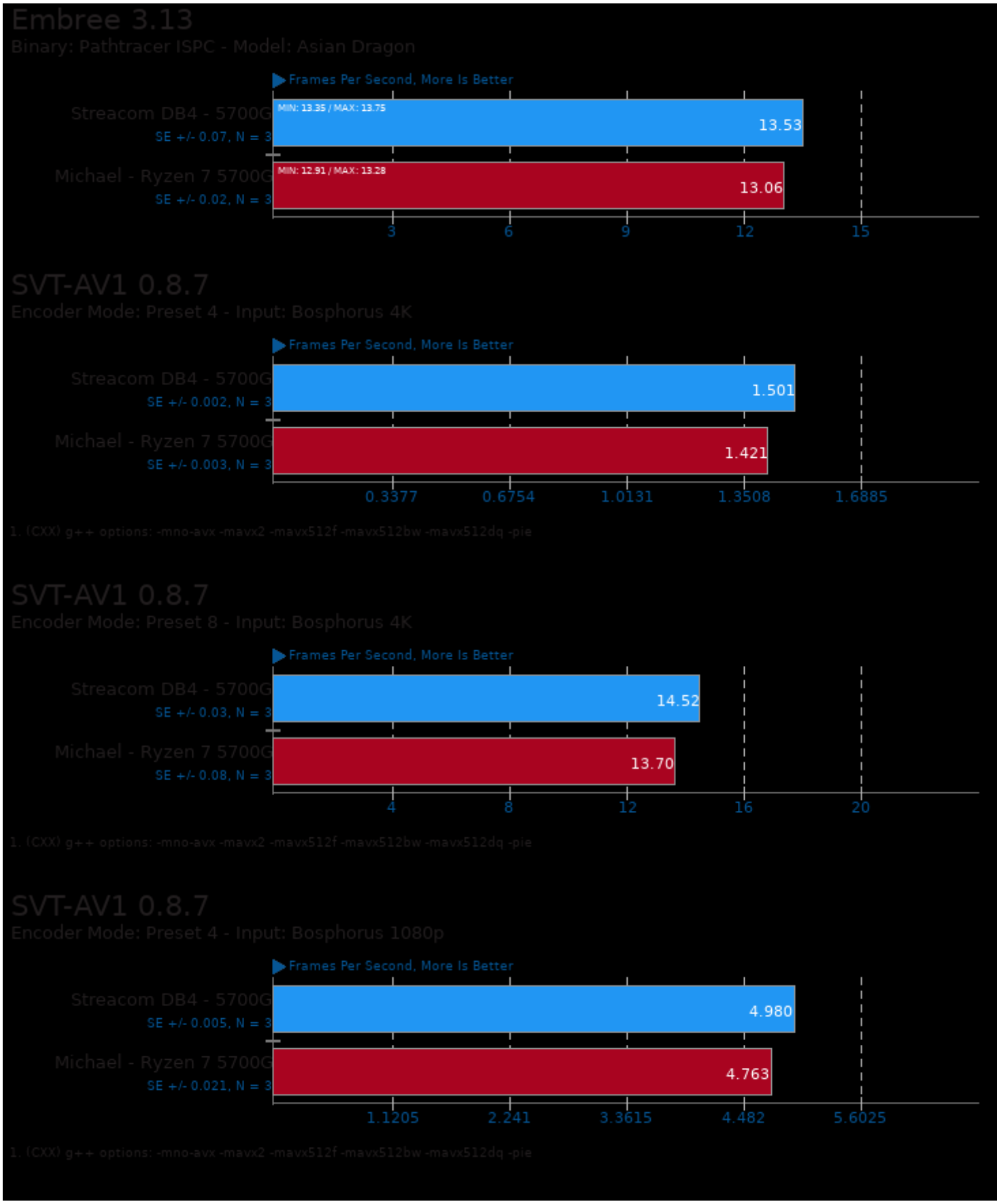


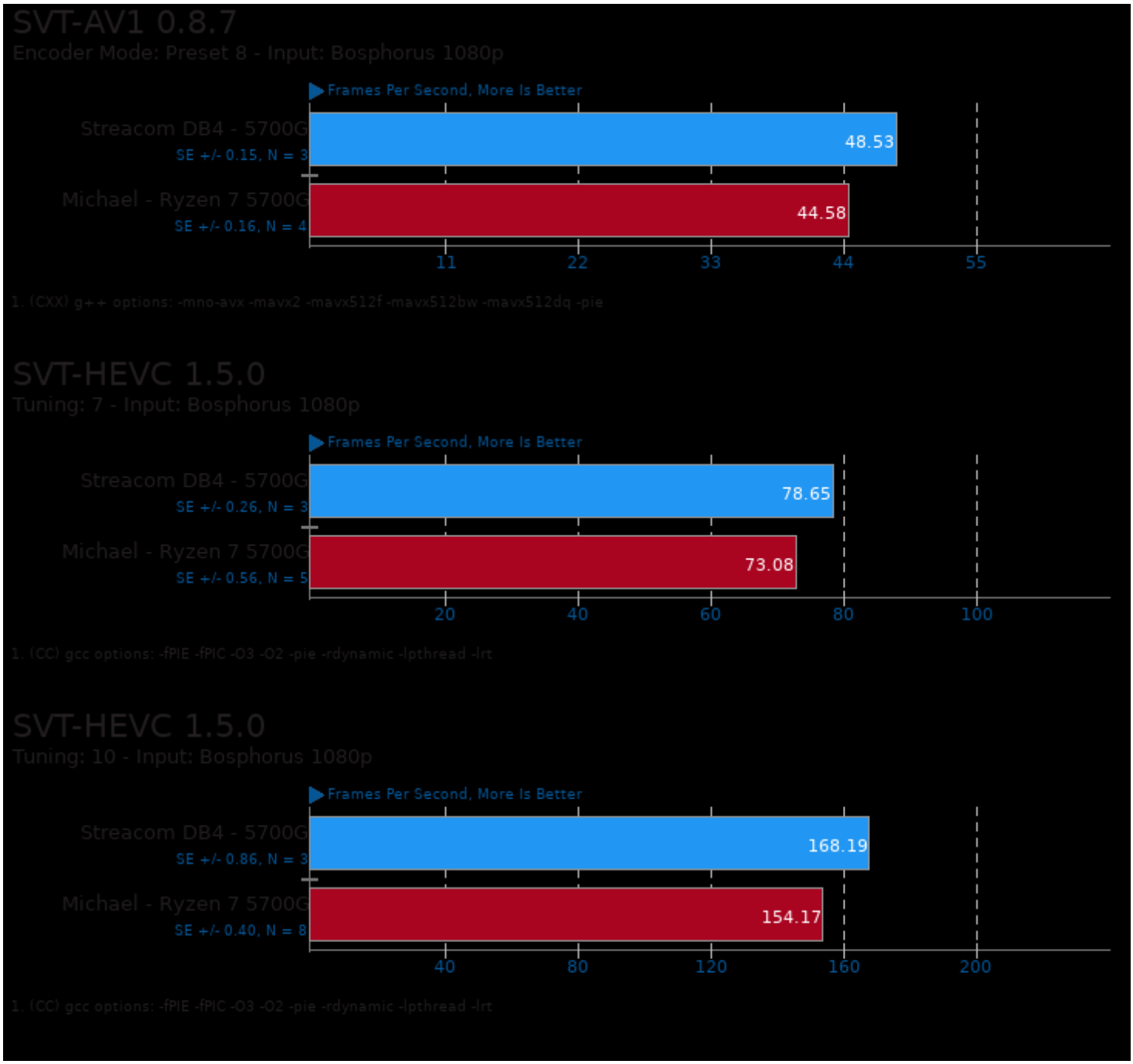

AOM AV1 3.1
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 4K
Frames Per Second, More Is Better
Streacom DB4 - 5700G
SE +/- 0.03, N = 3
13.49
Michael - Ryzen 7 5700G
-lpthread
SE +/- 0.02, N = 3
13.03
3
6
9
12
15
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm
AOM AV1 3.1
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 4K
Frames Per Second Per Watt, More Is Better
Michael - Ryzen 7 5700G
0.070
Streacom DB4 - 5700G
0.068
0.0158
0.0316
0.0474
0.0632
0.079
AOM AV1 3.1
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 4K
Frames Per Second Per Watt, More Is Better
Michael - Ryzen 7 5700G
0.287
Streacom DB4 - 5700G
0.279
0.0646
0.1292
0.1938
0.2584
0.323
AOM AV1 3.1
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K
Frames Per Second Per Watt, More Is Better
Streacom DB4 - 5700G
0.127
Michael - Ryzen 7 5700G
0.127
0.0286
0.0572
0.0858
0.1144
0.143


AOM AV1 3.1
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 4K
Frames Per Second, More Is Better
Streacom DB4 - 5700G
SE +/- 0.02, N = 3
6.84
Michael - Ryzen 7 5700G
-lpthread
SE +/- 0.05, N = 3
6.37
2
4
6
8
10
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm
AOM AV1 3.1
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 4K
Frames Per Second, More Is Better
Streacom DB4 - 5700G
SE +/- 0.07, N = 3
40.94
Michael - Ryzen 7 5700G
-lpthread
SE +/- 0.09, N = 4
38.58
9
18
27
36
45
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm
AOM AV1 3.1
Encoder Mode: Speed 4 Two-Pass - Input: Bosphorus 1080p
Frames Per Second, More Is Better
Streacom DB4 - 5700G
SE +/- 0.03, N = 3
6.74
Michael - Ryzen 7 5700G
-lpthread
SE +/- 0.00, N = 3
6.44
2
4
6
8
10
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm
AOM AV1 3.1
Encoder Mode: Speed 6 Realtime - Input: Bosphorus 1080p
Frames Per Second, More Is Better
Streacom DB4 - 5700G
SE +/- 0.04, N = 3
24.20
Michael - Ryzen 7 5700G
-lpthread
SE +/- 0.01, N = 3
22.85
6
12
18
24
30
1. (CXX) g++ options: -O3 -std=c++11 -U_FORTIFY_SOURCE -lm


AOM AV1 3.1
Encoder Mode: Speed 6 Two-Pass - Input: Bosphorus 1080p
Frames Per Second, More Is Better
Streacom DB4 - 5700G
SE +/- 0.04, N = 3
18.66
Michael - Ryzen 7 5700G
SE +/- 0.03, N = 3
-lpthread
17.57
5
10
15
20
25
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
Streacom DB4 - 5700G
SE +/- 0.04, N = 3
MIN: 12.34 / MAX: 12.99
12.69
Michael - Ryzen 7 5700G
SE +/- 0.05, N = 3
MIN: 12.07 / MAX: 12.74
12.31
3
6
9
12
15
Embree 3.13
Binary: Pathtracer ISPC - Model: Crown
Frames Per Second, More Is Better
Streacom DB4 - 5700G
SE +/- 0.03, N = 3
MIN: 11.4 / MAX: 11.95
11.66
Michael - Ryzen 7 5700G
SE +/- 0.03, N = 3
MIN: 11.19 / MAX: 11.8
11.48
3
6
9
12
15
Embree 3.13
Binary: Pathtracer - Model: Asian Dragon
Frames Per Second, More Is Better
Streacom DB4 - 5700G
SE +/- 0.03, N = 3
MIN: 14.81 / MAX: 15.14
14.90
Michael - Ryzen 7 5700G
SE +/- 0.05, N = 3
MIN: 14.15 / MAX: 14.63
14.36
4
8
12
16
20

AMD Ryzen 7 5700G Linux Benchmarks



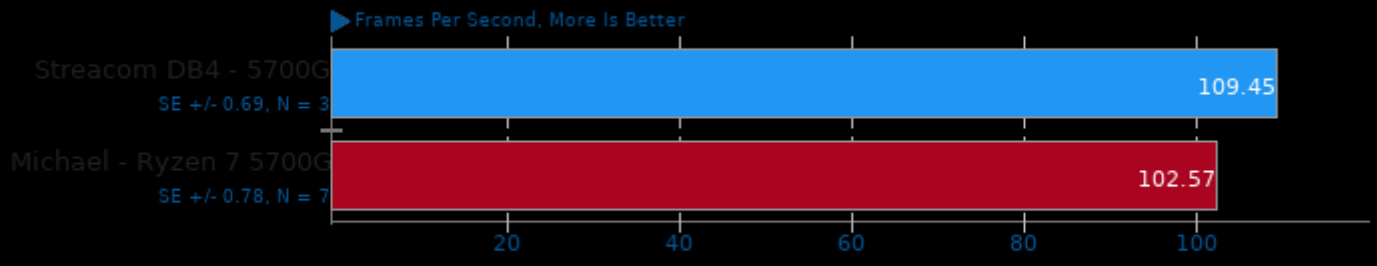


This test scales linearly over the number of cores.

AMD Ryzen 7 5700G Linux Benchmarks

SVT-VP9 0.3

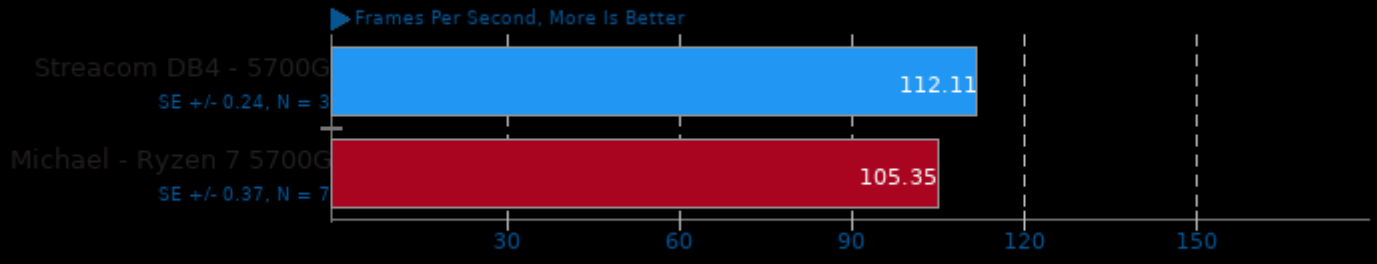
Tuning: VMAF Optimized - Input: Bosphorus 1080p



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

SVT-VP9 0.3

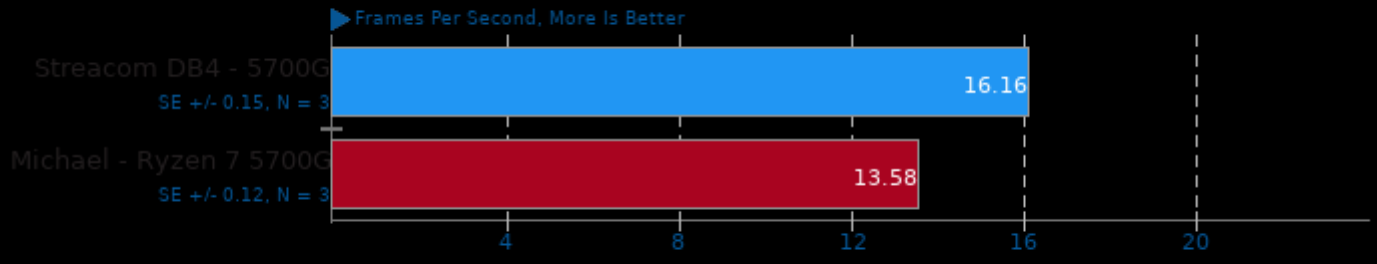
Tuning: PSNR/SSIM Optimized - Input: Bosphorus 1080p



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

VP9 libvpx Encoding 1.10.0

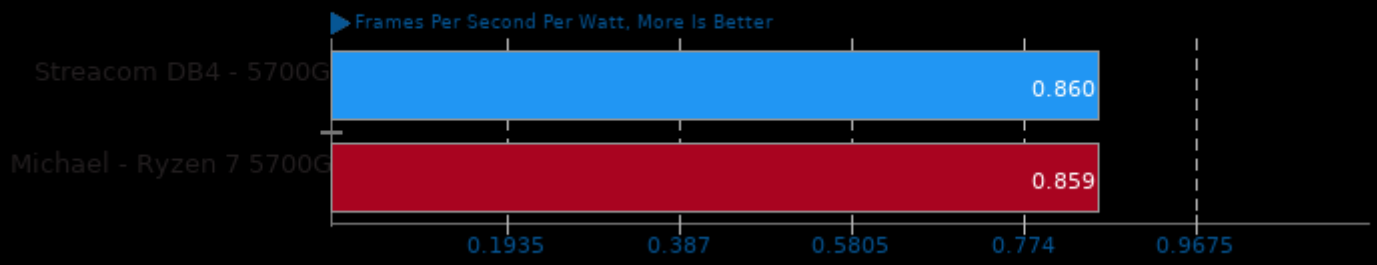
Speed: Speed 5 - Input: Bosphorus 4K



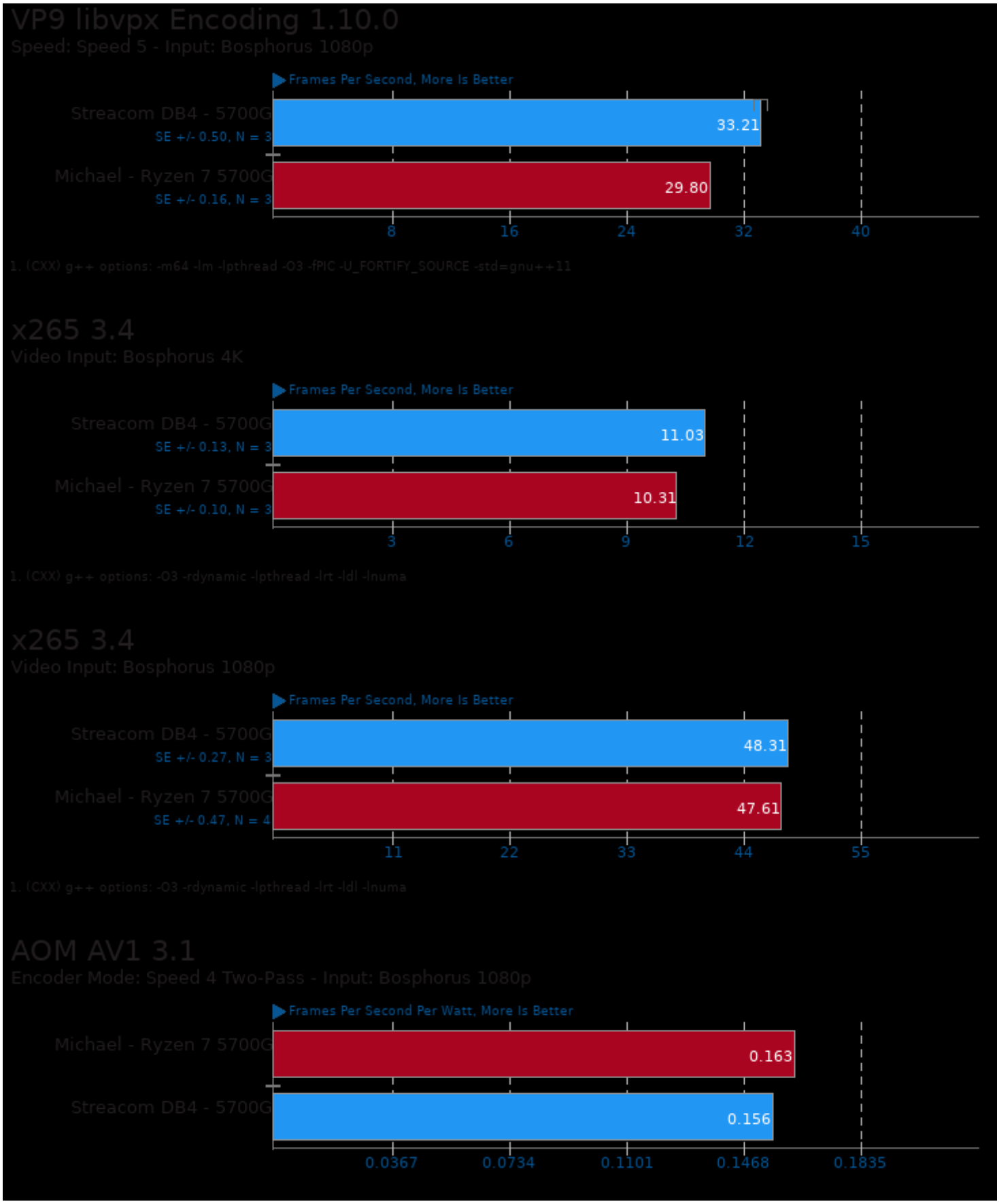
1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U_FORTIFY_SOURCE -std=gnu++11

AOM AV1 3.1

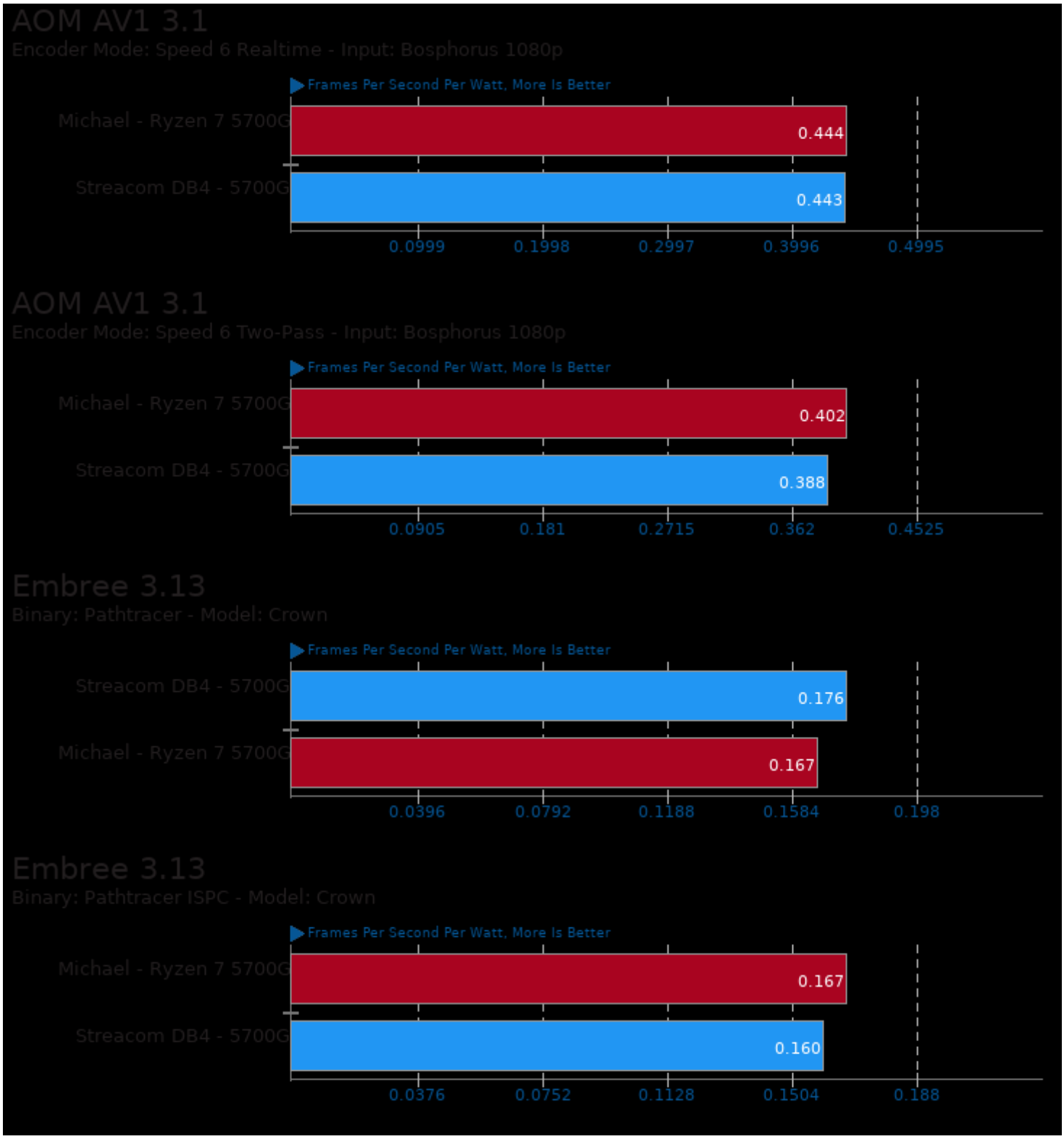
Encoder Mode: Speed 8 Realtime - Input: Bosphorus 4K



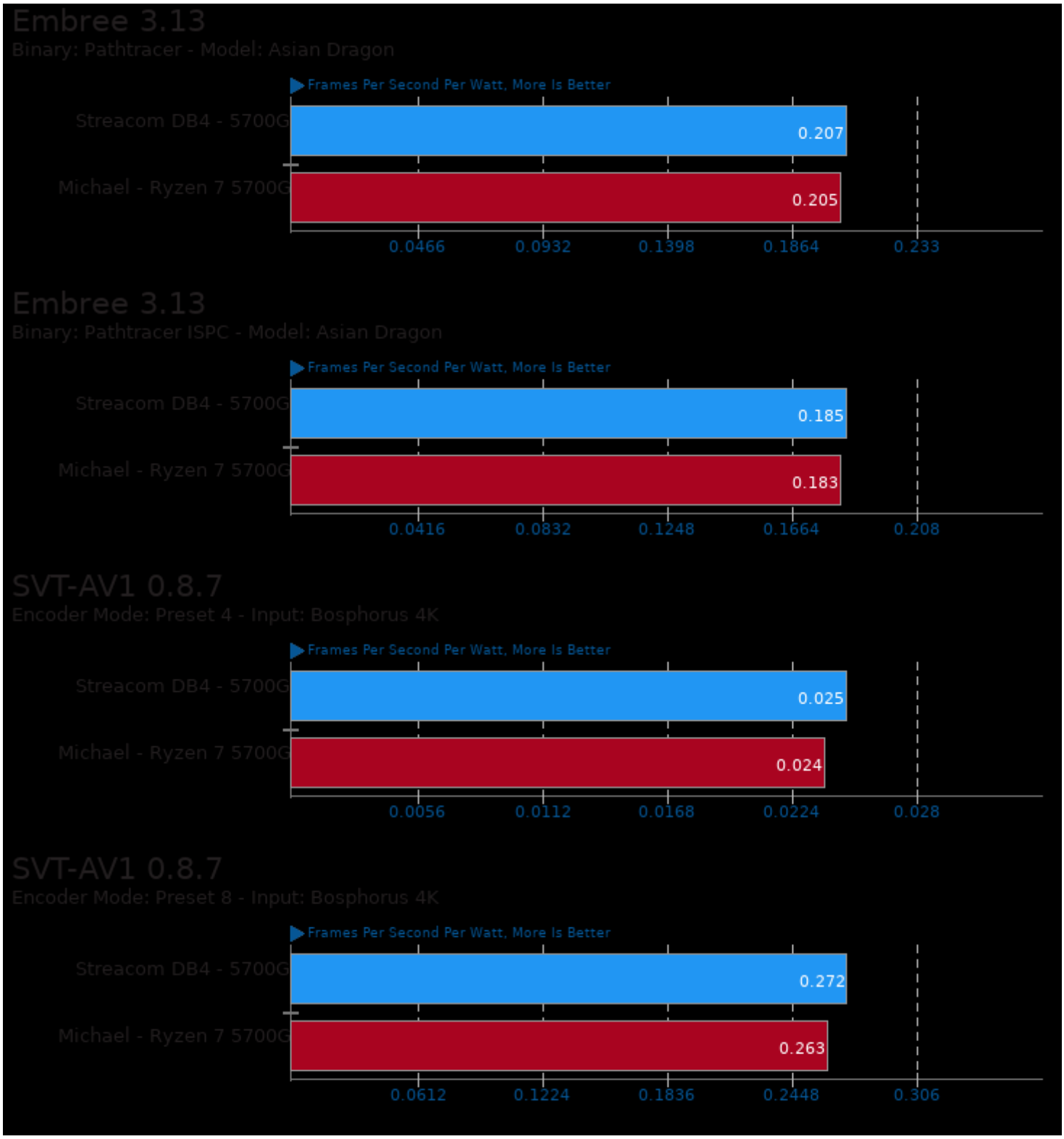
AMD Ryzen 7 5700G Linux Benchmarks



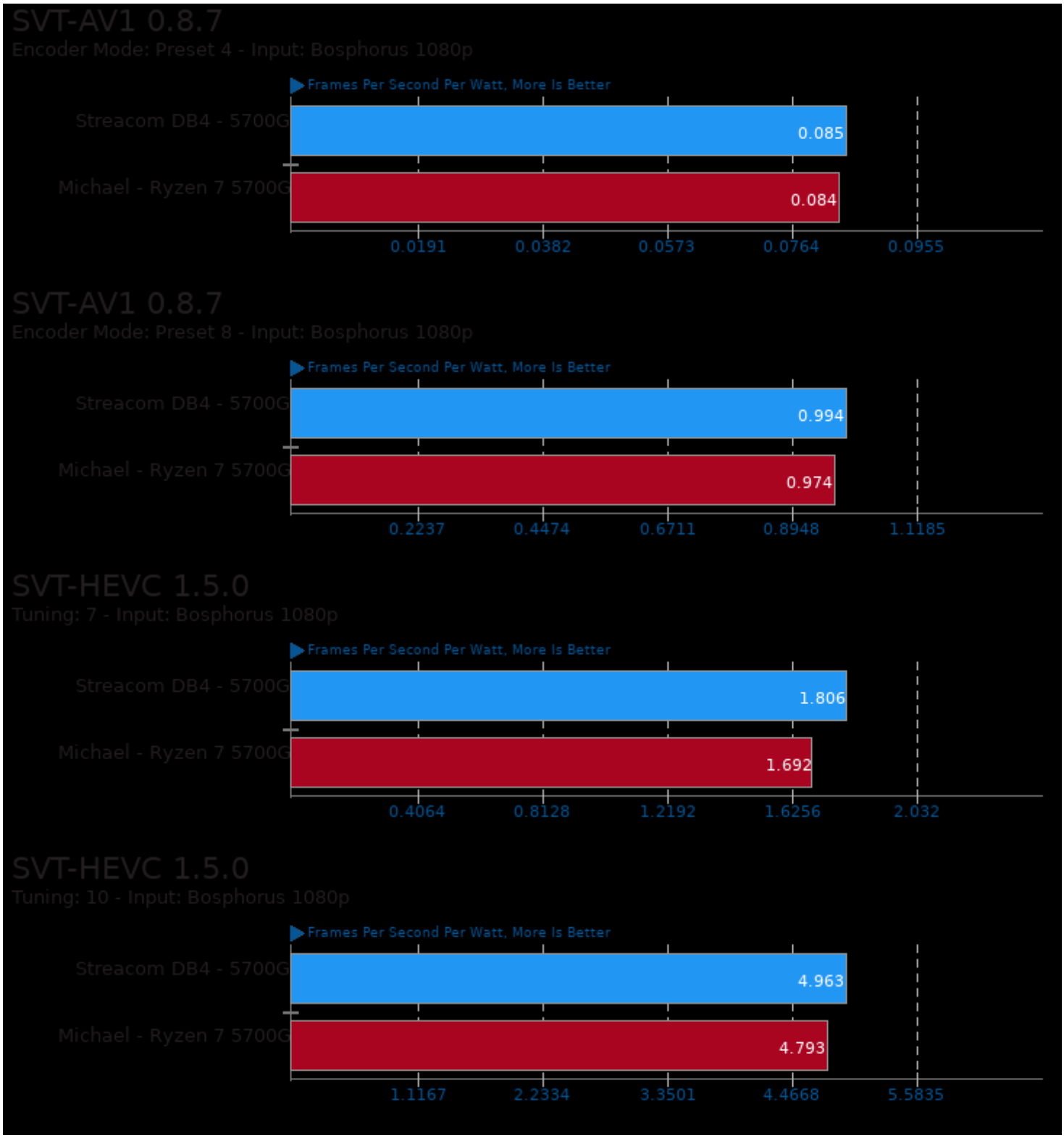
AMD Ryzen 7 5700G Linux Benchmarks



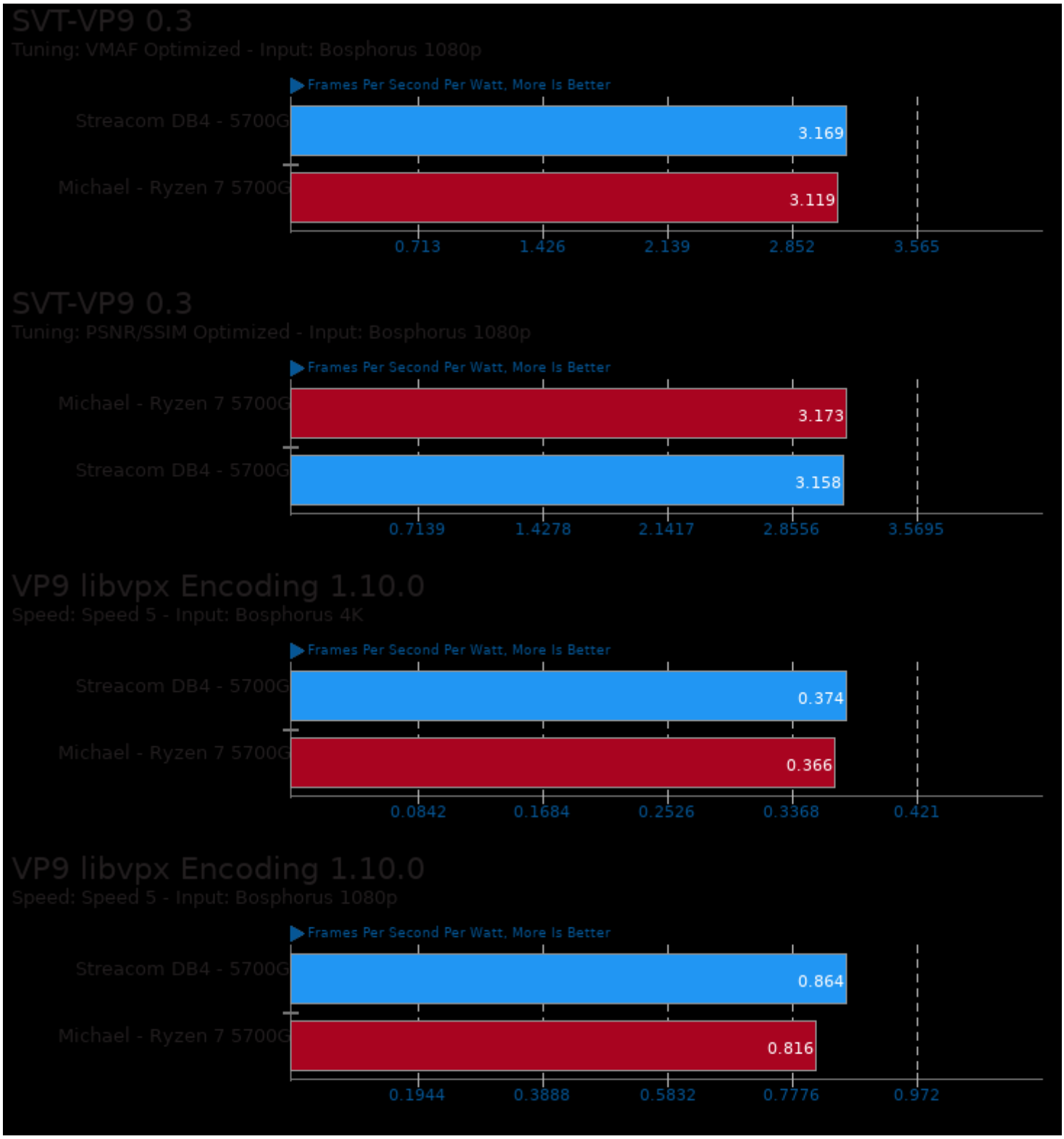
AMD Ryzen 7 5700G Linux Benchmarks



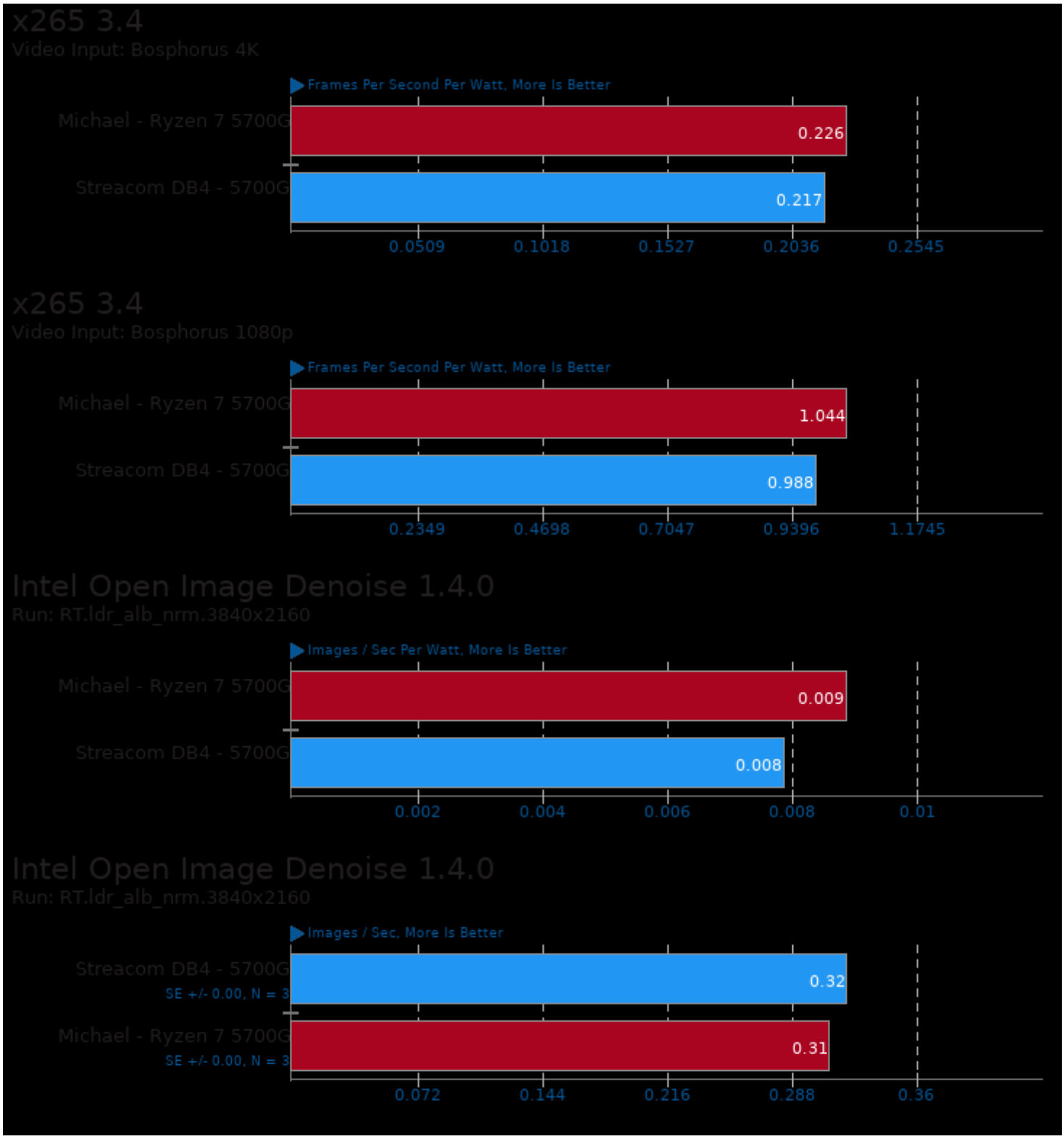
AMD Ryzen 7 5700G Linux Benchmarks



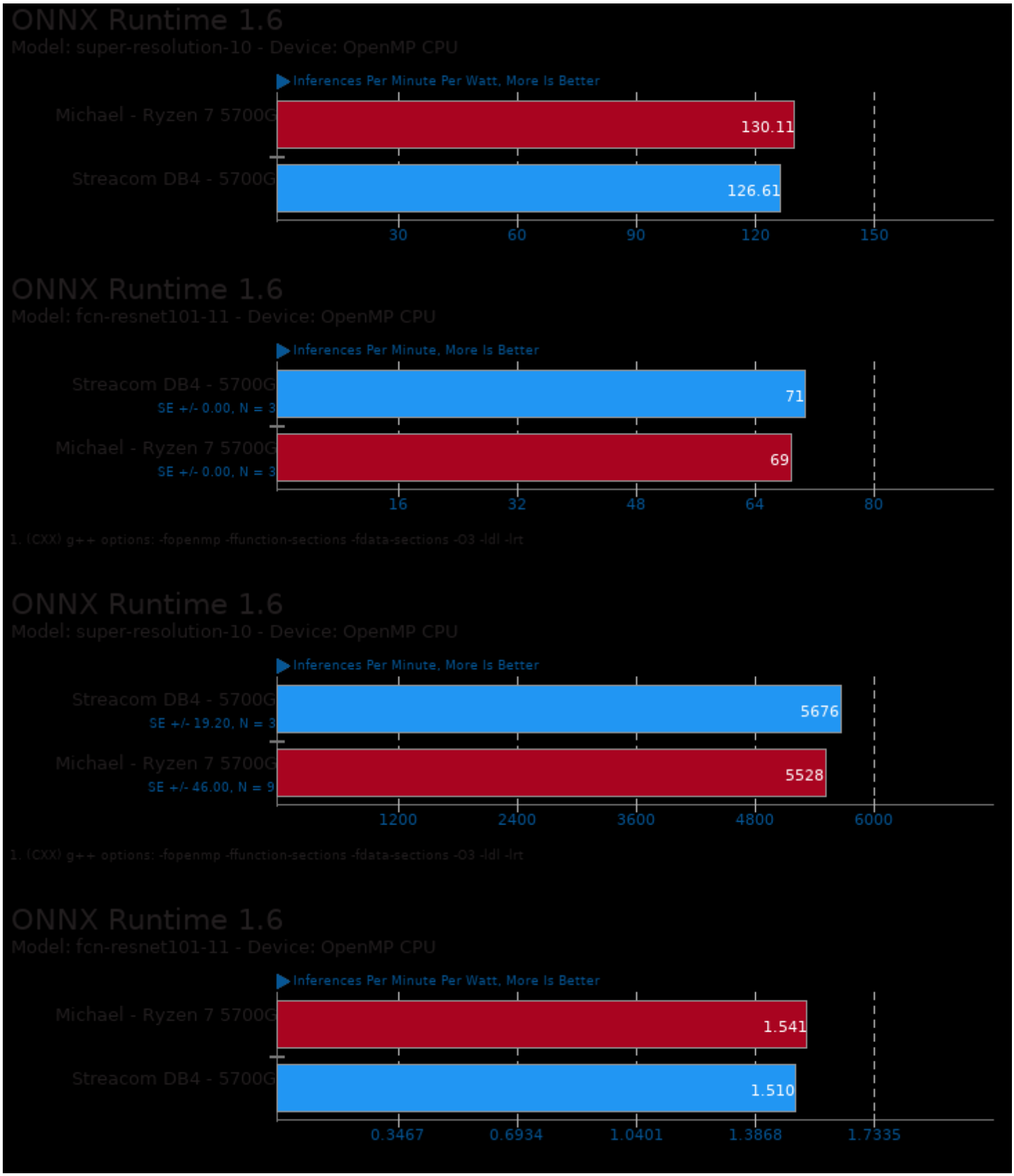
AMD Ryzen 7 5700G Linux Benchmarks



AMD Ryzen 7 5700G Linux Benchmarks



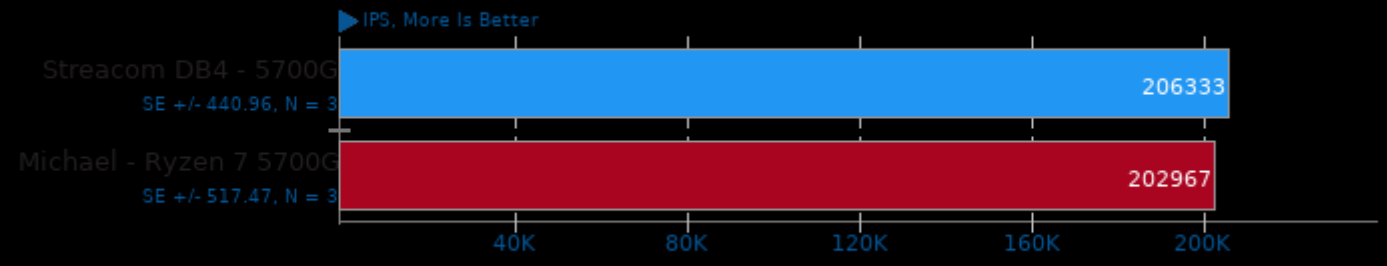
AMD Ryzen 7 5700G Linux Benchmarks



AMD Ryzen 7 5700G Linux Benchmarks

Chia Blockchain VDF 1.0.1

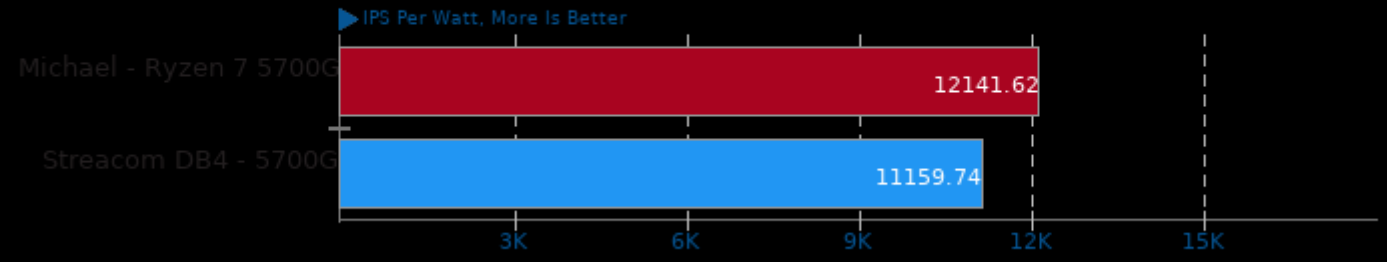
Test: Square Plain C++



1. (CXX) g++ options: -flto -no-pie -lgmpxx -lgmp -lboost_system -pthread

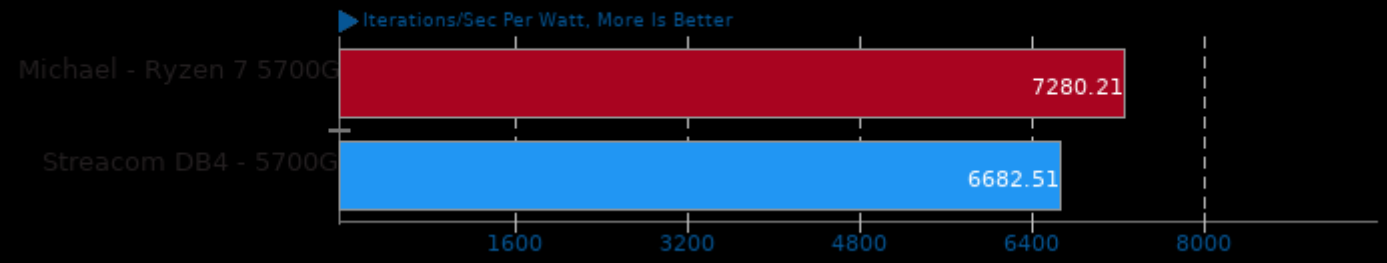
Chia Blockchain VDF 1.0.1

Test: Square Plain C++



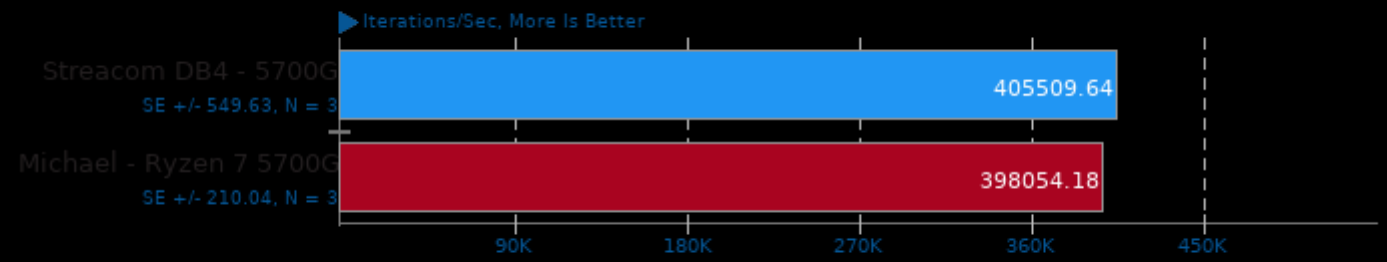
Coremark 1.0

CoreMark Size 666 - Iterations Per Second



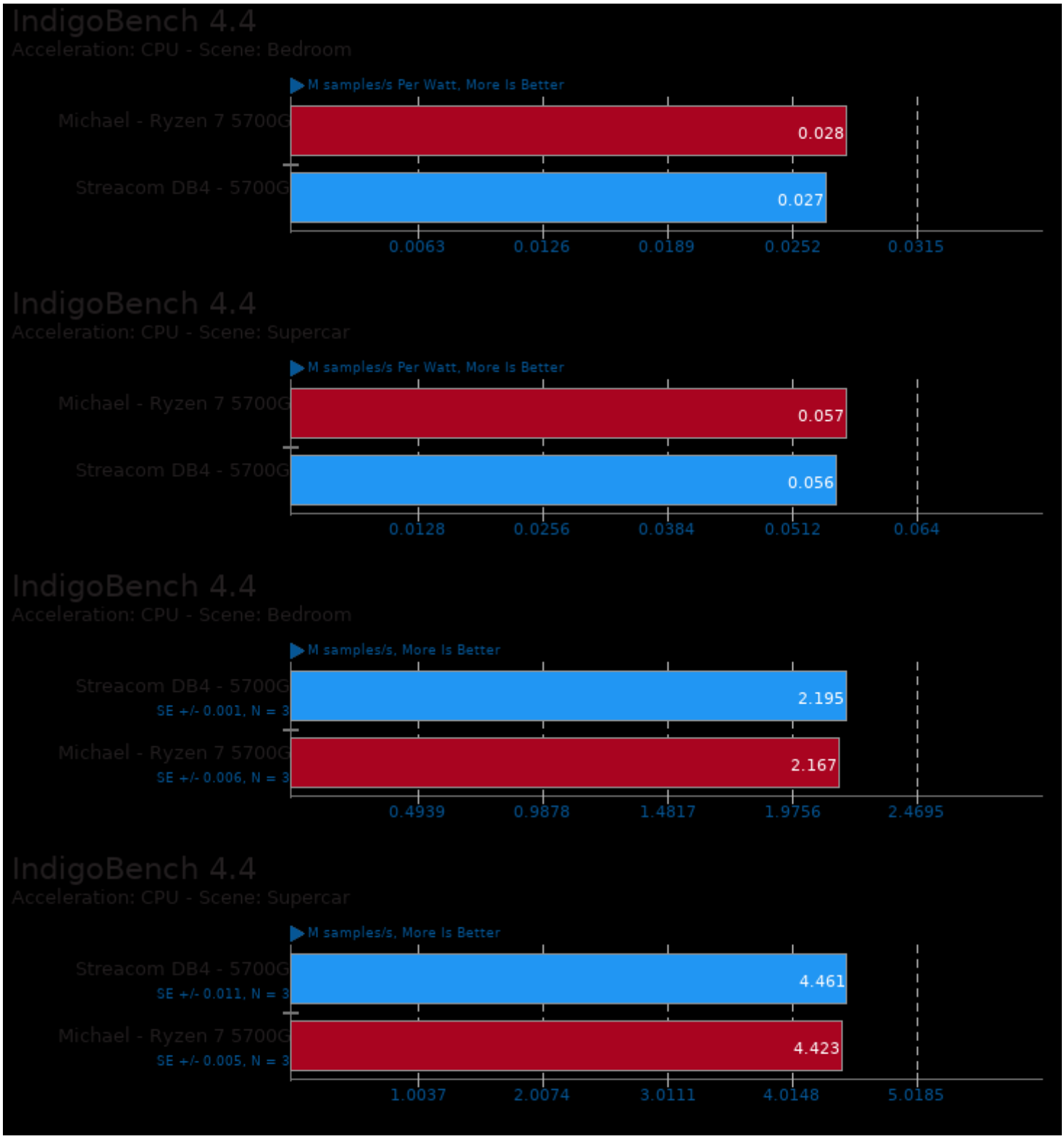
Coremark 1.0

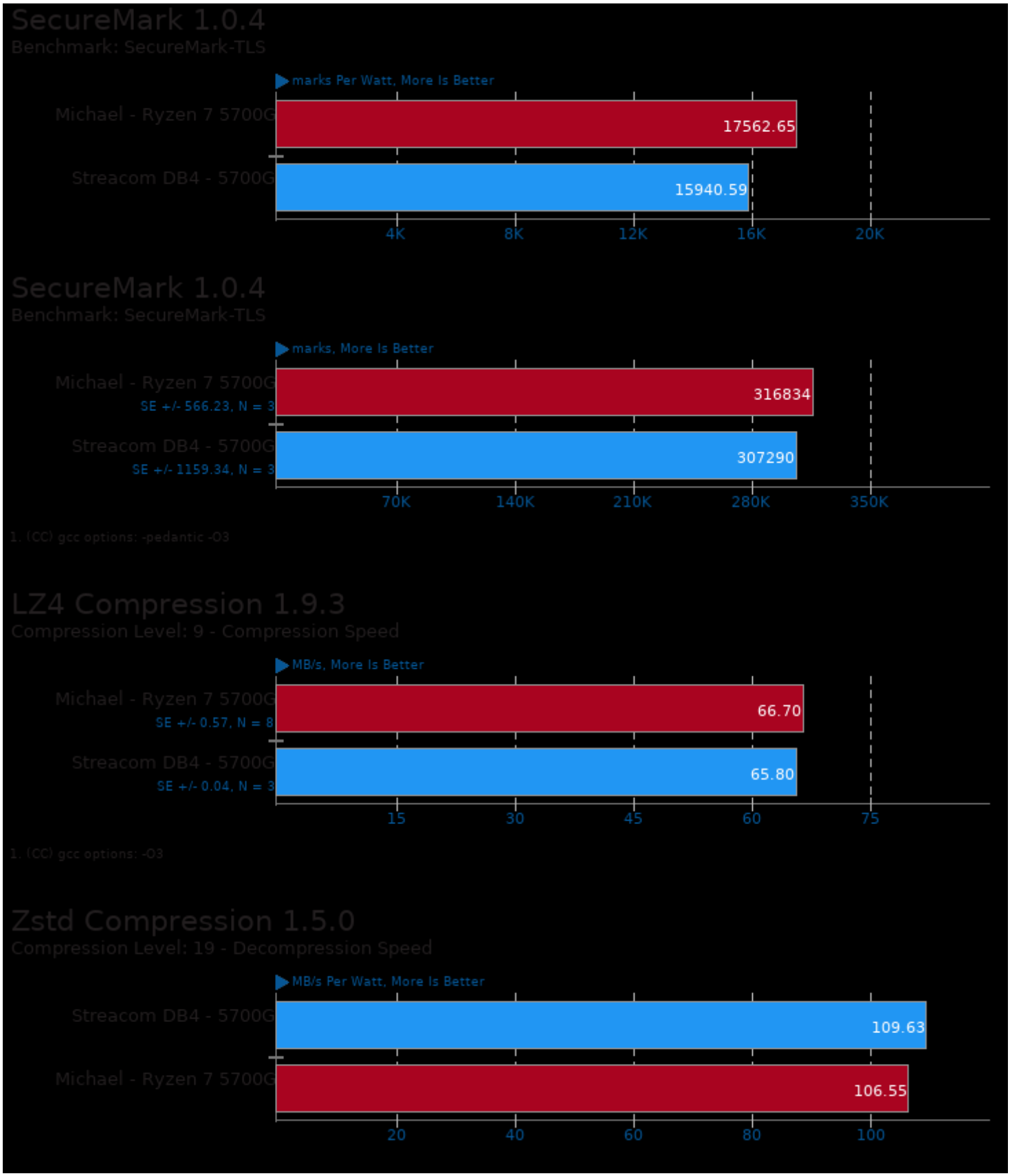
CoreMark Size 666 - Iterations Per Second



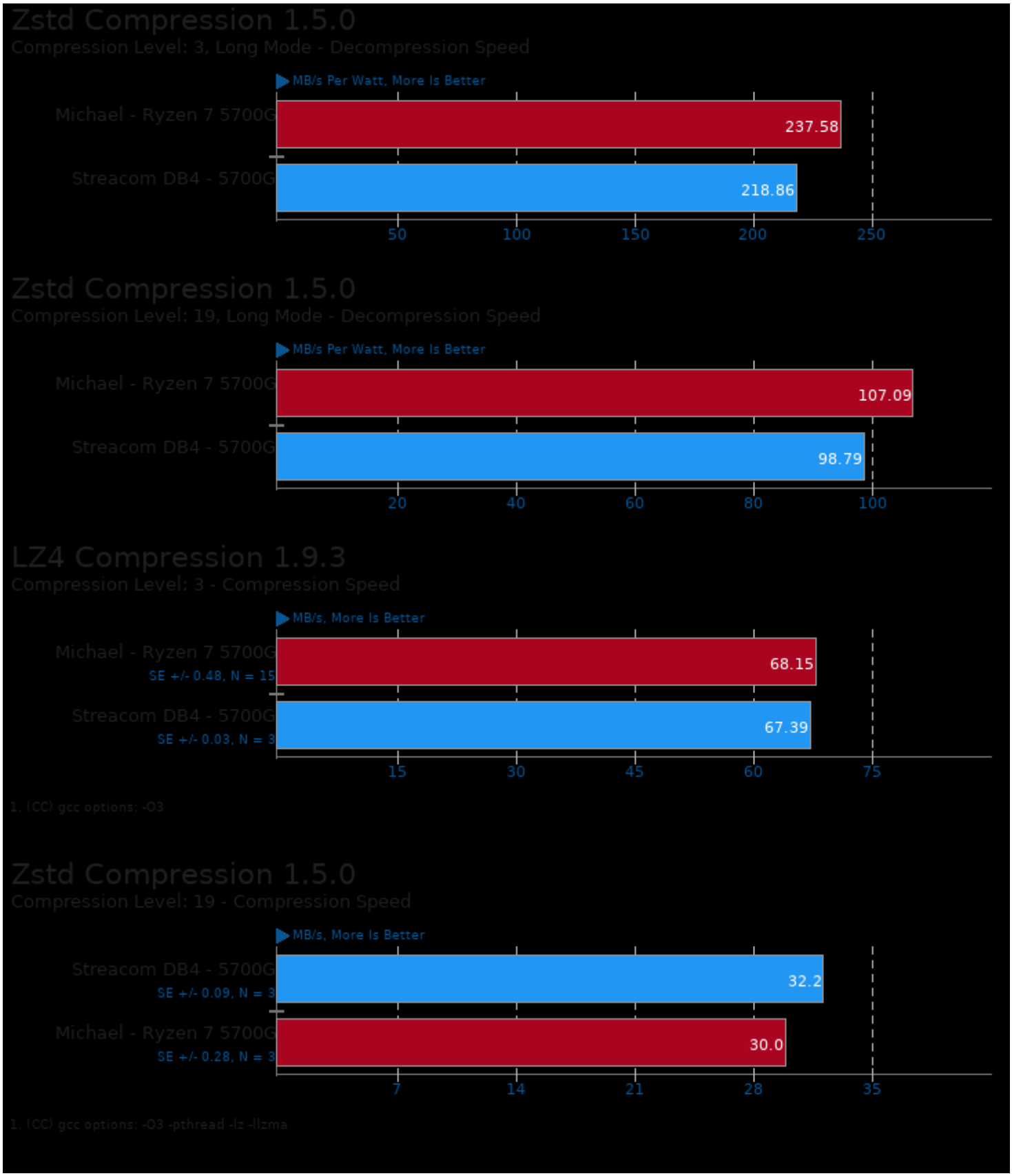
1. (CC) gcc options: -O2 -lrt" -lrt

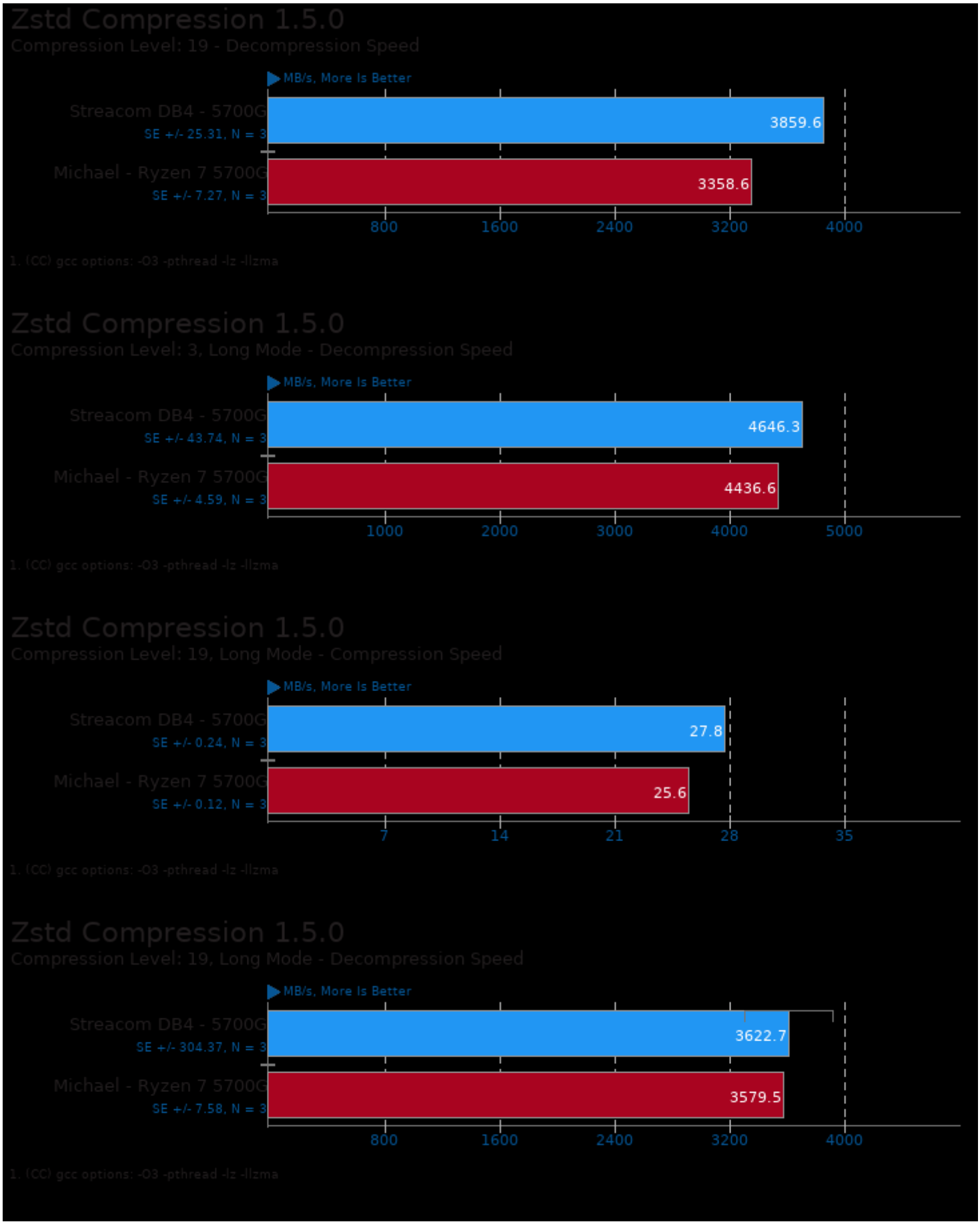
AMD Ryzen 7 5700G Linux Benchmarks




SecureMark 1.0.4
Benchmark: SecureMark-TLS
marks Per Watt, More Is Better
Michael - Ryzen 7 5700G
17562.65
Streacom DB4 - 5700G
15940.59
4K
8K
12K
16K
20K
SecureMark 1.0.4
Benchmark: SecureMark-TLS
marks, More Is Better
Michael - Ryzen 7 5700G
SE +/- 566.23, N = 3
316834
Streacom DB4 - 5700G
SE +/- 1159.34, N = 3
307290
70K
140K
210K
280K
350K
1. (CC) gcc options: -pedantic -O3
LZ4 Compression 1.9.3
Compression Level: 9 - Compression Speed
MB/s, More Is Better
Michael - Ryzen 7 5700G
SE +/- 0.57, N = 8
66.70
Streacom DB4 - 5700G
SE +/- 0.04, N = 3
65.80
15
30
45
60
75
1. (CC) gcc options: -O3
Zstd Compression 1.5.0
Compression Level: 19 - Decompression Speed
MB/s Per Watt, More Is Better
Streacom DB4 - 5700G
109.63
Michael - Ryzen 7 5700G
106.55
20
40
60
80
100

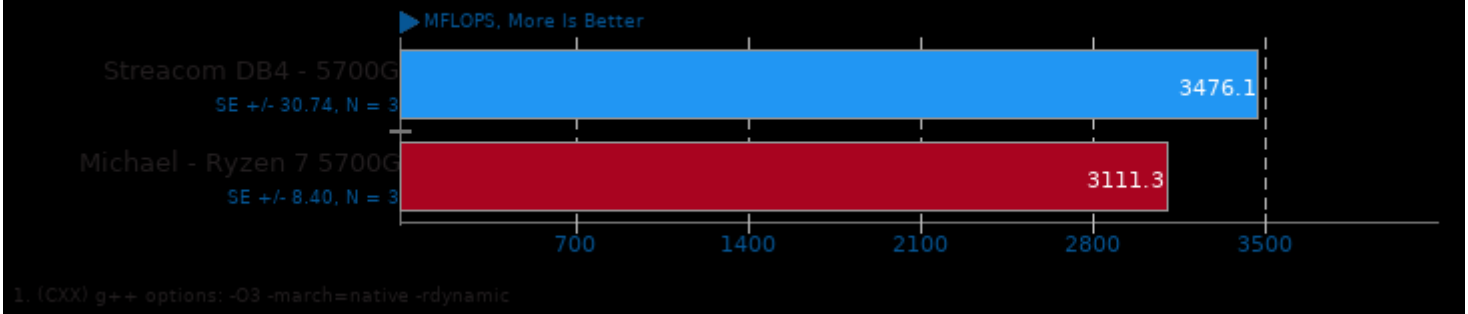
AMD Ryzen 7 5700G Linux Benchmarks




Zstd Compression 1.5.0
Compression Level: 19 - Decompression Speed
MB/s, More Is Better
Streacom DB4 - 5700G
SE +/- 25.31, N = 3
3859.6
Michael - Ryzen 7 5700G
SE +/- 7.27, N = 3
3358.6
800
1600
2400
3200
4000
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 3, Long Mode - Decompression Speed
MB/s, More Is Better
Streacom DB4 - 5700G
SE +/- 43.74, N = 3
4646.3
Michael - Ryzen 7 5700G
SE +/- 4.59, N = 3
4436.6
1000
2000
3000
4000
5000
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 19, Long Mode - Compression Speed
MB/s, More Is Better
Streacom DB4 - 5700G
SE +/- 0.24, N = 3
27.8
Michael - Ryzen 7 5700G
SE +/- 0.12, N = 3
25.6
7
14
21
28
35
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 19, Long Mode - Decompression Speed
MB/s, More Is Better
Streacom DB4 - 5700G
SE +/- 304.37, N = 3
3622.7
Michael - Ryzen 7 5700G
SE +/- 7.58, N = 3
3579.5
800
1600
2400
3200
4000
1. (CC) gcc options: -O3 -pthread -lz -llzma

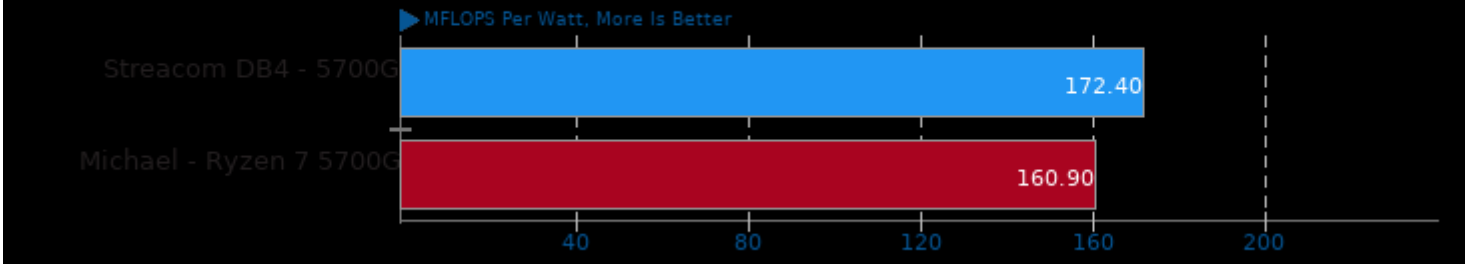
AMD Ryzen 7 5700G Linux Benchmarks

QuantLib 1.21



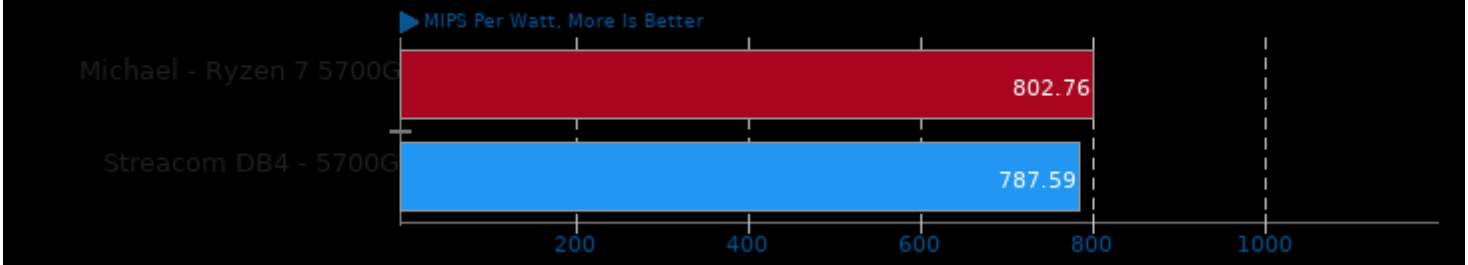
1. (CXX) g++ options: -O3 -march=native -rdynamic

QuantLib 1.21



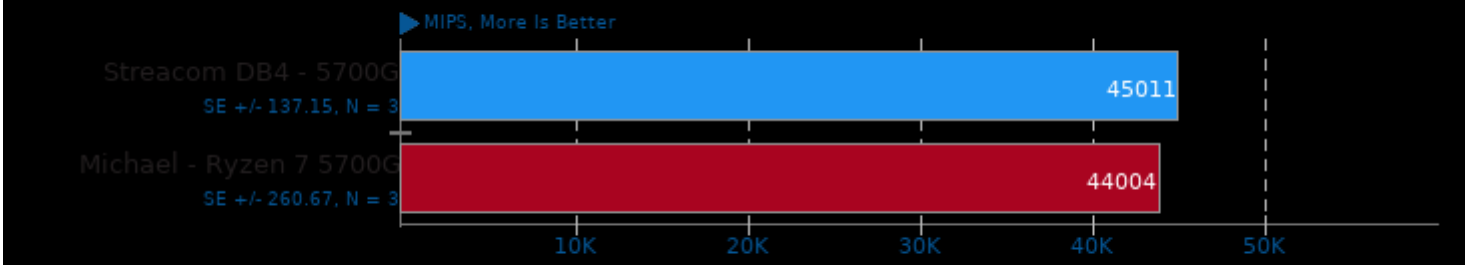
7-Zip Compression 16.02

Compress Speed Test



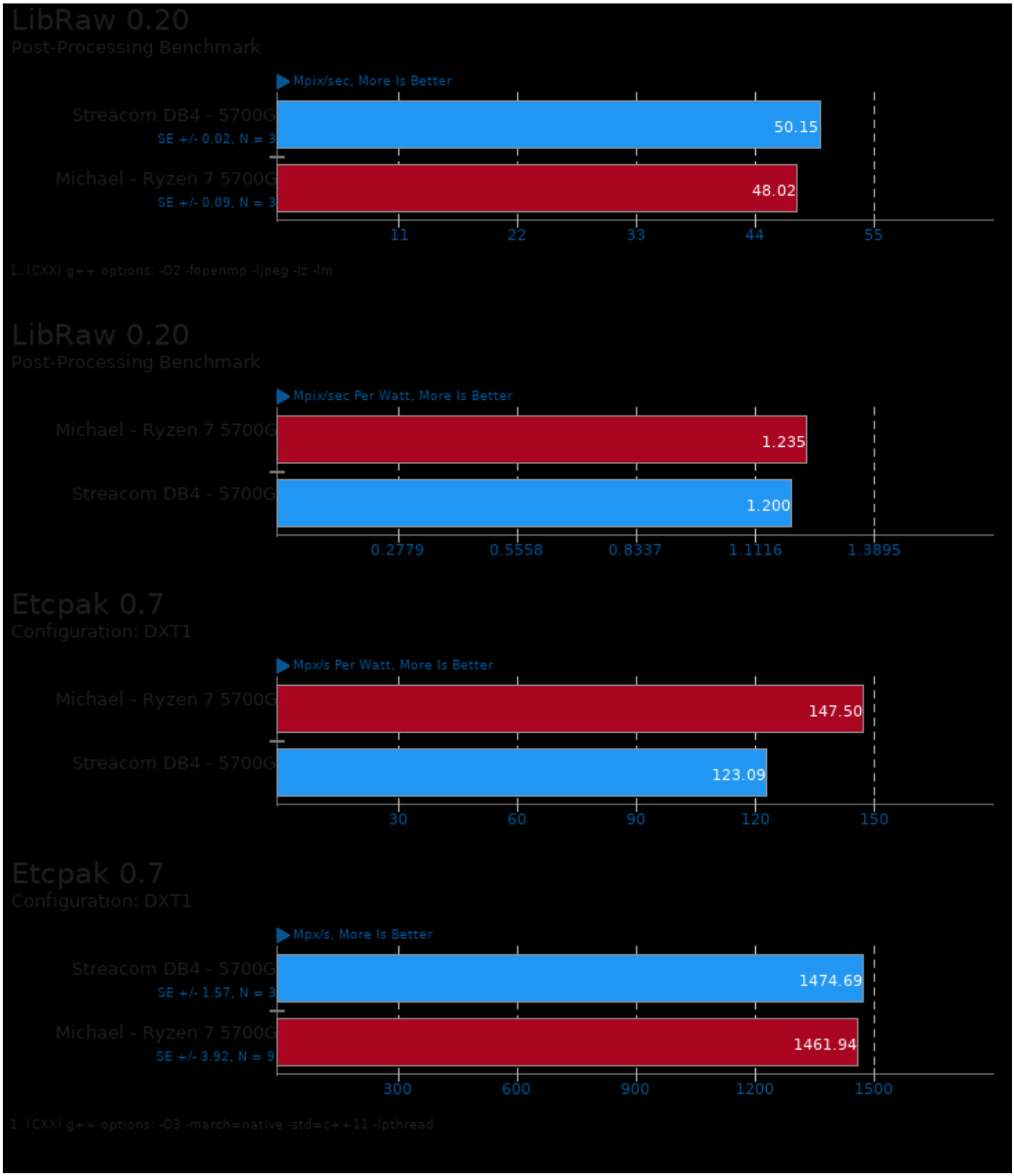
7-Zip Compression 16.02

Compress Speed Test



1. (CXX) g++ options: -pipe -lpthread

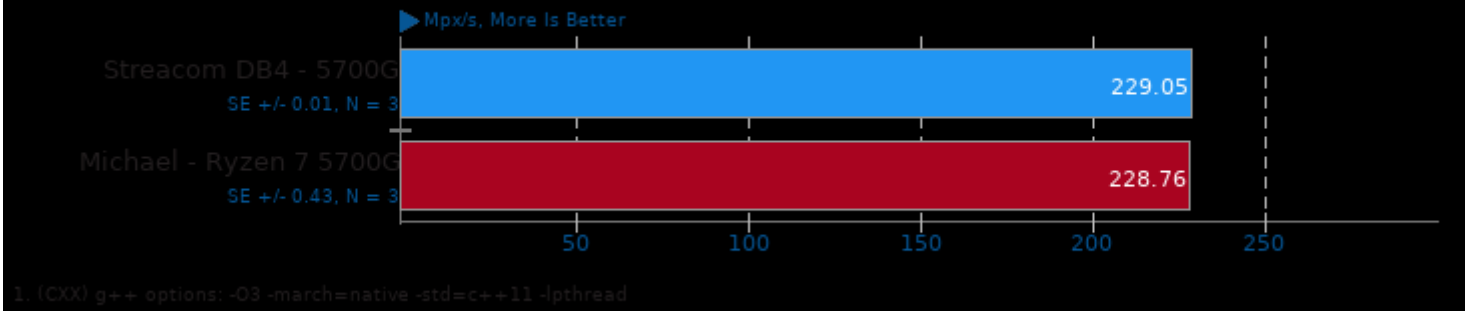
AMD Ryzen 7 5700G Linux Benchmarks



AMD Ryzen 7 5700G Linux Benchmarks

Etcpak 0.7

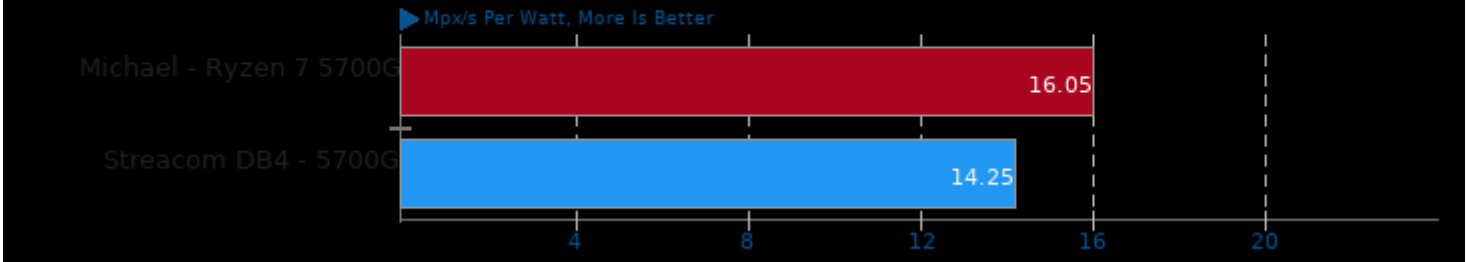
Configuration: ETC2



1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

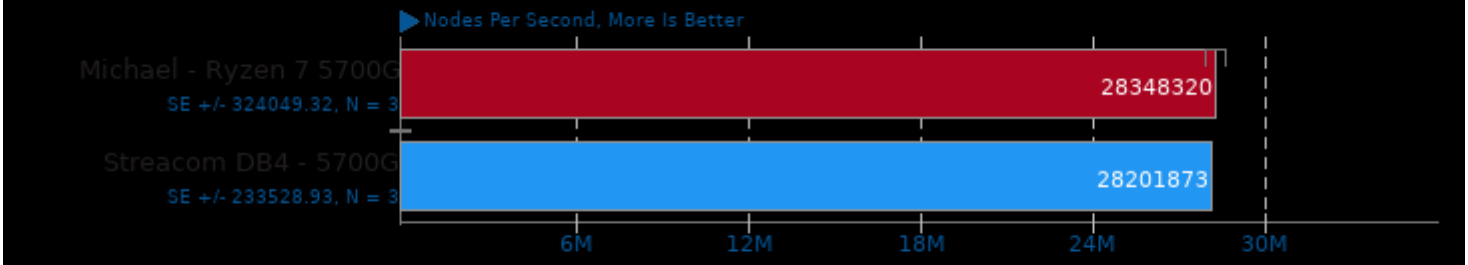
Etcpak 0.7

Configuration: ETC2



Stockfish 13

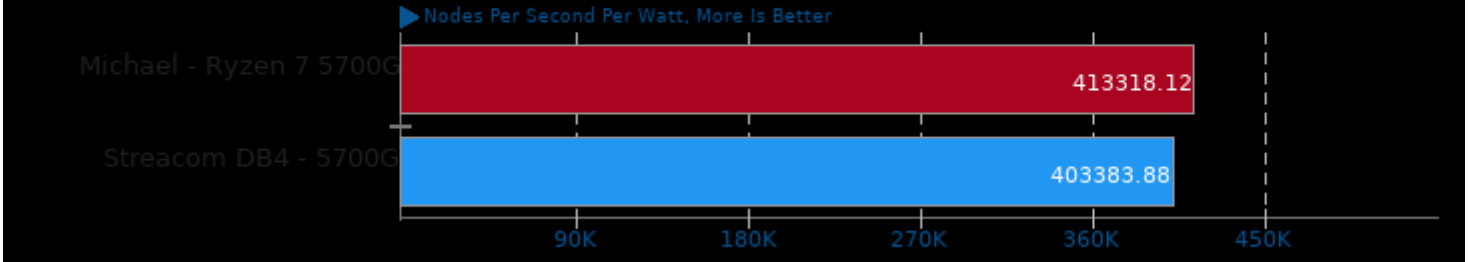
Total Time



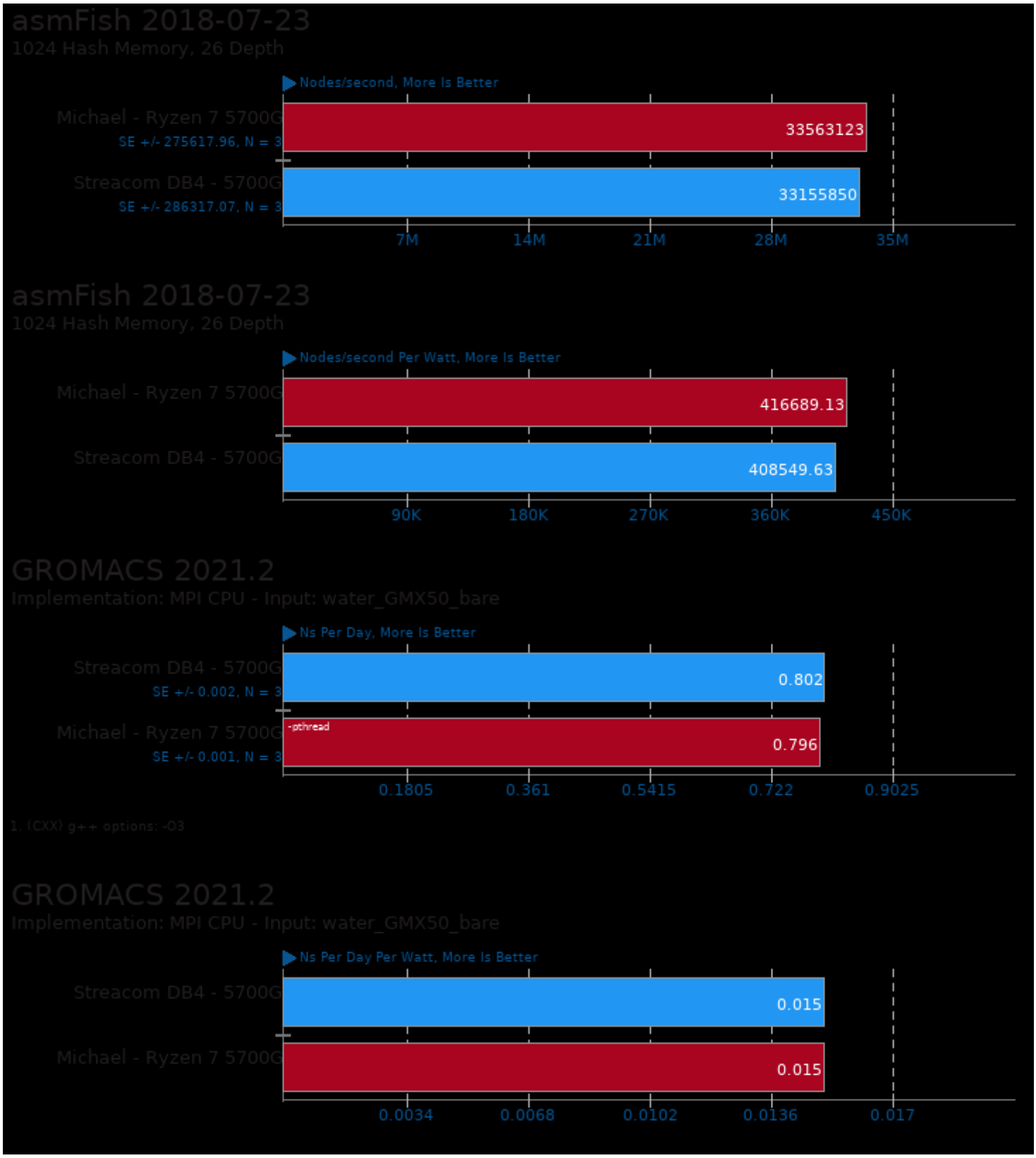
1. (CXX) g++ options: -lgcov -m64 -lpthread -fno-exceptions -std=c++17 -fprofile-use -fno-peel-loops -fno-tracer -pedantic -O3 -msse -msse3 -mpopcnt

Stockfish 13

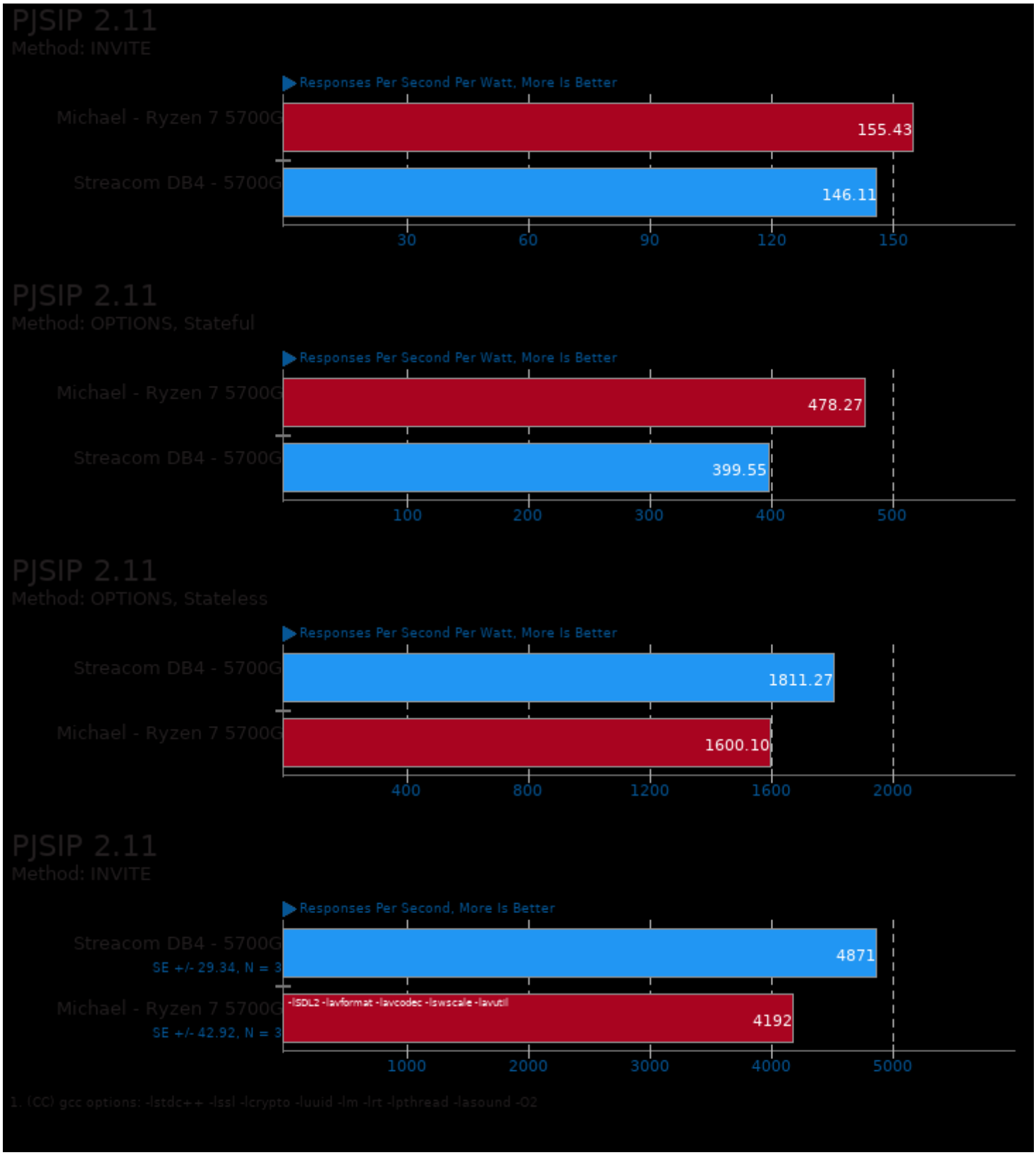
Total Time

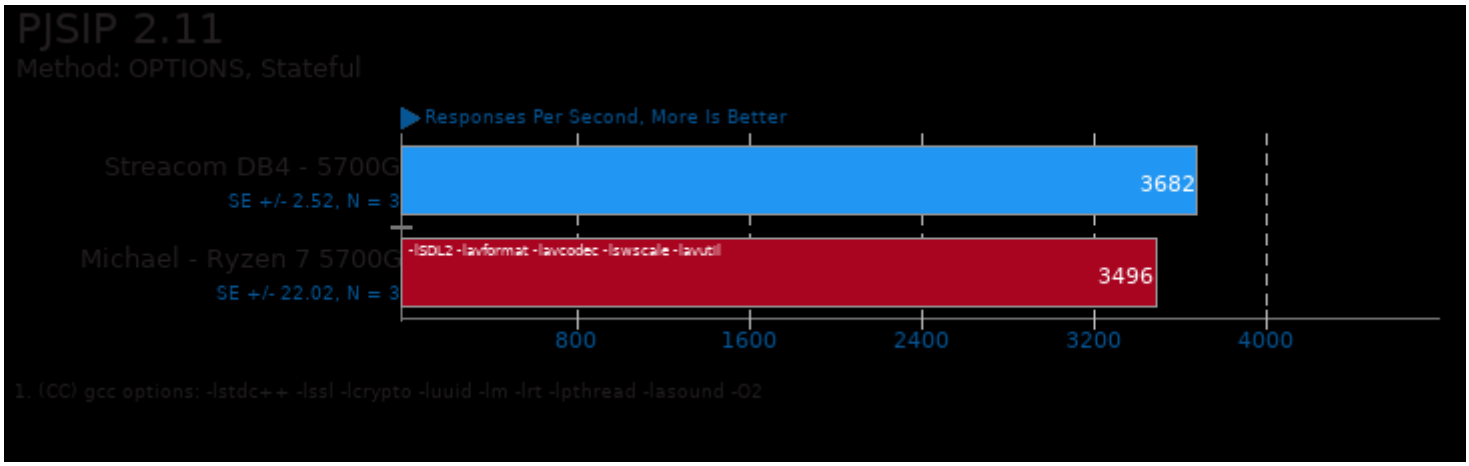


AMD Ryzen 7 5700G Linux Benchmarks

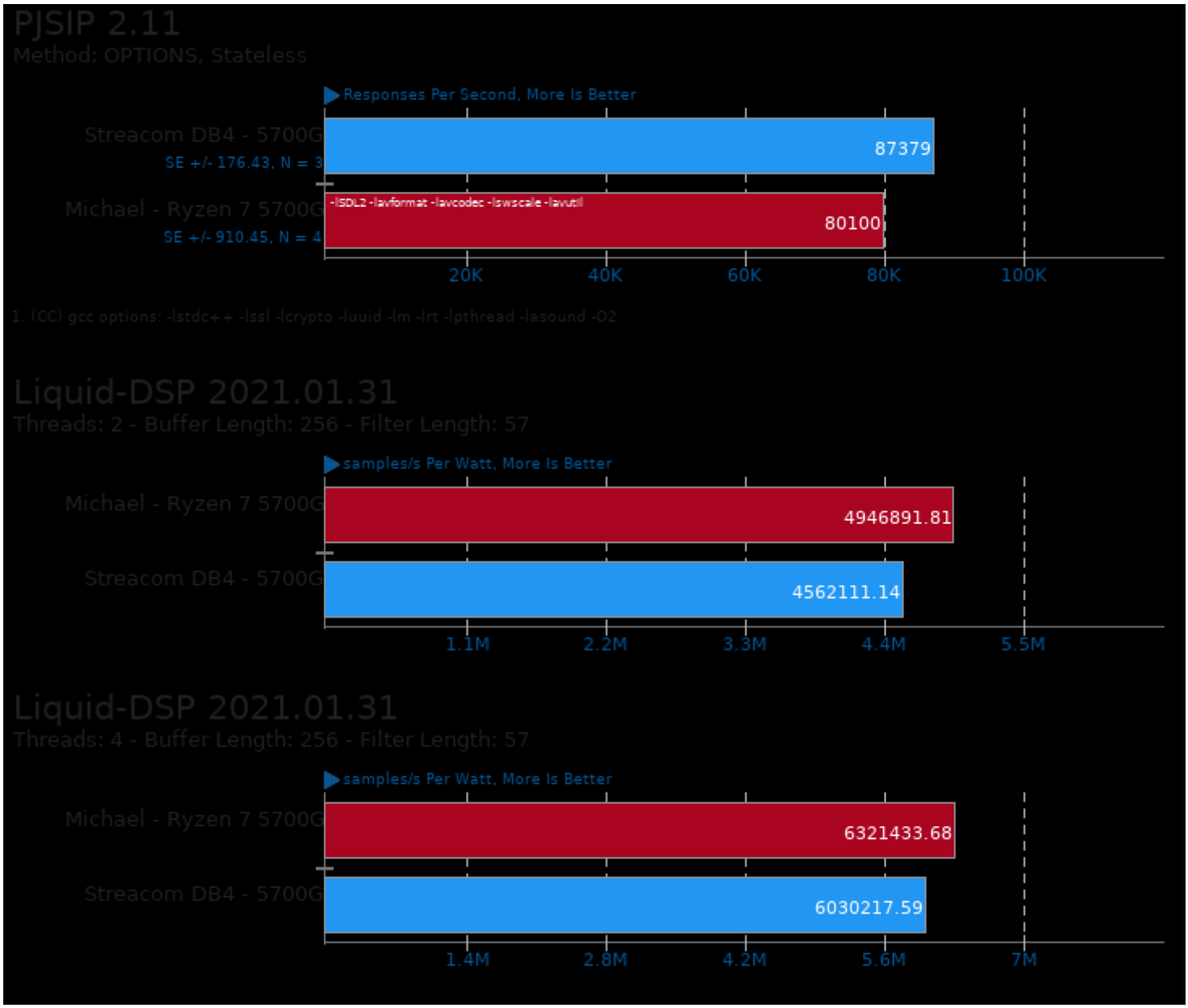


AMD Ryzen 7 5700G Linux Benchmarks

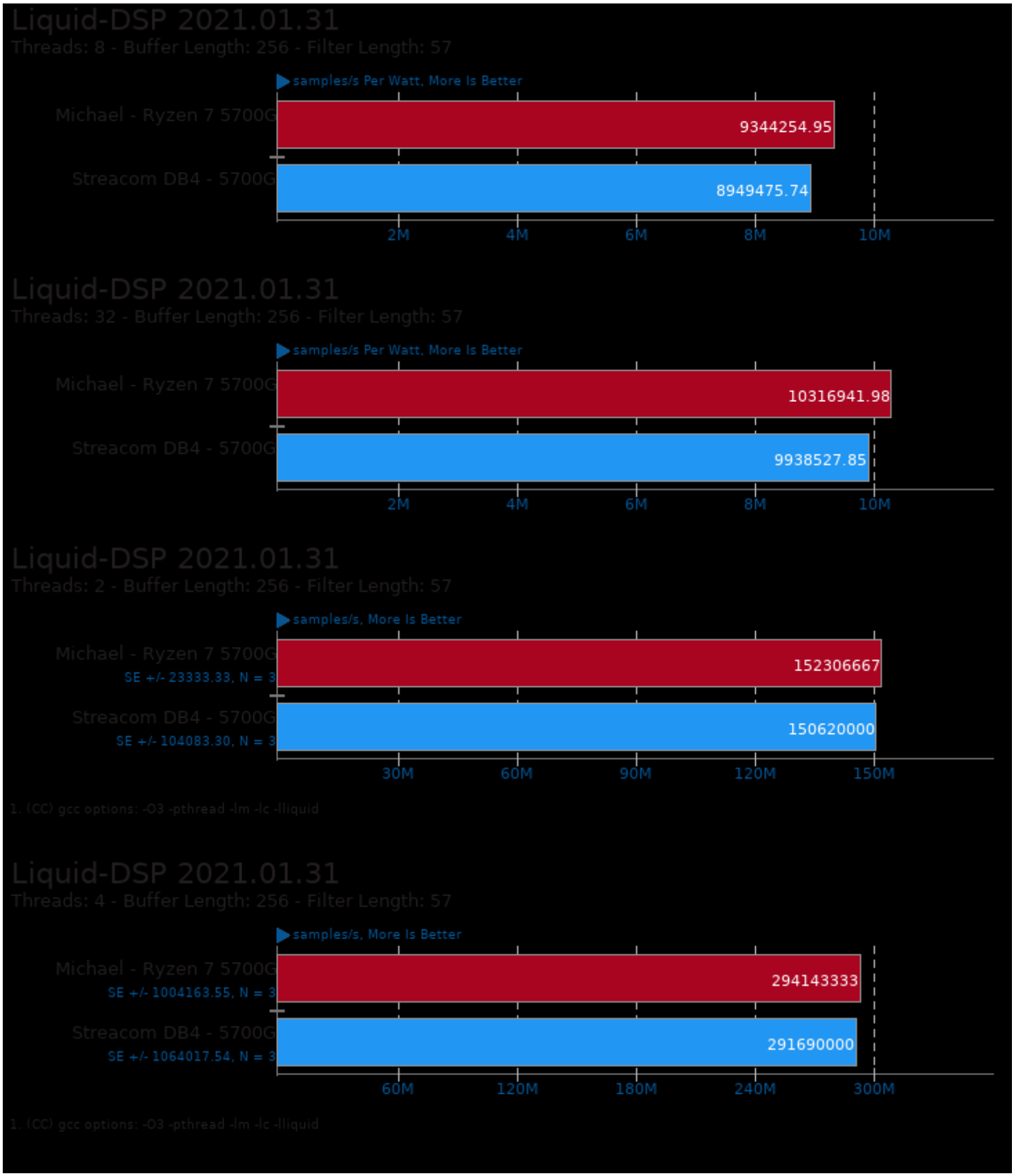




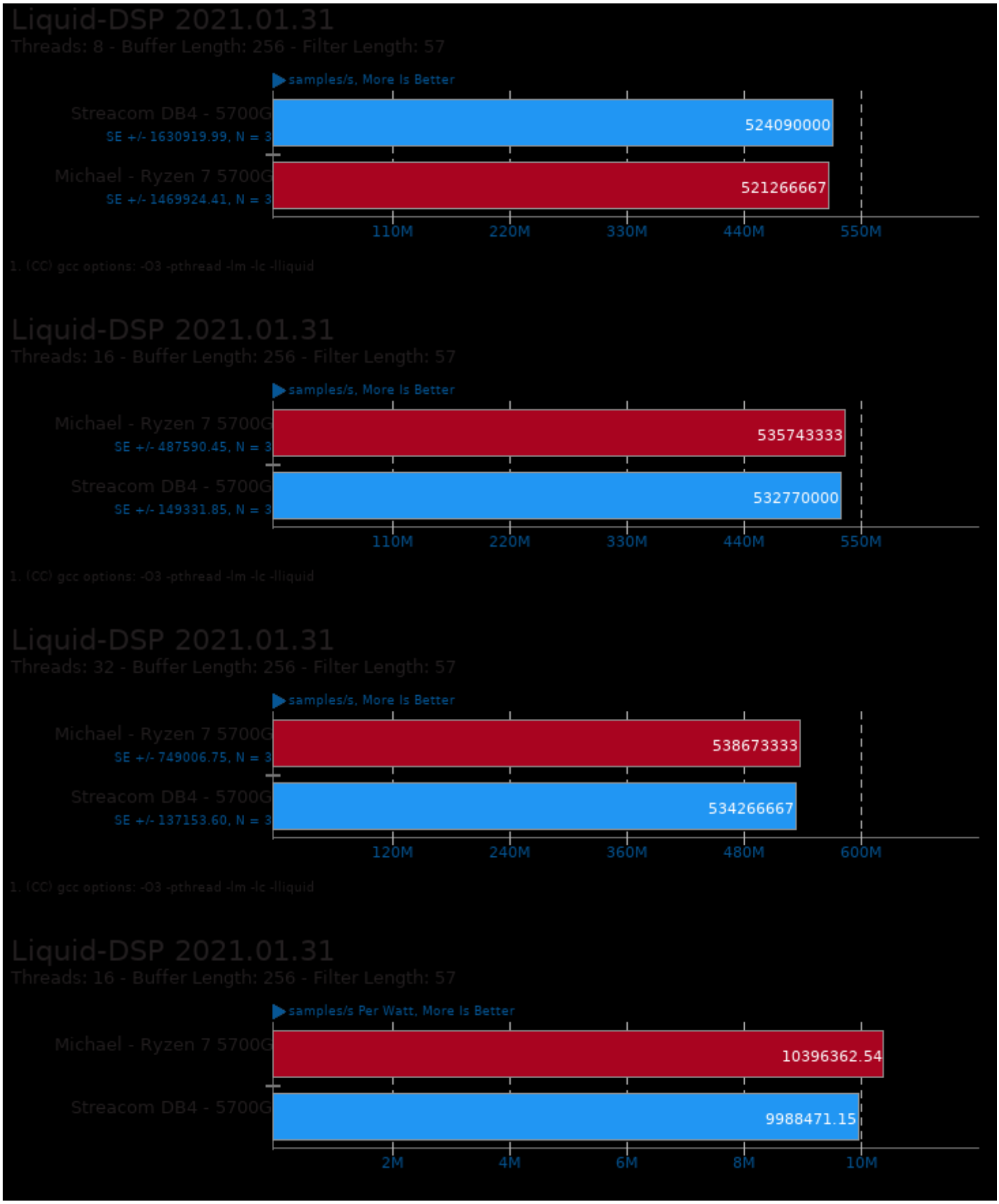
It is clear that in this test the APUs pay a hefty price for having a smaller cache.

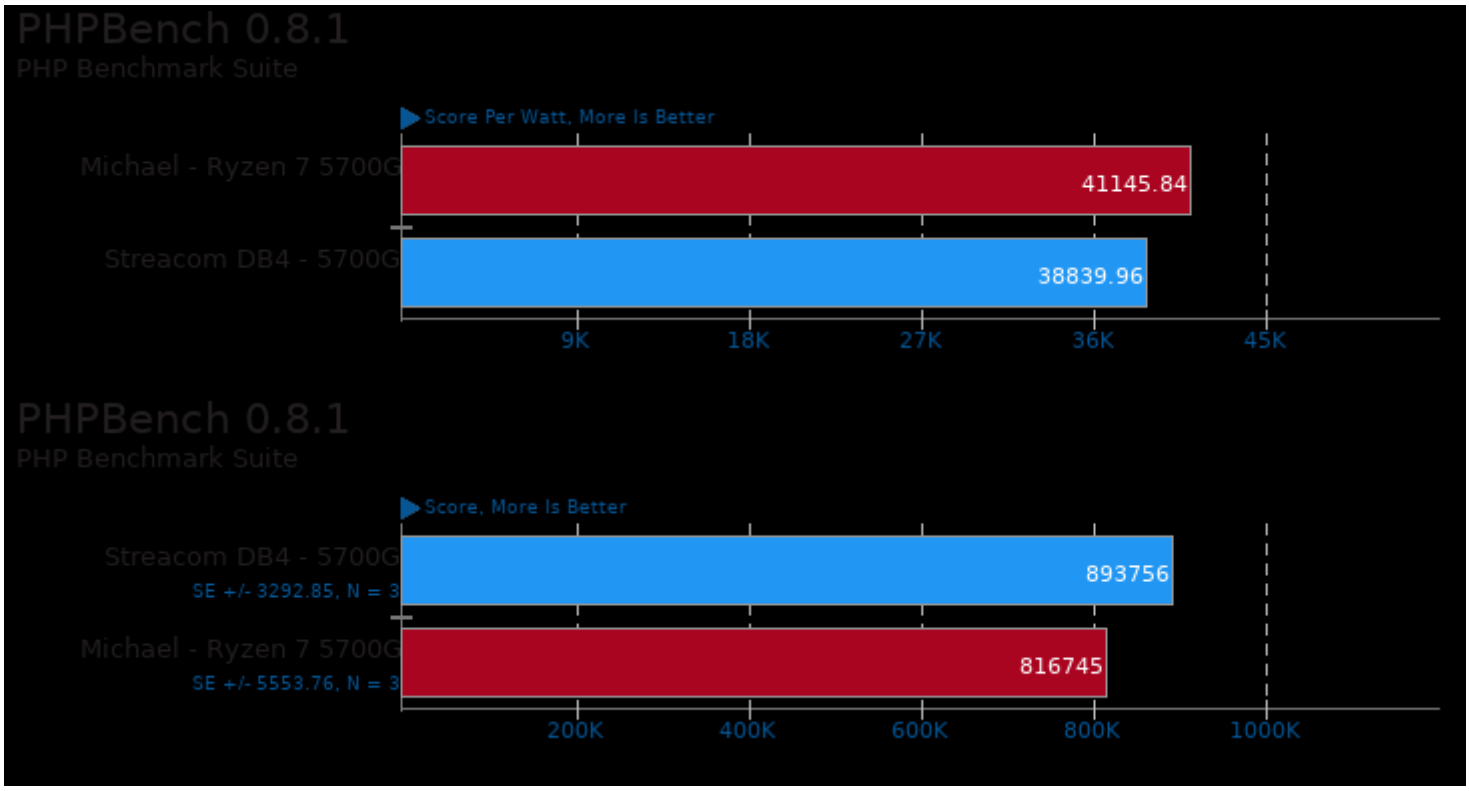


AMD Ryzen 7 5700G Linux Benchmarks

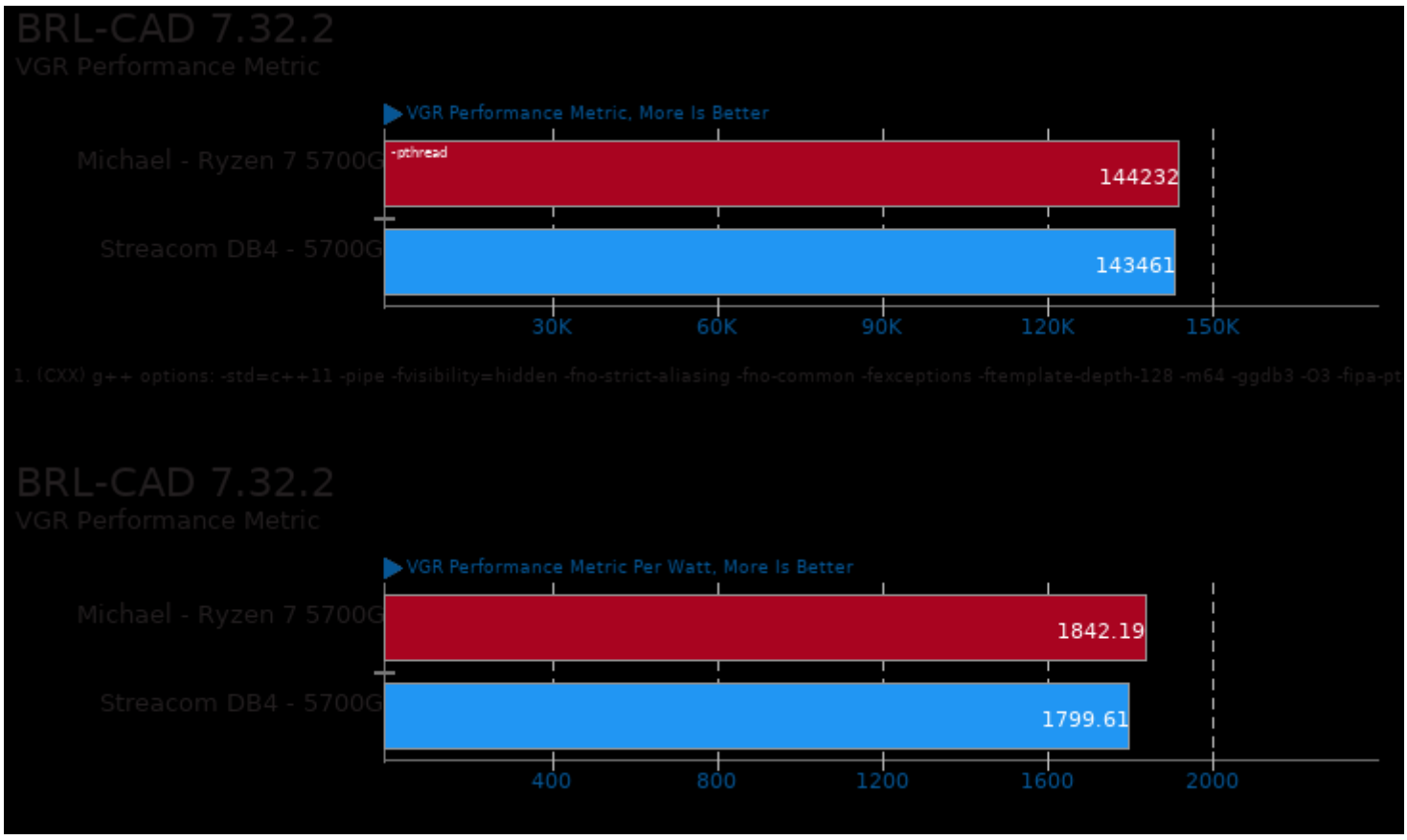


AMD Ryzen 7 5700G Linux Benchmarks

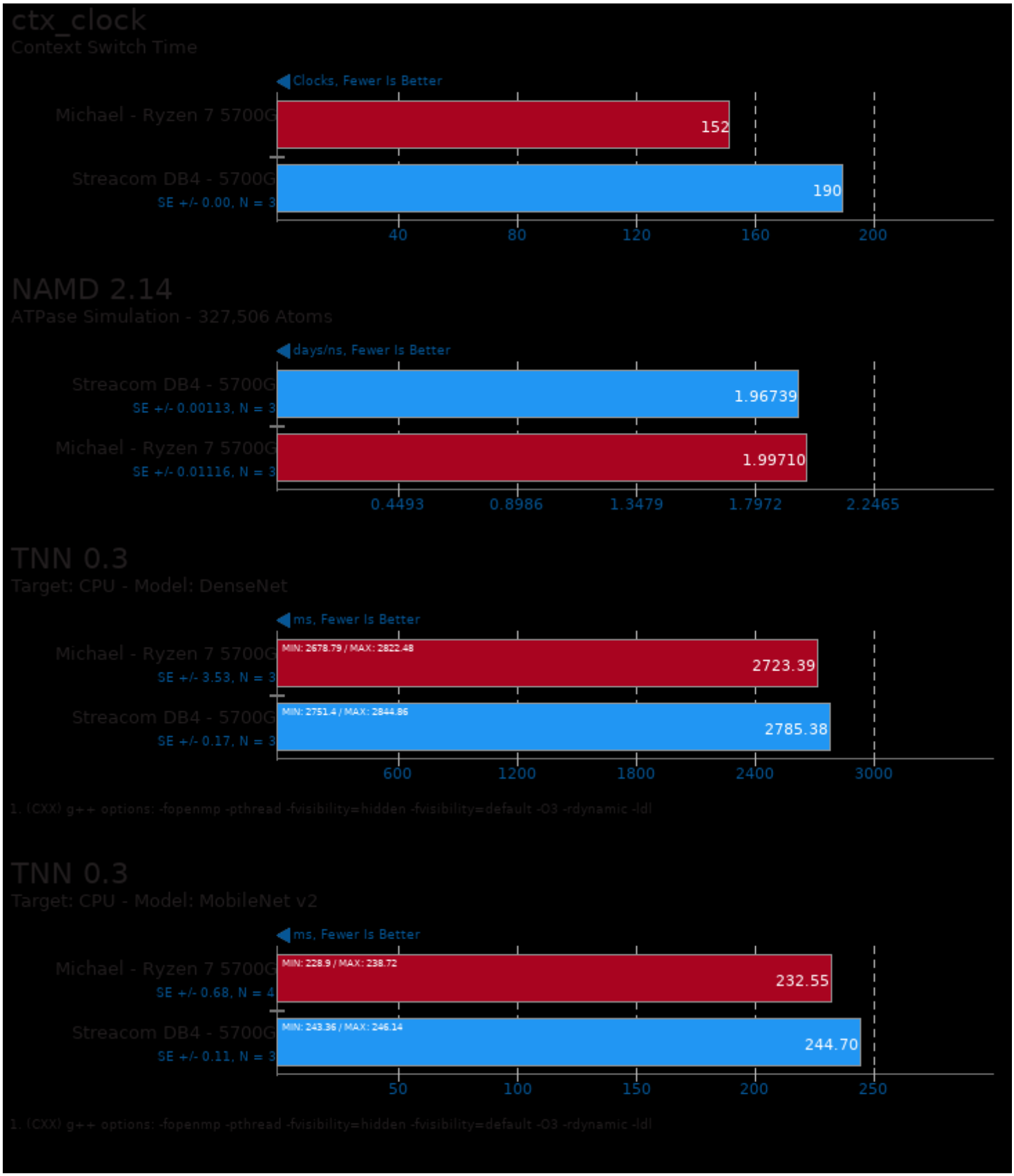




Memory bandwidth is of importance here.

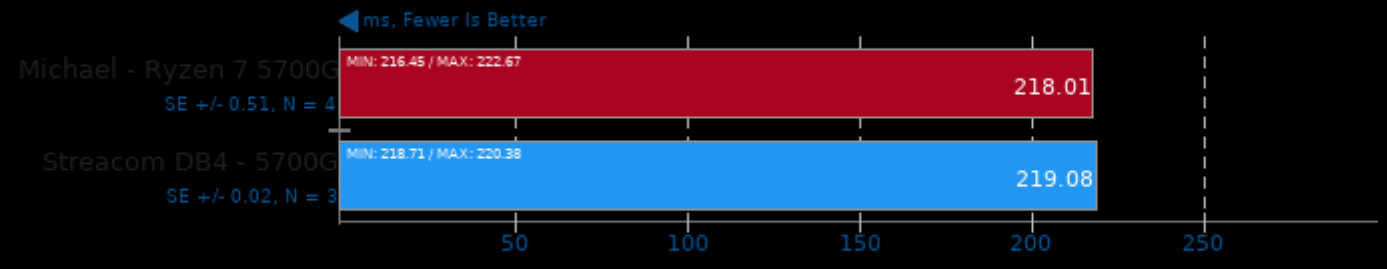


AMD Ryzen 7 5700G Linux Benchmarks



TNN 0.3

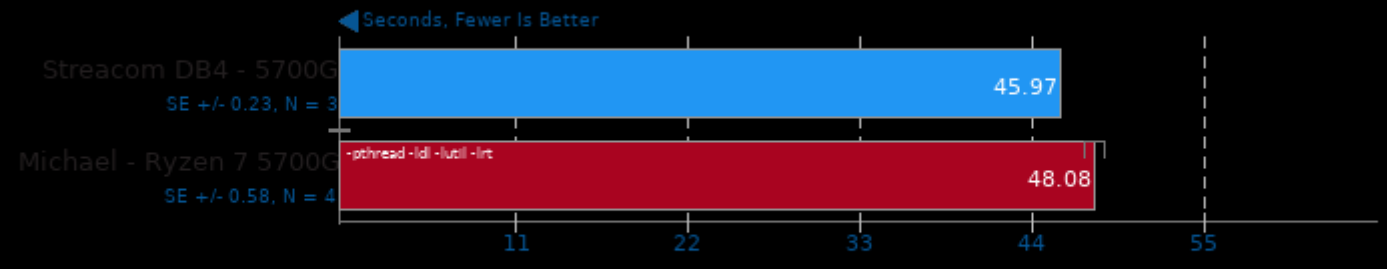
Target: CPU - Model: SqueezeNet v1.1



1. (CXX) g++ options: -fopenmp -pthread -fvisibility=hidden -fvisibility=default -O3 -rdynamic -ldl

Xcompact3d Incompact3d 2021-03-11

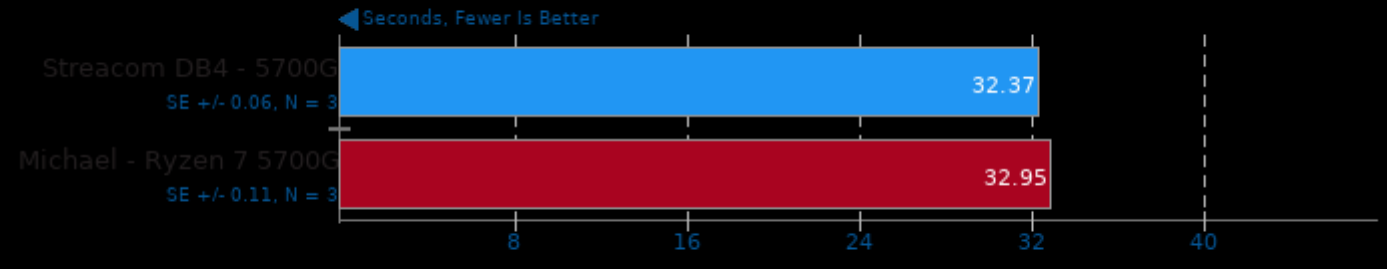
Input: input.i3d 129 Cells Per Direction



1. (F9X) gfortran options: -cpp -O2 -funroll-loops -floop-optimize -fcray-pointer -fbacktrace -lmpi_usempif08 -lmpi_mpifh -lmpi -lopen-rte -lopen-pal -lhwl

libavif avifenc 0.9.0

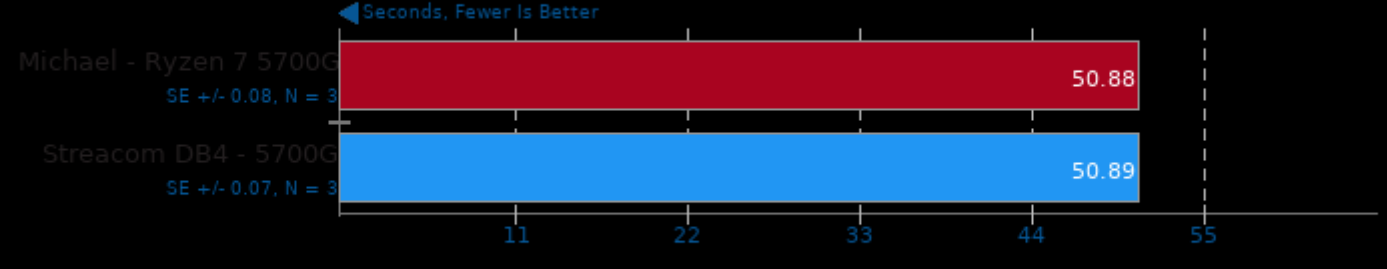
Encoder Speed: 2



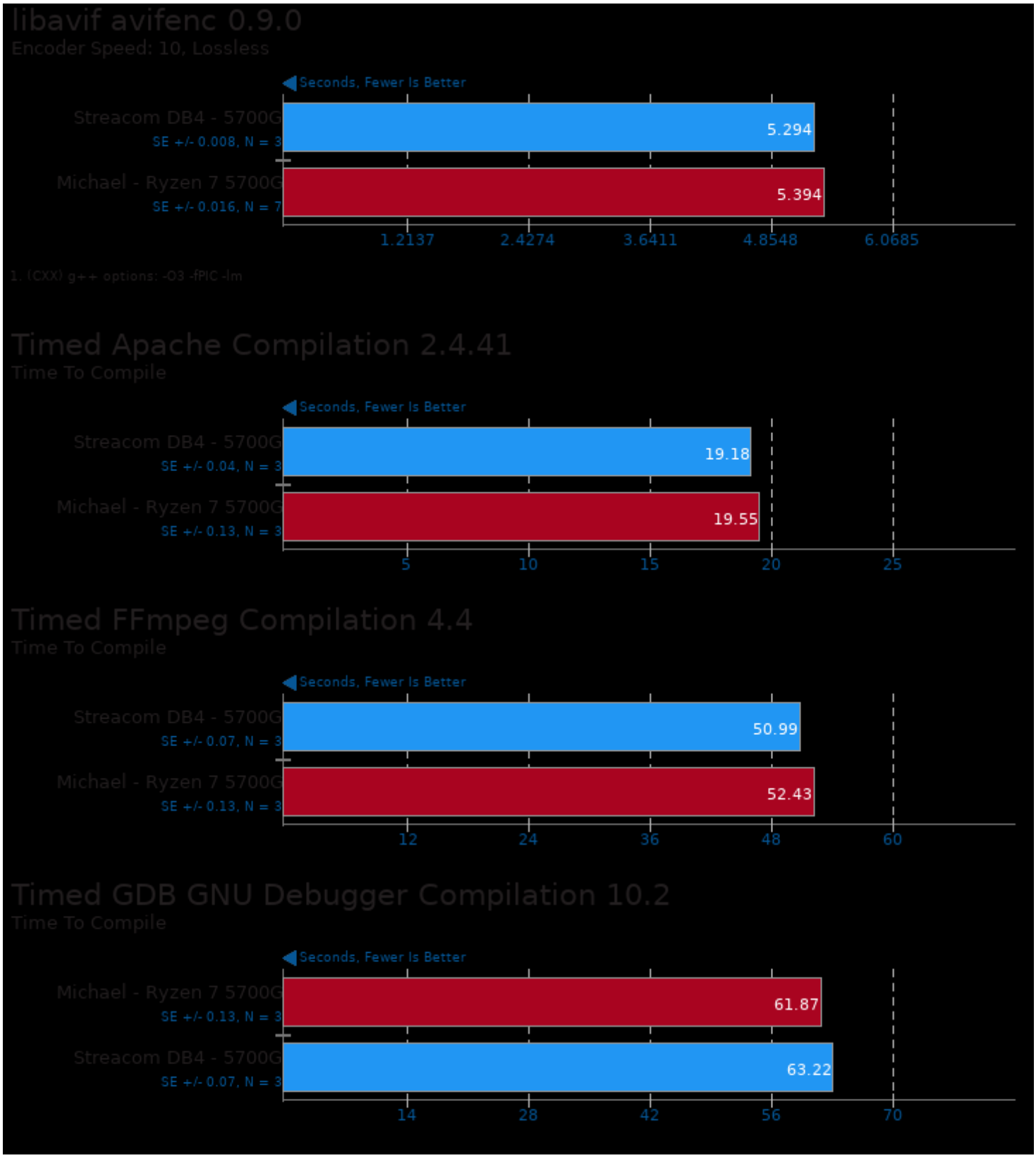
1. (CXX) g++ options: -O3 -fPIC -lm

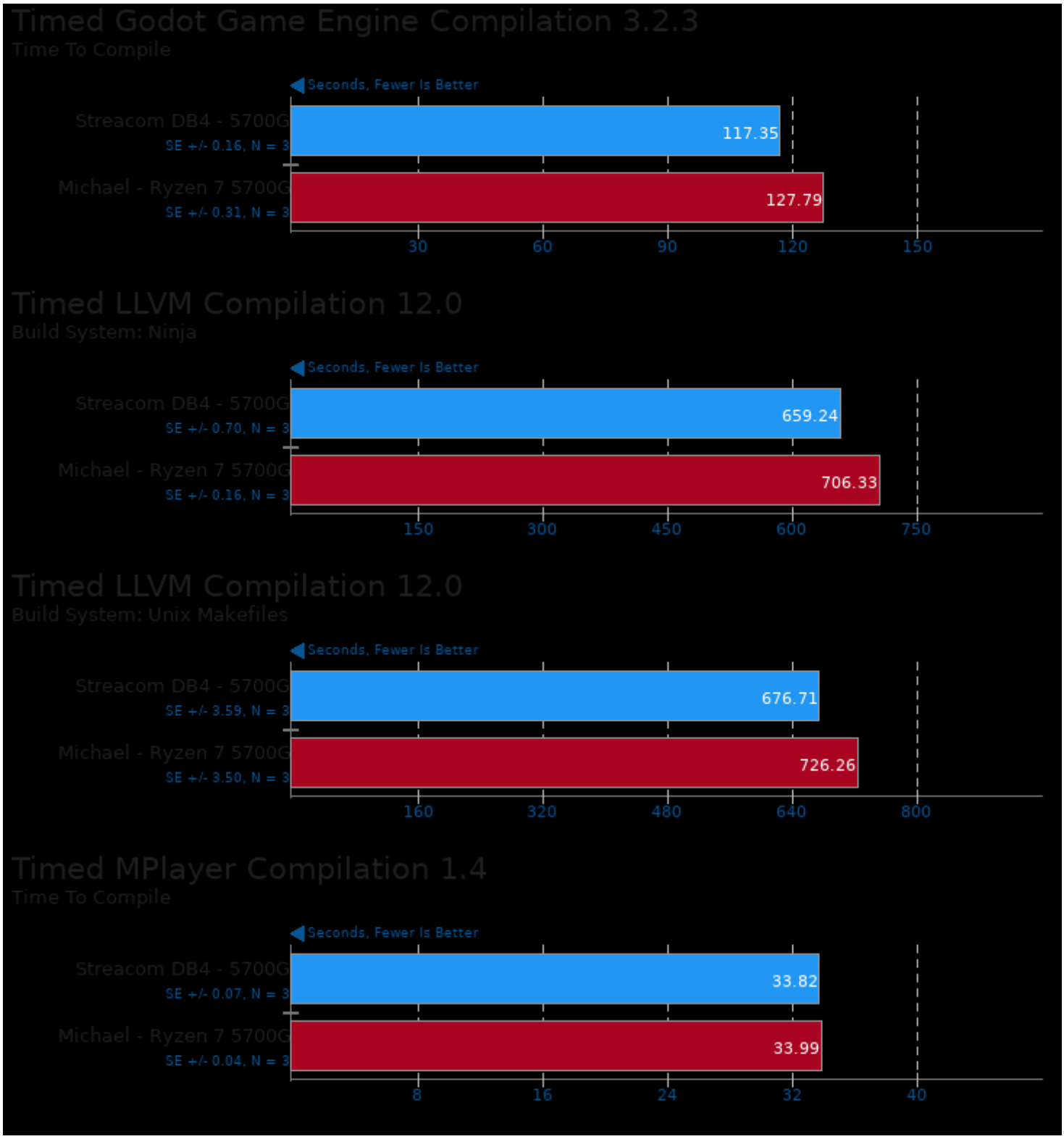
libavif avifenc 0.9.0

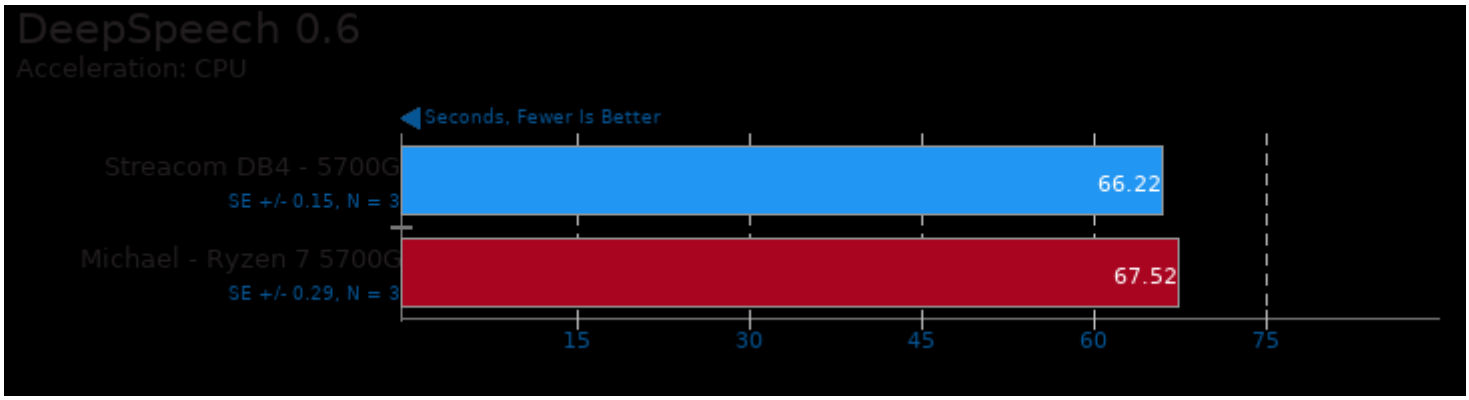
Encoder Speed: 6, Lossless



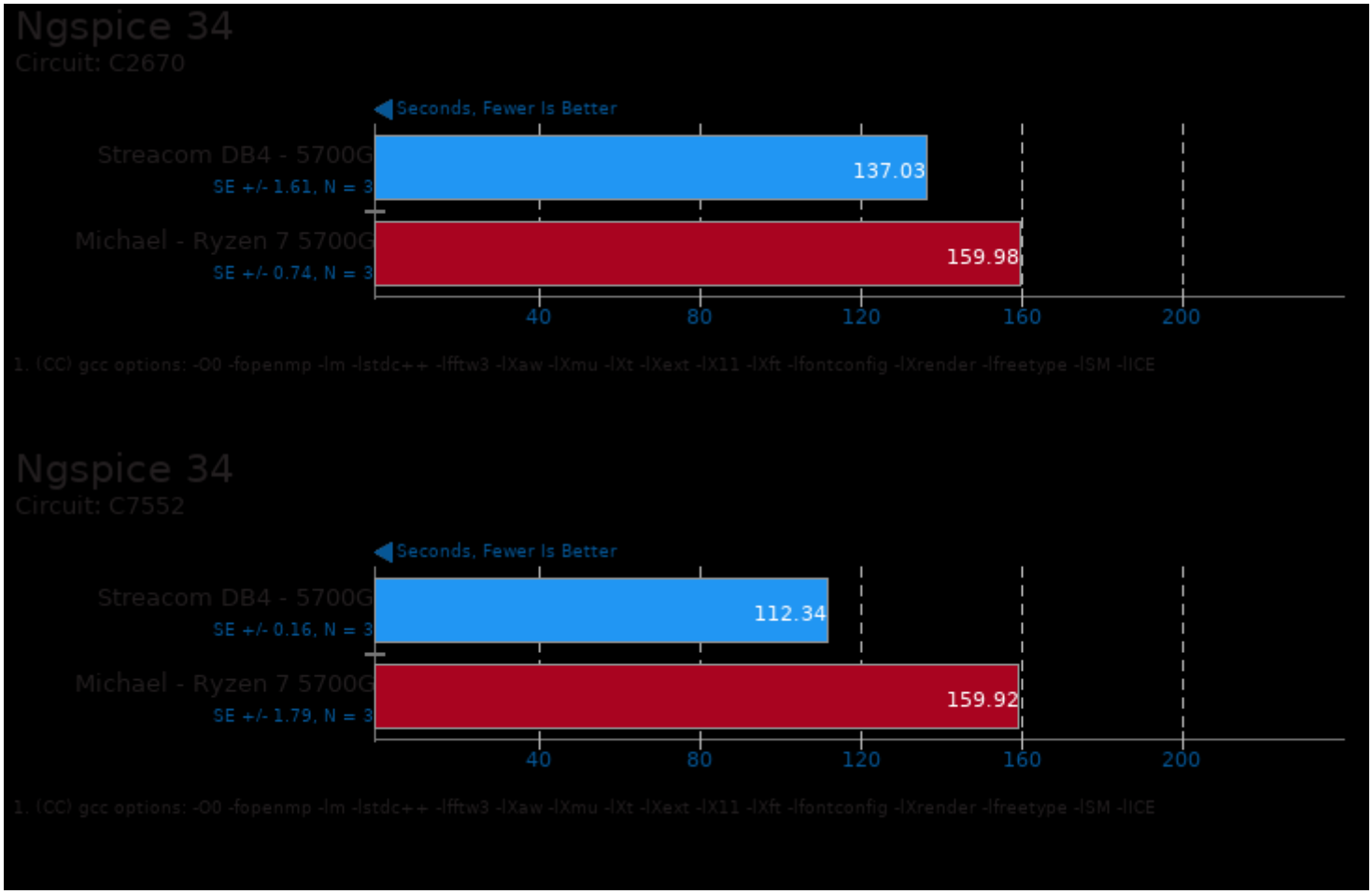
1. (CXX) g++ options: -O3 -fPIC -lm


libavif avifenc 0.9.0
Encoder Speed: 10, Lossless
Seconds, Fewer Is Better
Streacom DB4 - 5700G
SE +/- 0.008, N = 3
5.294
Michael - Ryzen 7 5700G
SE +/- 0.016, N = 7
5.394
1.2137
2.4274
3.6411
4.8548
6.0685
1. (CXX) g++ options: -O3 -fPIC -lm
Timed Apache Compilation 2.4.41
Time To Compile
Seconds, Fewer Is Better
Streacom DB4 - 5700G
SE +/- 0.04, N = 3
19.18
Michael - Ryzen 7 5700G
SE +/- 0.13, N = 3
19.55
5
10
15
20
25
Timed FFmpeg Compilation 4.4
Time To Compile
Seconds, Fewer Is Better
Streacom DB4 - 5700G
SE +/- 0.07, N = 3
50.99
Michael - Ryzen 7 5700G
SE +/- 0.13, N = 3
52.43
12
24
36
48
60
Timed GDB GNU Debugger Compilation 10.2
Time To Compile
Seconds, Fewer Is Better
Michael - Ryzen 7 5700G
SE +/- 0.13, N = 3
61.87
Streacom DB4 - 5700G
SE +/- 0.07, N = 3
63.22
14
28
42
56
70


Timed Godot Game Engine Compilation 3.2.3
Time To Compile
Seconds, Fewer Is Better
Streacom DB4 - 5700G
SE +/- 0.16, N = 3
117.35
Michael - Ryzen 7 5700G
SE +/- 0.31, N = 3
127.79
30
60
90
120
150
Timed LLVM Compilation 12.0
Build System: Ninja
Seconds, Fewer Is Better
Streacom DB4 - 5700G
SE +/- 0.70, N = 3
659.24
Michael - Ryzen 7 5700G
SE +/- 0.16, N = 3
706.33
150
300
450
600
750
Timed LLVM Compilation 12.0
Build System: Unix Makefiles
Seconds, Fewer Is Better
Streacom DB4 - 5700G
SE +/- 3.59, N = 3
676.71
Michael - Ryzen 7 5700G
SE +/- 3.50, N = 3
726.26
160
320
480
640
800
Timed MPlayer Compilation 1.4
Time To Compile
Seconds, Fewer Is Better
Streacom DB4 - 5700G
SE +/- 0.07, N = 3
33.82
Michael - Ryzen 7 5700G
SE +/- 0.04, N = 3
33.99
8
16
24
32
40



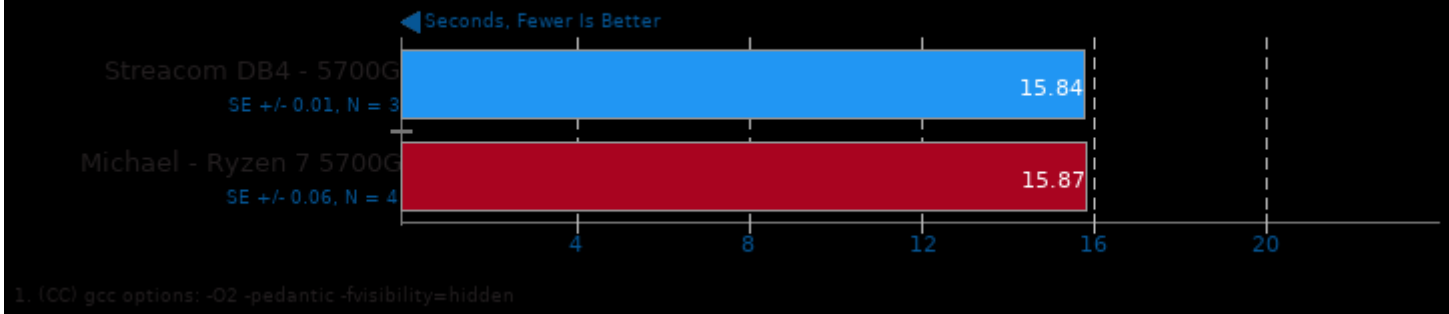
There is something deeply fishy about this test.



I think this test is heavily cache and memory dependent the DB4 has can compensate a little for its smaller cache with its faster RAM compared to its sibling.

AMD Ryzen 7 5700G Linux Benchmarks

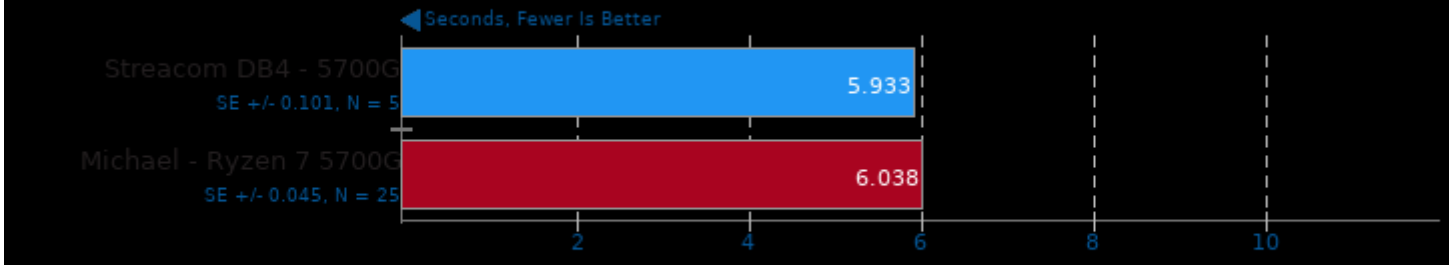
RNNoise 2020-06-28



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

LibreOffice

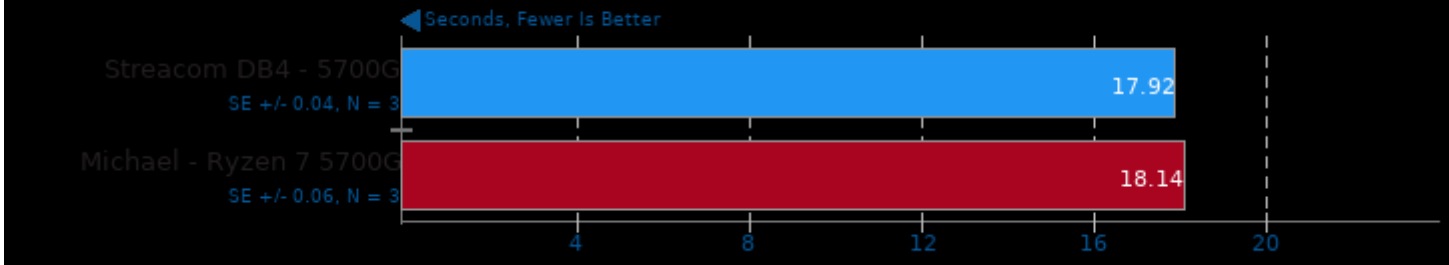
Test: 20 Documents To PDF



1. Streacom DB4 - 5700G: LibreOffice 7.2.3.2 20(Build:2)
2. Michael - Ryzen 7 5700G: LibreOffice 7.1.4.2 10(Build:2)

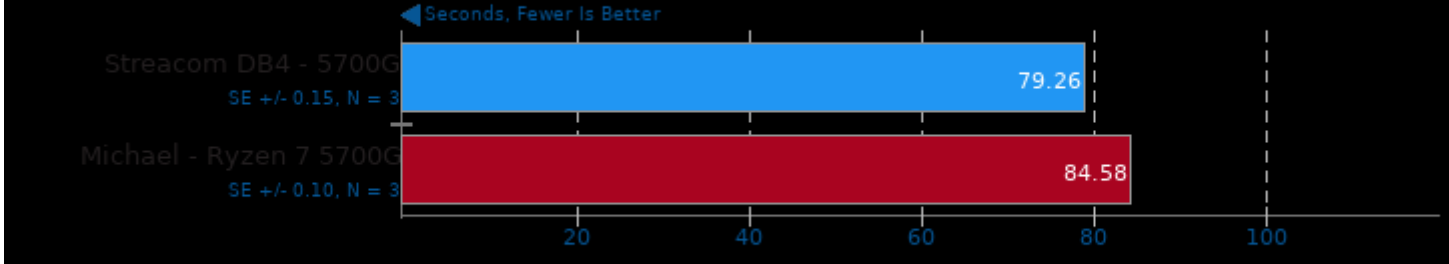
OCRMyPDF 10.3.1+dfsg

Processing 60 Page PDF Document



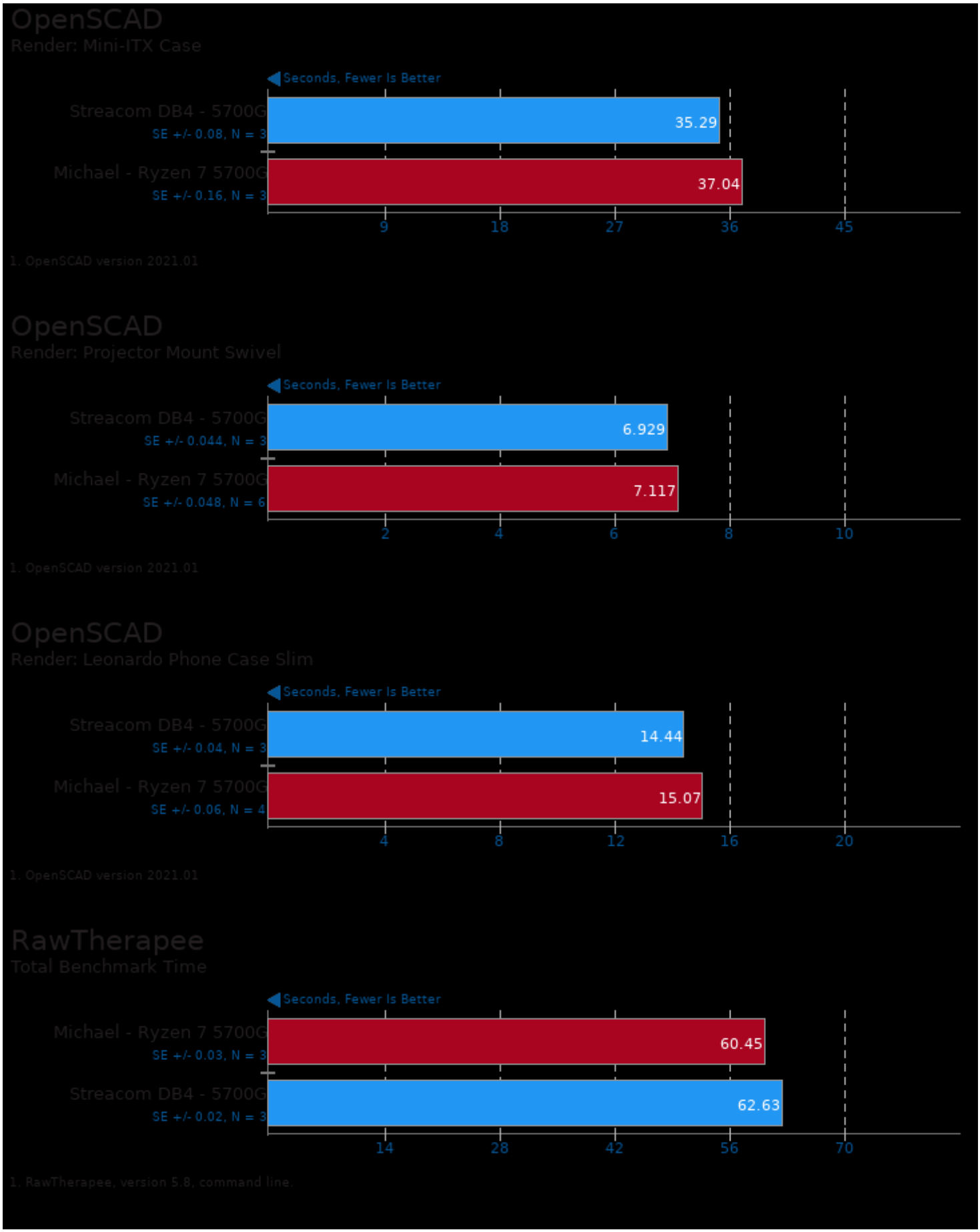
OpenSCAD

Render: Pistol



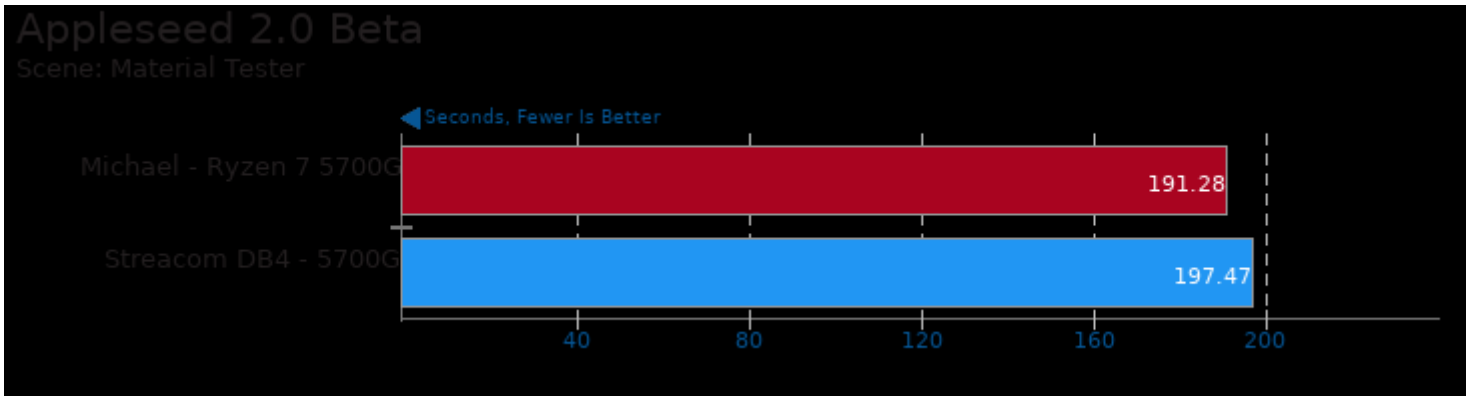
1. OpenSCAD version 2021.01

AMD Ryzen 7 5700G Linux Benchmarks





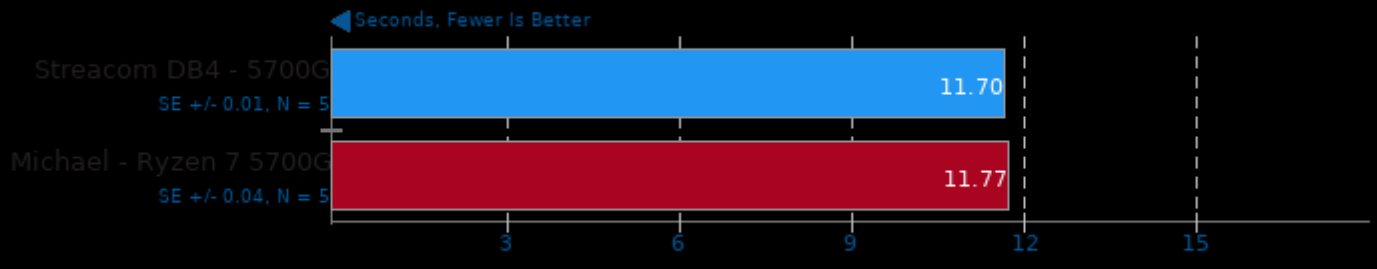
All renderers and tracers are strenuous tasks. While the the actively cooled 5700G 'does not care' it already ran hot for half an hour, passive case becomes thermally saturated. This is typically when having active cooling is beneficial over being passively cooled.



AMD Ryzen 7 5700G Linux Benchmarks

WavPack Audio Encoding 5.3

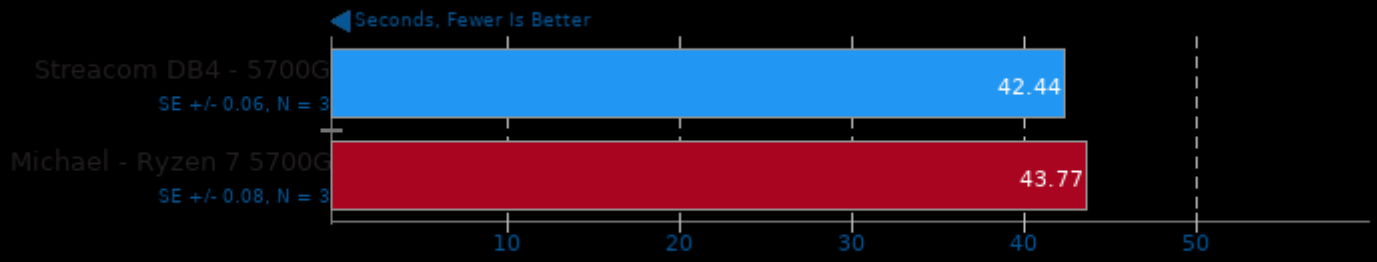
WAV To WavPack



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

Git

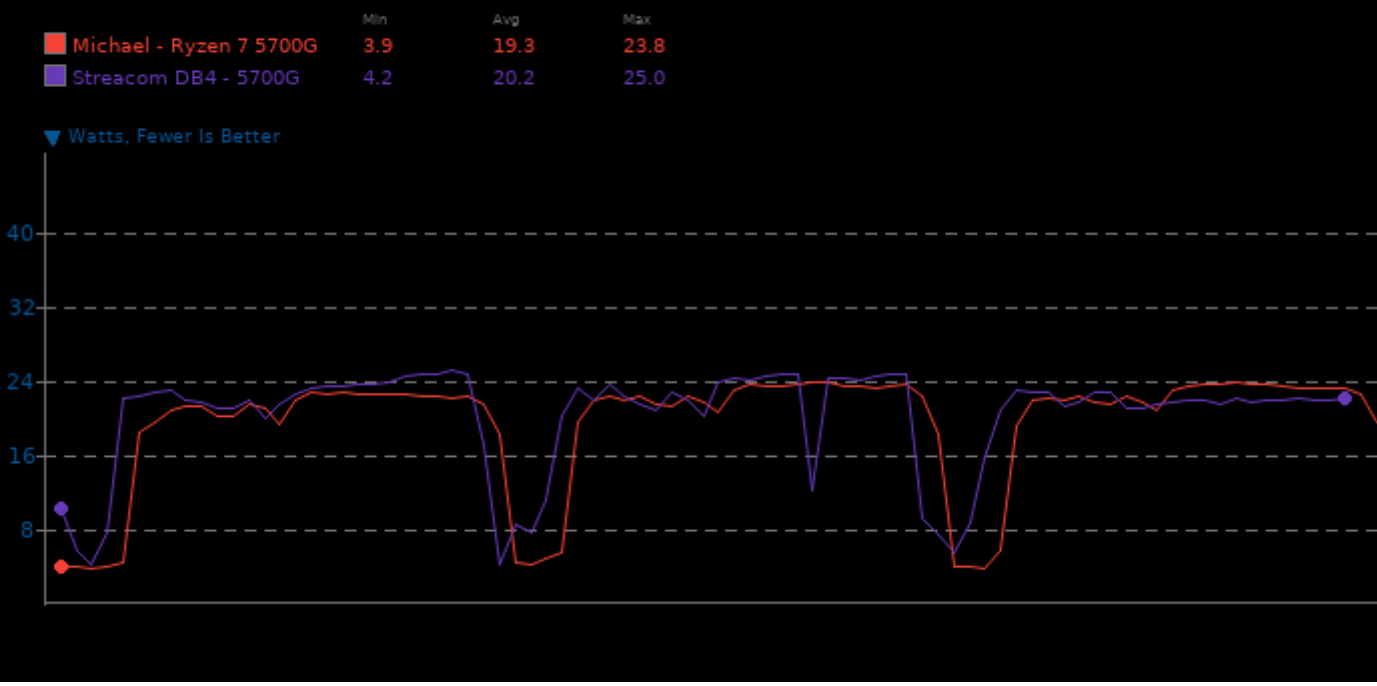
Time To Complete Common Git Commands



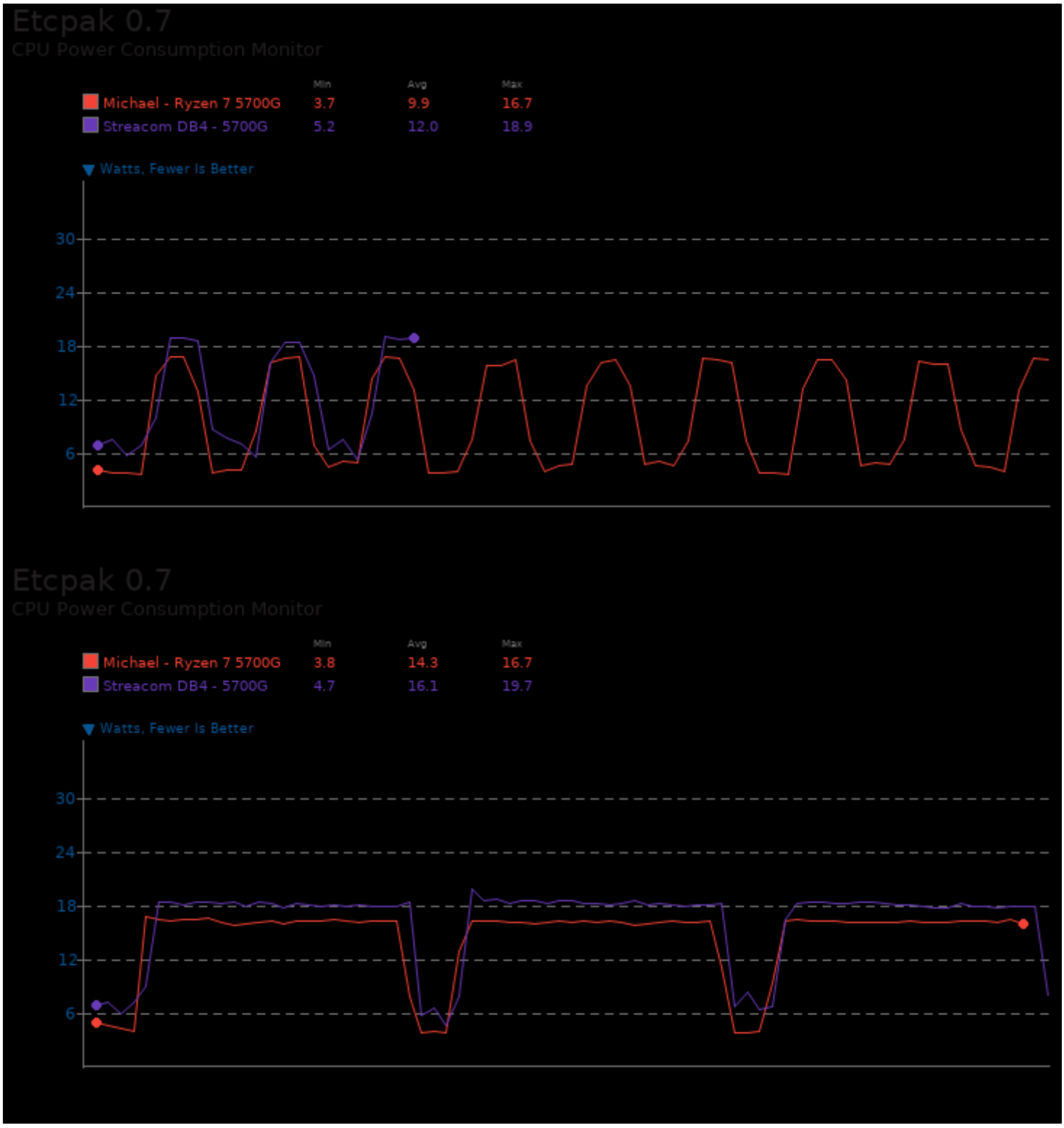
1. Streacom DB4 - 5700G: git version 2.32.0
2. Michael - Ryzen 7 5700G: git version 2.30.2

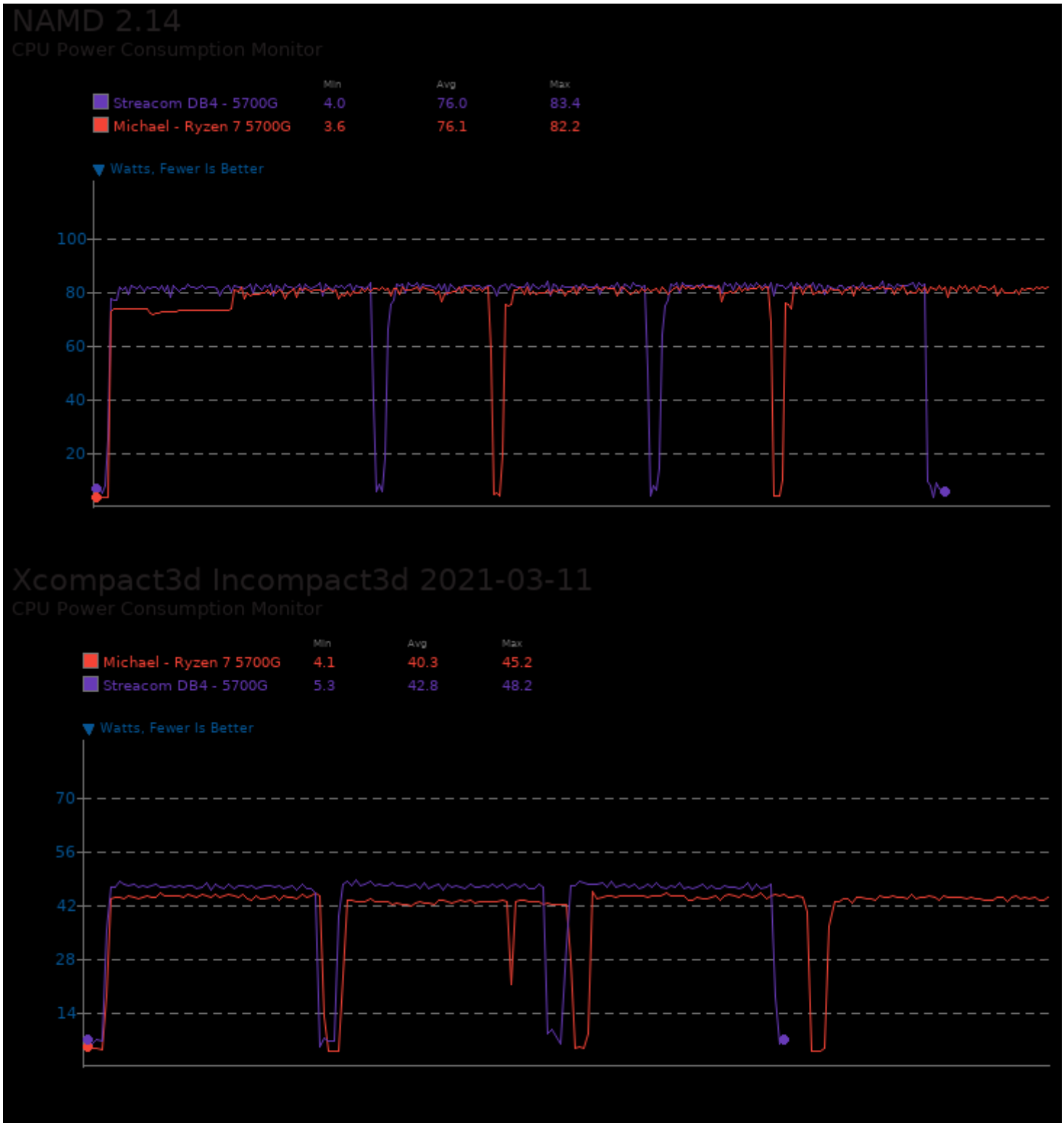
QuantLib 1.21

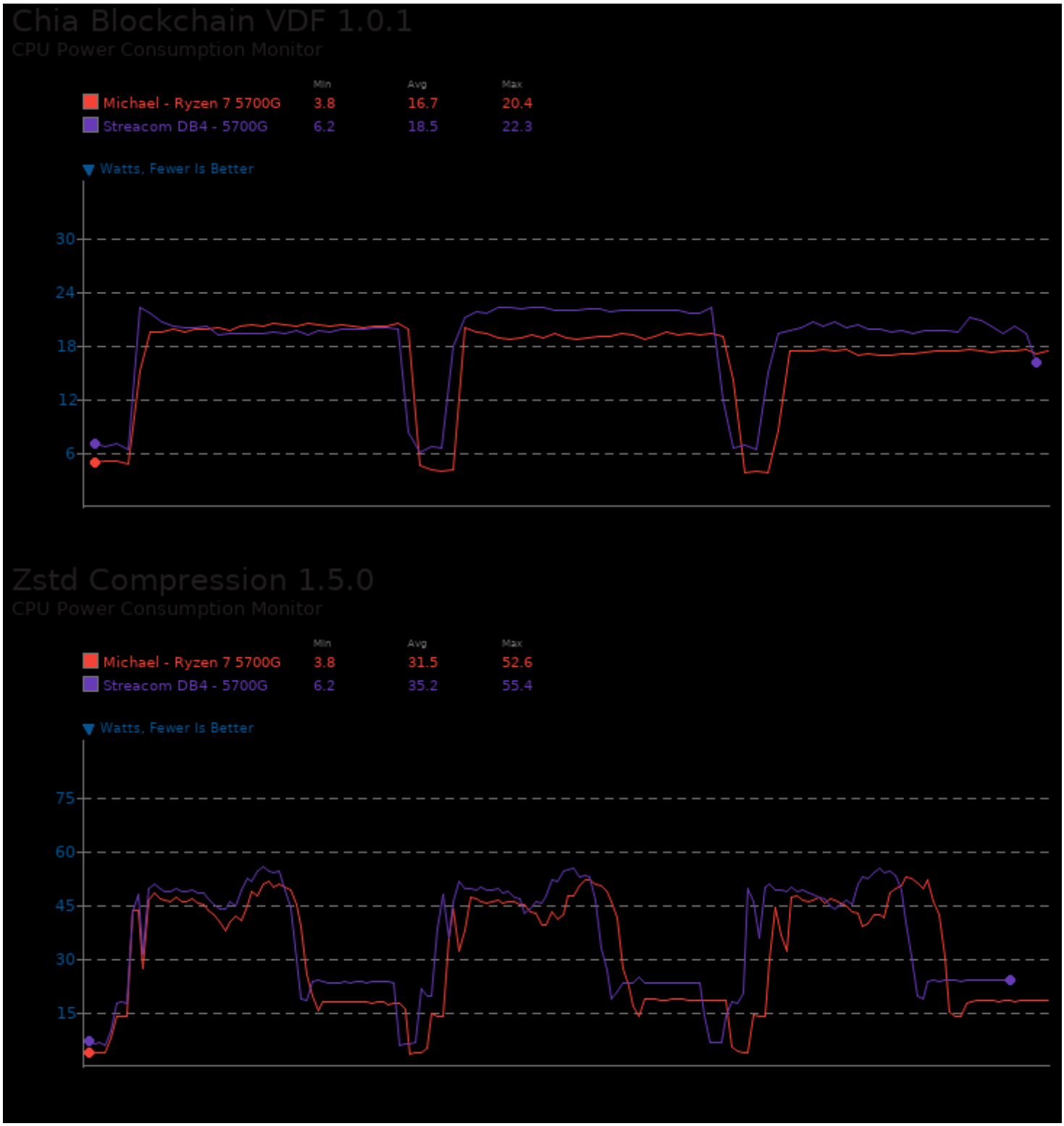
CPU Power Consumption Monitor



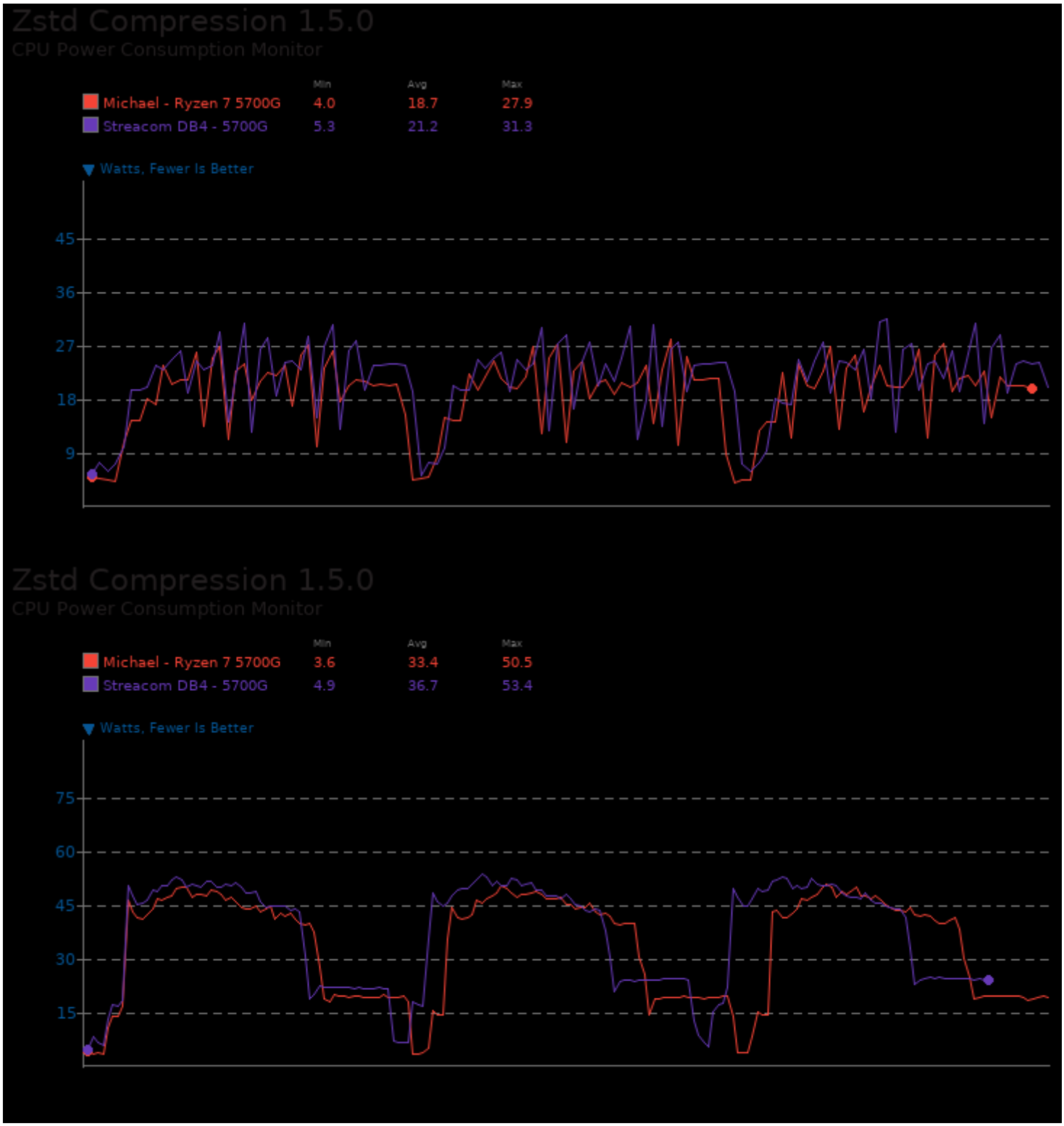
AMD Ryzen 7 5700G Linux Benchmarks



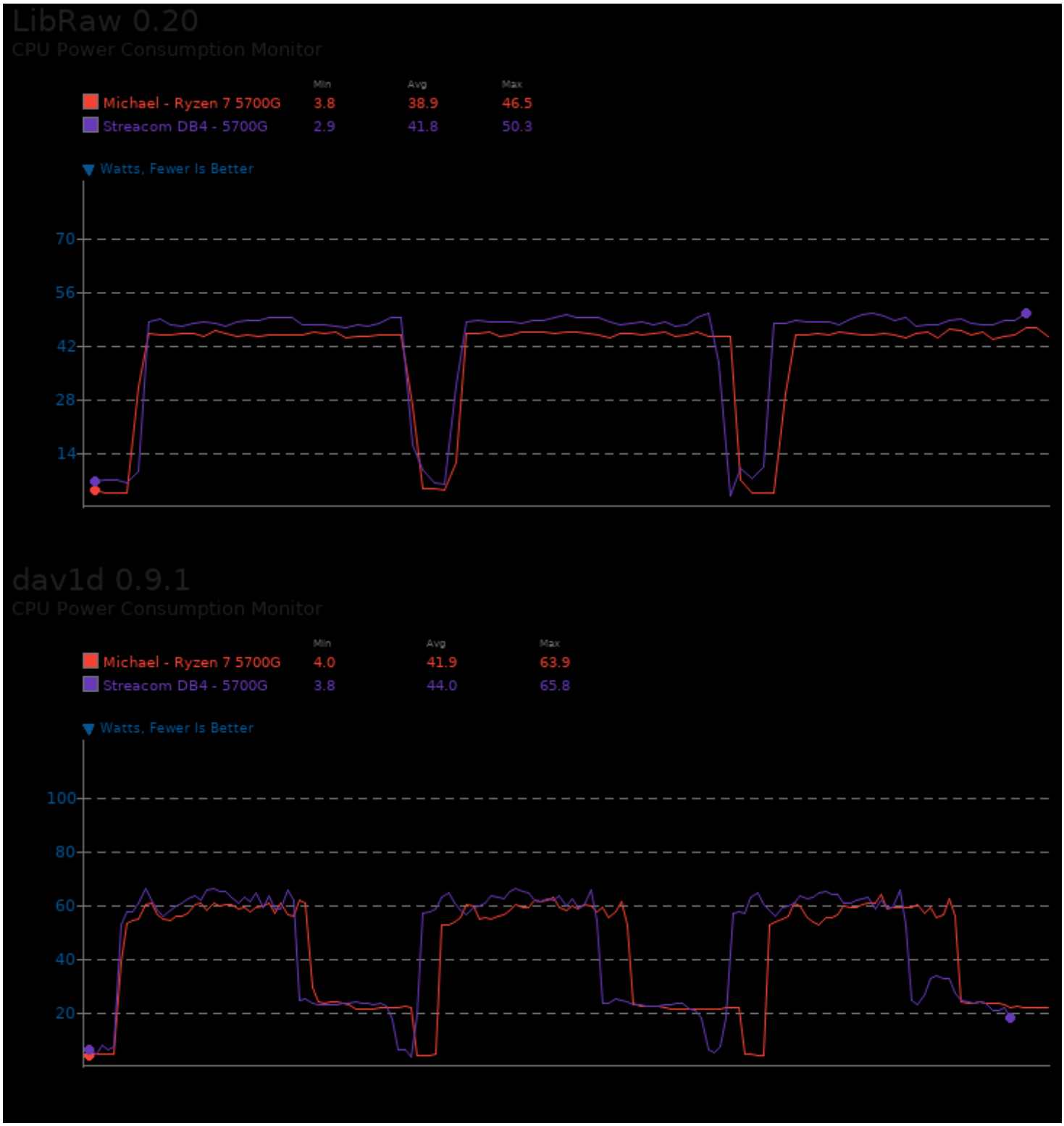

NAMD 2.14
CPU Power Consumption Monitor
Min
Avg
Max
Streacom DB4 - 5700G
4.0
76.0
83.4
Michael - Ryzen 7 5700G
3.6
76.1
82.2
Watts, Fewer Is Better
100
80
60
40
20
Xcompact3d Incompact3d 2021-03-11
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G
4.1
40.3
45.2
Streacom DB4 - 5700G
5.3
42.8
48.2
Watts, Fewer Is Better
70
56
42
28
14


Chia Blockchain VDF 1.0.1
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.8 16.7 20.4
Streacom DB4 - 5700G 6.2 18.5 22.3
Watts, Fewer Is Better
30
24
18
12
6
Zstd Compression 1.5.0
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.8 31.5 52.6
Streacom DB4 - 5700G 6.2 35.2 55.4
Watts, Fewer Is Better
75
60
45
30
15

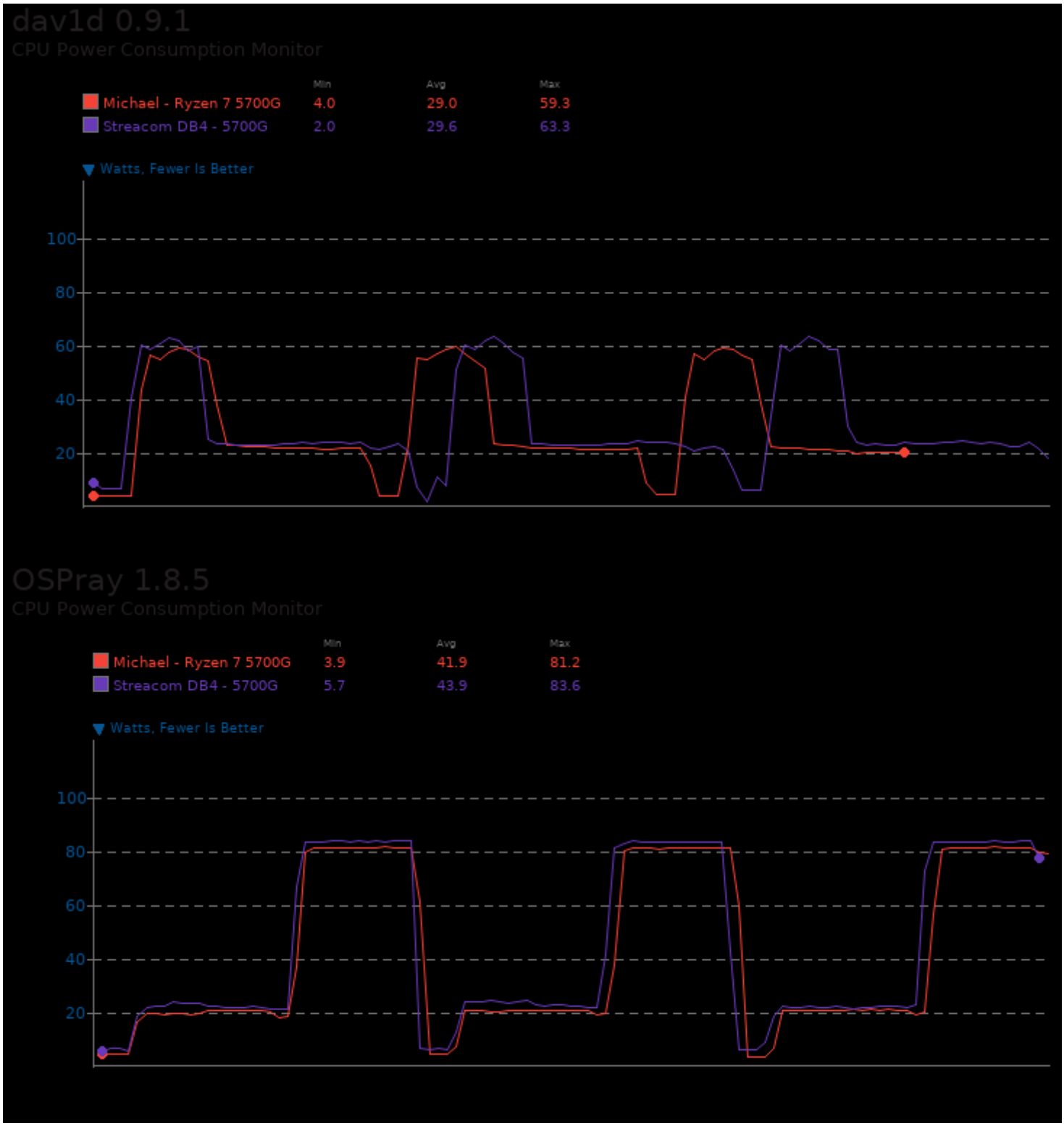
AMD Ryzen 7 5700G Linux Benchmarks



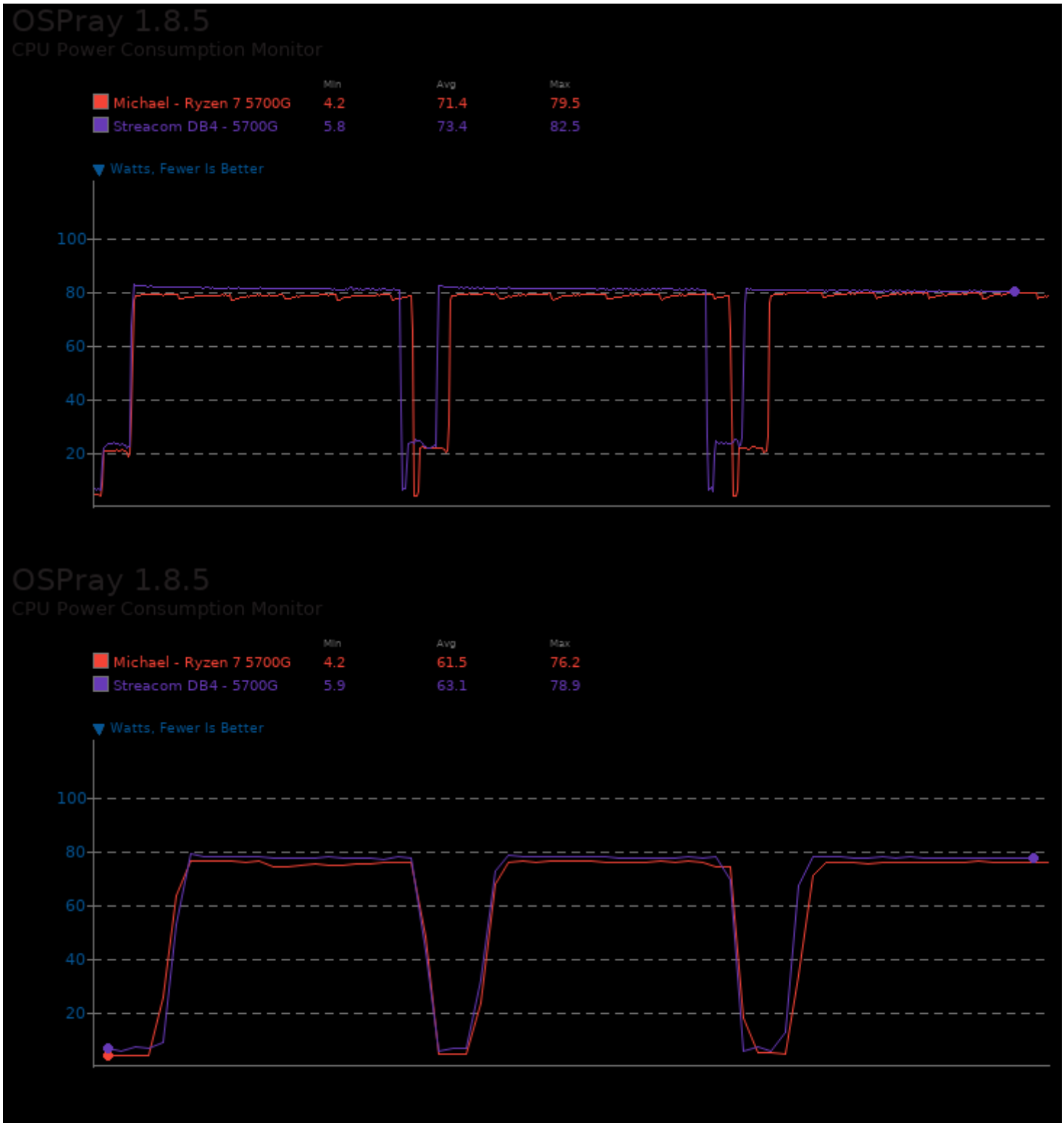
AMD Ryzen 7 5700G Linux Benchmarks

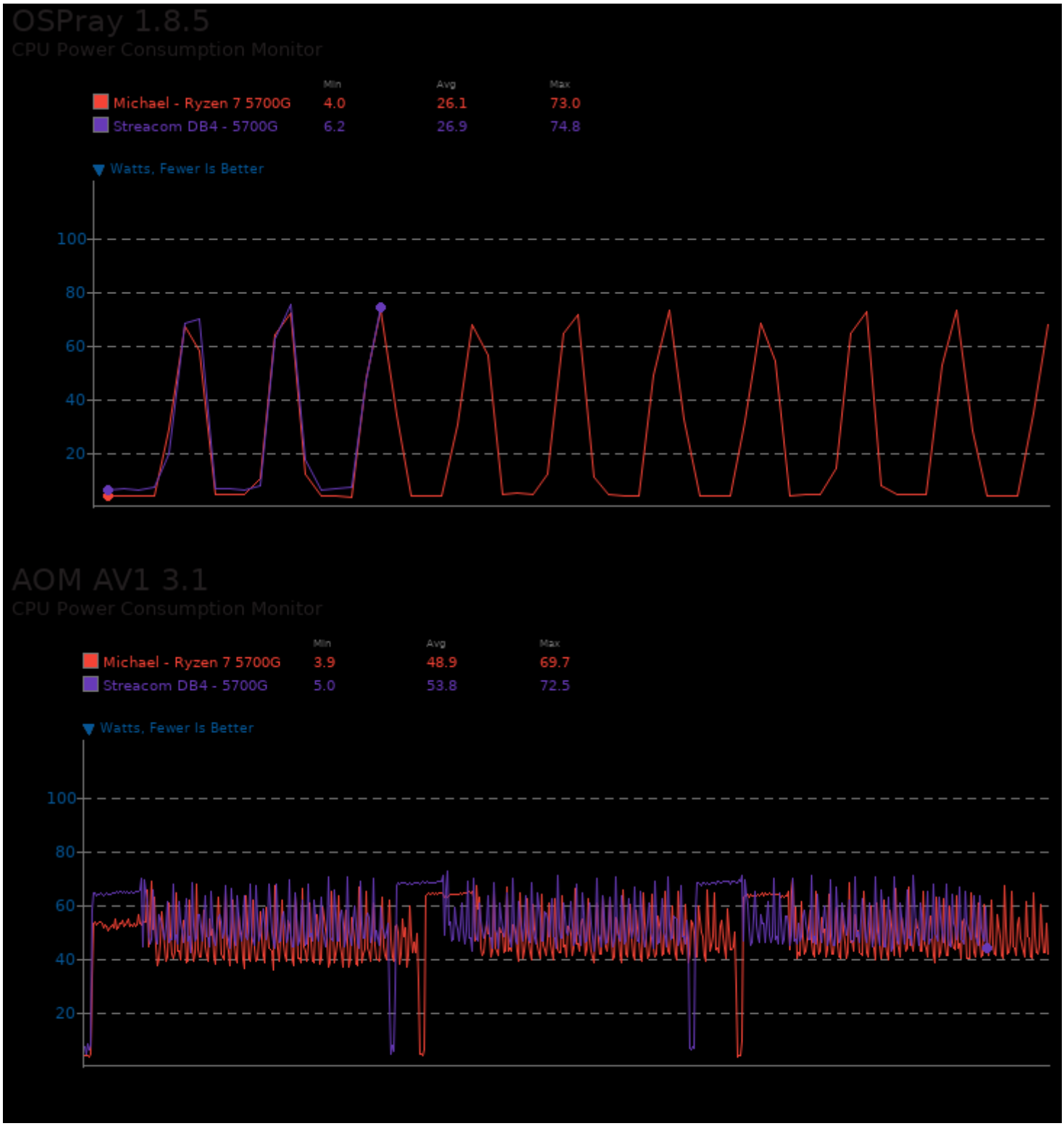


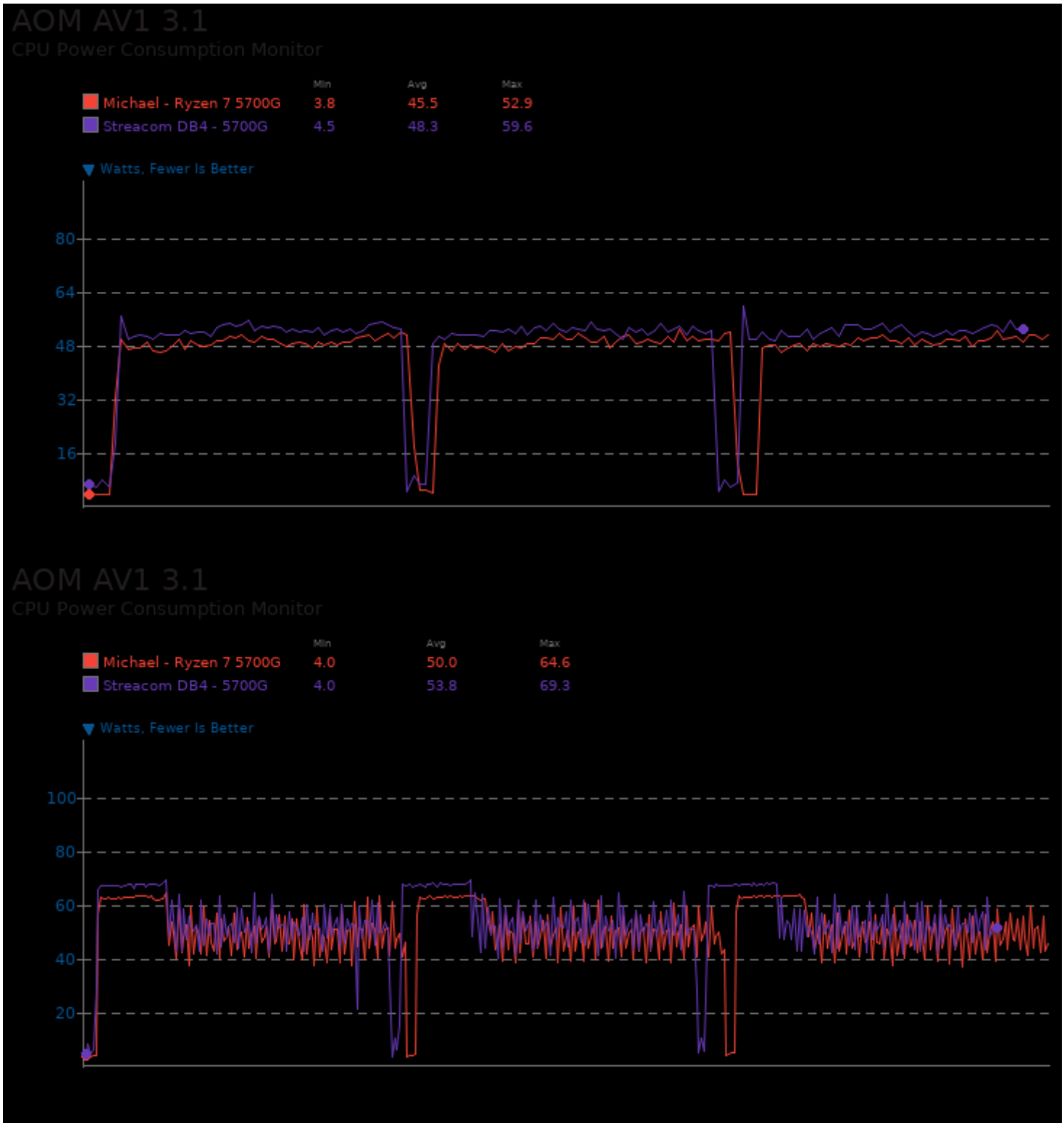
AMD Ryzen 7 5700G Linux Benchmarks



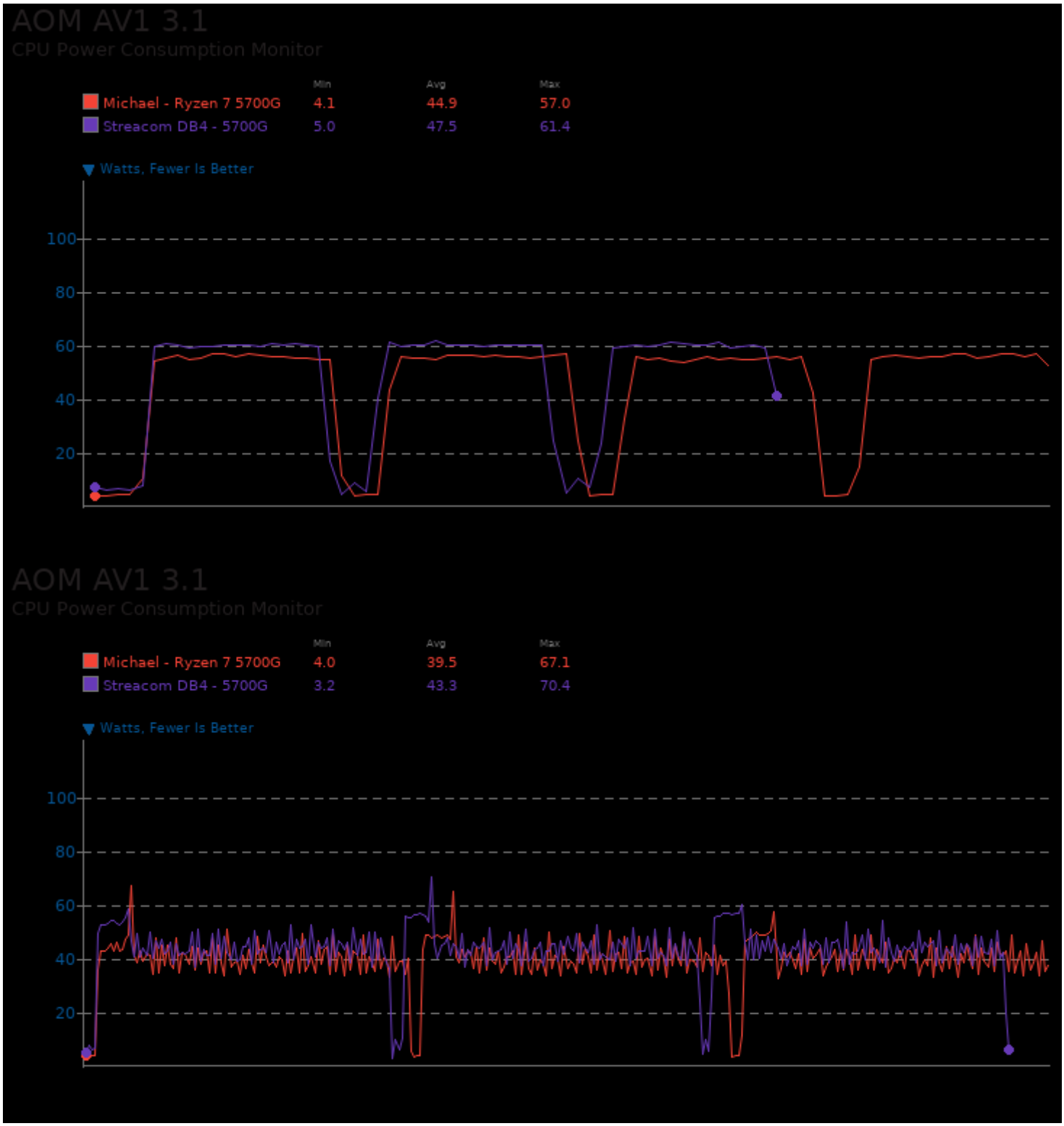
AMD Ryzen 7 5700G Linux Benchmarks



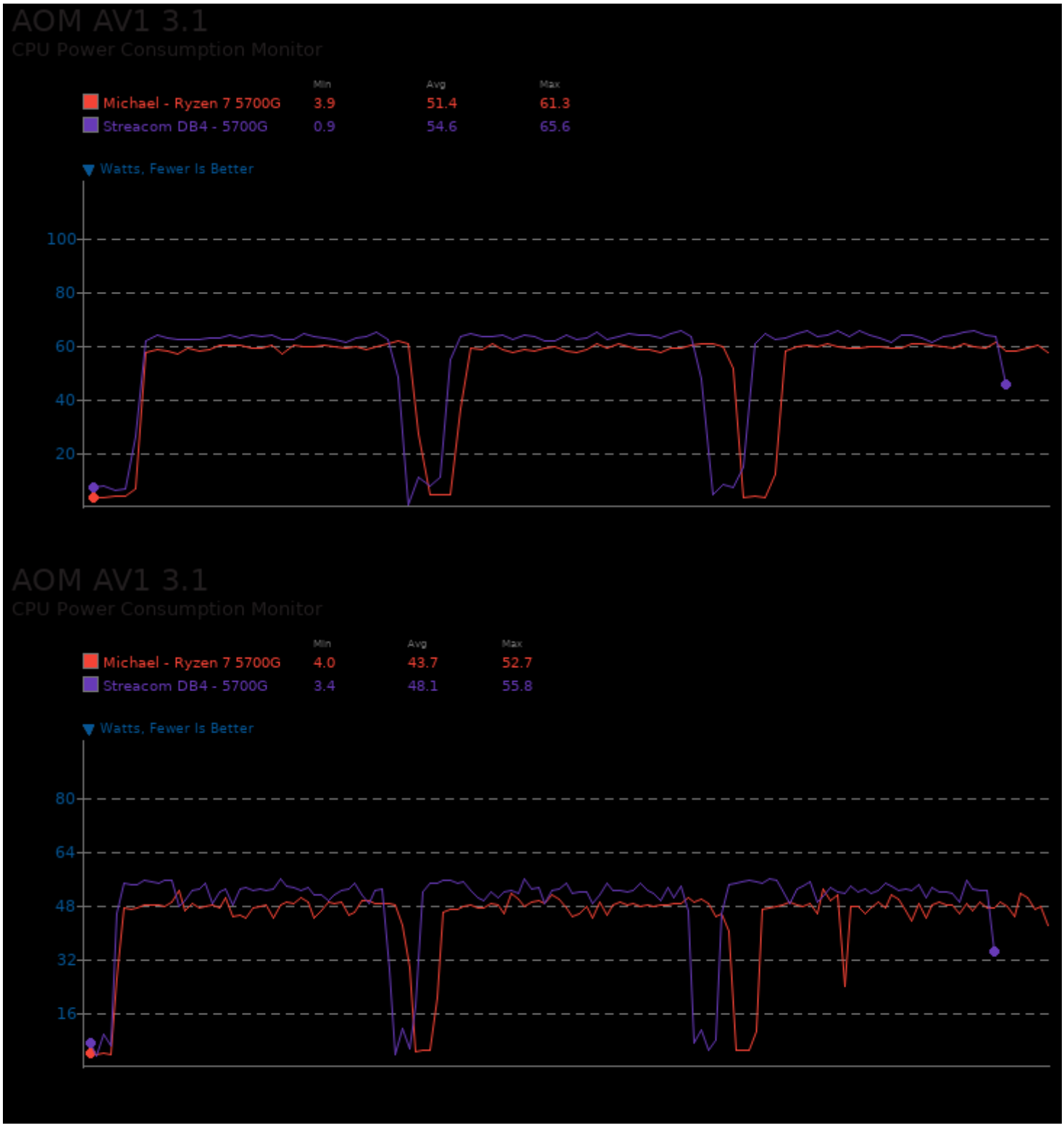

OSPray 1.8.5
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.0 26.1 73.0
Streacom DB4 - 5700G 6.2 26.9 74.8
Watts, Fewer Is Better
100
80
60
40
20
AOM AV1 3.1
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.9 48.9 69.7
Streacom DB4 - 5700G 5.0 53.8 72.5
Watts, Fewer Is Better
100
80
60
40
20


AOM AV1 3.1
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.8 45.5 52.9
Streacom DB4 - 5700G 4.5 48.3 59.6
Watts, Fewer Is Better
80
64
48
32
16
AOM AV1 3.1
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.0 50.0 64.6
Streacom DB4 - 5700G 4.0 53.8 69.3
Watts, Fewer Is Better
100
80
60
40
20

AMD Ryzen 7 5700G Linux Benchmarks



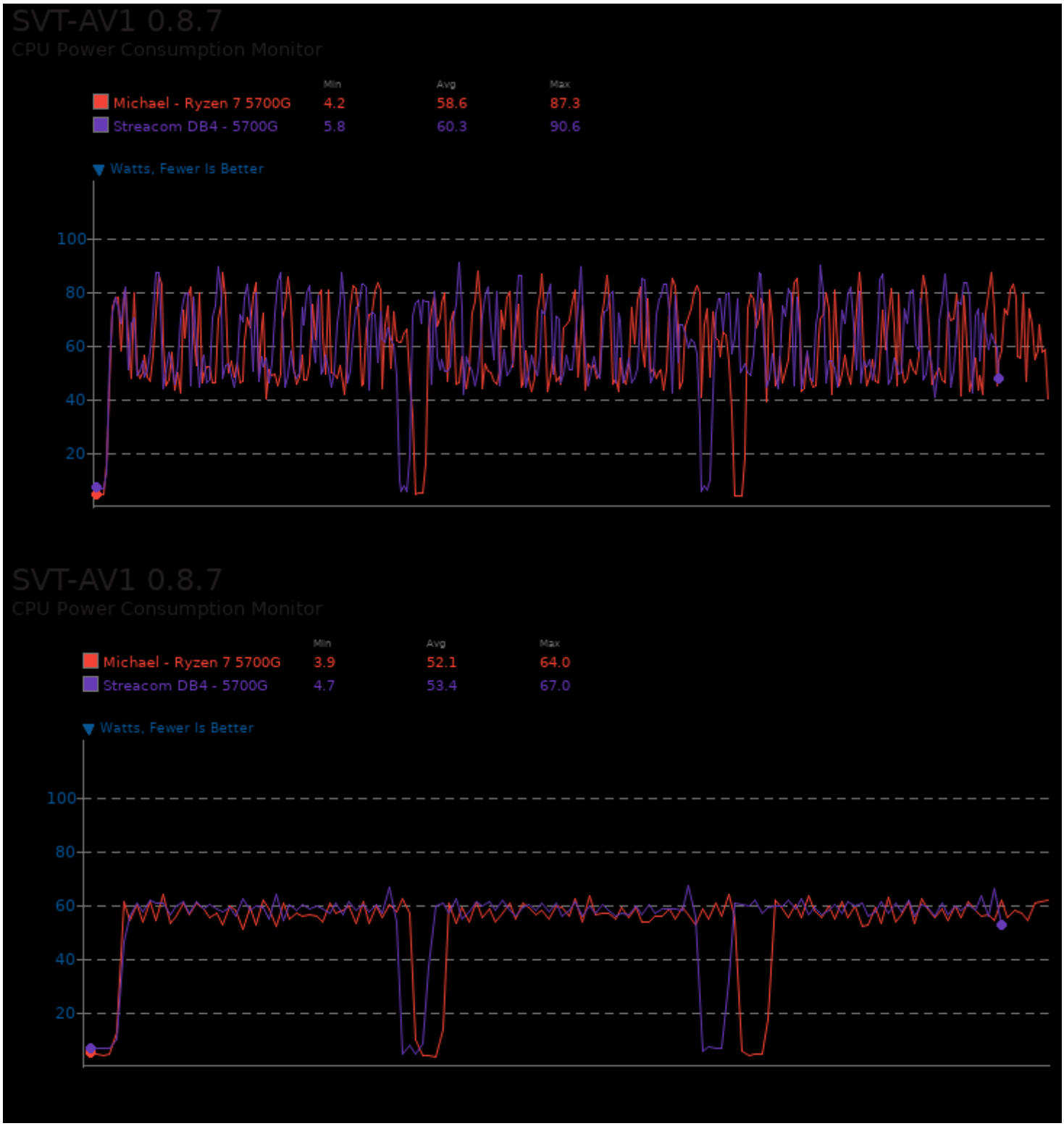
AMD Ryzen 7 5700G Linux Benchmarks



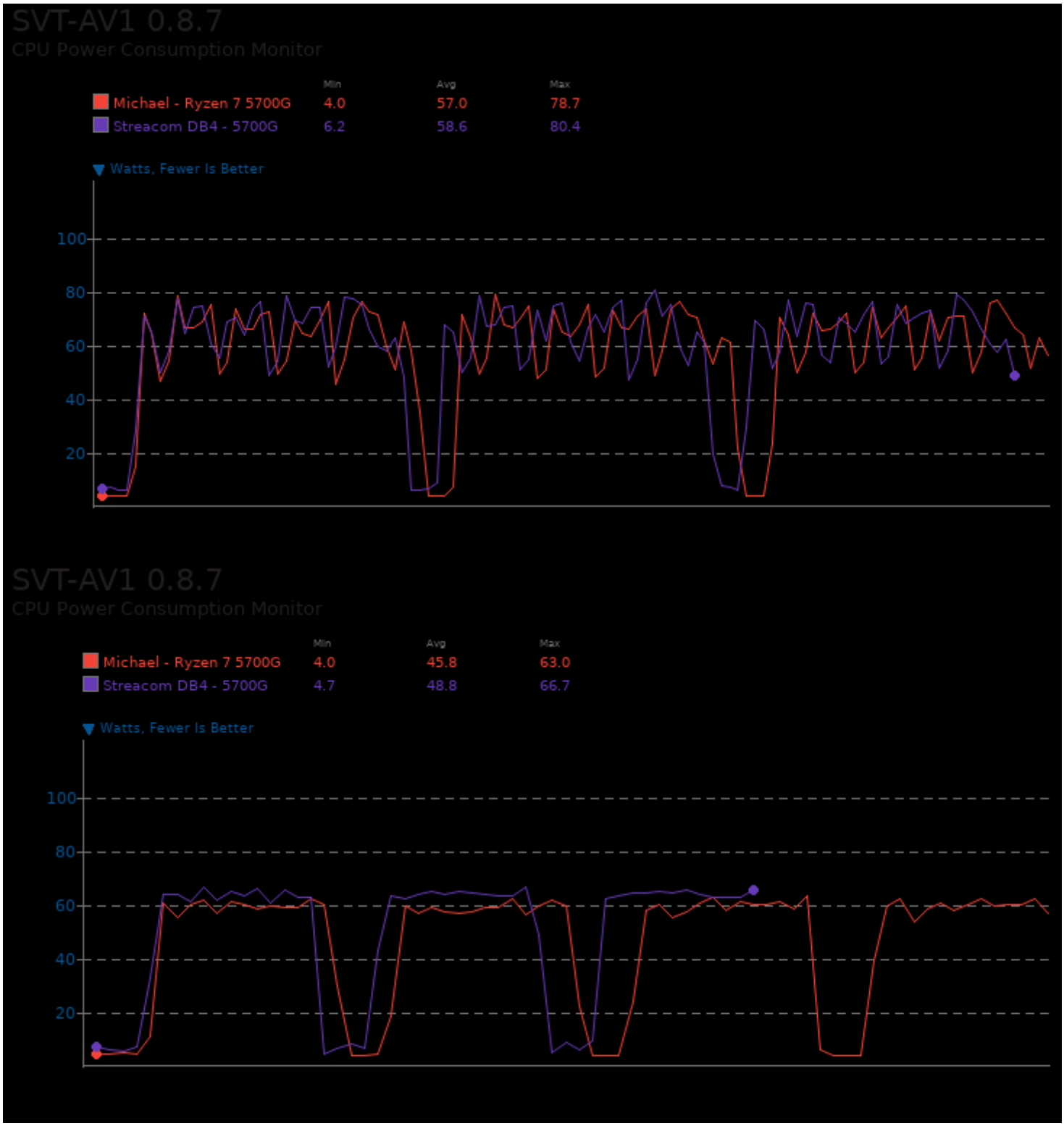
AMD Ryzen 7 5700G Linux Benchmarks

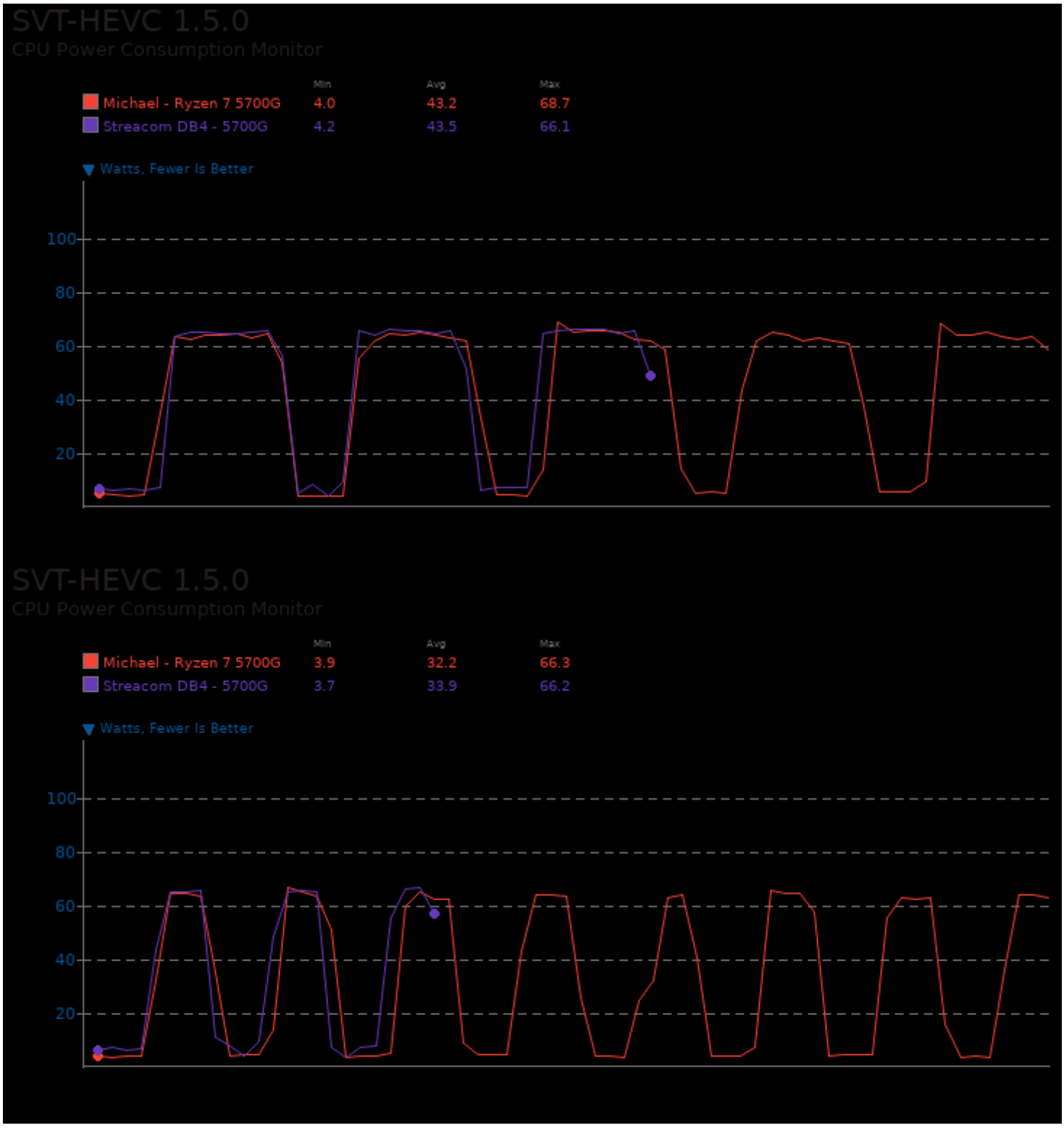



Embree 3.13
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.0 70.2 77.8
Streacom DB4 - 5700G 6.1 72.0 80.0
Watts, Fewer Is Better
100
80
60
40
20
Embree 3.13
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.1 71.2 78.3
Streacom DB4 - 5700G 6.4 73.2 80.4
Watts, Fewer Is Better
100
80
60
40
20

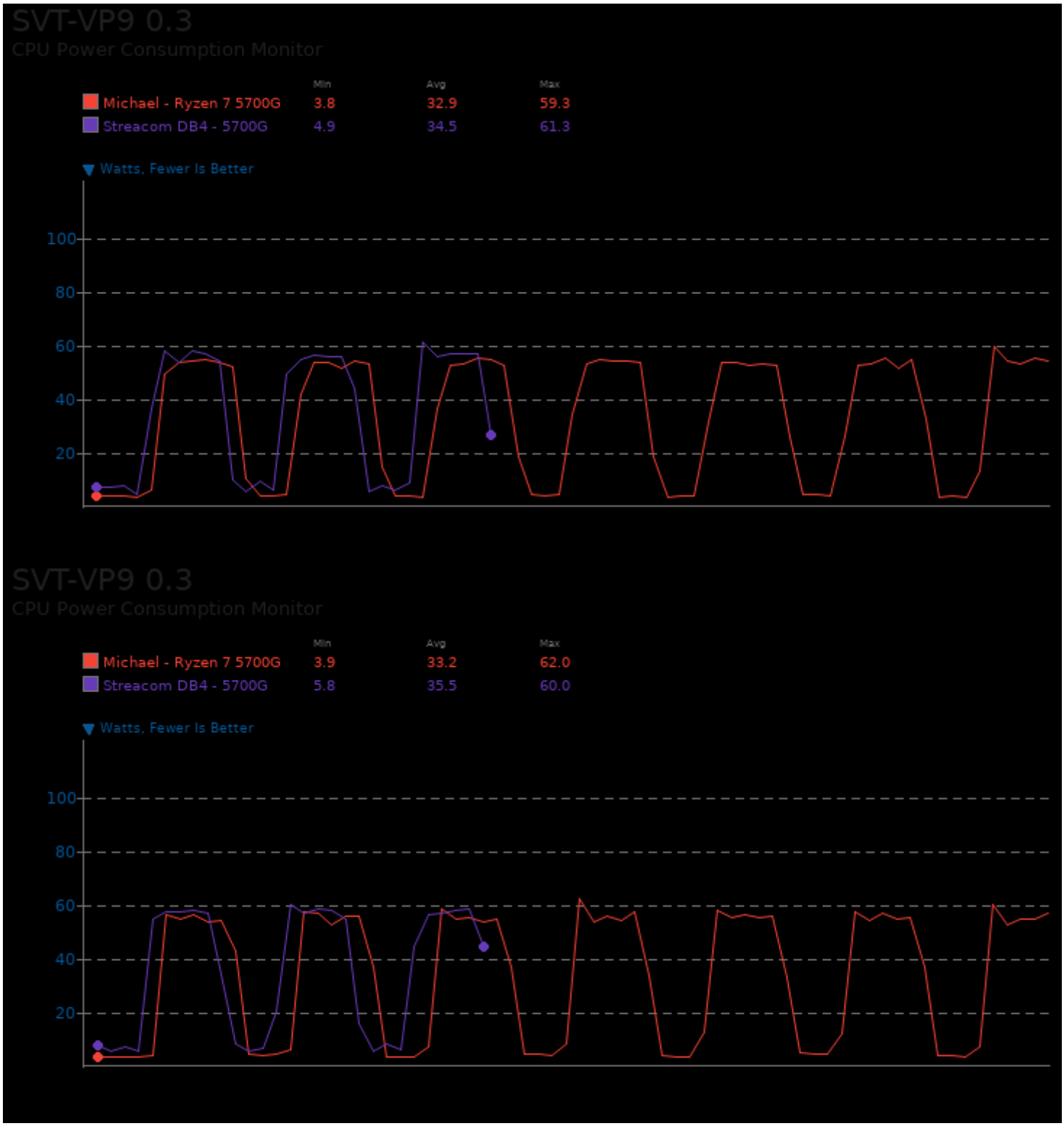

SVT-AV1 0.8.7
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.2 58.6 87.3
Streacom DB4 - 5700G 5.8 60.3 90.6
Watts, Fewer Is Better
100
80
60
40
20
SVT-AV1 0.8.7
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.9 52.1 64.0
Streacom DB4 - 5700G 4.7 53.4 67.0
Watts, Fewer Is Better
100
80
60
40
20

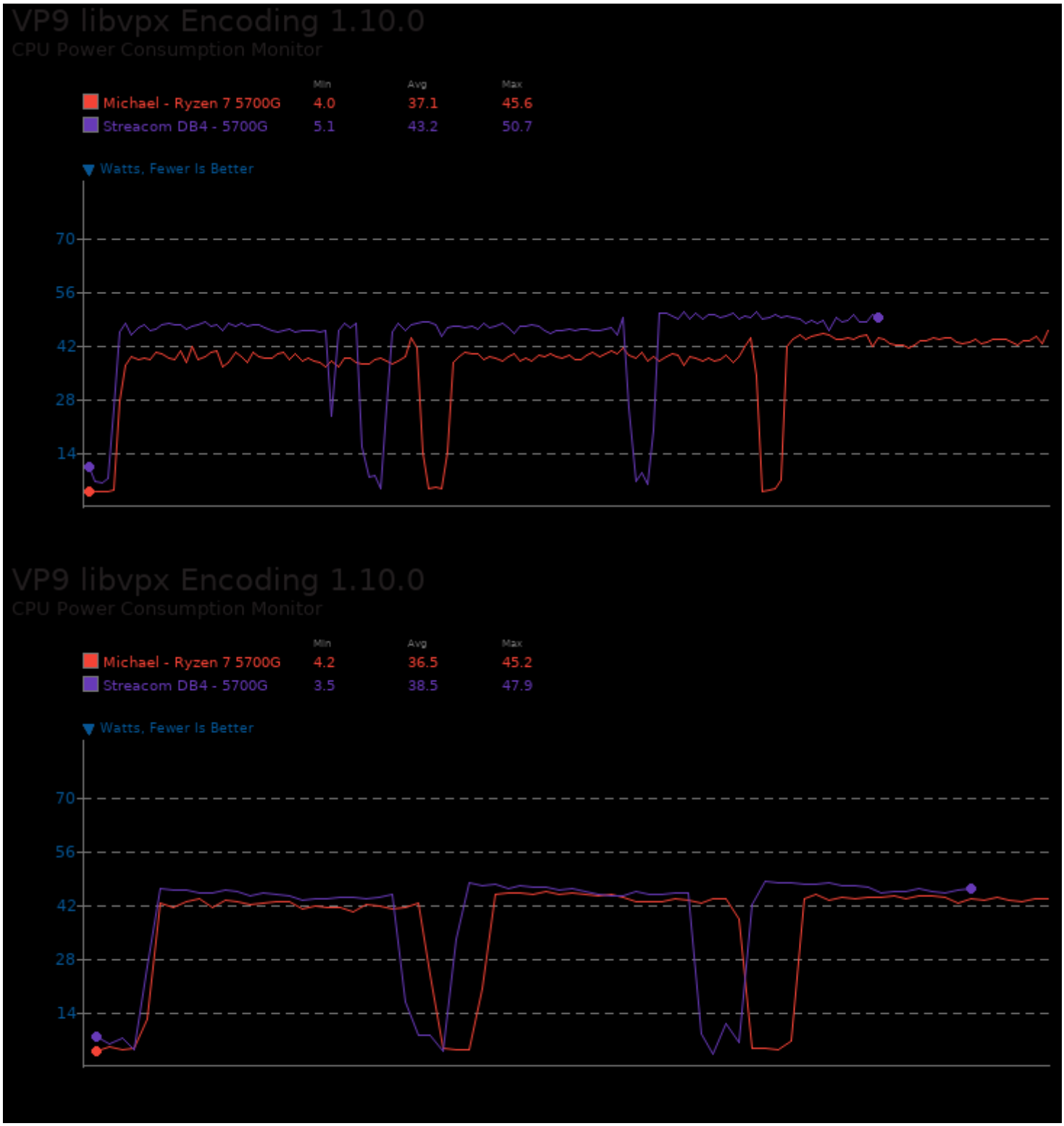
AMD Ryzen 7 5700G Linux Benchmarks




SVT-HEVC 1.5.0
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.0 43.2 68.7
Streacom DB4 - 5700G 4.2 43.5 66.1
Watts, Fewer Is Better
100
80
60
40
20
SVT-HEVC 1.5.0
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.9 32.2 66.3
Streacom DB4 - 5700G 3.7 33.9 66.2
Watts, Fewer Is Better
100
80
60
40
20

AMD Ryzen 7 5700G Linux Benchmarks

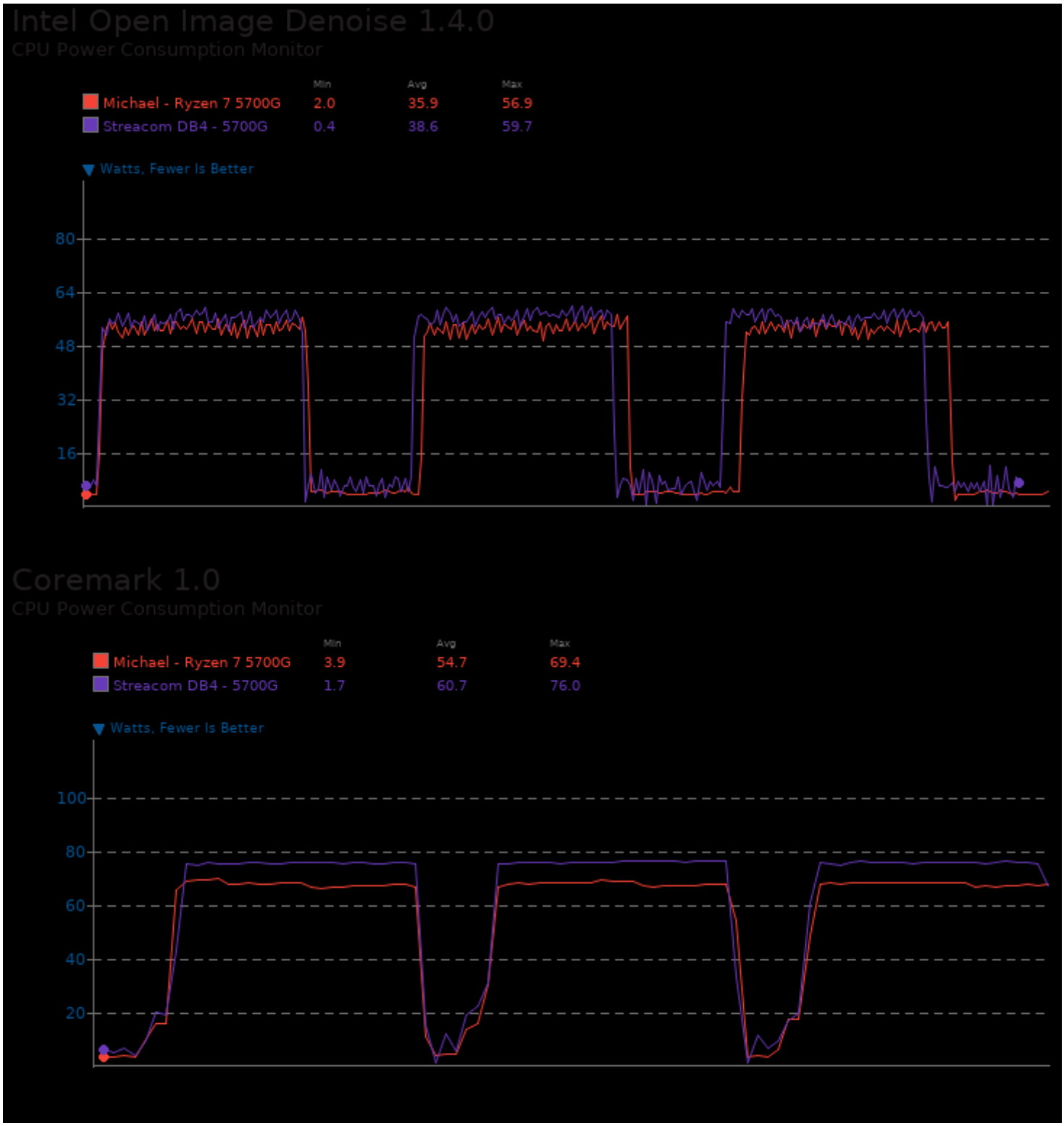



VP9 libvpx Encoding 1.10.0
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G
4.0
37.1
45.6
Streacom DB4 - 5700G
5.1
43.2
50.7
Watts, Fewer Is Better
70
56
42
28
14
VP9 libvpx Encoding 1.10.0
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G
4.2
36.5
45.2
Streacom DB4 - 5700G
3.5
38.5
47.9
Watts, Fewer Is Better
70
56
42
28
14

AMD Ryzen 7 5700G Linux Benchmarks

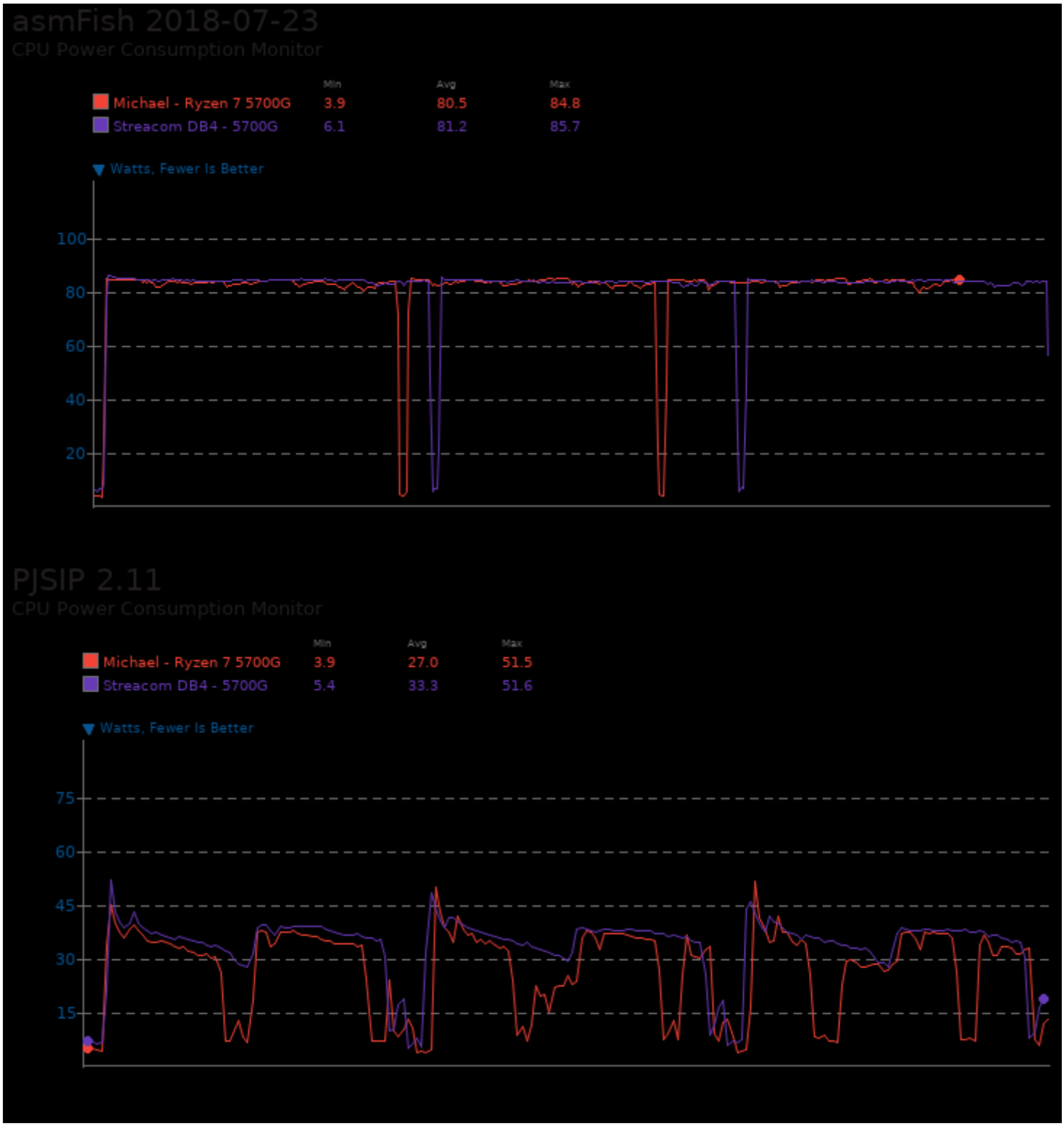


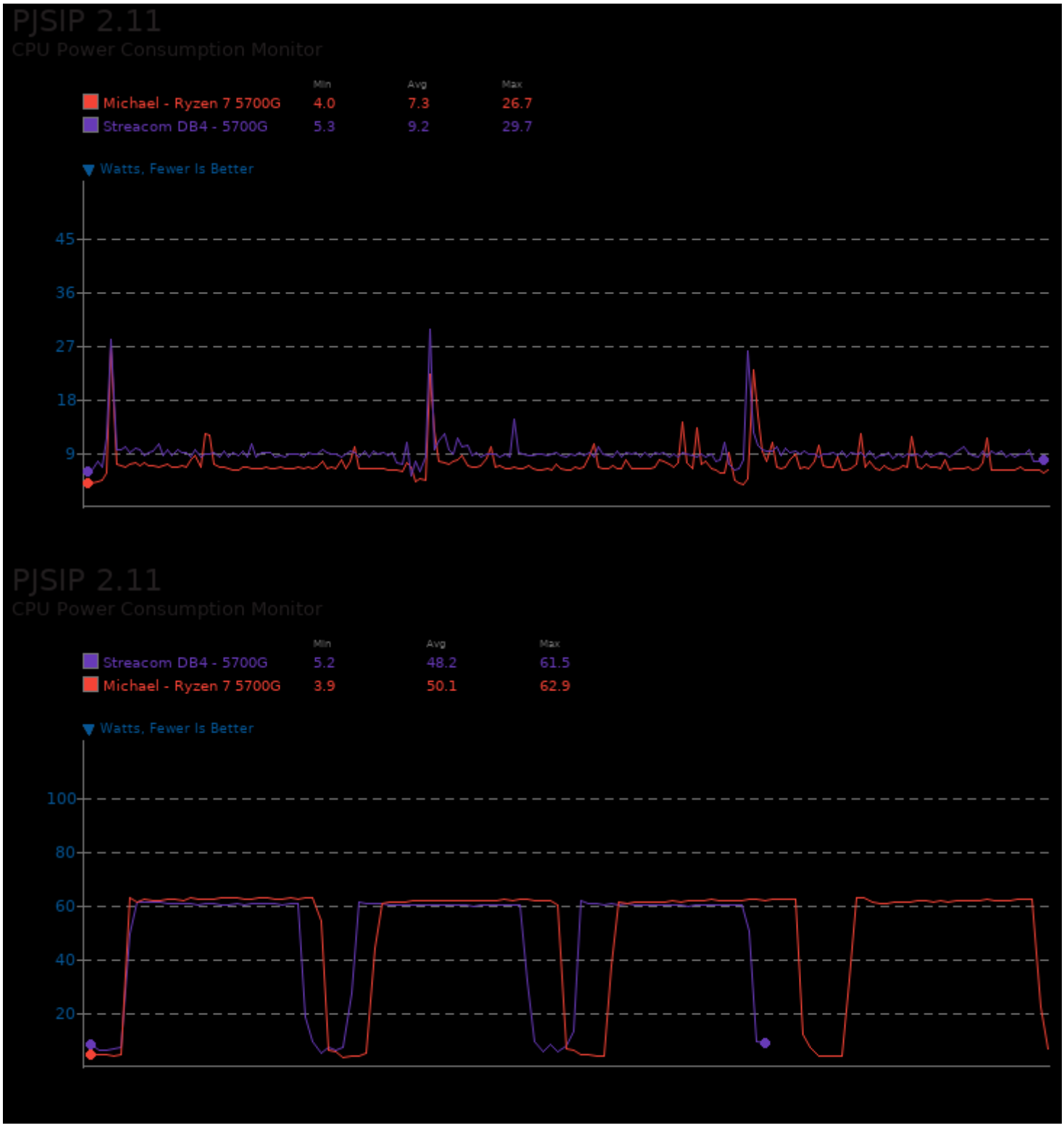
AMD Ryzen 7 5700G Linux Benchmarks



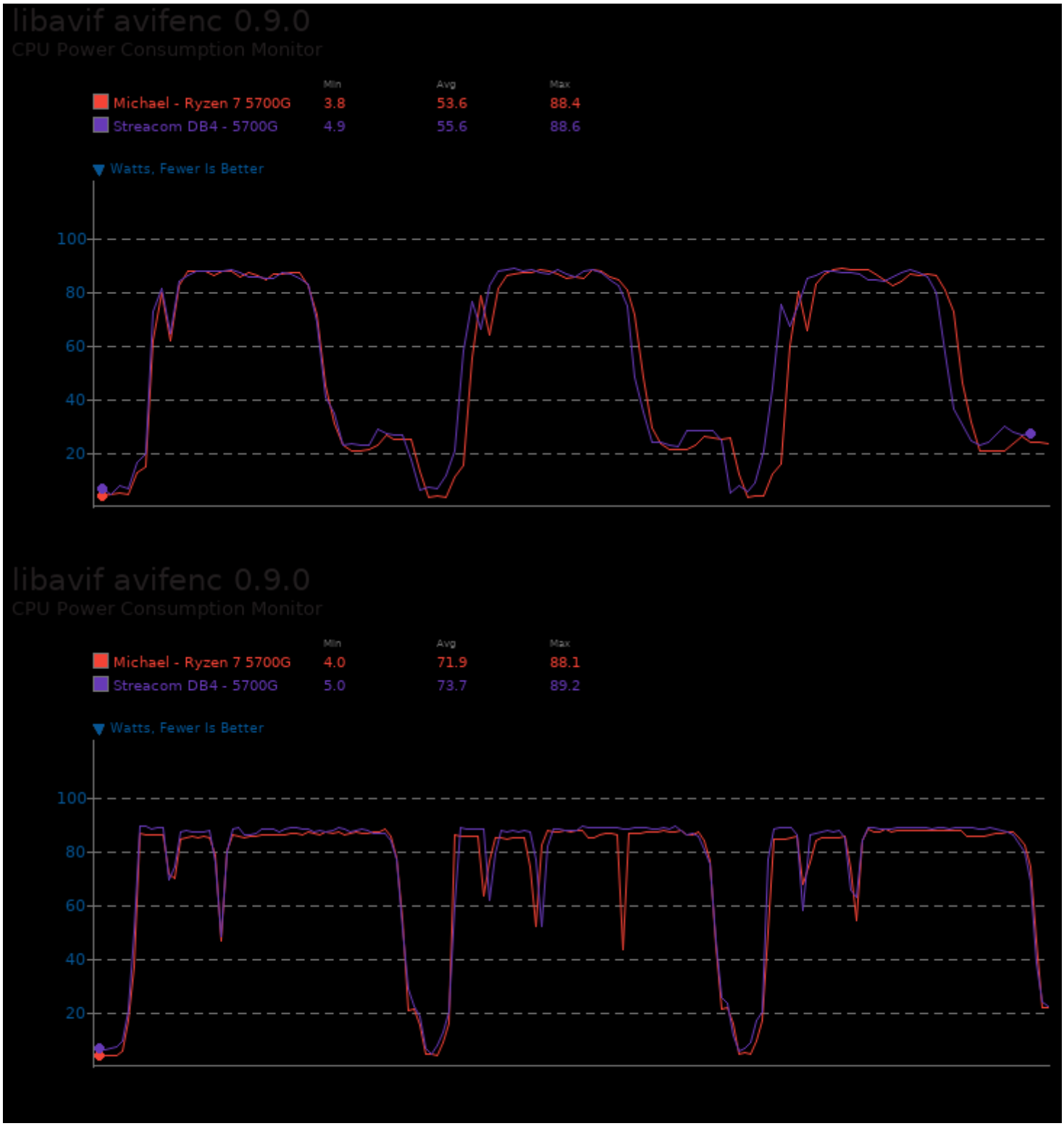

7-Zip Compression 16.02
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.9 54.8 74.0
Streacom DB4 - 5700G 4.8 57.2 74.4
Watts, Fewer Is Better
100
80
60
40
20
Stockfish 13
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.9 68.6 87.7
Streacom DB4 - 5700G 6.3 69.9 89.9
Watts, Fewer Is Better
100
80
60
40
20

AMD Ryzen 7 5700G Linux Benchmarks

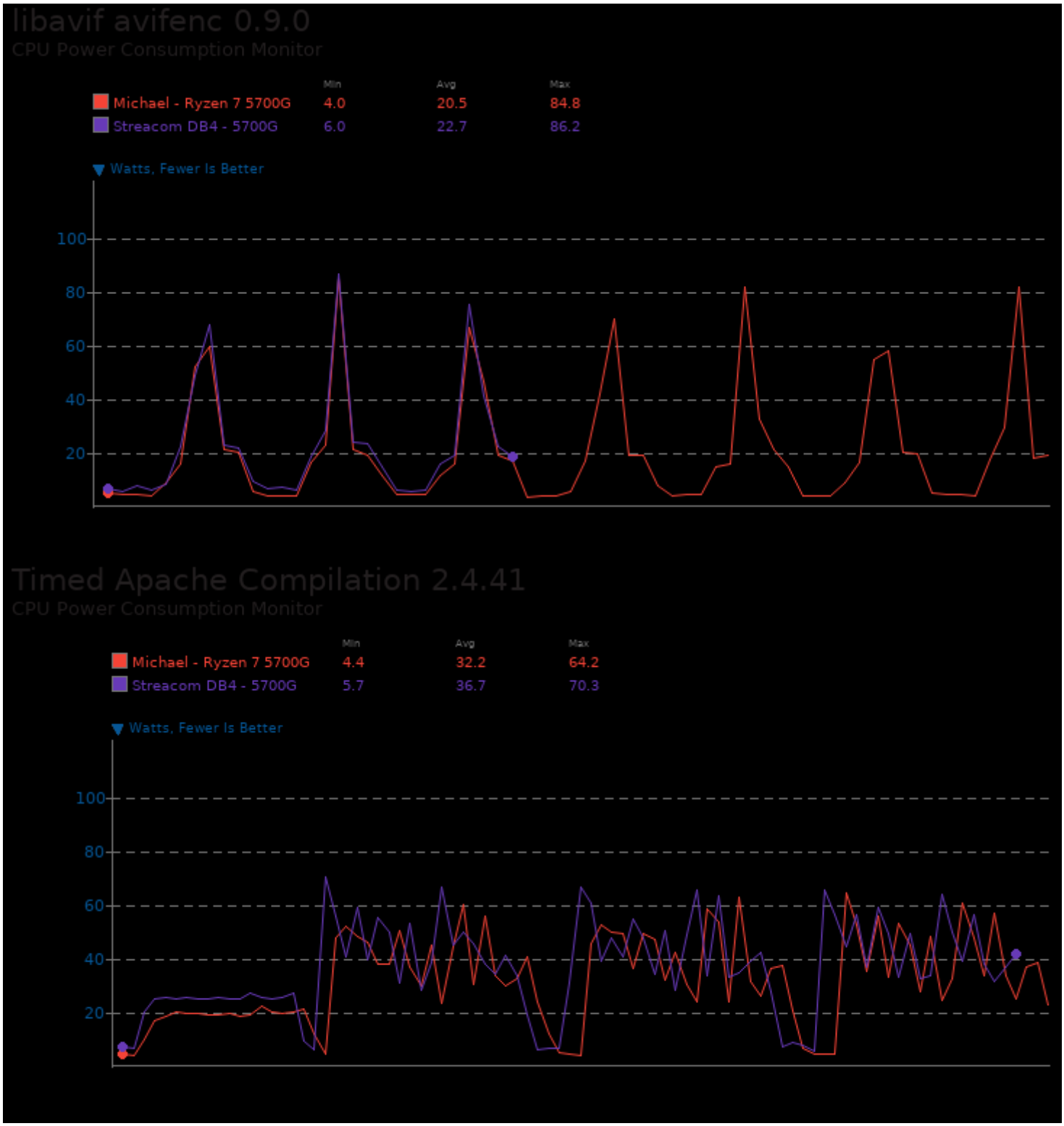


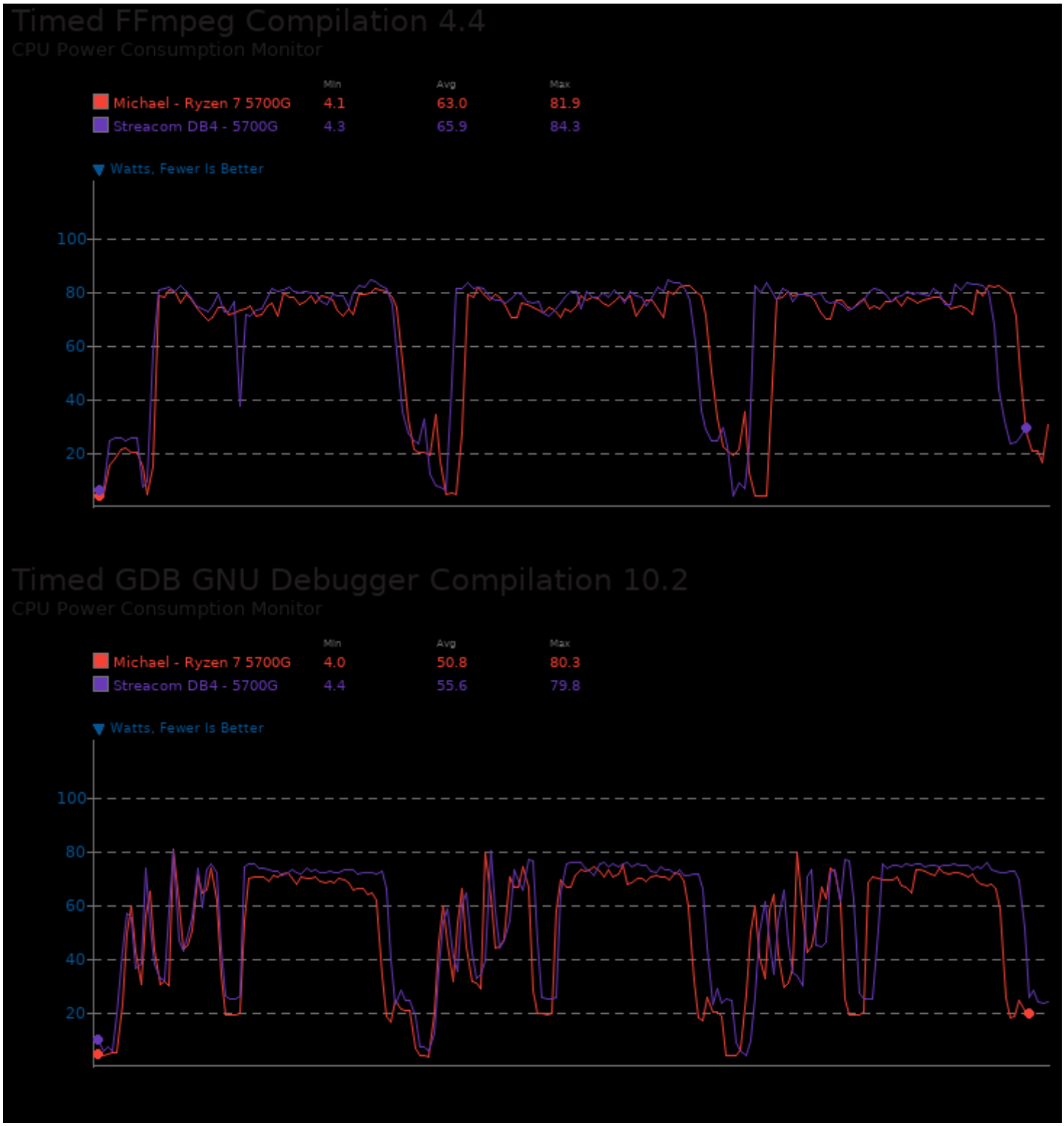

PJSIP 2.11
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.0 7.3 26.7
Streacom DB4 - 5700G 5.3 9.2 29.7
Watts, Fewer Is Better
45
36
27
18
9
PJSIP 2.11
CPU Power Consumption Monitor
Min
Avg
Max
Streacom DB4 - 5700G 5.2 48.2 61.5
Michael - Ryzen 7 5700G 3.9 50.1 62.9
Watts, Fewer Is Better
100
80
60
40
20

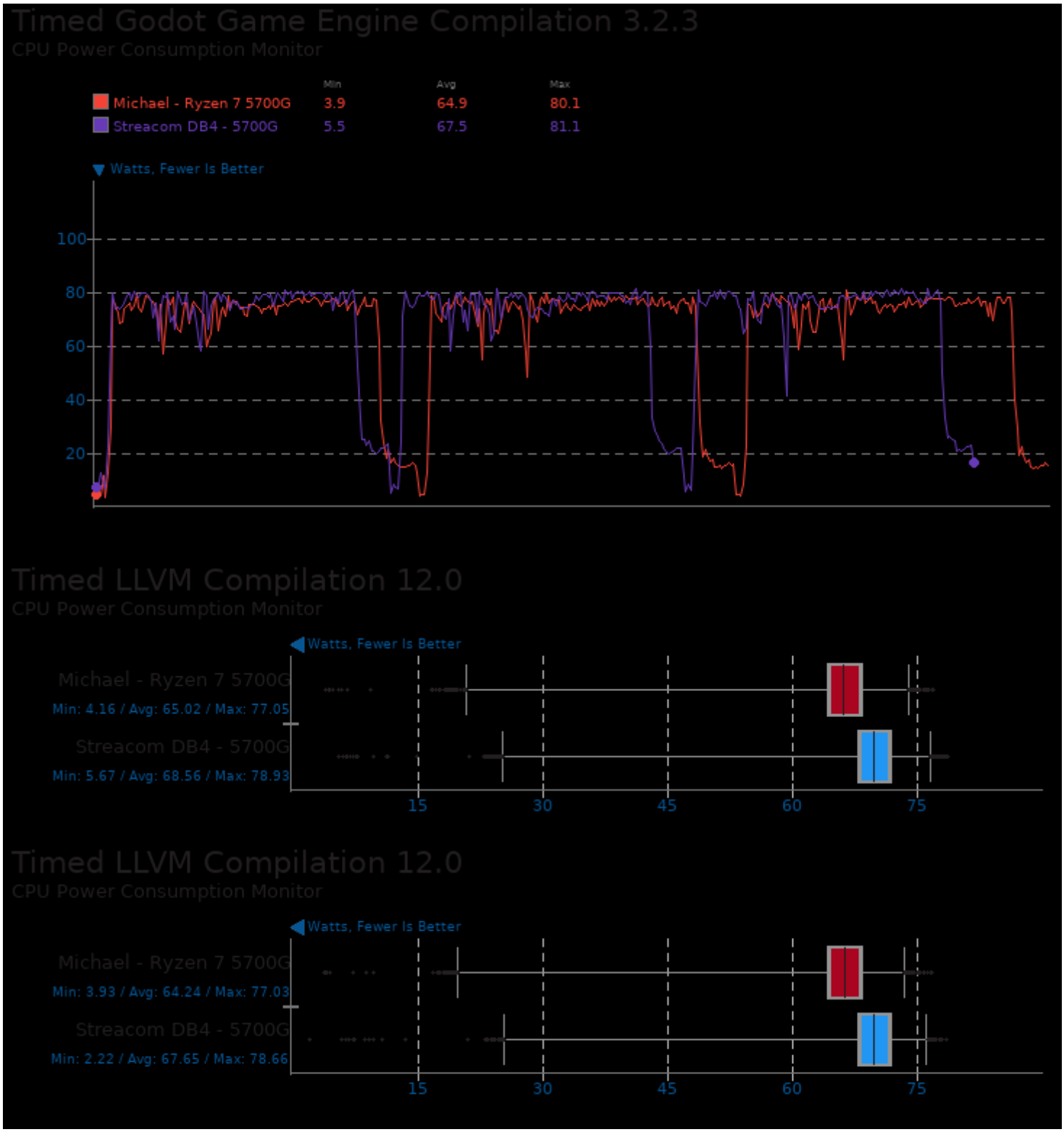
AMD Ryzen 7 5700G Linux Benchmarks



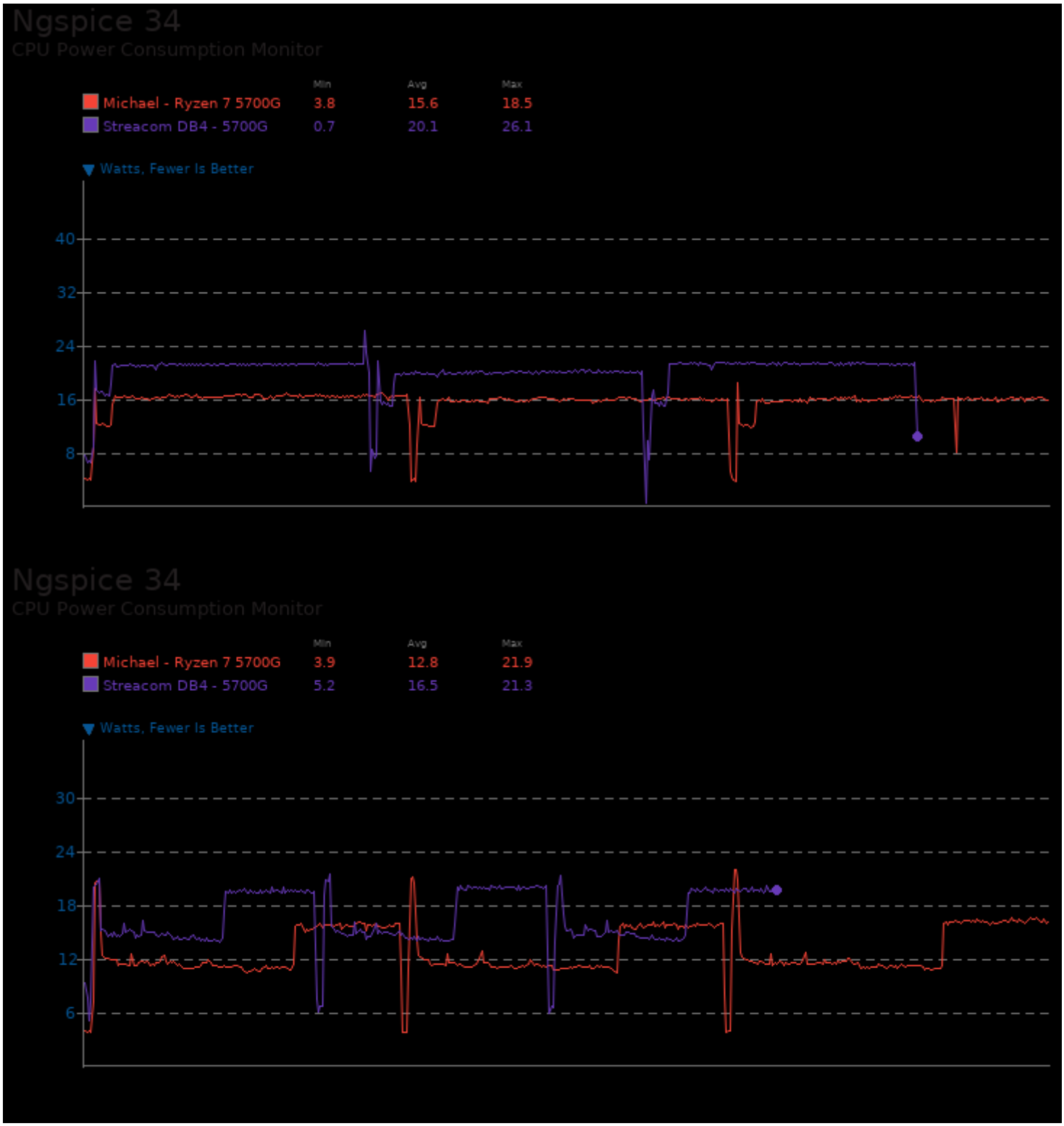
AMD Ryzen 7 5700G Linux Benchmarks



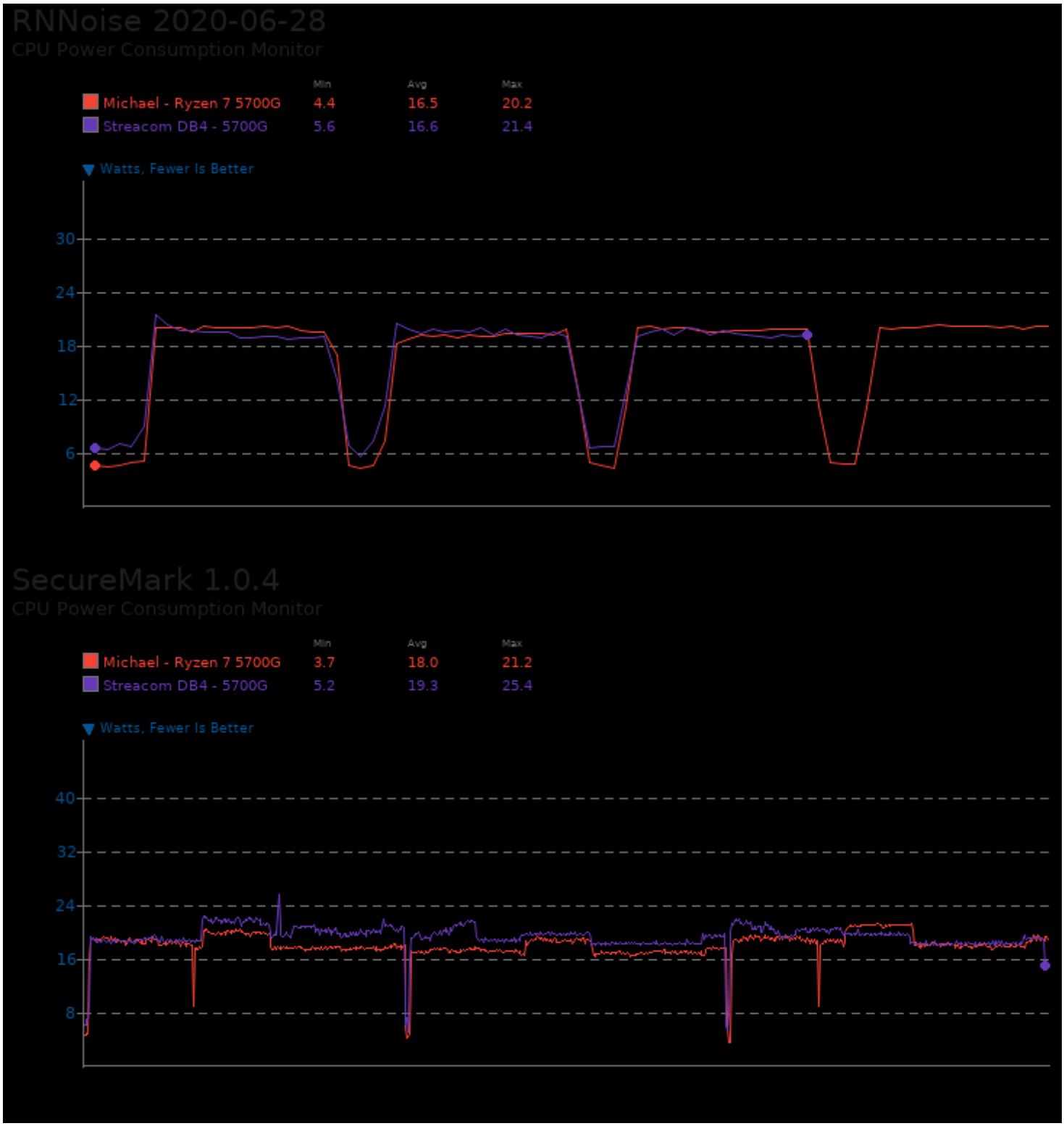

Timed FFmpeg Compilation 4.4
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.1 63.0 81.9
Streacom DB4 - 5700G 4.3 65.9 84.3
Watts, Fewer Is Better
100
80
60
40
20
Timed GDB GNU Debugger Compilation 10.2
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.0 50.8 80.3
Streacom DB4 - 5700G 4.4 55.6 79.8
Watts, Fewer Is Better
100
80
60
40
20

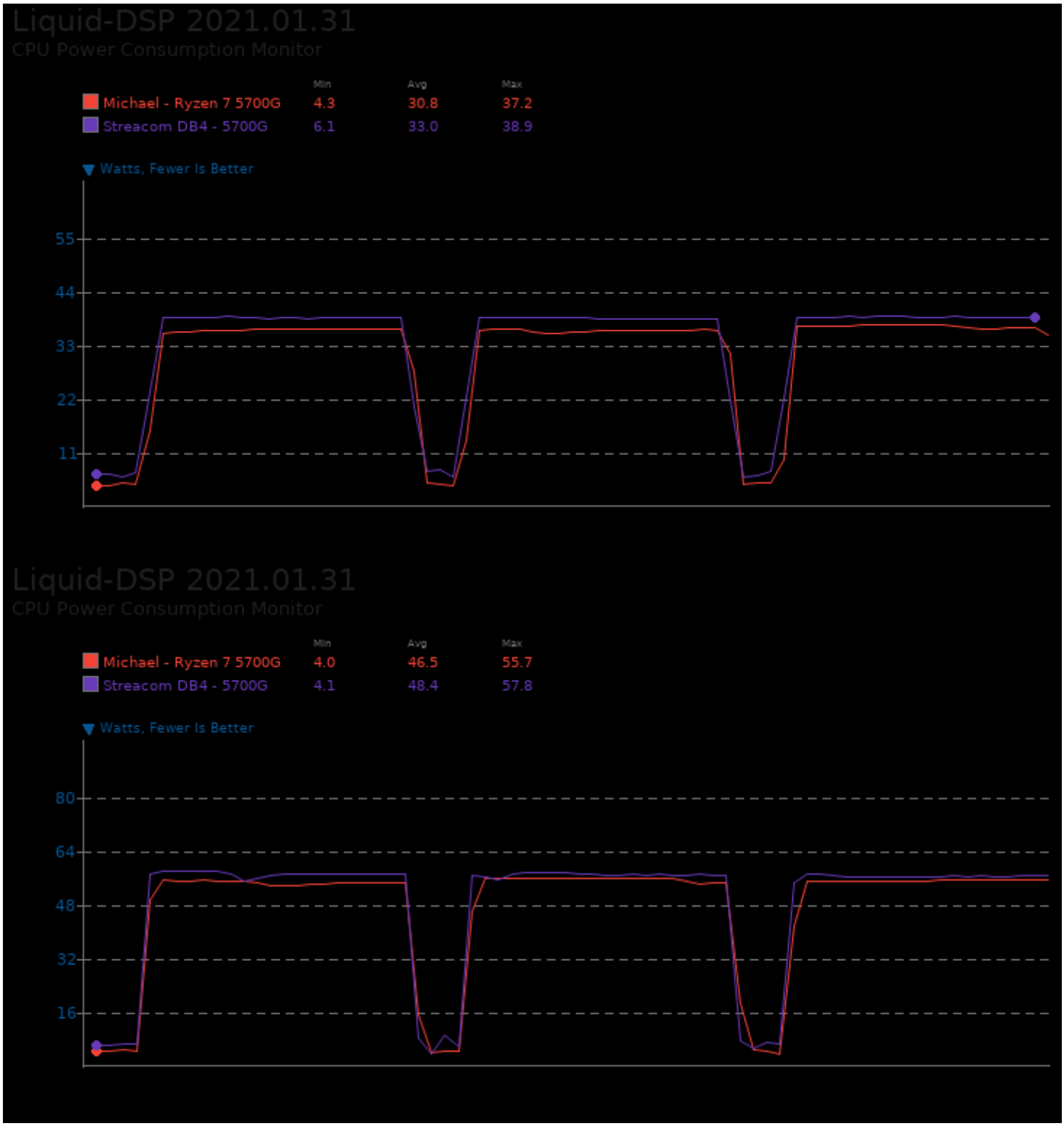

Timed Godot Game Engine Compilation 3.2.3
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G
3.9
64.9
80.1
Streacom DB4 - 5700G
5.5
67.5
81.1
Watts, Fewer Is Better
100
80
60
40
20
Timed LLVM Compilation 12.0
CPU Power Consumption Monitor
Watts, Fewer Is Better
Michael - Ryzen 7 5700G
Min: 4.16 / Avg: 65.02 / Max: 77.05
Streacom DB4 - 5700G
Min: 5.67 / Avg: 68.56 / Max: 78.93
15
30
45
60
75
Timed LLVM Compilation 12.0
CPU Power Consumption Monitor
Watts, Fewer Is Better
Michael - Ryzen 7 5700G
Min: 3.93 / Avg: 64.24 / Max: 77.03
Streacom DB4 - 5700G
Min: 2.22 / Avg: 67.65 / Max: 78.66
15
30
45
60
75


Timed MPlayer Compilation 1.4
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G
4.2
62.5
82.8
Streacom DB4 - 5700G
6.3
64.9
83.1
Watts, Fewer Is Better
100
80
60
40
20
DeepSpeech 0.6
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G
4.0
20.9
24.9
Streacom DB4 - 5700G
5.9
23.7
28.7
Watts, Fewer Is Better
45
36
27
18
9

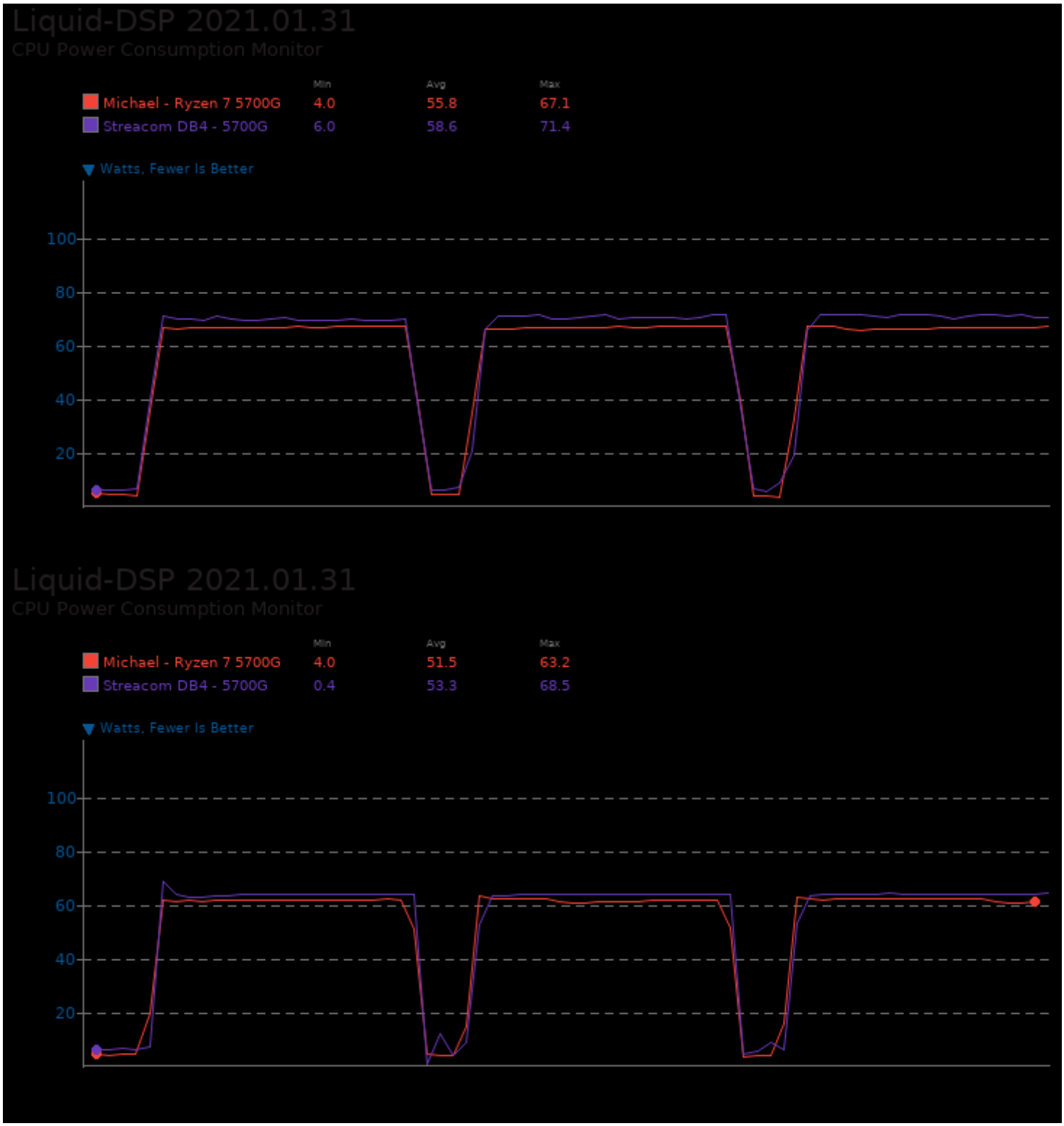

Ngspice 34
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.8 15.6 18.5
Streacom DB4 - 5700G 0.7 20.1 26.1
Watts, Fewer Is Better
40
32
24
16
8
Ngspice 34
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.9 12.8 21.9
Streacom DB4 - 5700G 5.2 16.5 21.3
Watts, Fewer Is Better
30
24
18
12
6

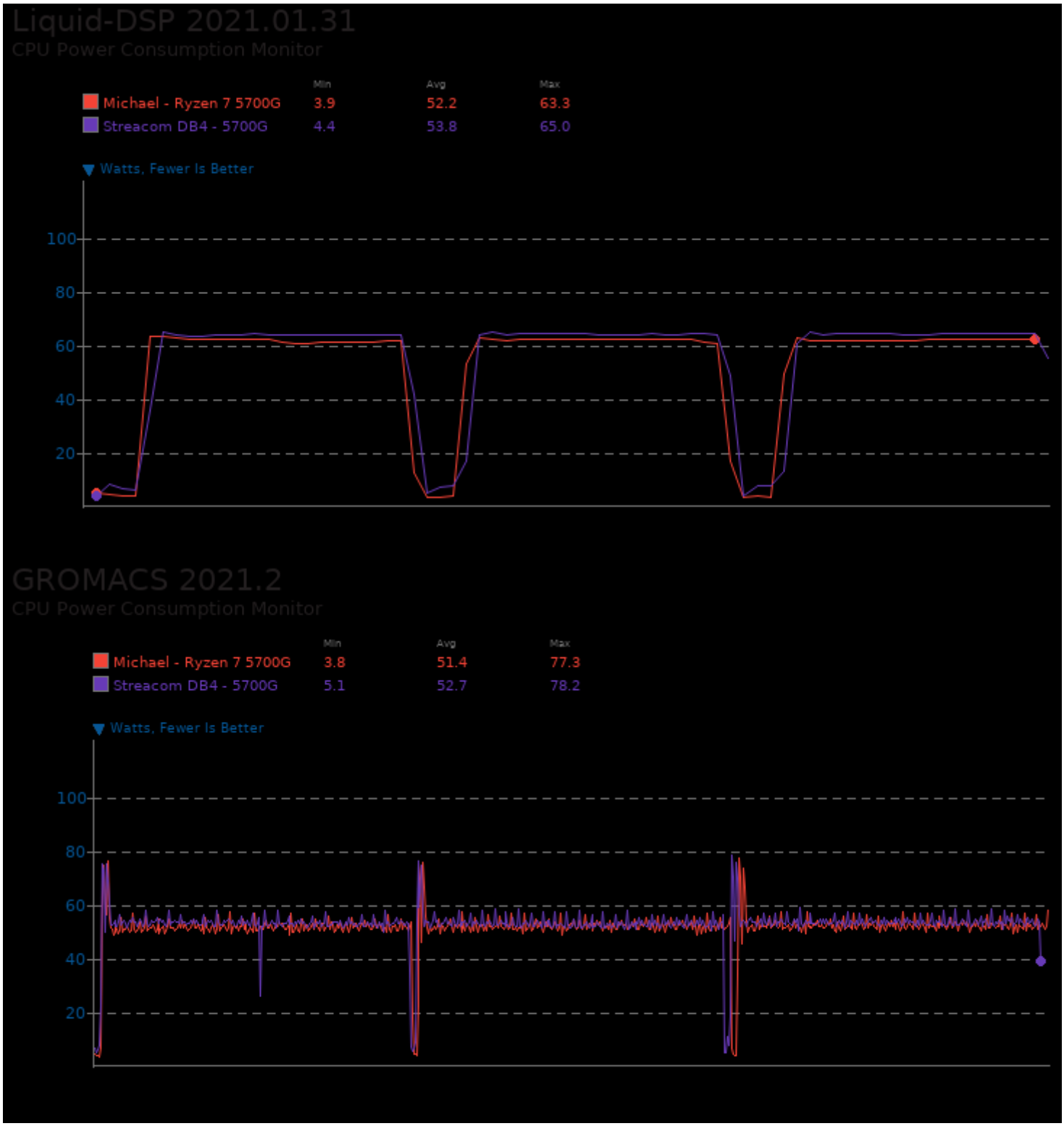
AMD Ryzen 7 5700G Linux Benchmarks



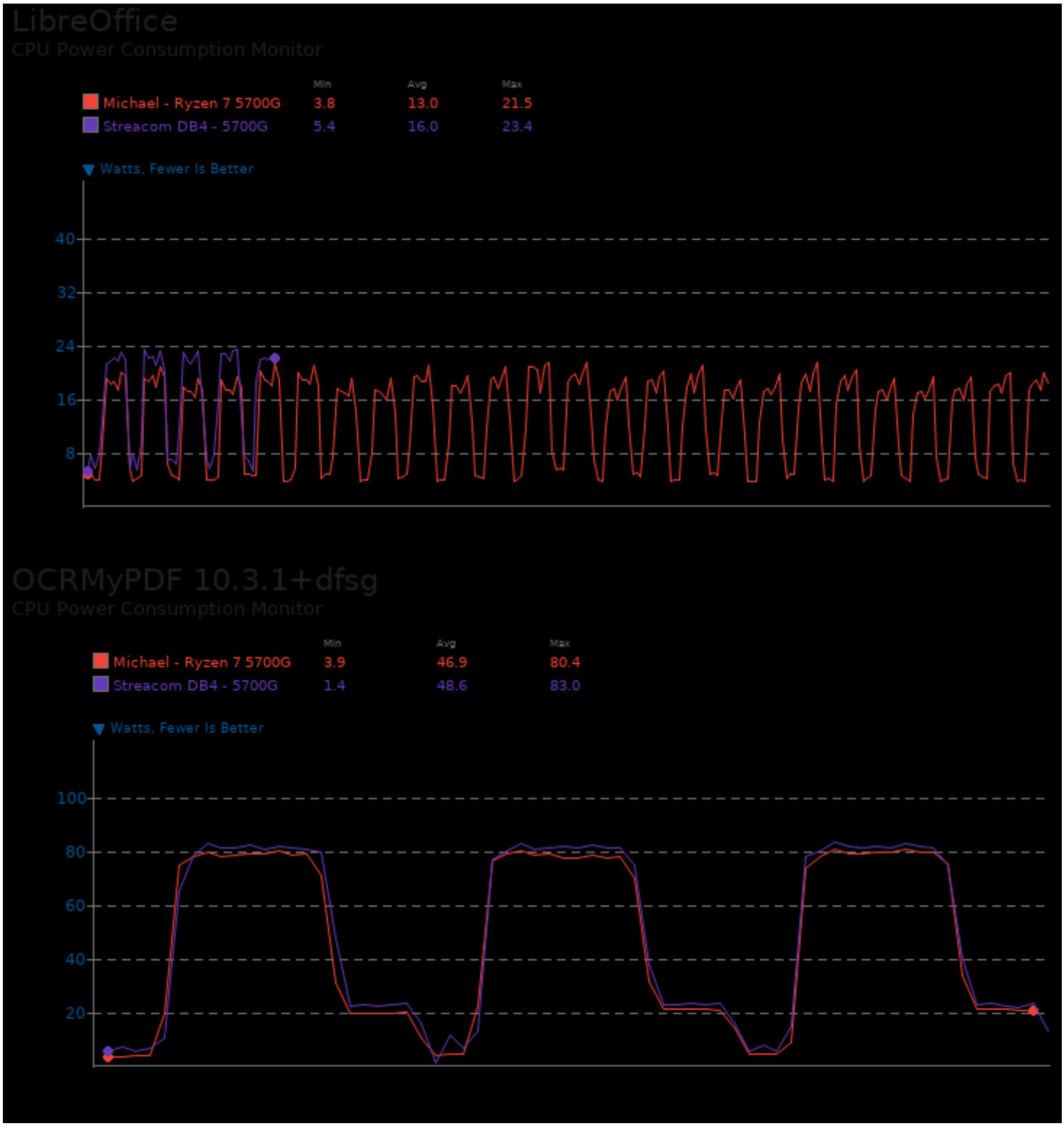

Liquid-DSP 2021.01.31
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.3 30.8 37.2
Streacom DB4 - 5700G 6.1 33.0 38.9
Watts, Fewer Is Better
55
44
33
22
11
Liquid-DSP 2021.01.31
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.0 46.5 55.7
Streacom DB4 - 5700G 4.1 48.4 57.8
Watts, Fewer Is Better
80
64
48
32
16

AMD Ryzen 7 5700G Linux Benchmarks




Liquid-DSP 2021.01.31
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.9 52.2 63.3
Streacom DB4 - 5700G 4.4 53.8 65.0
Watts, Fewer Is Better
100
80
60
40
20
GROMACS 2021.2
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.8 51.4 77.3
Streacom DB4 - 5700G 5.1 52.7 78.2
Watts, Fewer Is Better
100
80
60
40
20

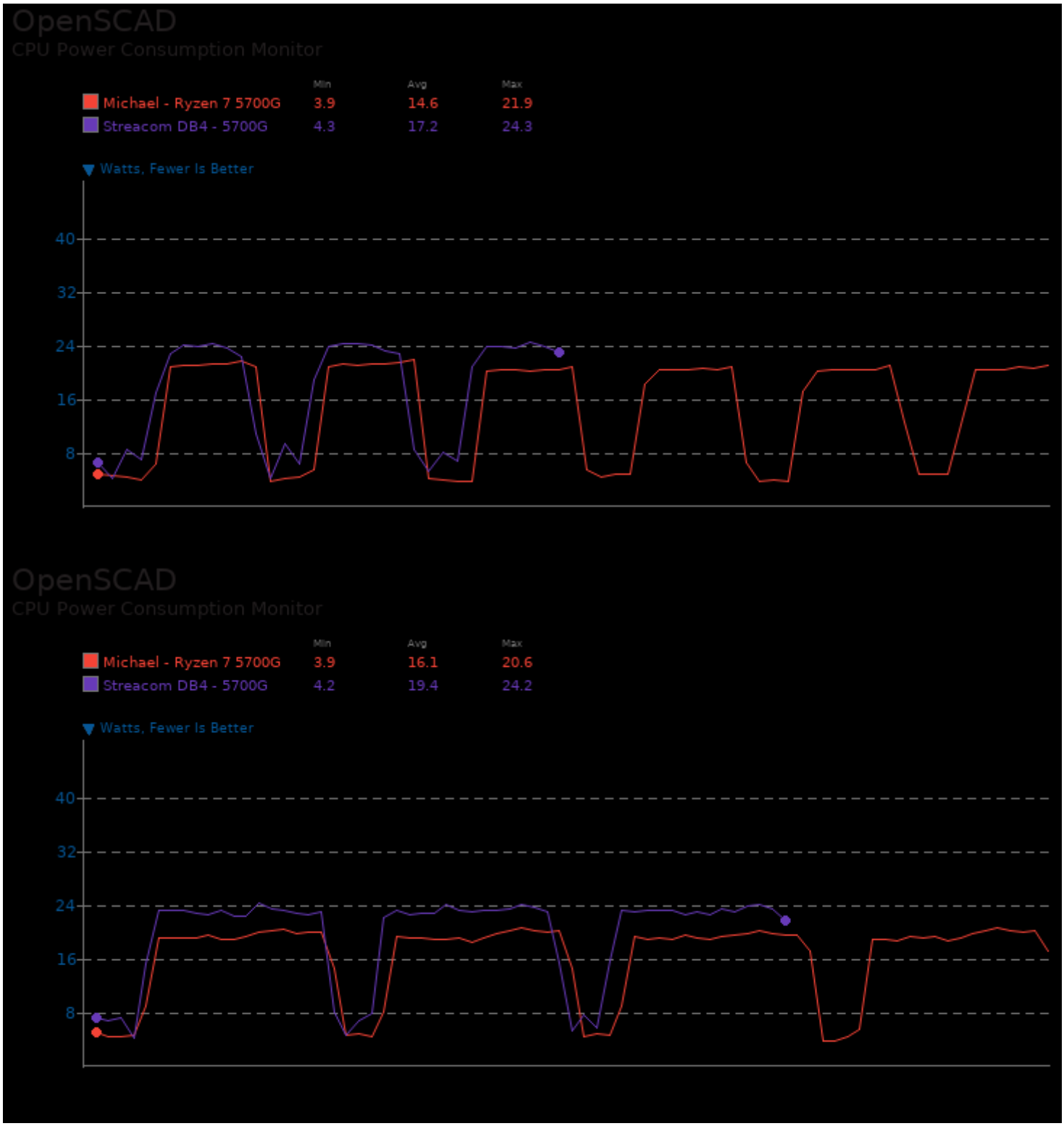
AMD Ryzen 7 5700G Linux Benchmarks



AMD Ryzen 7 5700G Linux Benchmarks

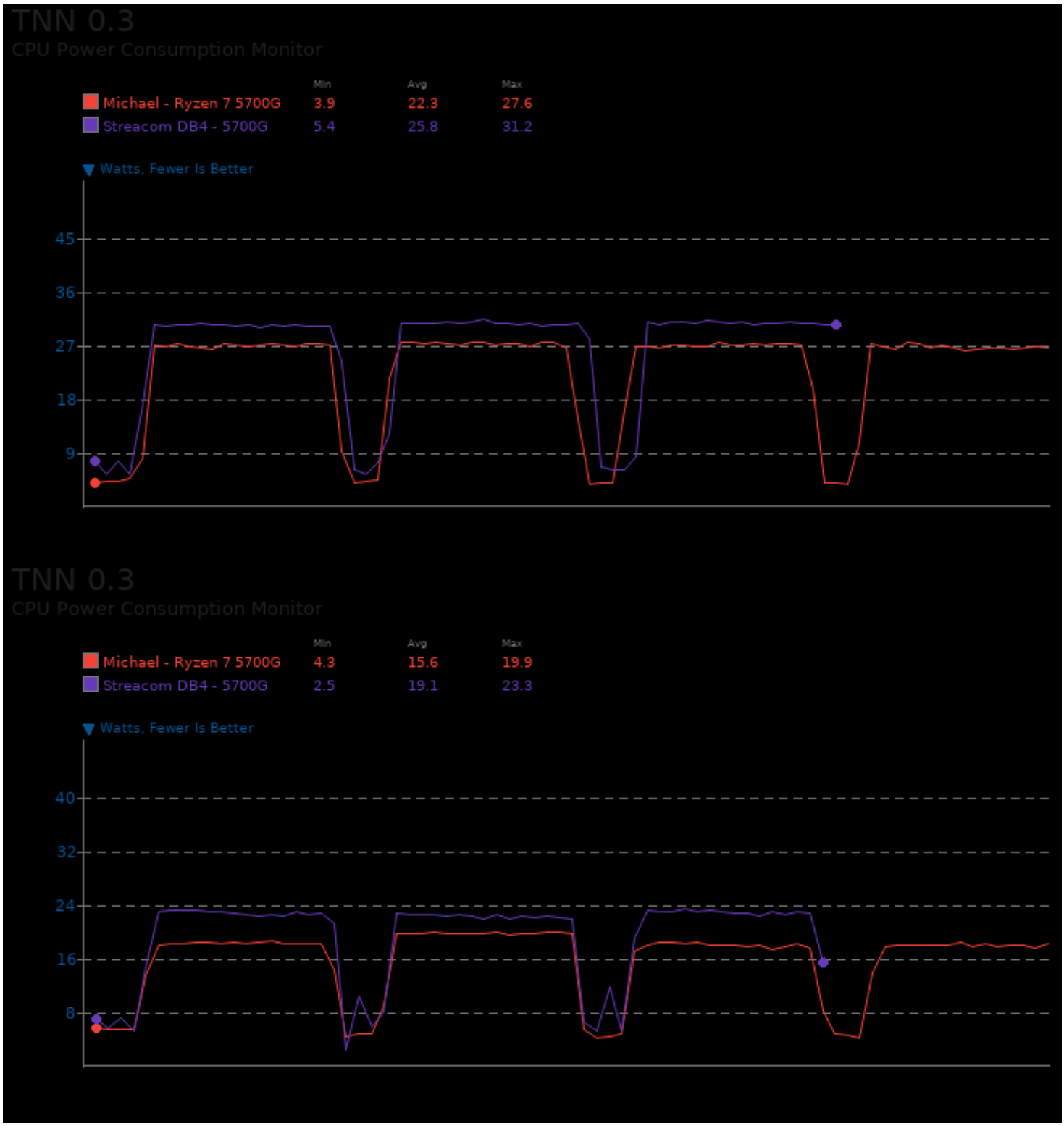


AMD Ryzen 7 5700G Linux Benchmarks



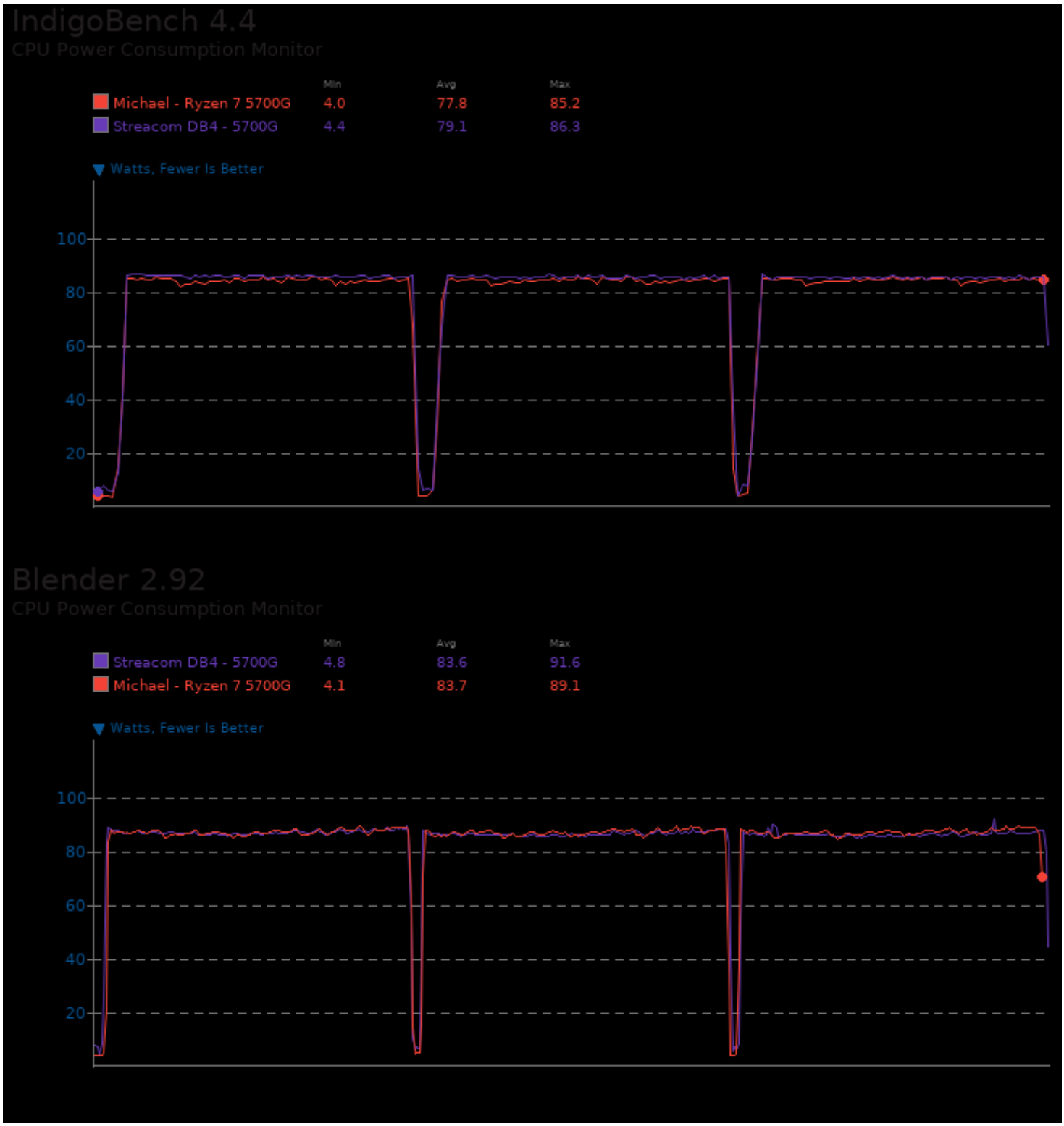
AMD Ryzen 7 5700G Linux Benchmarks

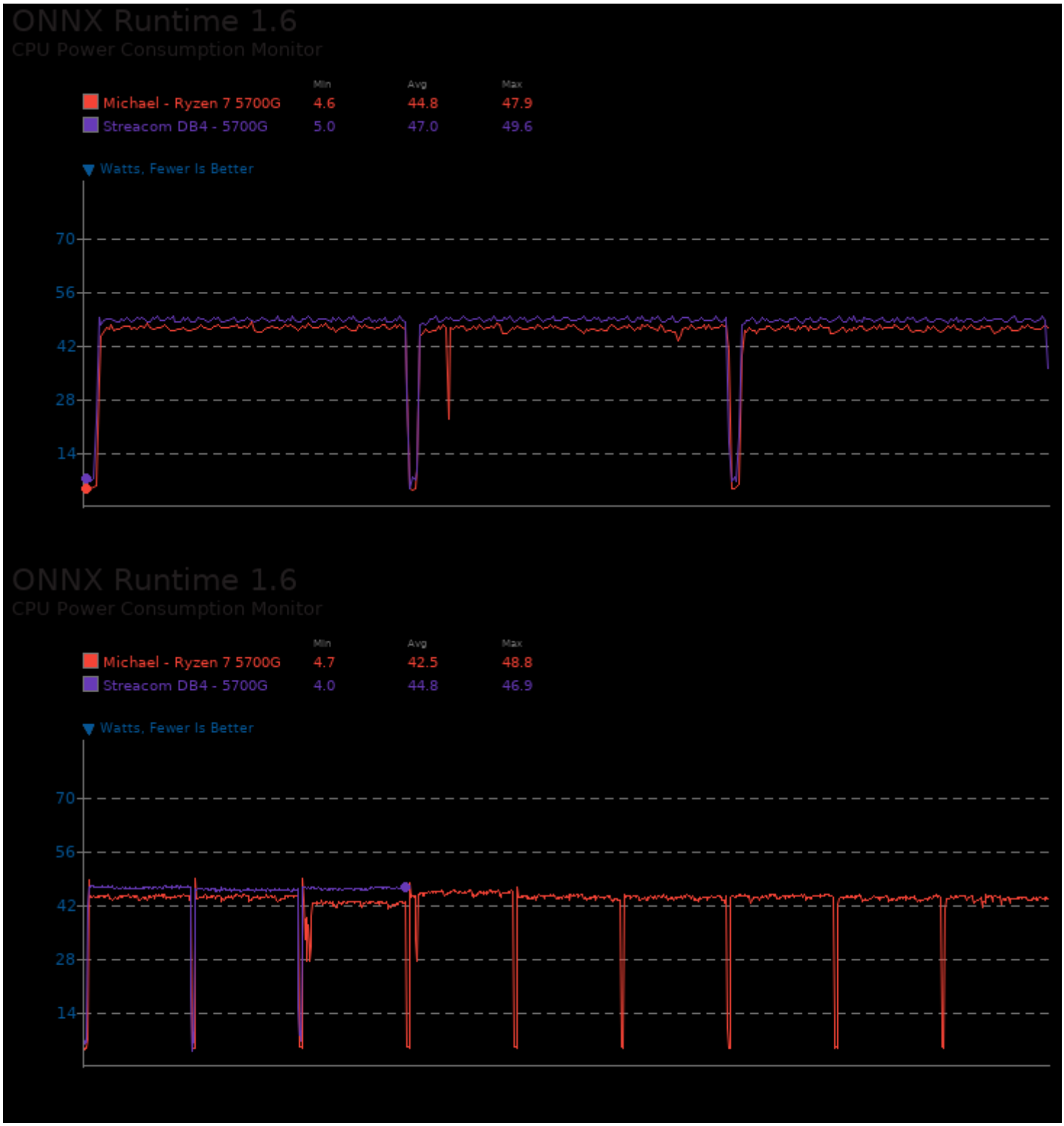



TNN 0.3
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.9 22.3 27.6
Streacom DB4 - 5700G 5.4 25.8 31.2
Watts, Fewer Is Better
45
36
27
18
9
TNN 0.3
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.3 15.6 19.9
Streacom DB4 - 5700G 2.5 19.1 23.3
Watts, Fewer Is Better
40
32
24
16
8

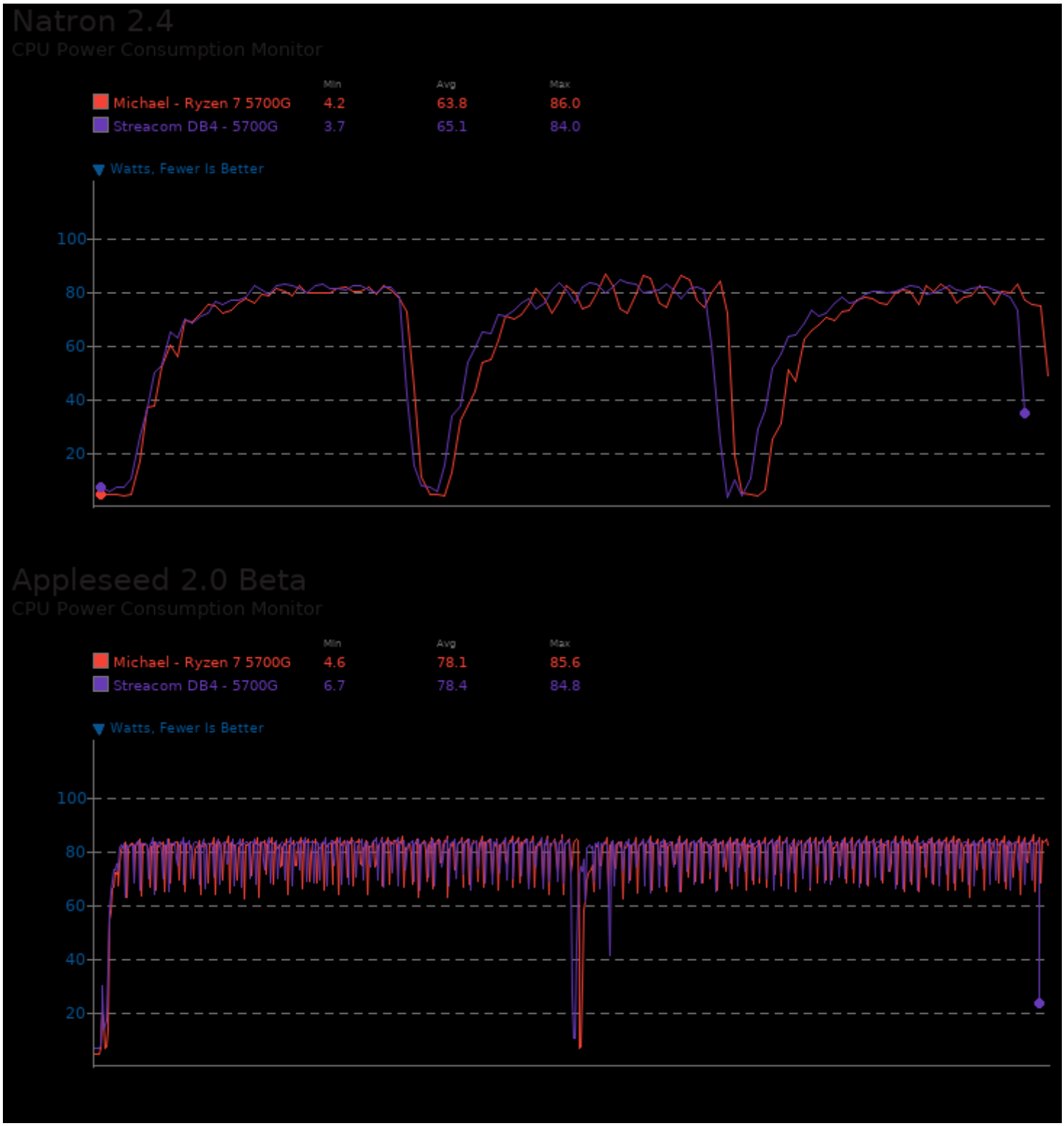

ctx_clock
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 2.0 5.6 10.8
Streacom DB4 - 5700G 5.3 8.4 14.3
Watts, Fewer Is Better
25
20
15
10
5
IndigoBench 4.4
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 3.9 78.3 86.6
Streacom DB4 - 5700G 4.0 80.7 89.6
Watts, Fewer Is Better
100
80
60
40
20

AMD Ryzen 7 5700G Linux Benchmarks

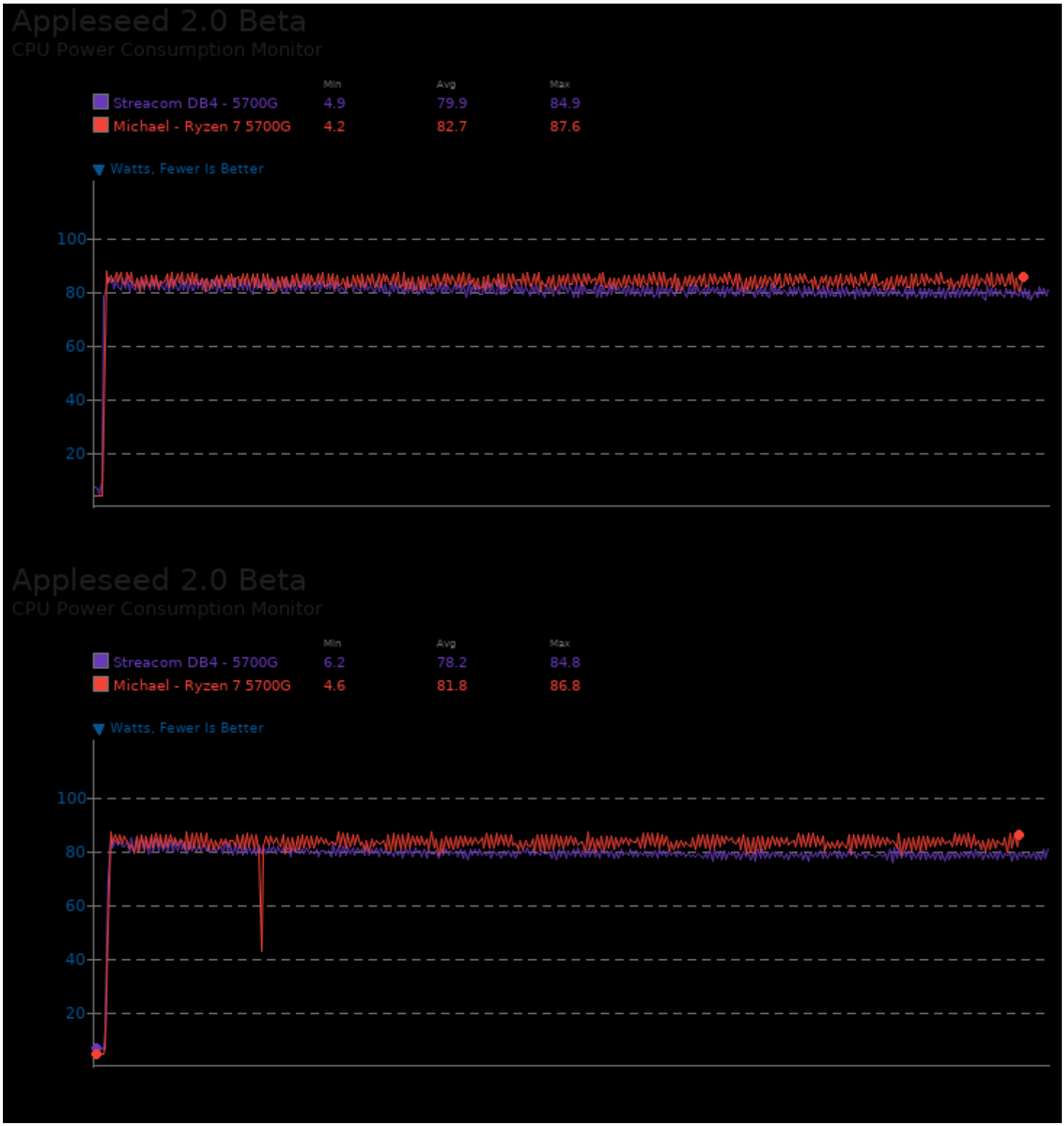



ONNX Runtime 1.6
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.6 44.8 47.9
Streacom DB4 - 5700G 5.0 47.0 49.6
Watts, Fewer Is Better
70
56
42
28
14
ONNX Runtime 1.6
CPU Power Consumption Monitor
Min
Avg
Max
Michael - Ryzen 7 5700G 4.7 42.5 48.8
Streacom DB4 - 5700G 4.0 44.8 46.9
Watts, Fewer Is Better
70
56
42
28
14

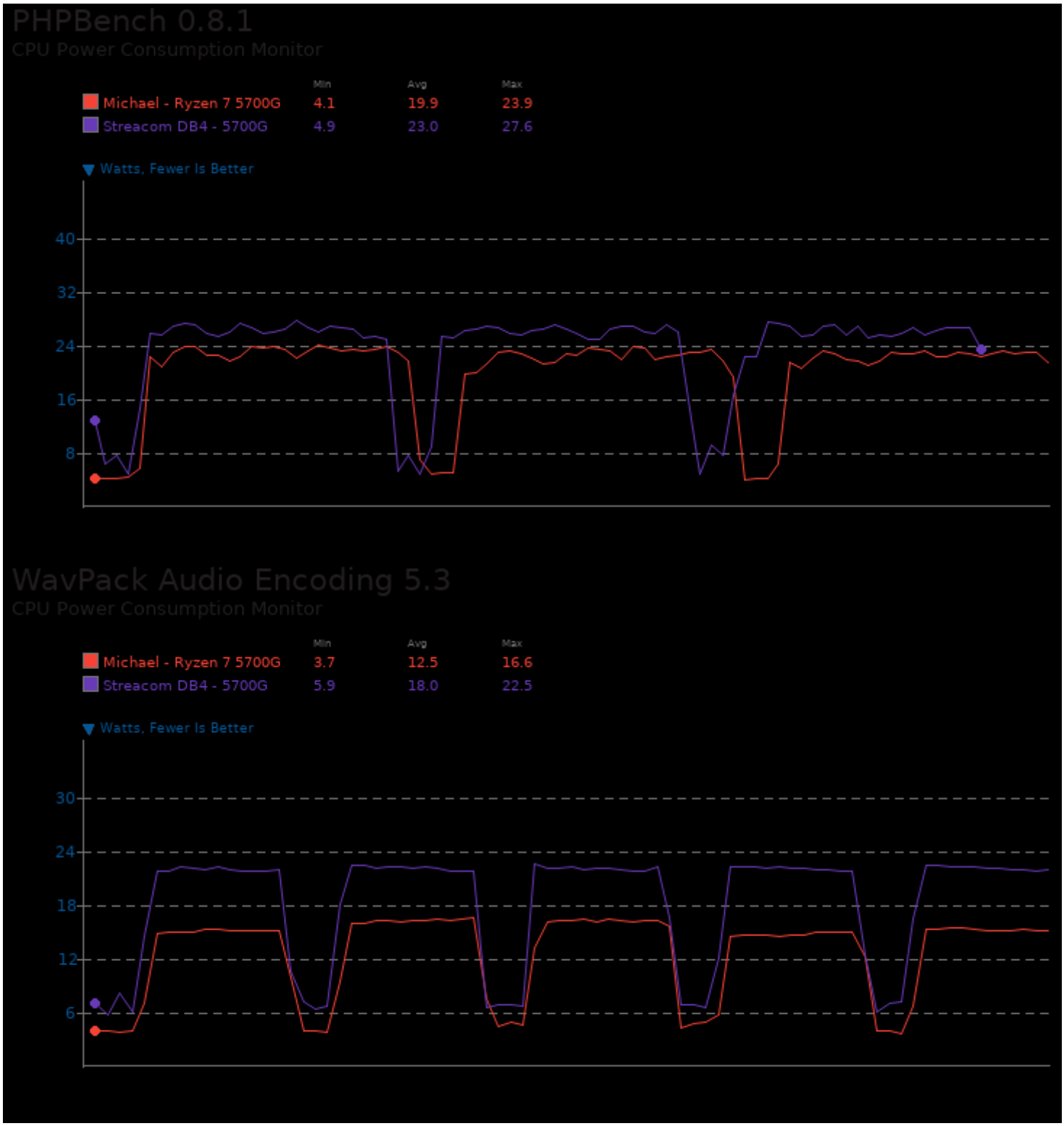
AMD Ryzen 7 5700G Linux Benchmarks



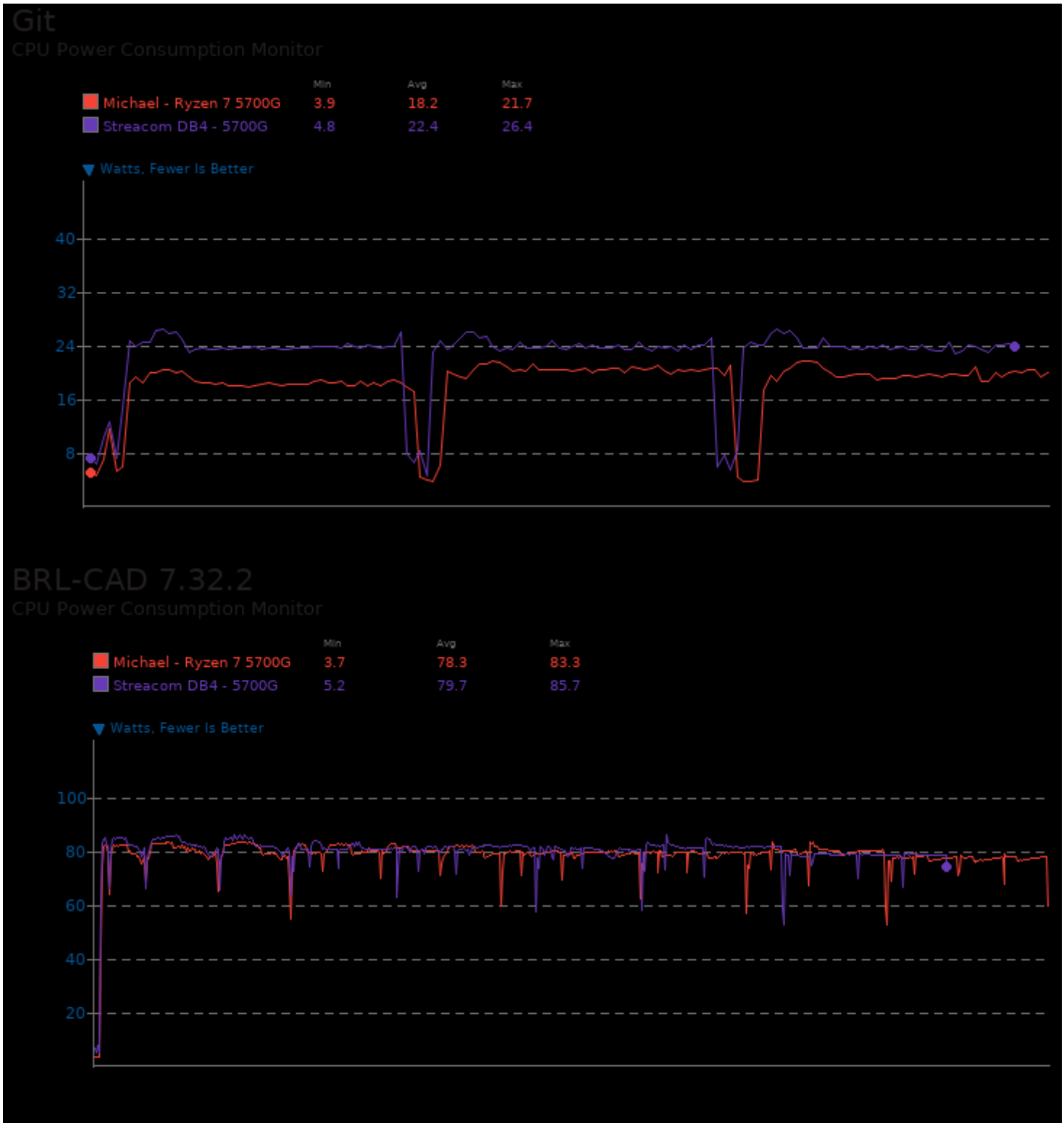
AMD Ryzen 7 5700G Linux Benchmarks



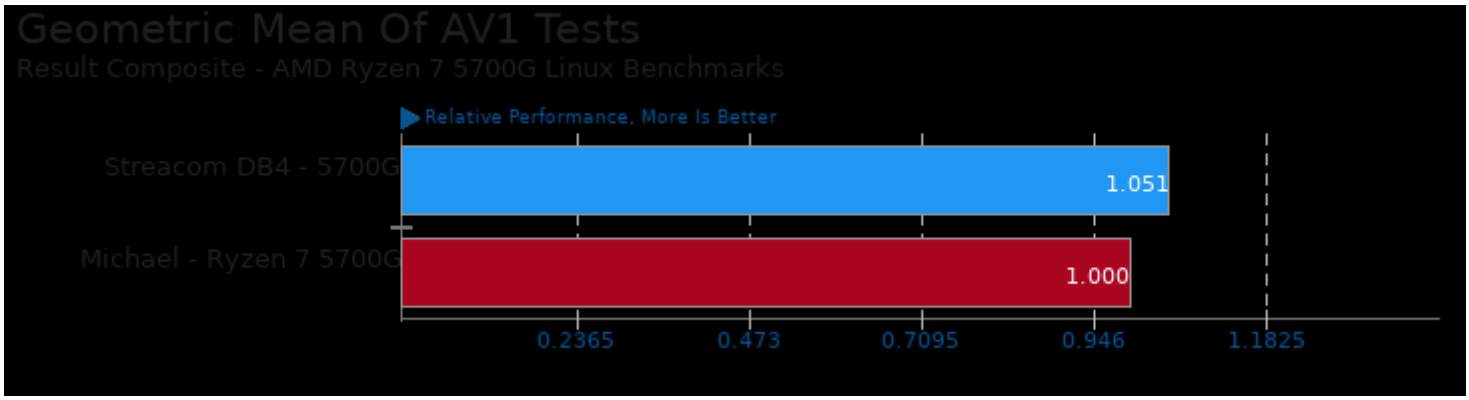
AMD Ryzen 7 5700G Linux Benchmarks



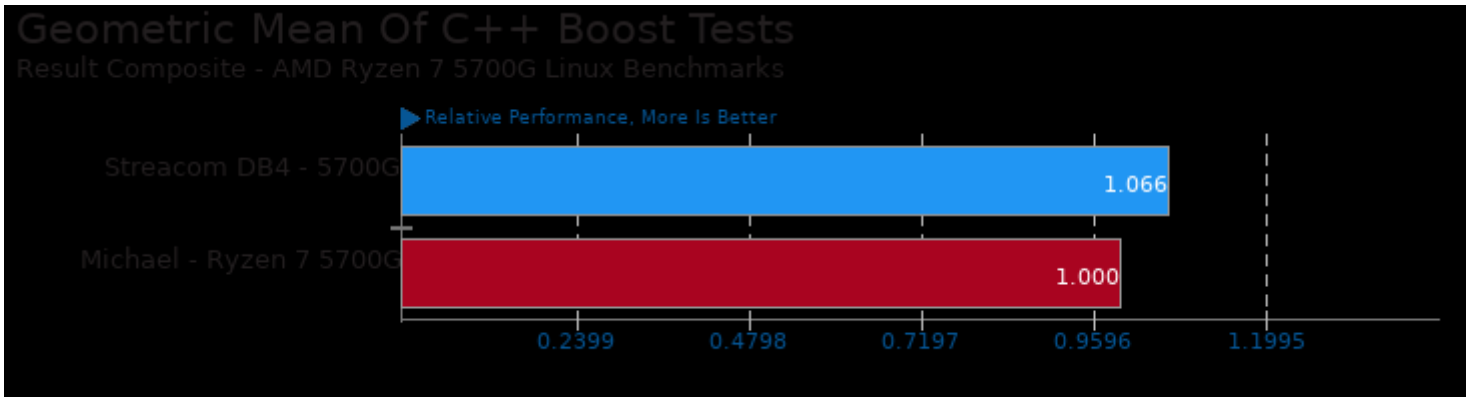
AMD Ryzen 7 5700G Linux Benchmarks



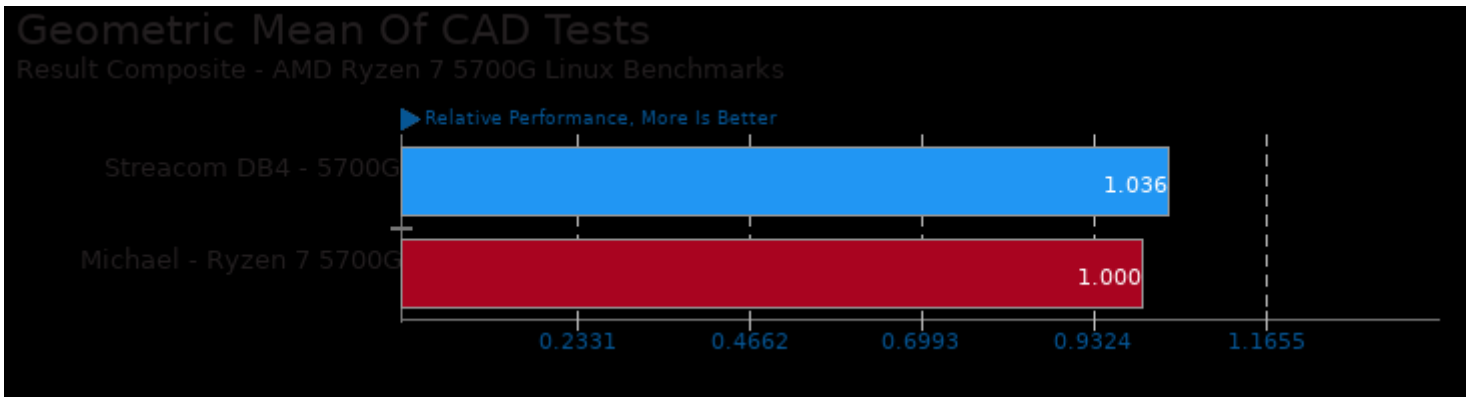
These geometric means are based upon test groupings / test suites for this result file.



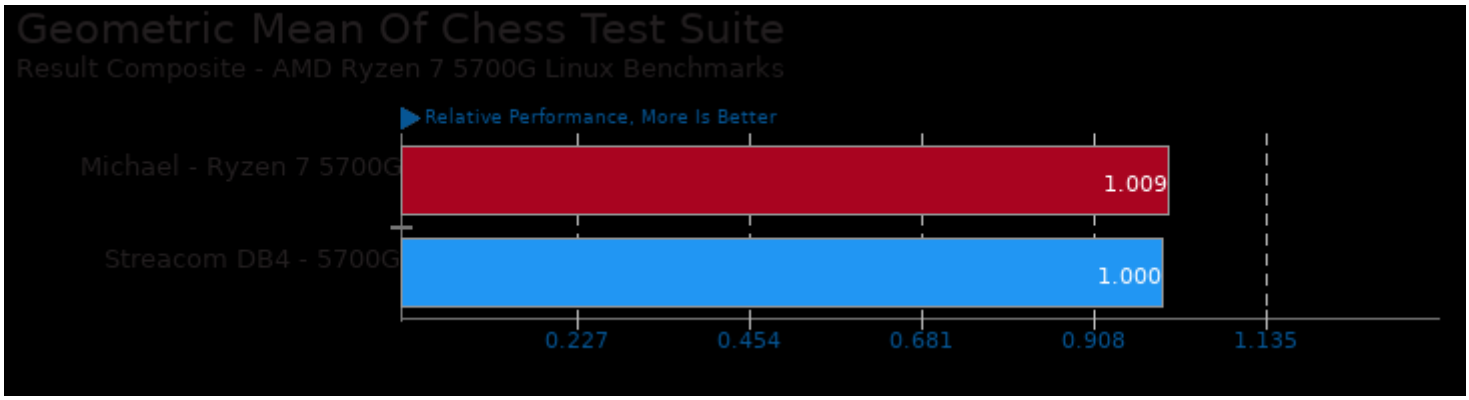
Geometric mean based upon tests: pts/dav1d, pts/aom-av1, pts/svt-av1 and pts/avifenc



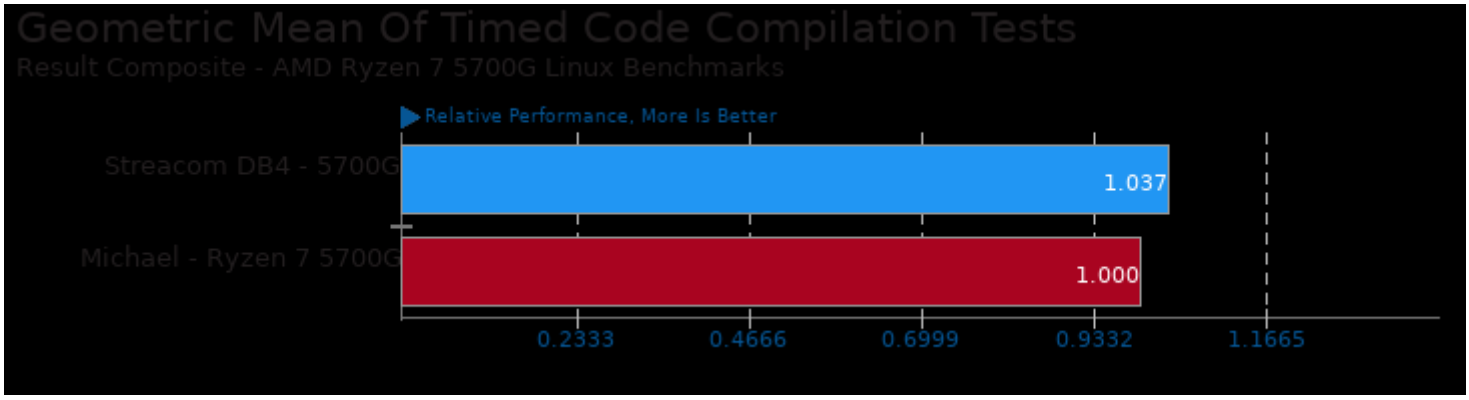
Geometric mean based upon tests: pts/chia-vdf and pts/quantlib



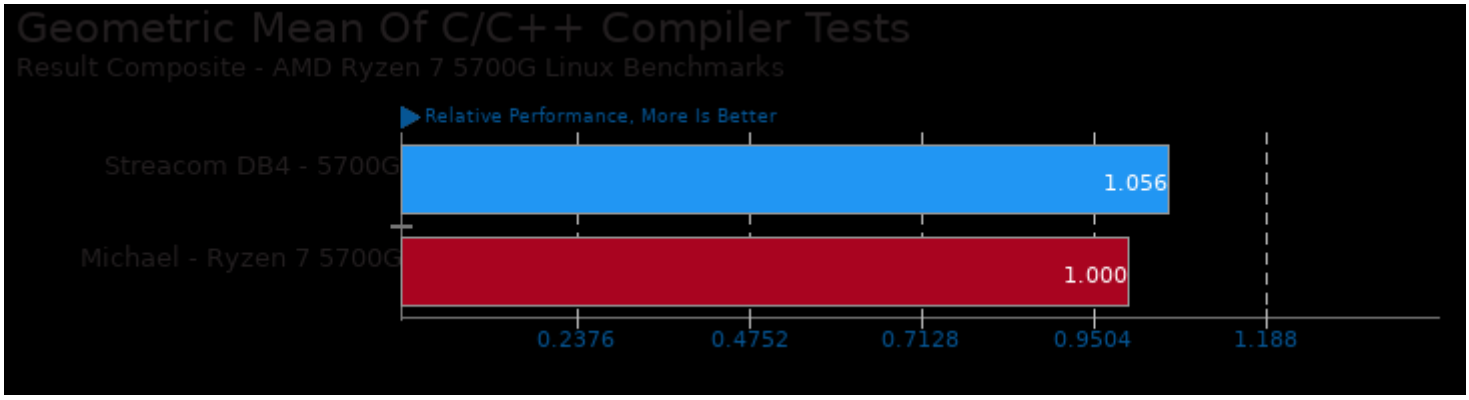
Geometric mean based upon tests: system/openscad and pts/brl-cad



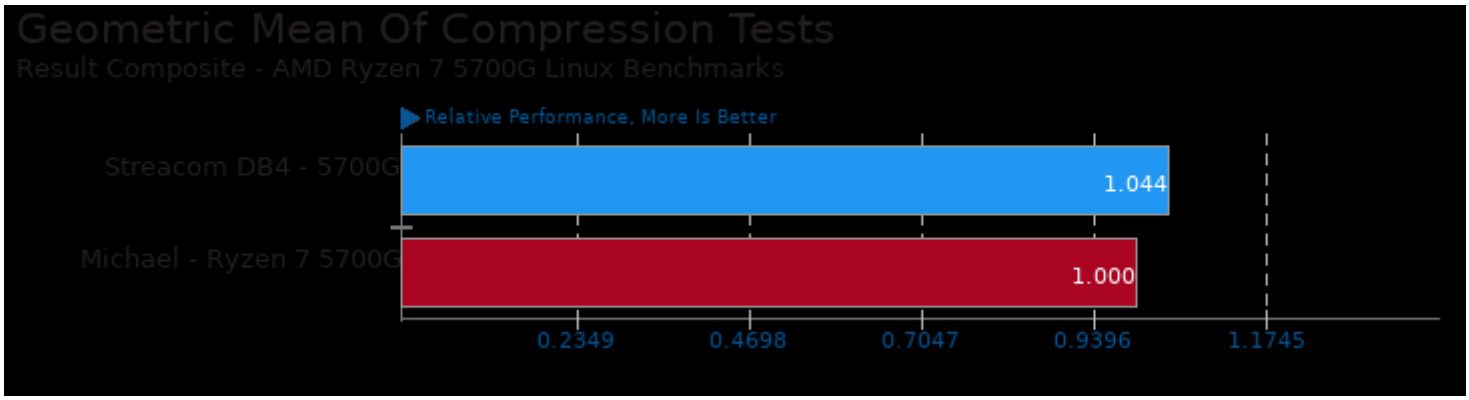
Geometric mean based upon tests: pts/stockfish and pts/asmfish



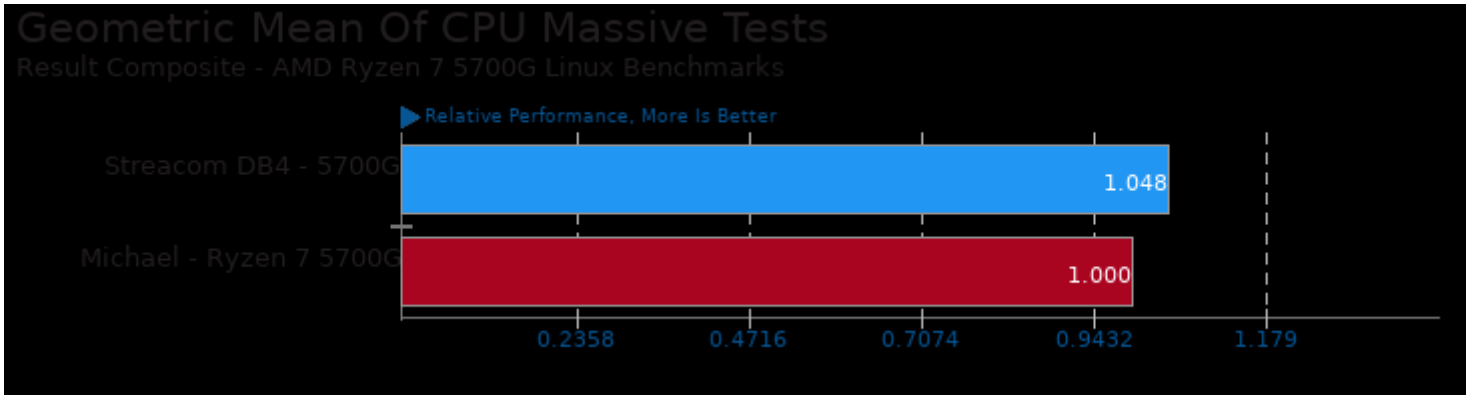
Geometric mean based upon tests: pts/build-apache, pts/build-gdb, pts/build-llvm, pts/build-ffmpeg, pts/build-mplayer and pts/build-godot



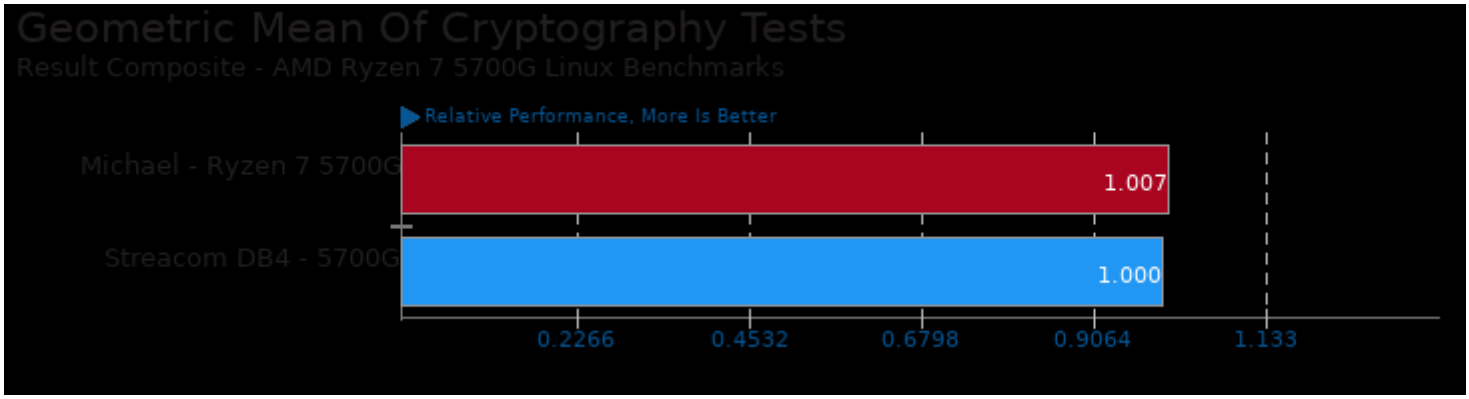
Geometric mean based upon tests: pts/vpxenc, pts/stockfish, pts/build-llvm, pts/compress-7zip, pts/dav1d, pts/x265, pts/compress-zstd, pts/aom-av1, pts/svt-av1, pts/svt-vp9, pts/gromacs, pts/build-gdb, pts/build-ffmpeg, pts/build-apache and pts/build-mplayer



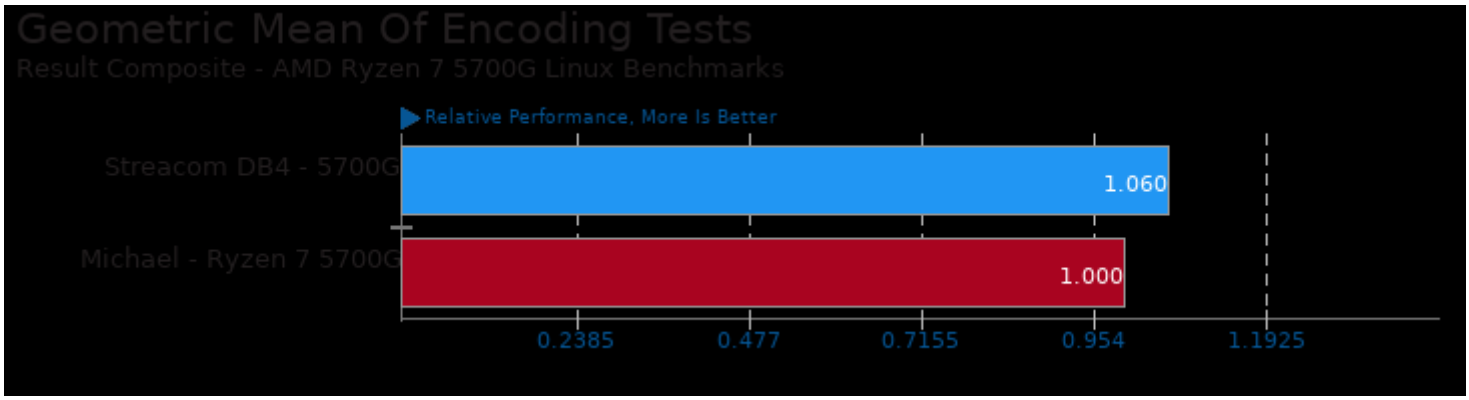
Geometric mean based upon tests: pts/compress-7zip, pts/compress-zstd and pts/compress-lz4



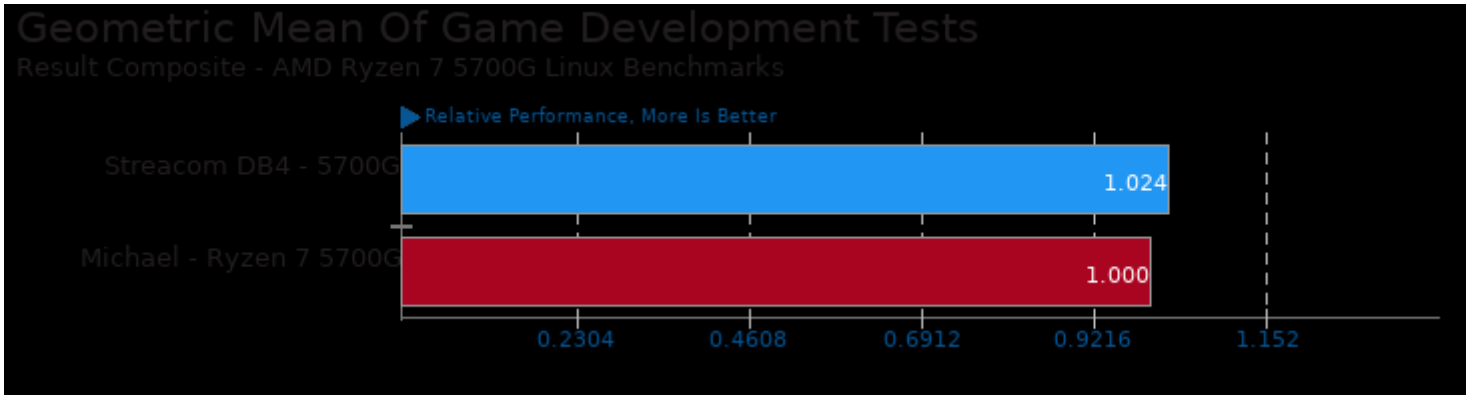
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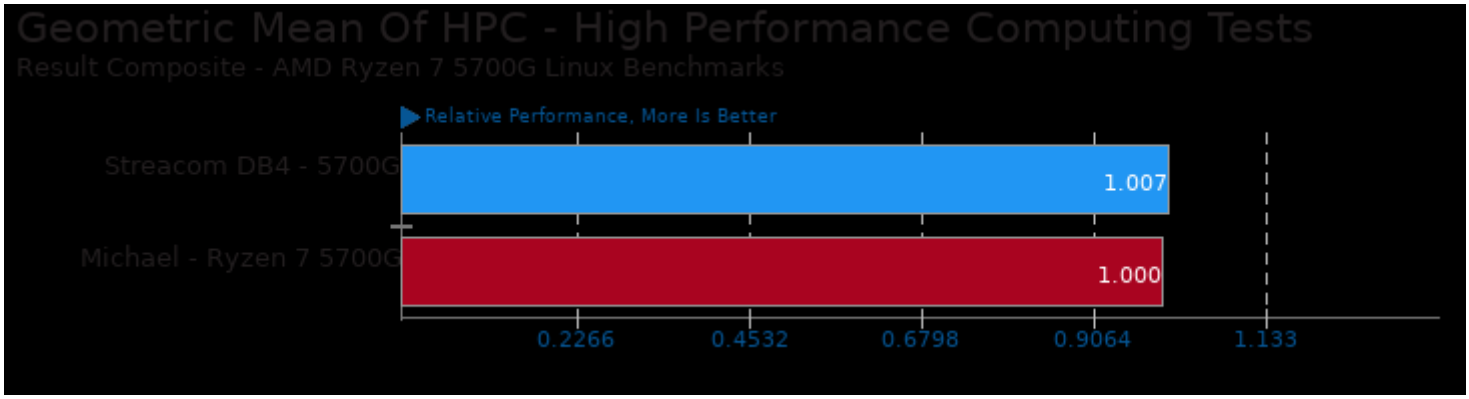
Geometric mean based upon tests: pts/securemark and pts/chia-vdf



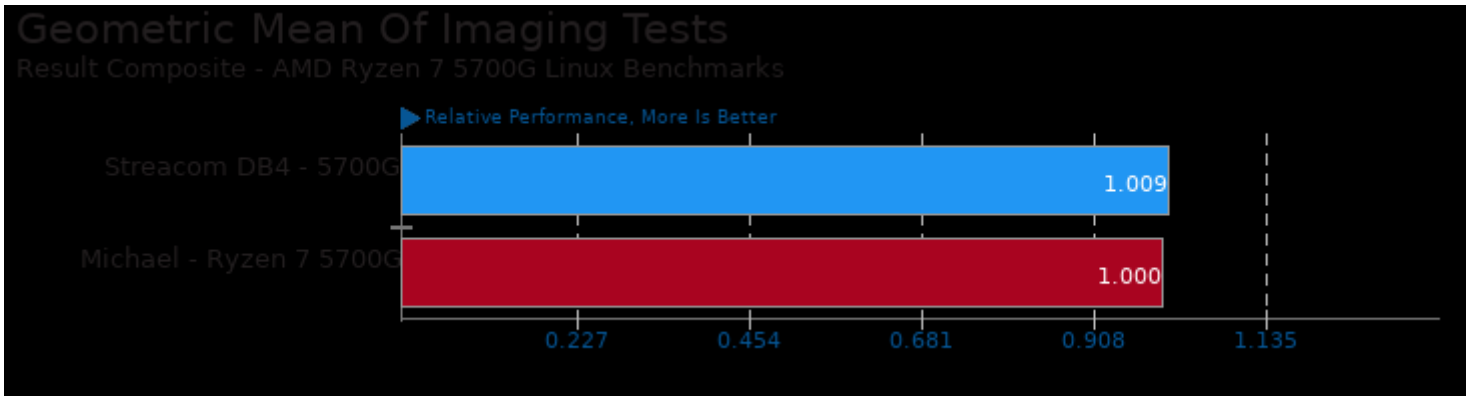
Geometric mean based upon tests: pts/encode-wavpack, pts/svt-vp9, pts/svt-hevc, pts/x265, pts/vpxenc, pts/dav1d, pts/aom-av1, pts/svt-av1 and pts/avifenc



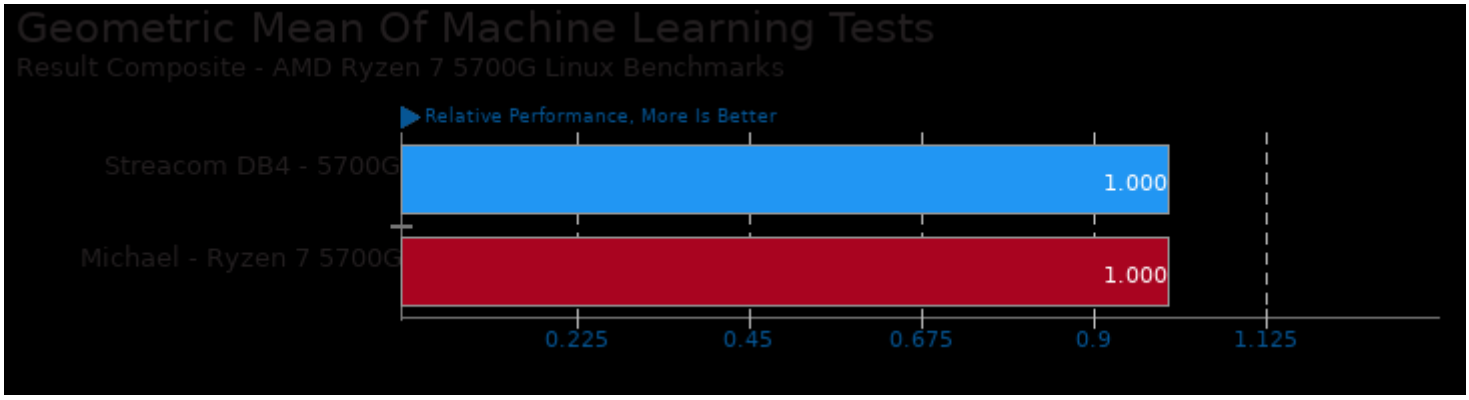
Geometric mean based upon tests: pts/etcpak, pts/build-godot, pts/blender and pts/oidn



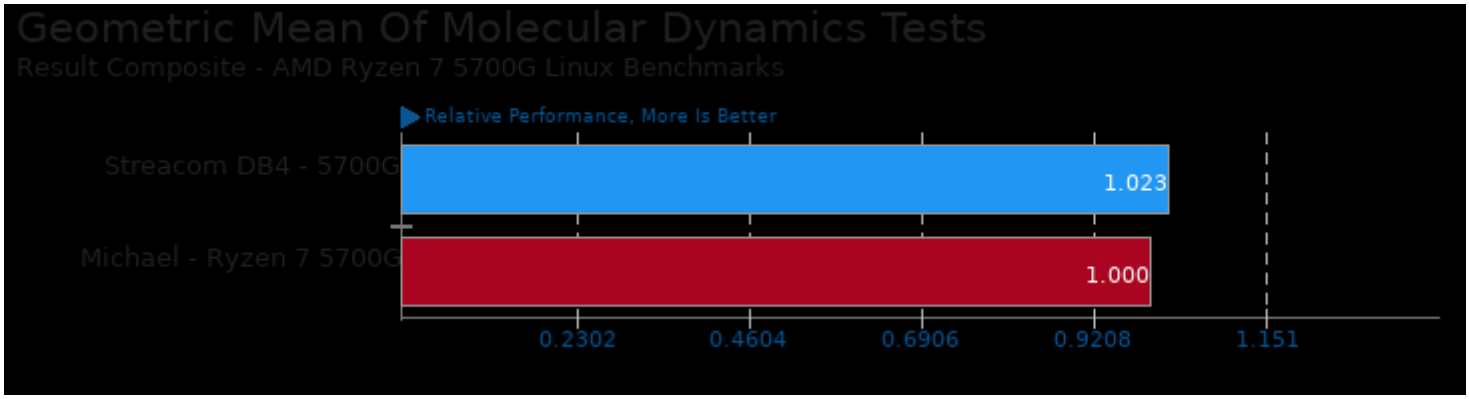
Geometric mean based upon tests: pts/namd, pts/gromacs, pts/incompact3d, pts/tnn, pts/deepspeech, pts/rnnoise and pts/onnx



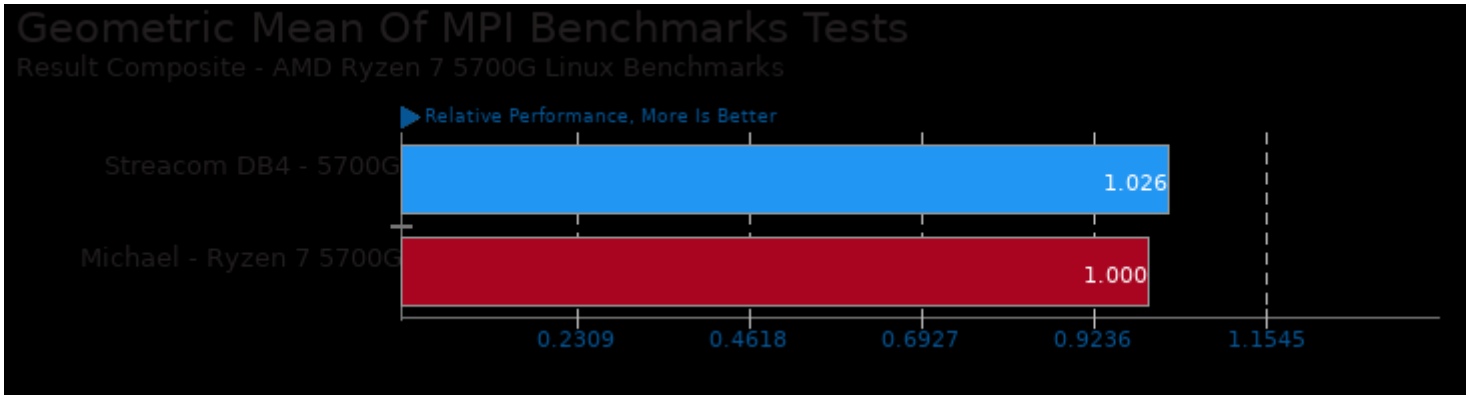
Geometric mean based upon tests: pts/libraw, system/rawtherapee and pts/avifenc



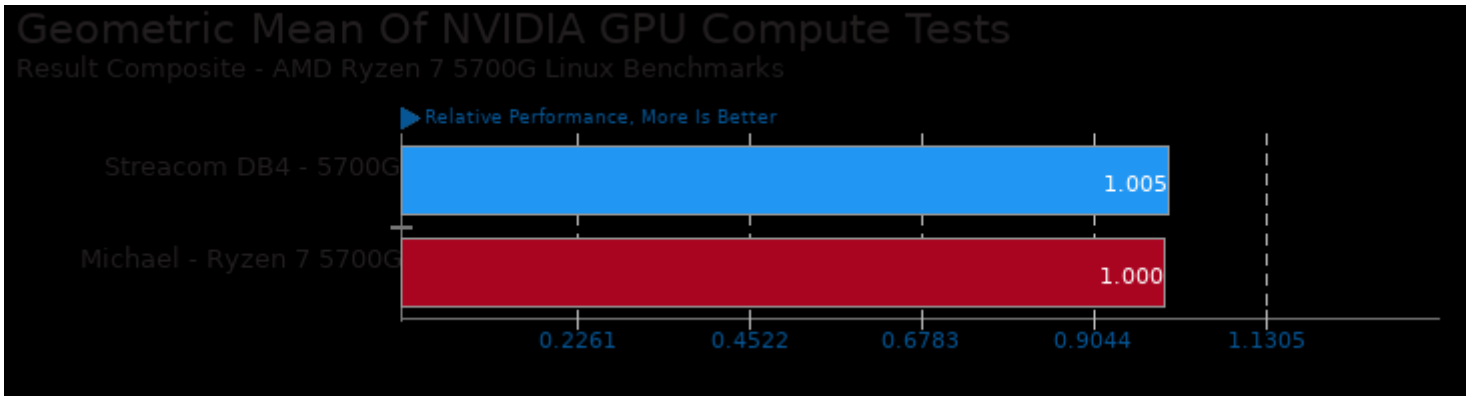
Geometric mean based upon tests: pts/tnn, pts/deepspeech, pts/rnnoise and pts/onnx



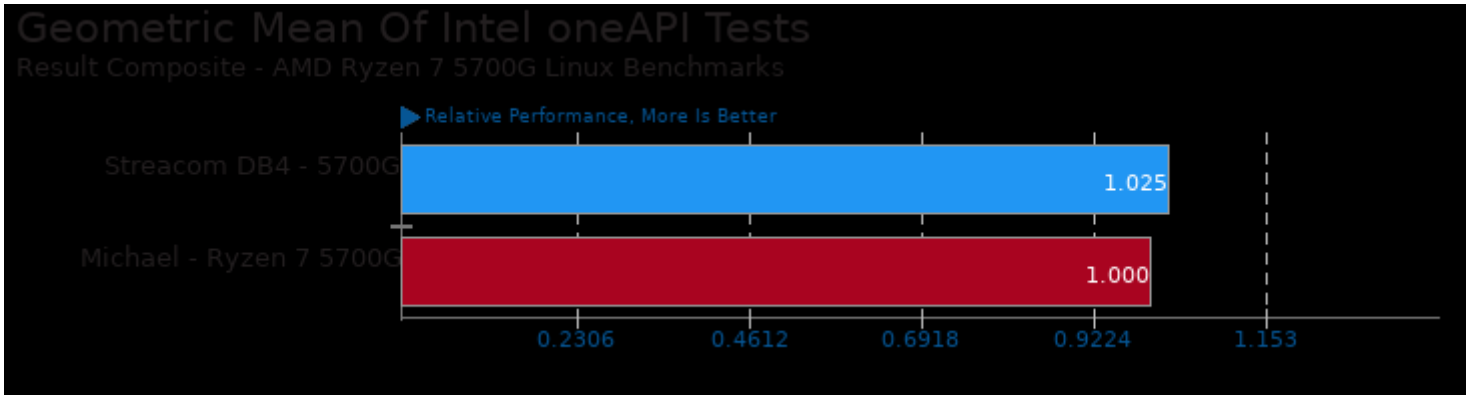
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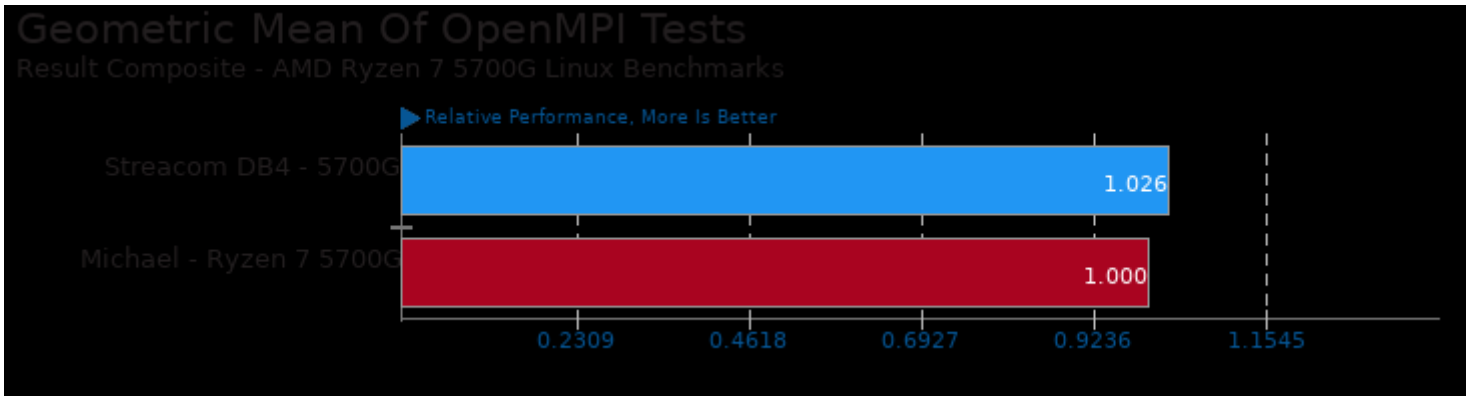
Geometric mean based upon tests: pts/incompact3d and pts/gromacs



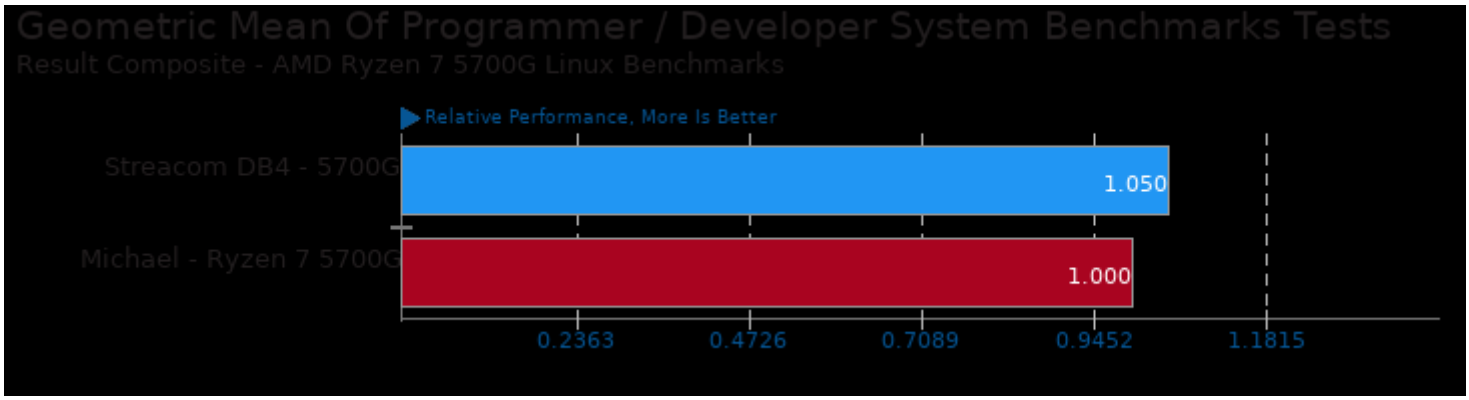
Geometric mean based upon tests: pts/gromacs, pts/indigobench and pts/blender



Geometric mean based upon tests: pts/embree, pts/oidn and pts/ospray

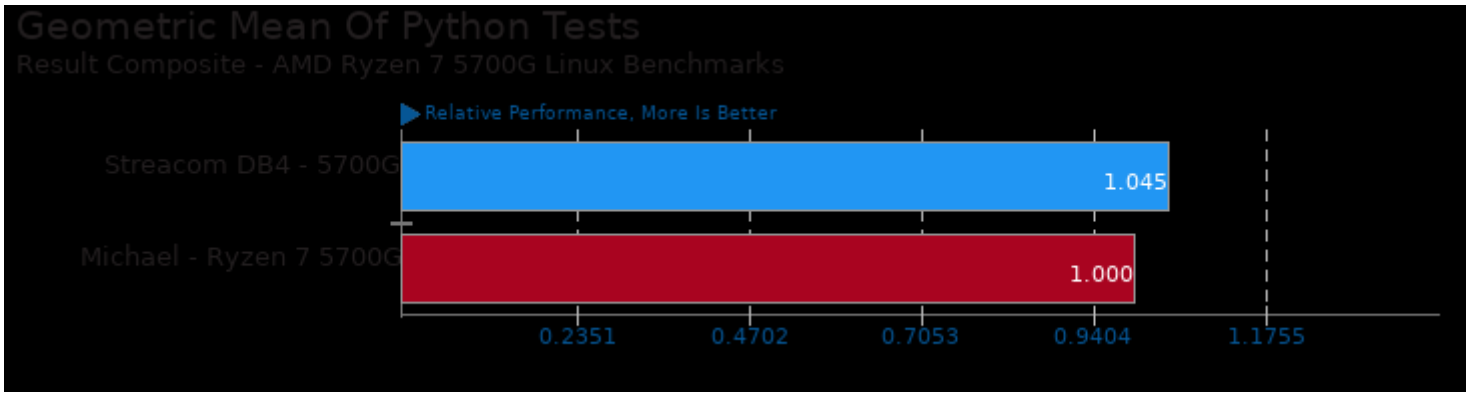


Geometric mean based upon tests: pts/gromacs and pts/incompact3d

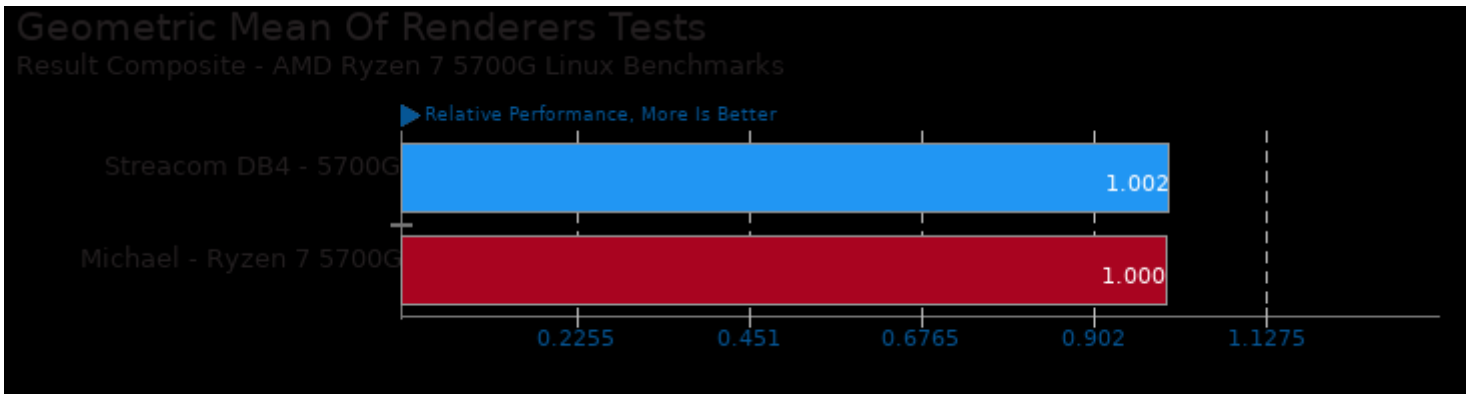


Geometric mean based upon tests: pts/git, pts/compress-zstd, pts/build-apache, pts/build-gdb, pts/build-llvm,

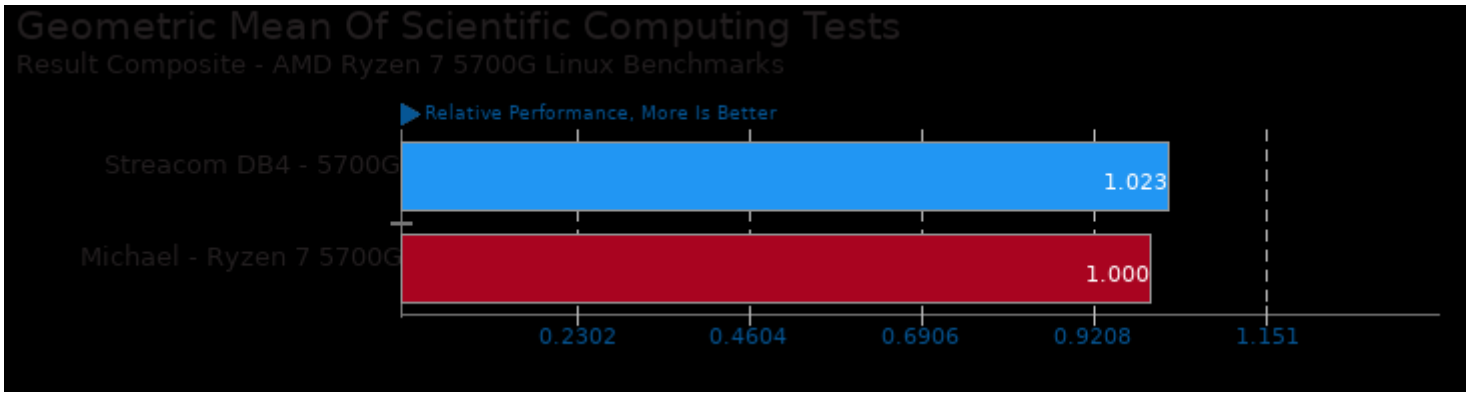
pts/build-ffmpeg, pts/build-mplayer and pts/build-godot



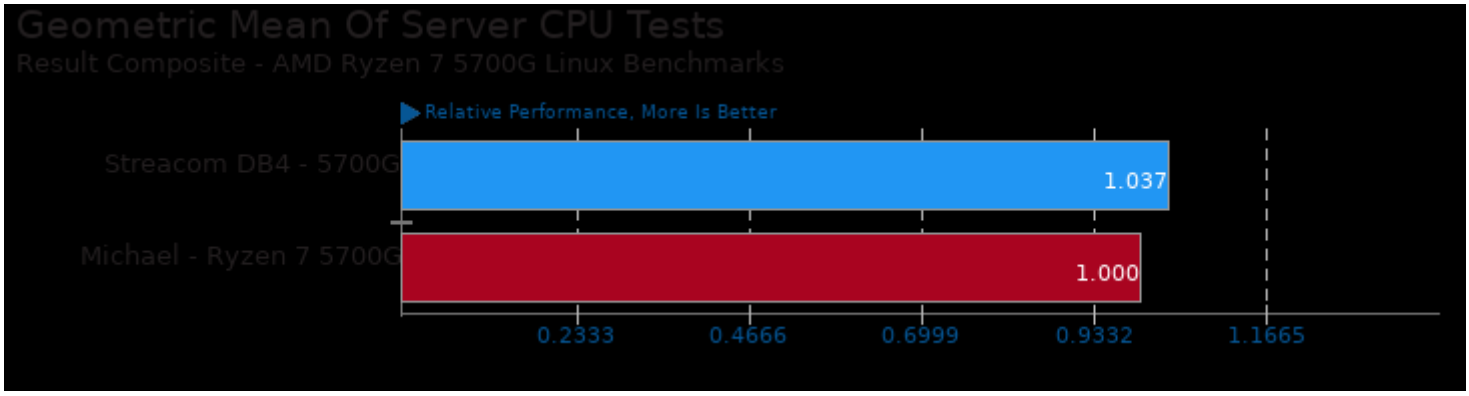
Geometric mean based upon tests: pts/onnx, pts/chia-vdf, pts/build-godot, pts/build-llvm and system/ocrmypdf



Geometric mean based upon tests: pts/ospray, pts/blender, pts/appleseed, pts/indigobench and pts/natron

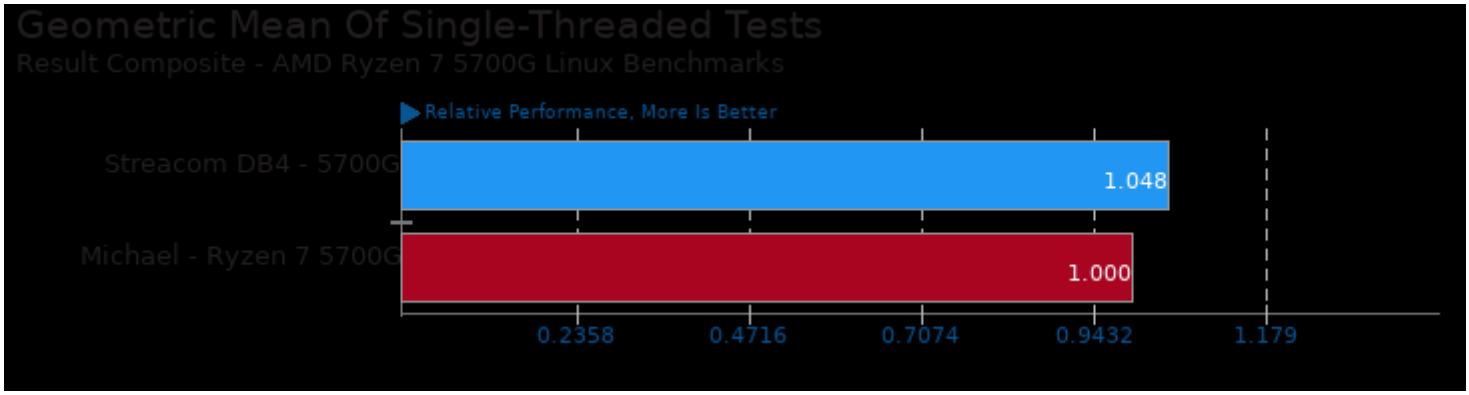


Geometric mean based upon tests: pts/namd, pts/gromacs and pts/incompact3d



AMD Ryzen 7 5700G Linux Benchmarks

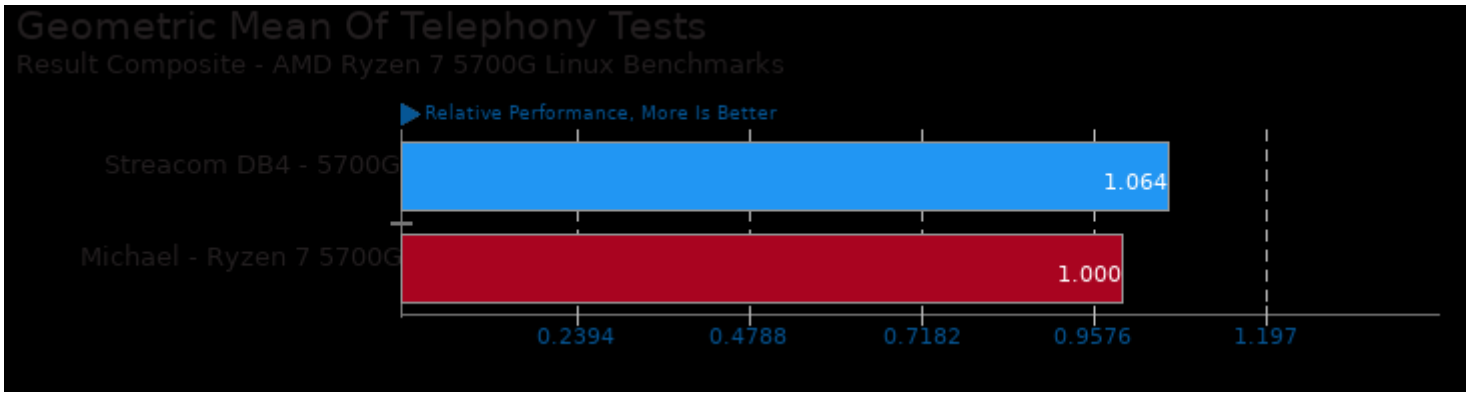
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Geometric mean based upon tests: pts/deepspeech, pts/phpbench and pts/git

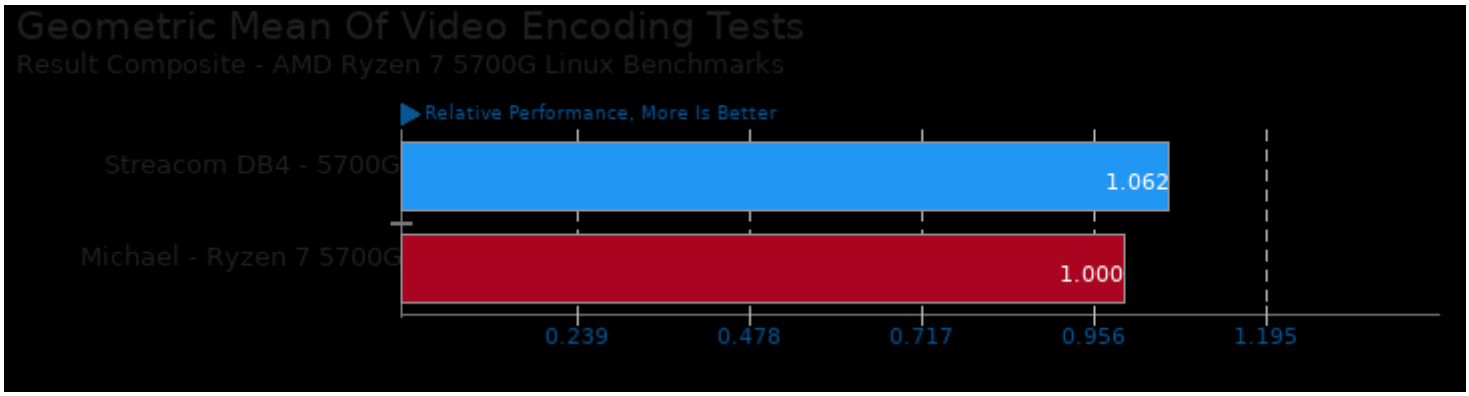


Geometric mean based upon tests: pts/deepspeech and pts/rnnoise

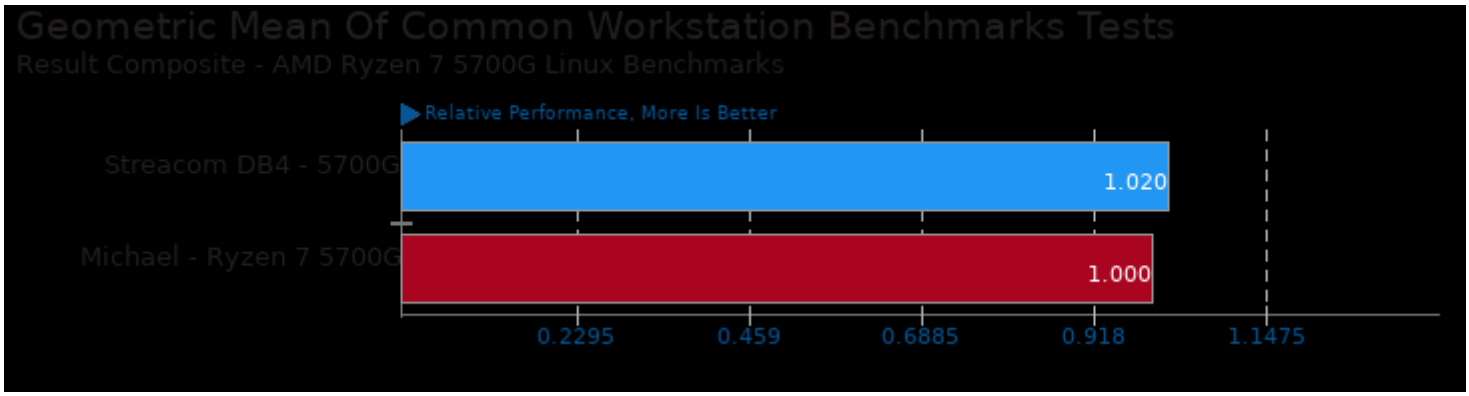


Geometric mean based upon tests: pts/pjsip, pts/deepspeech and pts/rnnoise

AMD Ryzen 7 5700G Linux Benchmarks



Geometric mean based upon tests: pts/svt-vp9, pts/svt-hevc, pts/x265, pts/vpxenc, pts/dav1d, pts/aom-av1, pts/svt-av1 and pts/avifenc



Geometric mean based upon tests: pts/blender, pts/brl-cad, pts/x265 and pts/git

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 10:50.