www.phoronix-test-suite.com

Memory Scaling

AMD Ryzen 9 5950X tests for a future article.

Automated Executive Summary

DDR4-4000 had the most wins, coming in first place for 44% of the tests.

Based on the geometric mean of all complete results, the fastest (DDR4-4000) was 1.022x the speed of the slowest (DDR4-3200). DDR4-4400 was 0.998x the speed of DDR4-4000, DDR4-4264 was 0.998x the speed of DDR4-4400, DDR4-3200 was 0.982x the speed of DDR4-4264.

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

RAMspeed SMP (Type: Triad - Benchmark: Integer) at 1.221x
RAMspeed SMP (Type: Add - Benchmark: Integer) at 1.2x
MBW (Test: Memory Copy - Array Size: 4096 MiB) at 1.198x
RAMspeed SMP (Type: Average - Benchmark: Integer) at 1.161x
RAMspeed SMP (Type: Copy - Benchmark: Integer) at 1.151x
RAMspeed SMP (Type: Scale - Benchmark: Integer) at 1.144x
Tinymembench (Standard Memcpy) at 1.131x
Tinymembench (Standard Memset) at 1.125x
FFTE (N=256, 3D Complex FFT Routine) at 1.106x

NAS Parallel Benchmarks (Test / Class: FT.C) at 1.084x.

Test Systems:

DDR4-4264

DDR4-4400

DDR4-4000

DDR4-3200

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (2311 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: 2000GB Corsair Force MP600 + 2000GB, Graphics: AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 8GB (2100/875MHz), Audio: AMD Navi 10 HDMI Audio, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.9.0-050900-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: amdgpu 19.1.0, OpenGL: 4.6 Mesa 20.3.0-devel (git-442f48f 2020-10-15 focal-oibaf-ppa) (LLVM 11.0.0), Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: acpi-cpufreq ondemand - CPU Microcode: 0xa201009
Java Notes: OpenJDK Runtime Environment (build 11.0.8+10-post-Ubuntu-0ubuntu120.04)
Python Notes: Python 2.7.18 + Python 3.8.5
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

	DDR4-4264	DDR4-4400	DDR4-4000	DDR4-3200
RAMspeed SMP - Add - Integer (MB/s)	44293	**46669**	44414	**38876**
Normalized	94.91%	100%	95.17%	83.3%
Standard Deviation	1.1%	0.7%	1.5%	0.9%
RAMspeed SMP - Copy - Integer	41702	**44880**	42507	**38990**
Normalized	92.92%	100%	94.71%	86.88%
Standard Deviation	1%	0.5%	0.6%	1.8%
RAMspeed SMP - Scale - Integer	41443	**43063**	40937	**37637**
Normalized	96.24%	100%	95.06%	87.4%
Standard Deviation	0.1%	0.3%	0.7%	0.4%
RAMspeed SMP - Triad - Integer	43209	**46206**	43097	**37837**
Normalized	93.51%	100%	93.27%	81.89%
Standard Deviation	1.7%	1%	2.3%	2.1%

Memory Scaling

RAMspeed SMP - Average - Integer (MB/s)	42517	**44700**	42369	**38516**
Normalized	95.12%	100%	94.78%	86.17%
Standard Deviation	0.9%	1.1%	0.6%	1.7%
Stream - Copy (MB/s)	29431	29114	**29900**	**28508**
Normalized	98.43%	97.37%	100%	95.34%
Standard Deviation	0.1%	0.2%	0.9%	0.2%
Stream - Scale (MB/s)	16901	16812	**17271**	**16397**
Normalized	97.85%	97.34%	100%	94.94%
Standard Deviation	0.4%	0.1%	0.1%	0.2%
Stream - Triad (MB/s)	18239	18299	**18717**	**17897**
Normalized	97.44%	97.77%	100%	95.62%
Standard Deviation	0.2%	0.6%	0.3%	0.3%
Stream - Add (MB/s)	18335	18203	**18716**	**17841**
Normalized	97.97%	97.26%	100%	95.33%
Standard Deviation	0.2%	0.4%	0.4%	0.2%
Tinymembench - Standard Memcpy (MB/s)	25535	25692	**27917**	**24675**
Normalized	91.47%	92.03%	100%	88.39%
Standard Deviation	0.1%	0.7%	0%	0%
Tinymembench - Standard Memset (MB/s)	**28662**	28600	28632	**25486**
Normalized	100%	99.78%	99.9%	88.92%
Standard Deviation	0%	0%	0%	0%
MBW - Memory Copy - 4096 MiB	22386	**22865**	21873	**19092**
Normalized	97.9%	100%	95.66%	83.5%
Standard Deviation	0.7%	0.9%	0.7%	0.6%
MBW - M.C.F.B.S - 4096 MiB (MiB/s)	**11829**	11704	10970	**10550**
Normalized	100%	98.95%	92.74%	89.19%
Standard Deviation	7.8%	7.9%	6.2%	7%
High Performance Conjugate Gradient (GFLOP/s)	4.23206	**4.18558**	**4.28011**	4.20338
Normalized	98.88%	97.79%	100%	98.21%
Standard Deviation	0.1%	0.1%	0.2%	0.2%
NAS Parallel Benchmarks - BT.C (Mop/s)	25215	24736	**25336**	**24006**
Normalized	99.52%	97.63%	100%	94.75%
Standard Deviation	0.1%	0.2%	0.2%	0.2%
NAS Parallel Benchmarks - CG.C (Mop/s)	6851	6958	**6970**	**6569**
Normalized	98.29%	99.82%	100%	94.25%
Standard Deviation	1.3%	1.5%	0.4%	1.9%
NAS Parallel Benchmarks - EP.C (Mop/s)	**1880**	1838	**1805**	1846
Normalized	100%	97.75%	96%	98.18%
Standard Deviation	0.1%	4.4%	5.5%	1.8%
NAS Parallel Benchmarks - EP.D (Mop/s)	**1841**	**1872**	1868	1857
Normalized	98.32%	100%	99.8%	99.21%
Standard Deviation	2.3%	1.4%	0.5%	1%
NAS Parallel Benchmarks - FT.C (Mop/s)	12719	12606	**12910**	**11905**
Normalized	98.52%	97.65%	100%	92.22%
Standard Deviation	0.3%	0.1%	0.2%	0.1%

Memory Scaling

NAS Parallel Benchmarks - LU.C (Mop/s)	28306	27791	**28520**	**27305**
Normalized	99.25%	97.44%	100%	95.74%
Standard Deviation	0.6%	1.3%	0.1%	0.1%
NAS Parallel Benchmarks - MG.C (Mop/s)	10367	10206	**10469**	**9792**
Normalized	99.03%	97.49%	100%	93.54%
Standard Deviation	0.1%	0%	0.2%	0.2%
NAS Parallel Benchmarks - SP.B (Mop/s)	8189	8016	**8295**	**7806**
Normalized	98.71%	96.64%	100%	94.1%
Standard Deviation	0.3%	0.2%	0.3%	0.2%
Parboil - OpenMP LBM (sec)	136.958104	139.023834	**134.097031**	**142.590846**
Normalized	97.91%	96.46%	100%	94.04%
Standard Deviation	0.1%	0.1%	0.1%	0.3%
Parboil - OpenMP CUTCP (sec)	**1.006056**	1.014672	1.007303	**1.030985**
Normalized	100%	99.15%	99.88%	97.58%
Standard Deviation	0.4%	0.6%	0.8%	0.4%
Parboil - OpenMP Stencil (sec)	**14.946752**	14.892794	**14.750481**	14.861606
Normalized	98.69%	99.04%	100%	99.25%
Standard Deviation	1.3%	1.6%	0.5%	3.9%
Parboil - O.M.G (sec)	95.050161	95.222448	**94.975698**	**96.660070**
Normalized	99.92%	99.74%	100%	98.26%
Standard Deviation	0.4%	0.2%	0.1%	0.2%
Rodinia - OpenMP LavaMD (sec)	104.005	**104.218**	104.020	**103.819**
Normalized	99.82%	99.62%	99.81%	100%
Standard Deviation	0.2%	0.2%	0.2%	0.2%
Rodinia - OpenMP HotSpot3D (sec)	67.618	67.243	**68.520**	**64.947**
Normalized	96.05%	96.59%	94.79%	100%
Standard Deviation	6%	7.3%	1.5%	6%
Rodinia - OpenMP Leukocyte (sec)	70.551	**71.948**	**69.676**	69.900
Normalized	98.76%	96.84%	100%	99.68%
Standard Deviation	1.7%	1.3%	1.2%	1.1%
Rodinia - OpenMP CFD Solver (sec)	10.311	10.363	**10.308**	**10.433**
Normalized	99.97%	99.47%	100%	98.8%
Standard Deviation	1%	0.4%	0.8%	0.8%
Rodinia - O.S (sec)	15.645	**16.157**	15.600	**15.458**
Normalized	98.8%	95.67%	99.09%	100%
Standard Deviation	0.2%	3%	2.3%	2.6%
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	1.08435	1.08422	**1.07763**	**1.08496**
Normalized	99.38%	99.39%	100%	99.32%
Standard Deviation	1.1%	1%	0.5%	0%
Dolfyn - C.F.D (sec)	12.906	13.029	**13.034**	**12.775**
Normalized	98.98%	98.05%	98.01%	100%
Standard Deviation	0.4%	0.8%	0.7%	2.1%
FFTE - N.2.3.C.F.R (MFLOPS)	39634	38854	**40420**	**36553**
Normalized	98.05%	96.13%	100%	90.43%
Standard Deviation	0.6%	0.3%	0.1%	1%
Timed MAFFT Alignment - M.S.A - LSU RNA (sec)	7.242	**7.192**	7.196	**7.387**
Normalized	99.31%	100%	99.94%	97.36%
Standard Deviation	1%	1.6%	0.8%	0.6%

Memory Scaling

LAMMPS Molecular Dynamics Simulator - 20k Atoms (ns/day)	12.819	12.852	12.958	12.849
Normalized	98.93%	99.18%	100%	99.16%
Standard Deviation	1.1%	1.7%	0.9%	1.3%
LAMMPS Molecular Dynamics Simulator - Rhodopsin Protein	12.622	13.174	12.364	12.587
Normalized	95.81%	100%	93.85%	95.54%
Standard Deviation	6%	1.2%	7.2%	5.6%
WebP Image Encode - Q.1.L (Encode Time - sec)	12.972	12.754	12.955	12.752
Normalized	98.3%	99.98%	98.43%	100%
Standard Deviation	1%	1.9%	0.2%	2%
WebP Image Encode - Q.1.H.C (Encode Time - sec)	5.384	5.307	5.333	5.382
Normalized	98.57%	100%	99.51%	98.61%
Standard Deviation	0.4%	1.9%	0.9%	0.5%
WebP Image Encode - Q.1.L.H.C (Encode Time - sec)	27.530	27.382	27.508	27.306
Normalized	99.19%	99.72%	99.27%	100%
Standard Deviation	0.3%	0.3%	0.2%	0.1%
DaCapo Benchmark - H2 (msec)	2825	2804	2742	2873
Normalized	97.06%	97.79%	100%	95.44%
Standard Deviation	2.7%	1.1%	3%	1.8%
DaCapo Benchmark - Jython (msec)	3072	3088	3092	3088
Normalized	100%	99.48%	99.35%	99.48%
Standard Deviation	1.5%	0.9%	0.7%	1.5%
DaCapo Benchmark - Tradesoap	2972	2996	2993	3064
Normalized	100%	99.2%	99.3%	97%
Standard Deviation	2%	2%	3%	3%
DaCapo Benchmark - Tradebeans (msec)	3890	3914	3882	3887
Normalized	99.79%	99.18%	100%	99.87%
Standard Deviation	0.6%	1.2%	0.8%	1.7%
Fhourstones - C.C.4.S (Kpos / sec)	19782	20132	20179	20053
Normalized	98.04%	99.77%	100%	99.38%
Standard Deviation	0%	0.6%	0.9%	2%
BYTE Unix Benchmark - Dhrystone 2 (LPS)	55608923	55232733	56378467	55699860
Normalized	98.64%	97.97%	100%	98.8%
Standard Deviation	1.6%	1.6%	0.7%	1.1%
Zstd Compression - 3 (MB/s)	5071	5012	5088	4736
Normalized	99.66%	98.51%	100%	93.07%
Standard Deviation	0.9%	1%	0.9%	0.6%
Zstd Compression - 19 (MB/s)	44.0	43.4	44.6	43.6
Normalized	98.65%	97.31%	100%	97.76%
Standard Deviation	0.3%	0.2%	0.1%	0.1%
Crafty - Elapsed Time (Nodes/s)	11566864	11854680	11651005	11453535
Normalized	97.57%	100%	98.28%	96.62%
Standard Deviation	1.2%	1.3%	1.5%	1.4%
TSCP - A.C.P (Nodes/s)	1962914	2004703	1998837	1991332
Normalized	97.92%	100%	99.71%	99.33%
Standard Deviation	0.6%	1.6%	1.5%	0.7%
dav1d - Chimera 1080p (FPS)	685.92	679.59	678.02	672.09
Normalized	100%	99.08%	98.85%	97.98%

Memory Scaling

Standard Deviation	0.4%	0.8%	0.5%	0.5%
dav1d - Summer Nature 4K (FPS)	231.56	226.71	**232.95**	**224.15**
Normalized	99.4%	97.32%	100%	96.22%
Standard Deviation	0.7%	0.8%	0.4%	0.6%
dav1d - S.N.1 (FPS)	**668.85**	662.81	665.12	**660.60**
Normalized	100%	99.1%	99.44%	98.77%
Standard Deviation	0.9%	0.6%	0.9%	0.1%
dav1d - C.1.1.b (FPS)	**132.44**	**132.44**	**132.69**	132.48
Normalized	99.81%	99.81%	100%	99.84%
Standard Deviation	0.1%	0.1%	0.2%	0.6%
OSPray - San Miguel - SciVis (FPS)	29.41	29.41	29.41	29.41
Standard Deviation	0%	0%	0%	0%
OSPray - San Miguel - Path Tracer (FPS)	2.42	**2.43**	**2.43**	**2.41**
Normalized	99.59%	100%	100%	99.18%
Standard Deviation	0.2%	0.2%	0.1%	0.1%
TTSIOD 3D Renderer - P.R.W.S.S.M (FPS)	1002	1005	**1019**	**997.743**
Normalized	98.34%	98.63%	100%	97.91%
Standard Deviation	0.3%	0.5%	0.6%	0.3%
AOM AV1 - Speed 0 Two-Pass (FPS)	0.44	0.44	0.44	0.44
Standard Deviation	1.3%	1.3%	1.3%	1.3%
AOM AV1 - Speed 4 Two-Pass (FPS)	3.40	**3.41**	3.39	**3.38**
Normalized	99.71%	100%	99.41%	99.12%
Standard Deviation	0.4%	0.7%	0.8%	0.6%
AOM AV1 - Speed 6 Realtime (FPS)	**24.86**	**25.06**	25.02	24.88
Normalized	99.2%	100%	99.84%	99.28%
Standard Deviation	1.1%	1.2%	0.4%	1%
AOM AV1 - Speed 6 Two-Pass (FPS)	**5.26**	**5.27**	**5.27**	**5.27**
Normalized	99.81%	100%	100%	100%
Standard Deviation	0.5%	0.6%	0.5%	1.2%
AOM AV1 - Speed 8 Realtime (FPS)	52.68	**53.20**	52.36	**51.58**
Normalized	99.02%	100%	98.42%	96.95%
Standard Deviation	0.8%	1.3%	2.3%	0.6%
Kvazaar - Bosphorus 4K - Slow (FPS)	10.77	**10.76**	**10.80**	**10.80**
Normalized	99.72%	99.63%	100%	100%
Standard Deviation	0.3%	0.3%	0.5%	0.4%
Kvazaar - Bosphorus 4K - Medium	**10.90**	**10.90**	**10.94**	**10.94**
Normalized	99.63%	99.63%	100%	100%
Standard Deviation	0.1%	0.2%	0.2%	0.2%
Kvazaar - Bosphorus 1080p - Slow (FPS)	38.32	38.35	**38.30**	**38.42**
Normalized	99.74%	99.82%	99.69%	100%
Standard Deviation	0.2%	0.3%	0.4%	0.3%
Kvazaar - Bosphorus 1080p - Medium (FPS)	**39.35**	**39.16**	39.34	**39.35**
Normalized	100%	99.52%	99.97%	100%
Standard Deviation	0.2%	0.3%	0.4%	0.3%
Kvazaar - Bosphorus 4K - Very Fast (FPS)	26.56	**26.55**	**26.70**	26.61
Normalized	99.48%	99.44%	100%	99.66%
Standard Deviation	0.2%	0.2%	0.1%	0.5%

Memory Scaling

Kvazaar - Bosphorus 4K - Ultra Fast (FPS)	48.90	48.82	**48.99**	**48.66**
Normalized	99.82%	99.65%	100%	99.33%
Standard Deviation	0.7%	0.5%	0.2%	0.1%
Kvazaar - Bosphorus 1080p - Very Fast (FPS)	**86.98**	**86.49**	86.68	86.71
Normalized	100%	99.44%	99.66%	99.69%
Standard Deviation	0.3%	0.1%	0.1%	0.7%
Kvazaar - Bosphorus 1080p - Ultra Fast (FPS)	**154.80**	153.99	154.18	**153.95**
Normalized	100%	99.48%	99.6%	99.45%
Standard Deviation	0.9%	0.5%	0.6%	0.3%
SVT-AV1 - Enc Mode 0 - 1080p (FPS)	0.164	0.164	0.164	0.164
Standard Deviation	1.3%	1.1%	1.3%	2%
SVT-AV1 - Enc Mode 4 - 1080p (FPS)	6.025	**6.081**	6.055	**5.937**
Normalized	99.08%	100%	99.57%	97.63%
Standard Deviation	0.1%	1.1%	0.5%	0.9%
SVT-AV1 - Enc Mode 8 - 1080p (FPS)	48.430	48.652	**48.729**	**48.162**
Normalized	99.39%	99.84%	100%	98.84%
Standard Deviation	1.6%	0.9%	0.4%	0.6%
VP9 libvpx Encoding - Speed 0 (FPS)	**9.44**	9.45	**9.49**	9.45
Normalized	99.47%	99.58%	100%	99.58%
Standard Deviation	0.1%	0.6%	0.4%	0.1%
VP9 libvpx Encoding - Speed 5 (FPS)	30.19	**30.00**	**30.35**	30.21
Normalized	99.47%	98.85%	100%	99.54%
Standard Deviation	1.4%	0.8%	1.4%	1.8%
x265 - Bosphorus 4K (FPS)	**26.23**	26.21	26.15	**25.68**
Normalized	100%	99.92%	99.7%	97.9%
Standard Deviation	0.8%	0.1%	0.2%	0.6%
x265 - Bosphorus 1080p (FPS)	**71.11**	71.83	**72.01**	71.15
Normalized	98.75%	99.75%	100%	98.81%
Standard Deviation	0.8%	0.4%	0.8%	0.7%
Intel Open Image Denoise - Memorial (Images / Sec)	13.61	13.66	**13.81**	**13.41**
Normalized	98.55%	98.91%	100%	97.1%
Standard Deviation	0.6%	0.3%	0.3%	0.6%
OpenVKL - vklBenchmark (Items /	280.44	280.47	**282.86**	**279.00**
Normalized	99.14%	99.16%	100%	98.64%
Standard Deviation	0.6%	0.4%	0.9%	1.5%
libavif avifenc - 0 (sec)	**53.269**	53.176	**52.516**	53.182
Normalized	98.59%	98.76%	100%	98.75%
Standard Deviation	0.5%	0.8%	0.5%	0.4%
libavif avifenc - 2 (sec)	**32.356**	**32.041**	32.084	32.134
Normalized	99.03%	100%	99.87%	99.71%
Standard Deviation	0.6%	0.2%	0.6%	0.3%
libavif avifenc - 8 (sec)	4.333	**4.288**	4.291	**4.381**
Normalized	98.96%	100%	99.93%	97.88%
Standard Deviation	0.7%	0.9%	1.5%	0.8%
libavif avifenc - 10 (sec)	4.196	4.163	**4.120**	**4.218**
Normalized	98.19%	98.97%	100%	97.68%
Standard Deviation	0.5%	0.4%	1.1%	0.5%
Timed Apache Compilation - Time To Compile (sec)	17.162	17.137	**17.064**	**17.174**
Normalized	99.43%	99.57%	100%	99.36%

Memory Scaling

Standard Deviation	0.4%	0.4%	0.6%	0.5%
Timed GDB GNU Debugger Compilation - Time To Compile (sec)	82.166	81.932	82.487	83.147
Normalized	99.72%	100%	99.33%	98.54%
Standard Deviation	0.1%	0.2%	0%	0.2%
Timed ImageMagick Compilation - Time To Compile (sec)	18.242	18.380	18.442	18.644
Normalized	100%	99.25%	98.92%	97.84%
Standard Deviation	0.1%	0.9%	0.9%	0.6%
Timed Linux Kernel Compilation - Time To Compile (sec)	45.690	45.050	47.008	46.227
Normalized	98.6%	100%	95.83%	97.45%
Standard Deviation	2.6%	2%	1.8%	0.9%
Timed LLVM Compilation - Time To Compile (sec)	354.920	355.159	361.313	363.848
Normalized	100%	99.93%	98.23%	97.55%
Standard Deviation	0.8%	1.8%	0.5%	1.2%
Timed PHP Compilation - Time To Compile (sec)	37.933	37.878	37.786	38.140
Normalized	99.61%	99.76%	100%	99.07%
Standard Deviation	0.6%	0.5%	0.4%	0.3%
C-Ray - Total Time - 4.1.R.P.P (sec)	30.483	30.439	30.354	30.430
Normalized	99.58%	99.72%	100%	99.75%
Standard Deviation	0.4%	0.5%	0.5%	0.4%
POV-Ray - Trace Time (sec)	23.032	22.859	23.004	22.649
Normalized	98.34%	99.08%	98.46%	100%
Standard Deviation	0.8%	0.4%	0.7%	0.1%
Smallpt - G.I.R.1.S (sec)	4.953	4.958	4.932	4.960
Normalized	99.58%	99.48%	100%	99.44%
Standard Deviation	0.1%	0.1%	0.1%	0.5%
Open Porous Media - Flow MPI Norne - 16 (sec)	325.903	327.200	326.055	327.758
Normalized	100%	99.6%	99.95%	99.43%
Standard Deviation	0.1%	0.4%	0%	0.1%
XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)	23.245	23.256	23.382	23.285
Normalized	100%	99.95%	99.41%	99.83%
Standard Deviation	0.5%	0.3%	0.6%	0.7%
DeepSpeech - CPU (sec)	60.49850	60.29981	60.53578	61.67798
Normalized	99.67%	100%	99.61%	97.77%
Standard Deviation	0.2%	0.4%	0.8%	0.5%
eSpeak-NG Speech Engine - T.T.S.S (sec)	20.815	21.265	21.129	20.954
Normalized	100%	97.88%	98.51%	99.34%
Standard Deviation	0.9%	0.7%	0.1%	1.7%
RNNoise (sec)	15.376	15.331	15.122	15.336
Normalized	98.35%	98.64%	100%	98.6%
Standard Deviation	1%	0.6%	2.6%	1.4%
OpenSSL - R.4.b.P (Signs/sec)	4858	4859	4865	4881
Normalized	99.52%	99.54%	99.67%	100%
Standard Deviation	0.6%	0.7%	0.6%	0.6%
Aircrack-ng (k/s)	74423	74437	74631	74746
Normalized	99.57%	99.59%	99.85%	100%
Standard Deviation	0.5%	0.3%	0.2%	0.3%

Memory Scaling

Apache CouchDB - 100 - 1000 - 24	84.588	84.700	**84.522**	**84.983**
Normalized	99.92%	99.79%	100%	99.46%
Standard Deviation	0.8%	1.1%	2.3%	1.1%
KeyDB (Ops/sec)	772208	769634	**779174**	**766769**
Normalized	99.11%	98.78%	100%	98.41%
Standard Deviation	0.5%	0.8%	0.5%	0.4%
GROMACS - Water Benchmark (Ns/Day)	1.296	1.291	**1.318**	**1.265**
Normalized	98.33%	97.95%	100%	95.98%
Standard Deviation	0.3%	0.4%	0.9%	0.3%
TensorFlow Lite - SqueezeNet (us)	95466	95547	**95889**	**95383**
Normalized	99.91%	99.83%	99.47%	100%
Standard Deviation	0.2%	0.2%	1%	0.1%
TensorFlow Lite - Inception V4 (us)	1359703	**1360253**	**1356853**	1358450
Normalized	99.79%	99.75%	100%	99.88%
Standard Deviation	0.1%	0%	0.1%	0.1%
TensorFlow Lite - NASNet Mobile (us)	106147	**106070**	**106848**	106515
Normalized	99.93%	100%	99.27%	99.58%
Standard Deviation	0.5%	0.5%	0.7%	0.4%
TensorFlow Lite - Mobilenet Float (us)	**62847**	**63539**	62948	
Normalized	100%	98.91%	99.84%	
Standard Deviation	0.6%	1%	0.1%	
TensorFlow Lite - Mobilenet Quant	68742	**68827**	**68550**	
Normalized	99.72%	99.6%	100%	
Standard Deviation	0.1%	0.1%	0.1%	
TensorFlow Lite - I.R.V (us)	1222950	**1224003**	**1221090**	
Normalized	99.85%	99.76%	100%	
Standard Deviation	0.1%	0.1%	0.1%	
ASTC Encoder - Fast (sec)	**4.25**	4.22	**4.21**	
Normalized	99.06%	99.76%	100%	
Standard Deviation	0.5%	0.4%	0.6%	
ASTC Encoder - Medium (sec)	**5.55**	5.52	**5.50**	
Normalized	99.1%	99.64%	100%	
Standard Deviation	0.8%	1.1%	0.9%	
ASTC Encoder - Thorough (sec)	**12.82**	**12.85**	**12.82**	
Normalized	100%	99.77%	100%	
Standard Deviation	0.3%	0.2%	0.3%	
ASTC Encoder - Exhaustive (sec)	101.47	**101.50**	**101.17**	
Normalized	99.7%	99.67%	100%	
Standard Deviation	0.1%	0.2%	0.2%	
SQLite Speedtest - Timed Time - Size 1,000 (sec)	42.781	**42.109**	**42.902**	
Normalized	98.43%	100%	98.15%	
Standard Deviation	0.4%	1.7%	1%	
Hugin - P.P.A.S.T (sec)	**35.516**	35.469	**34.851**	
Normalized	98.13%	98.26%	100%	
Standard Deviation	1.4%	1.1%	1.4%	
OCRMyPDF - P.6.P.P.D (sec)	**15.671**	**15.764**	15.739	
Normalized	100%	99.41%	99.57%	
Standard Deviation	1.7%	1.1%	0.9%	
Caffe - AlexNet - CPU - 200 (ms)	81628	**81717**	**81382**	
Normalized	99.7%	99.59%	100%	
Standard Deviation	0.3%	0.9%	0.5%	
Caffe - GoogleNet - CPU - 200 (ms)	**212920**	213624	**214237**	
Normalized	100%	99.67%	99.39%	

Memory Scaling

Standard Deviation	1%	0.1%	0.2%
Mobile Neural Network - resnet-v2-50 (ms)	28.823	28.689	28.515
Normalized	98.93%	99.39%	100%
Standard Deviation	3.1%	2%	2%
Mobile Neural Network - mobilenet-v1-1.0 (ms)	5.039	5.047	5.032
Normalized	99.86%	99.7%	100%
Standard Deviation	0.8%	0.9%	0.8%
Mobile Neural Network - inception-v3 (ms)	27.767	27.573	26.983
Normalized	97.18%	97.86%	100%
Standard Deviation	3.2%	2.5%	0.8%
NCNN - CPU - squeezenet (ms)	13.04	13.07	13.12
Normalized	100%	99.77%	99.39%
Standard Deviation	0.2%	0.5%	1.2%
NCNN - CPU - mobilenet (ms)	12.67	12.71	12.68
Normalized	100%	99.69%	99.92%
Standard Deviation	2.3%	3%	2.2%
NCNN - CPU-v2-v2 - mobilenet-v2 (ms)	4.36	4.35	4.38
Normalized	99.77%	100%	99.32%
Standard Deviation	0.5%	0.2%	0.3%
NCNN - CPU-v3-v3 - mobilenet-v3 (ms)	4.15	4.15	4.19
Normalized	100%	100%	99.05%
Standard Deviation	0.4%	0.7%	0.8%
NCNN - CPU - shufflenet-v2 (ms)	3.86	3.84	3.88
Normalized	99.48%	100%	98.97%
Standard Deviation	0.4%	0.3%	0.6%
NCNN - CPU - mnasnet (ms)	3.89	3.88	3.91
Normalized	99.74%	100%	99.23%
Standard Deviation	0.3%	0.1%	0.6%
NCNN - CPU - efficientnet-b0 (ms)	5.23	5.22	5.34
Normalized	99.81%	100%	97.75%
Standard Deviation	0.6%	0.5%	1.7%
NCNN - CPU - blazeface (ms)	1.56	1.53	1.56
Normalized	98.08%	100%	98.08%
Standard Deviation	1.7%	0.7%	0.6%
NCNN - CPU - googlenet (ms)	13.33	13.28	13.63
Normalized	99.62%	100%	97.43%
Standard Deviation	0.8%	0.1%	3.1%
NCNN - CPU - vgg16 (ms)	64.87	65.44	63.94
Normalized	98.57%	97.71%	100%
Standard Deviation	0.4%	0.1%	0.1%
NCNN - CPU - resnet18 (ms)	14.61	14.67	14.77
Normalized	100%	99.59%	98.92%
Standard Deviation	0.1%	0.1%	2.7%
NCNN - CPU - alexnet (ms)	14.20	14.26	14.18
Normalized	99.86%	99.44%	100%
Standard Deviation	0.2%	0.6%	1.1%
NCNN - CPU - resnet50 (ms)	25.18	25.17	25.48
Normalized	99.96%	100%	98.78%
Standard Deviation	0.3%	0.3%	1.9%
NCNN - CPU - yolov4-tiny (ms)	22.58	22.67	22.71
Normalized	100%	99.6%	99.43%
Standard Deviation	0.4%	1%	0.4%

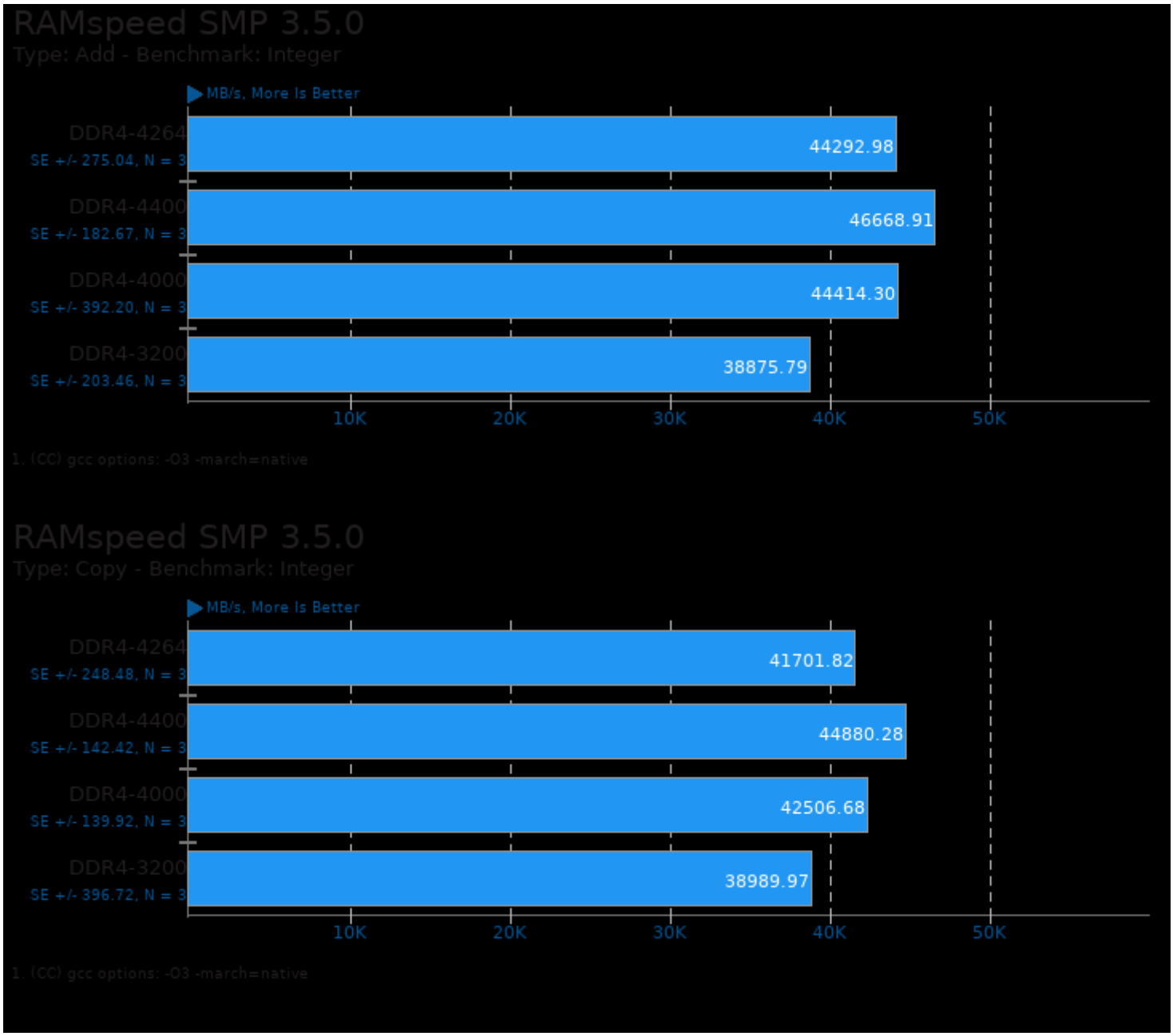
Memory Scaling

OpenVINO - F.D.0.F - CPU (FPS)	3.62	**3.60**	**3.63**
Normalized	99.72%	99.17%	100%
Standard Deviation	0.3%	0.4%	0.3%
OpenVINO - F.D.0.F - CPU (ms)	2192	**2212**	**2182**
Normalized	99.54%	98.65%	100%
Standard Deviation	0.8%	0.8%	0.1%
OpenVINO - F.D.0.F - CPU (FPS)	**3.64**	**3.62**	3.63
Normalized	100%	99.45%	99.73%
Standard Deviation	0.6%	0.6%	0.4%
OpenVINO - F.D.0.F - CPU (ms)	**2183**	**2196**	2190
Normalized	100%	99.42%	99.7%
Standard Deviation	0.6%	0.6%	0.4%
OpenVINO - P.D.0.F - CPU (FPS)	2.43	**2.42**	**2.47**
Normalized	98.38%	97.98%	100%
Standard Deviation	2.9%	1%	0.2%
OpenVINO - P.D.0.F - CPU (ms)	3230	**3277**	**3200**
Normalized	99.06%	97.63%	100%
Standard Deviation	3.7%	1.4%	0.4%
OpenVINO - P.D.0.F - CPU (FPS)	2.47	**2.45**	**2.48**
Normalized	99.6%	98.79%	100%
Standard Deviation	0.4%	1.1%	0.8%
OpenVINO - P.D.0.F - CPU (ms)	3191	**3215**	**3179**
Normalized	99.63%	98.9%	100%
Standard Deviation	0.7%	1.7%	1.1%
OpenVINO - A.G.R.R.0.F - CPU (FPS)	**13530**	13543	**13557**
Normalized	99.8%	99.89%	100%
Standard Deviation	0.1%	0.1%	0.1%
OpenVINO - A.G.R.R.0.F - CPU (ms)	0.58	0.58	0.58
Standard Deviation	0%	0%	0%
OpenVINO - A.G.R.R.0.F - CPU (FPS)	**13500**	13472	**13467**
Normalized	100%	99.79%	99.75%
Standard Deviation	0.1%	0.2%	0.2%
OpenVINO - A.G.R.R.0.F - CPU (ms)	0.58	0.58	0.58
Standard Deviation	0%	0%	0%
Blender - BMW27 - CPU-Only (sec)	**78.27**	**78.84**	78.60
Normalized	100%	99.28%	99.58%
Standard Deviation	0.1%	0.2%	0.3%
Blender - Classroom - CPU-Only (sec)	**226.10**	227.24	**227.35**
Normalized	100%	99.5%	99.45%
Standard Deviation	0.1%	0.2%	0.2%
Apache Benchmark - S.W.P.S (Reqs/sec)	44360	**44939**	**44185**
Normalized	98.71%	100%	98.32%
Standard Deviation	0.6%	0.9%	1.2%
Appleseed - Emily (sec)	**190.419922**	192.037946	**192.560293**
Normalized	100%	99.16%	98.89%
Appleseed - Disney Material (sec)	**117.717827**	**118.841934**	118.304493
Normalized	100%	99.05%	99.5%
Appleseed - Material Tester (sec)	**111.583087**	111.991816	**112.388429**
Normalized	100%	99.64%	99.28%
Geekbench - CPU Multi Core (Score)	14916	**14799**	**14935**
Normalized	99.87%	99.09%	100%
Standard Deviation	0.2%	0.3%	0.3%

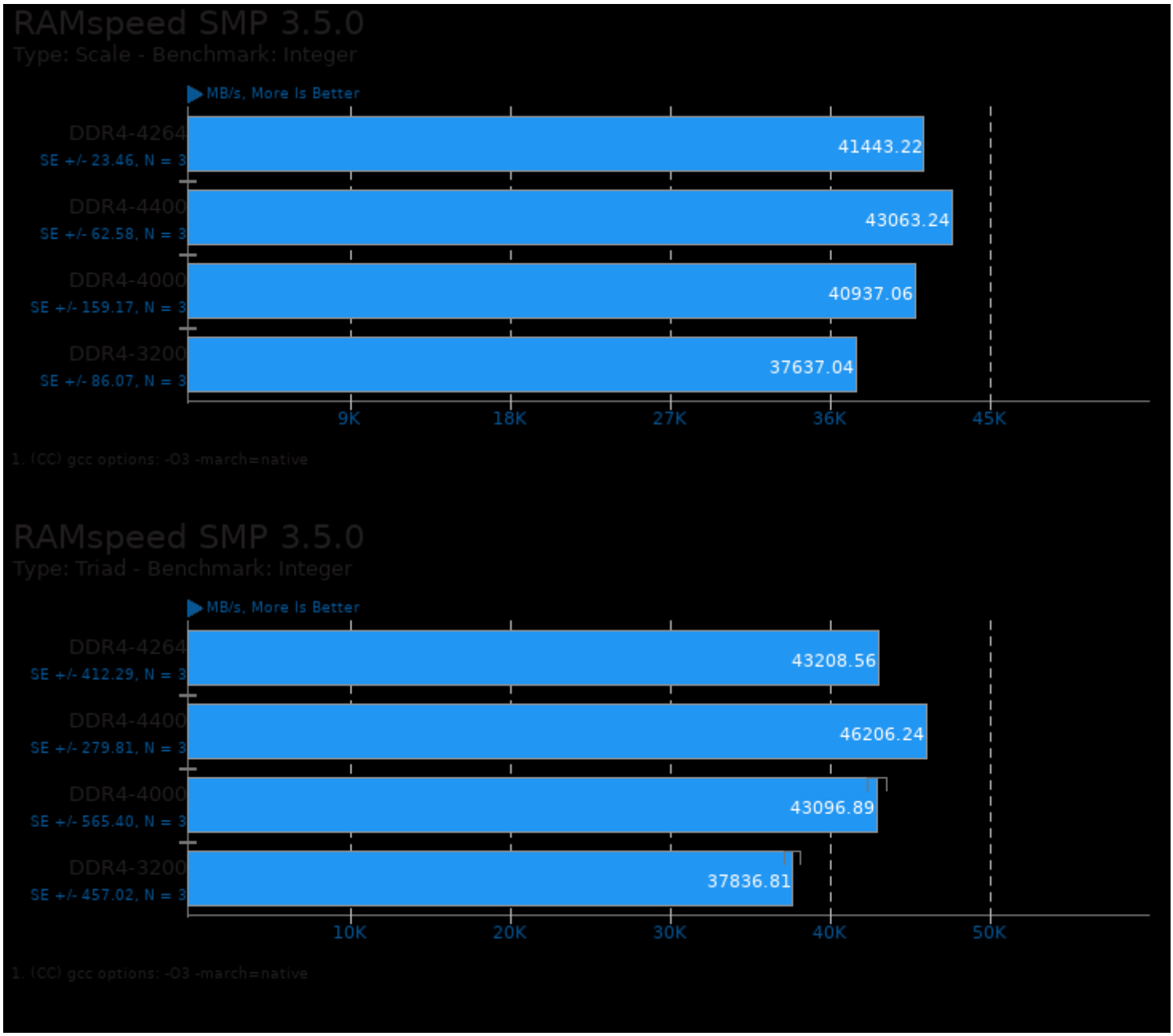
Memory Scaling

Geekbench - CPU Multi Core - Gaussian Blur (Mpixels/sec)	**1.08**	**1.08**	**1.07**
Normalized	100%	100%	99.07%
Standard Deviation	0.5%	0.5%	0.5%
Geekbench - CPU Multi Core - Face Detection (images/sec)	**198.3**	**195.1**	196.8
Normalized	100%	98.39%	99.24%
Standard Deviation	0.4%	1.9%	0.9%
Geekbench - CPU Multi Core - Horizon Detection (Gpixels/sec)	280.7	**276.8**	**282.8**
Normalized	99.26%	97.88%	100%
Standard Deviation	0.1%	0.5%	0.1%
Geekbench - CPU Single Core (Score)	1715	**1716**	**1703**
Normalized	99.94%	100%	99.24%
Standard Deviation	1.3%	0.3%	1.2%
Geekbench - CPU Single Core - Gaussian Blur (Mpixels/sec)	**104.8**	105.6	**106.0**
Normalized	98.87%	99.62%	100%
Standard Deviation	1.1%	0.2%	0.1%
Geekbench - CPU Single Core - Face Detection (images/sec)	**13.3**	**13.4**	**13.3**
Normalized	99.25%	100%	99.25%
Standard Deviation	1.2%	1.9%	0%
Geekbench - CPU Single Core - Horizon Detection (Gpixels/sec)	**38.8**	**39.1**	38.9
Normalized	99.23%	100%	99.49%
Standard Deviation	1.2%	0.6%	0.3%
Sunflow Rendering System - G.I.I.S (sec)	**0.614**	**0.600**	0.602
Normalized	97.72%	100%	99.67%
Standard Deviation	3.4%	4.3%	1%
Tesseract OCR - T.T.O.7.I (sec)	**19.395**	19.368	**19.231**
Normalized	99.15%	99.29%	100%
Standard Deviation	1.4%	0.4%	1%
InfluxDB - 4 - 10000 - 2,5000,1 - 10000 (val/sec)	**1815755**	1813978	**1811072**
Normalized	100%	99.9%	99.74%
Standard Deviation	0.3%	0.4%	0.6%
InfluxDB - 64 - 10000 - 2,5000,1 - 10000 (val/sec)	**2209040**	**2154814**	2169301
Normalized	100%	97.55%	98.2%
Standard Deviation	0.1%	0%	0.6%
Mobile Neural Network - SqueezeNetV1.0 (ms)			6.563
Standard Deviation			0.3%
Mobile Neural Network - MobileNetV2_224 (ms)			3.881
Standard Deviation			0.6%

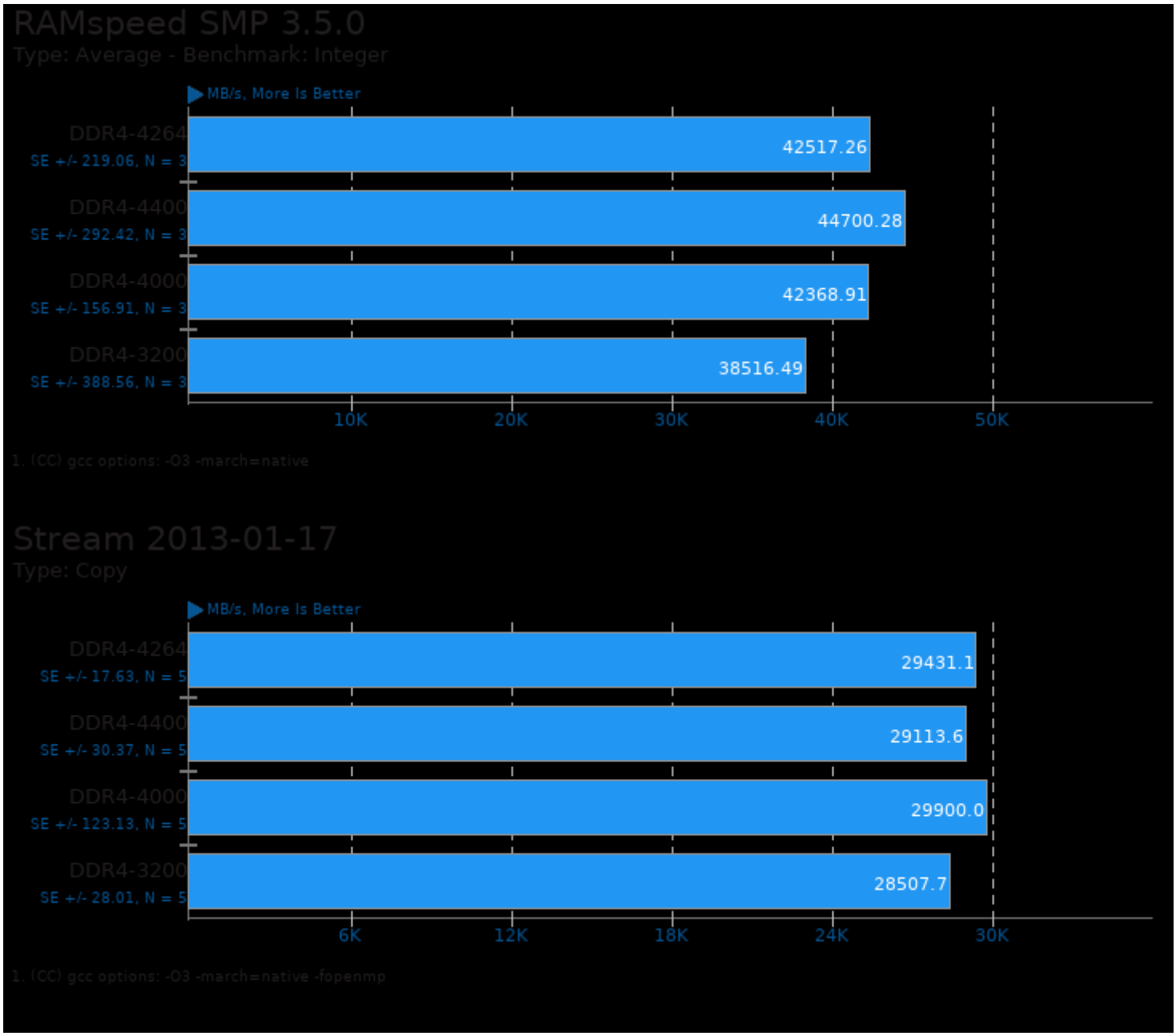
Memory Scaling



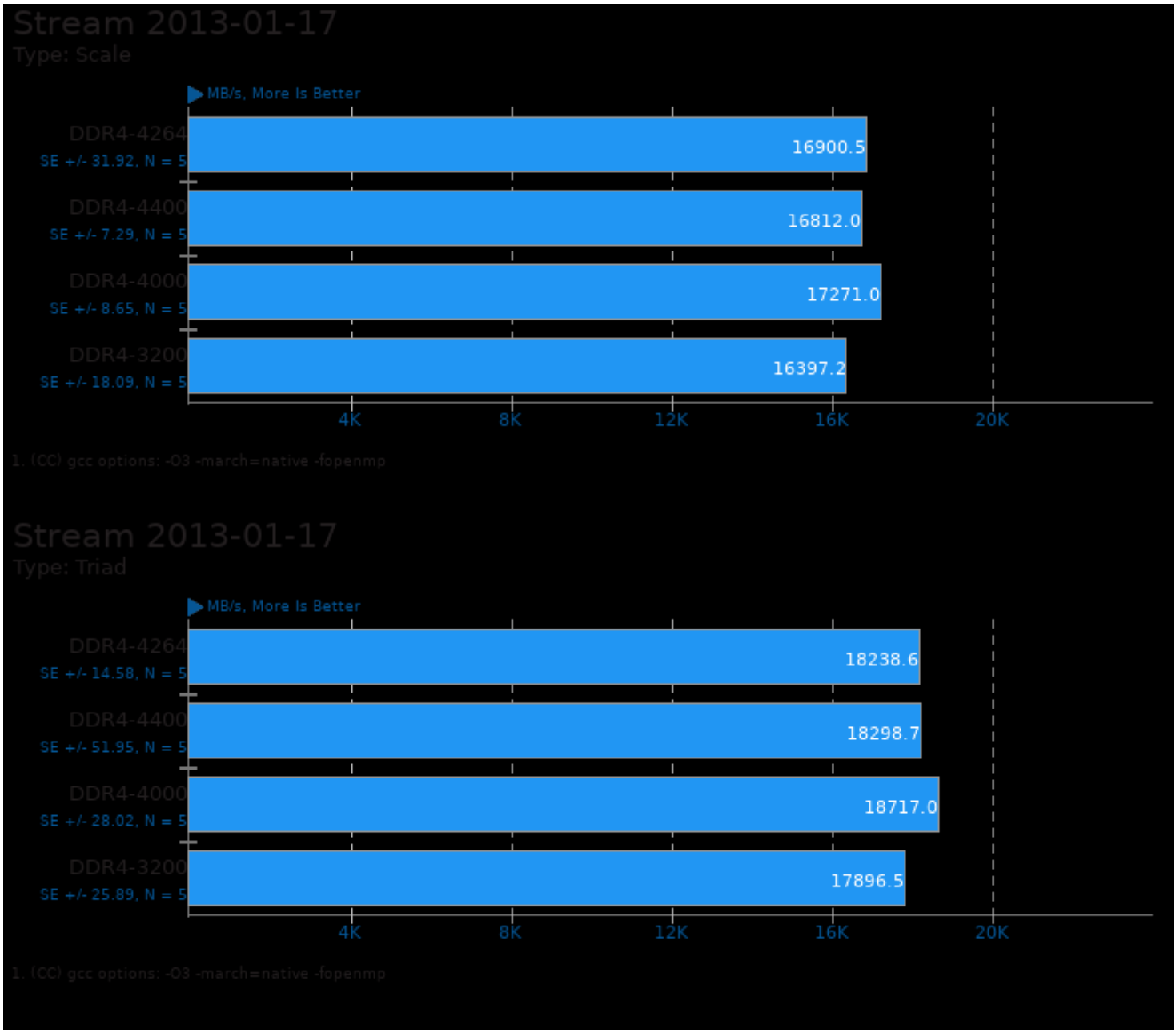
Memory Scaling



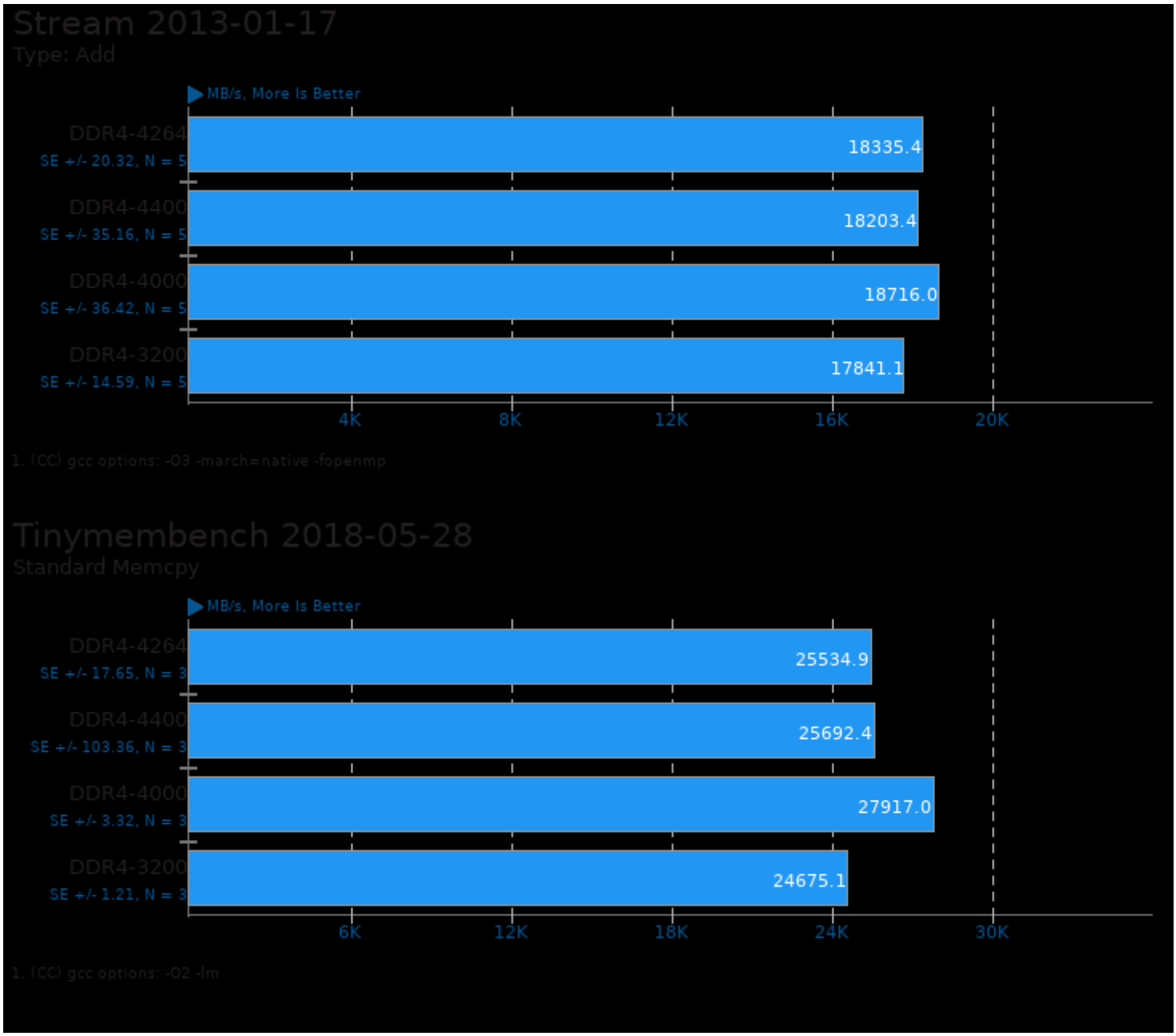
Memory Scaling



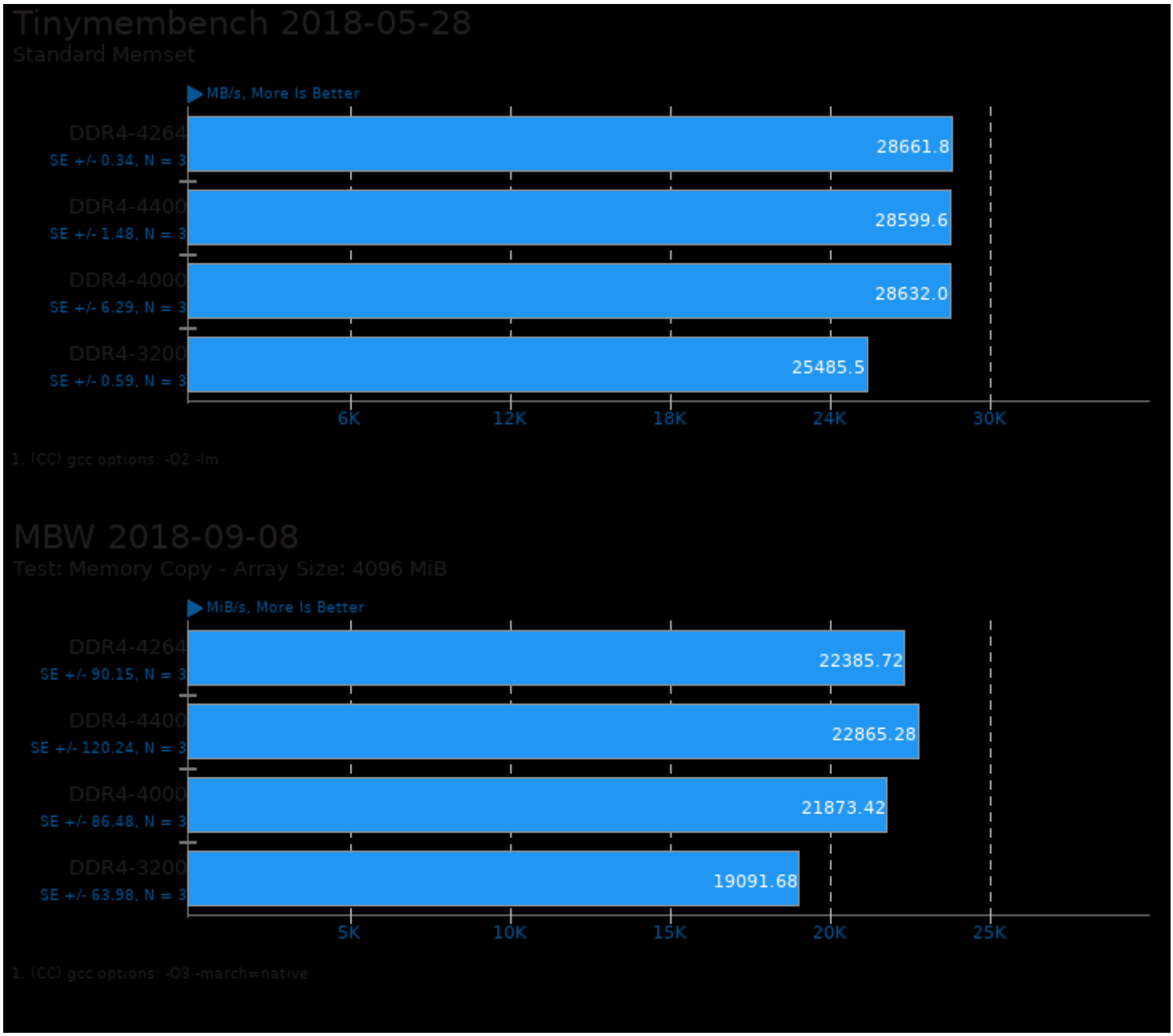
Memory Scaling



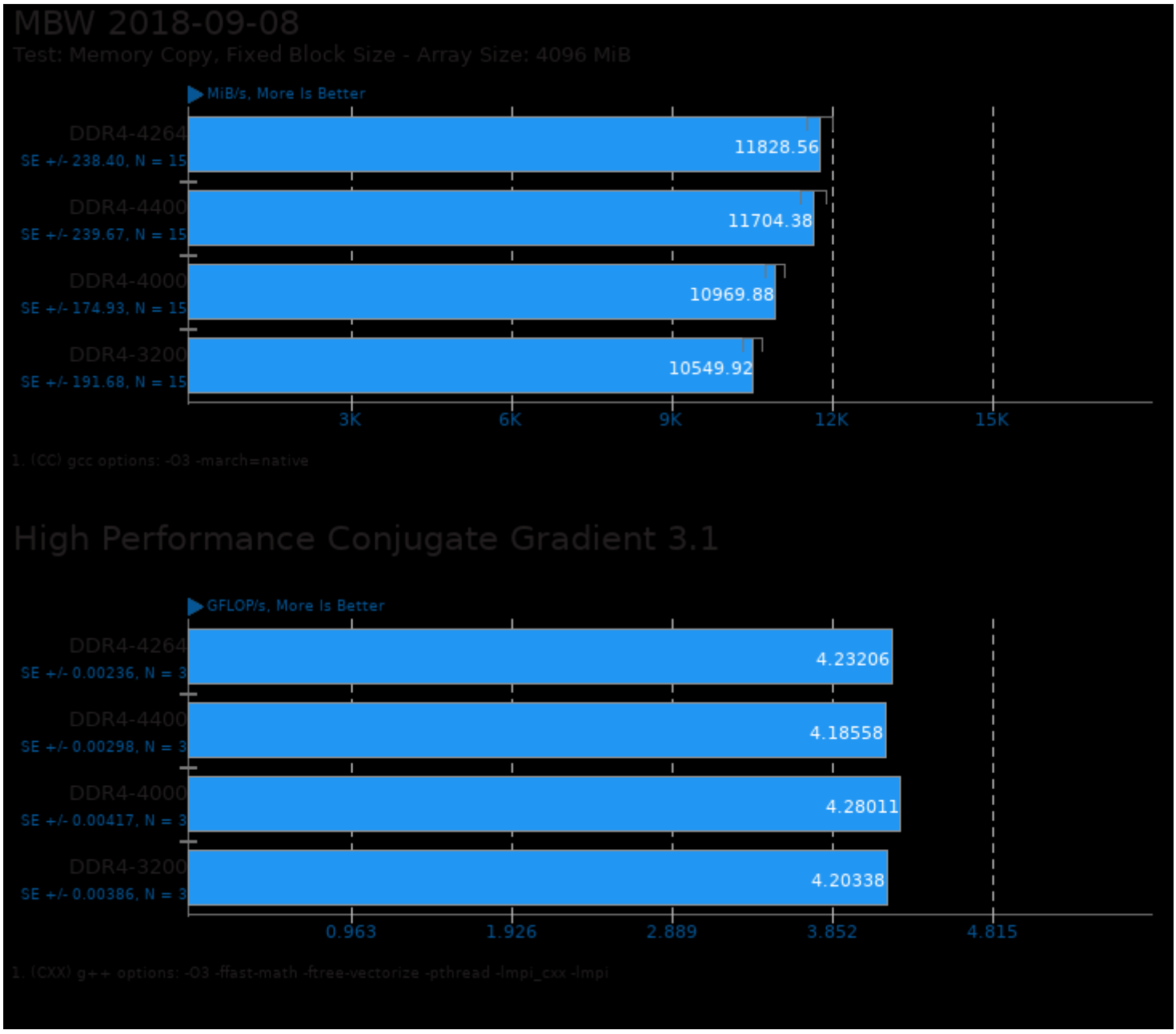
Memory Scaling



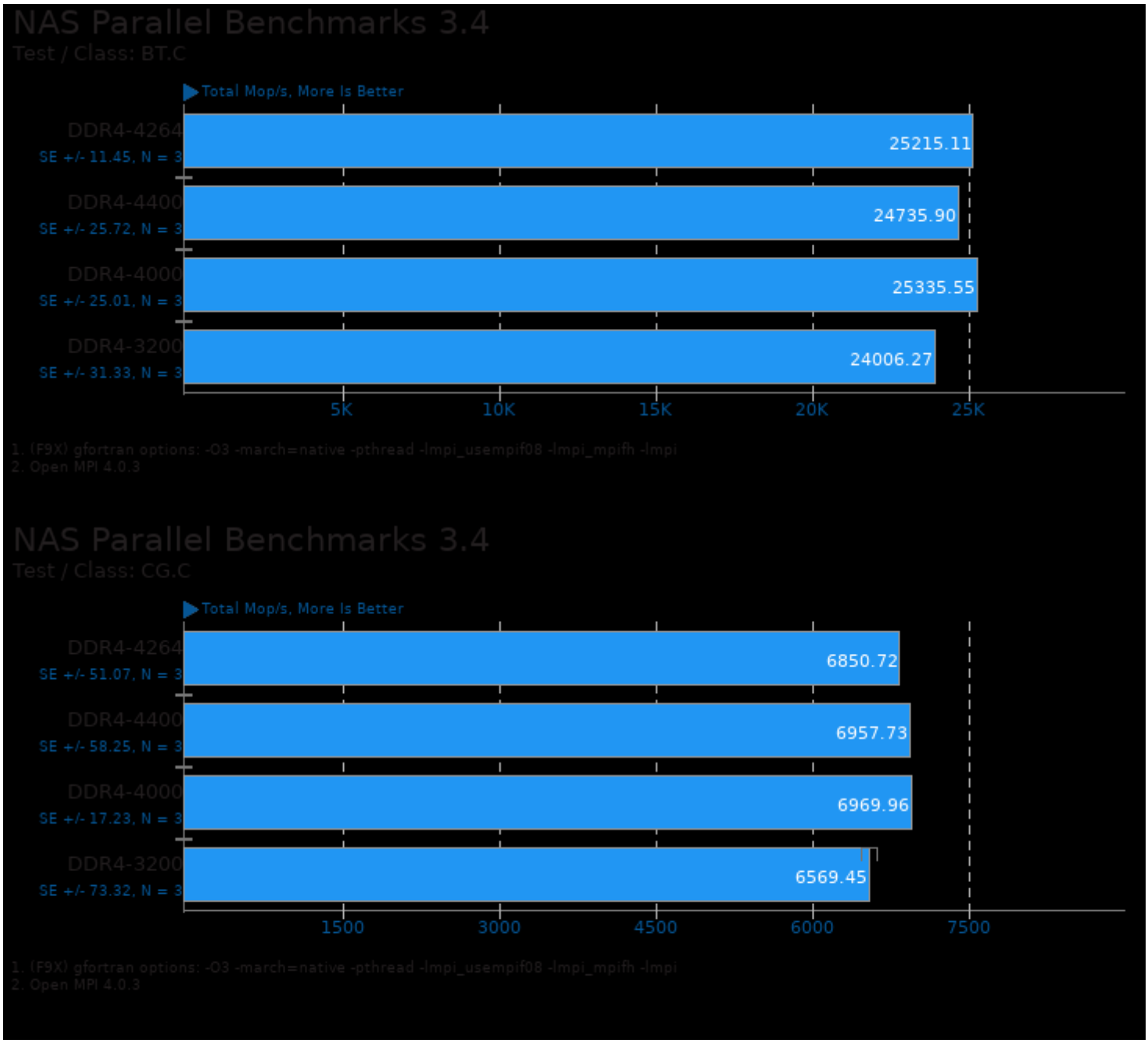
Memory Scaling



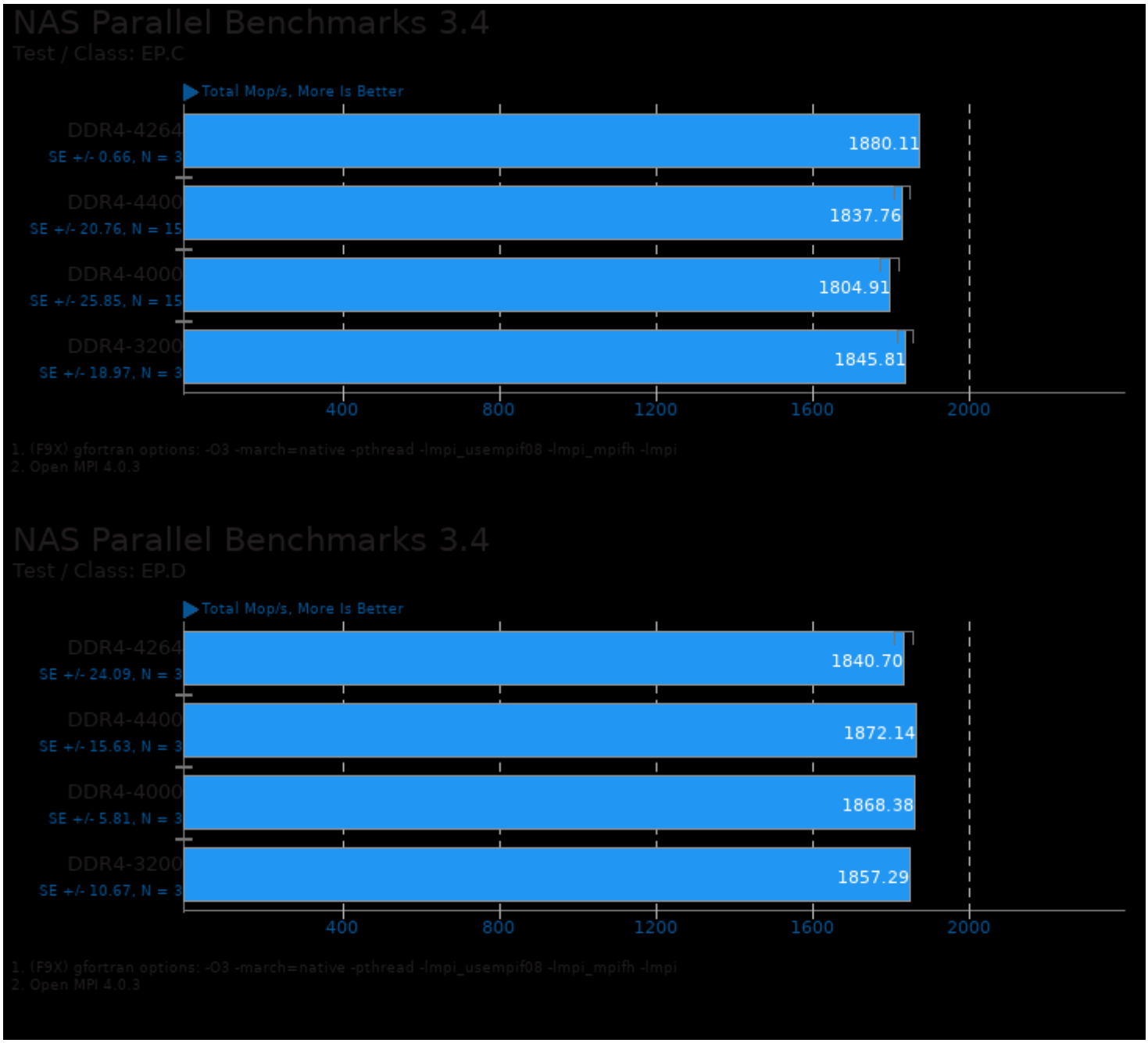
Memory Scaling



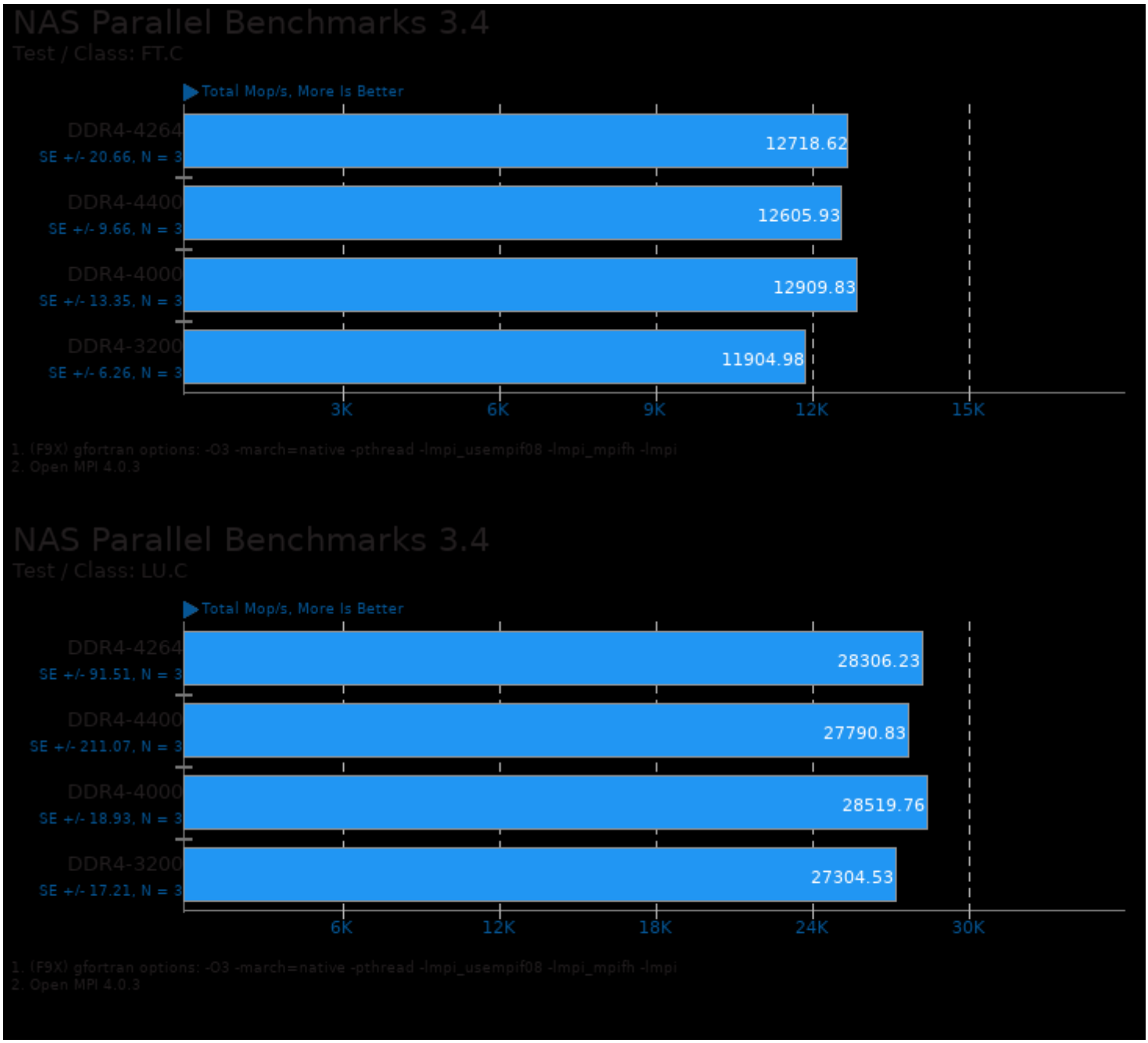
Memory Scaling



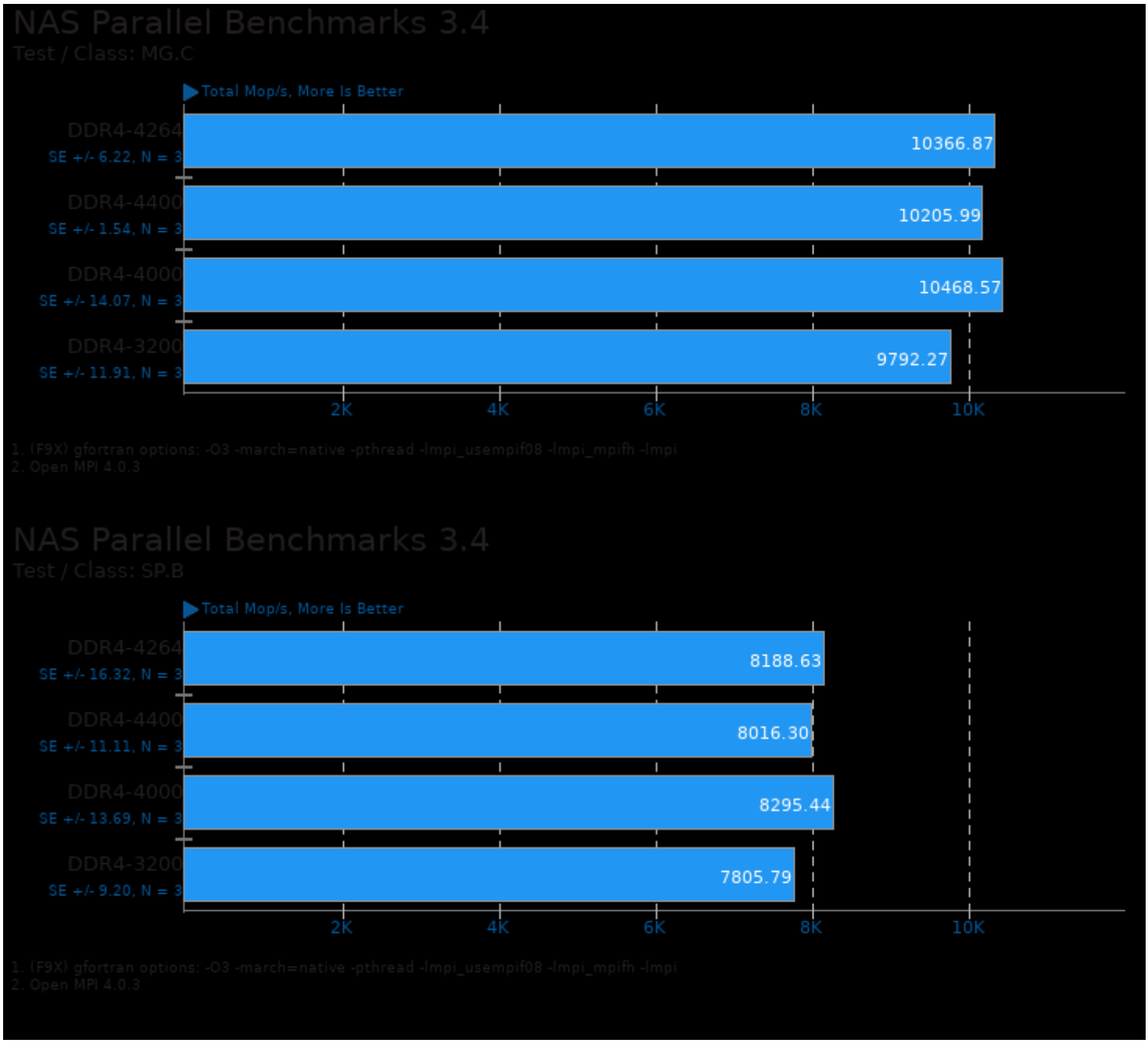
Memory Scaling



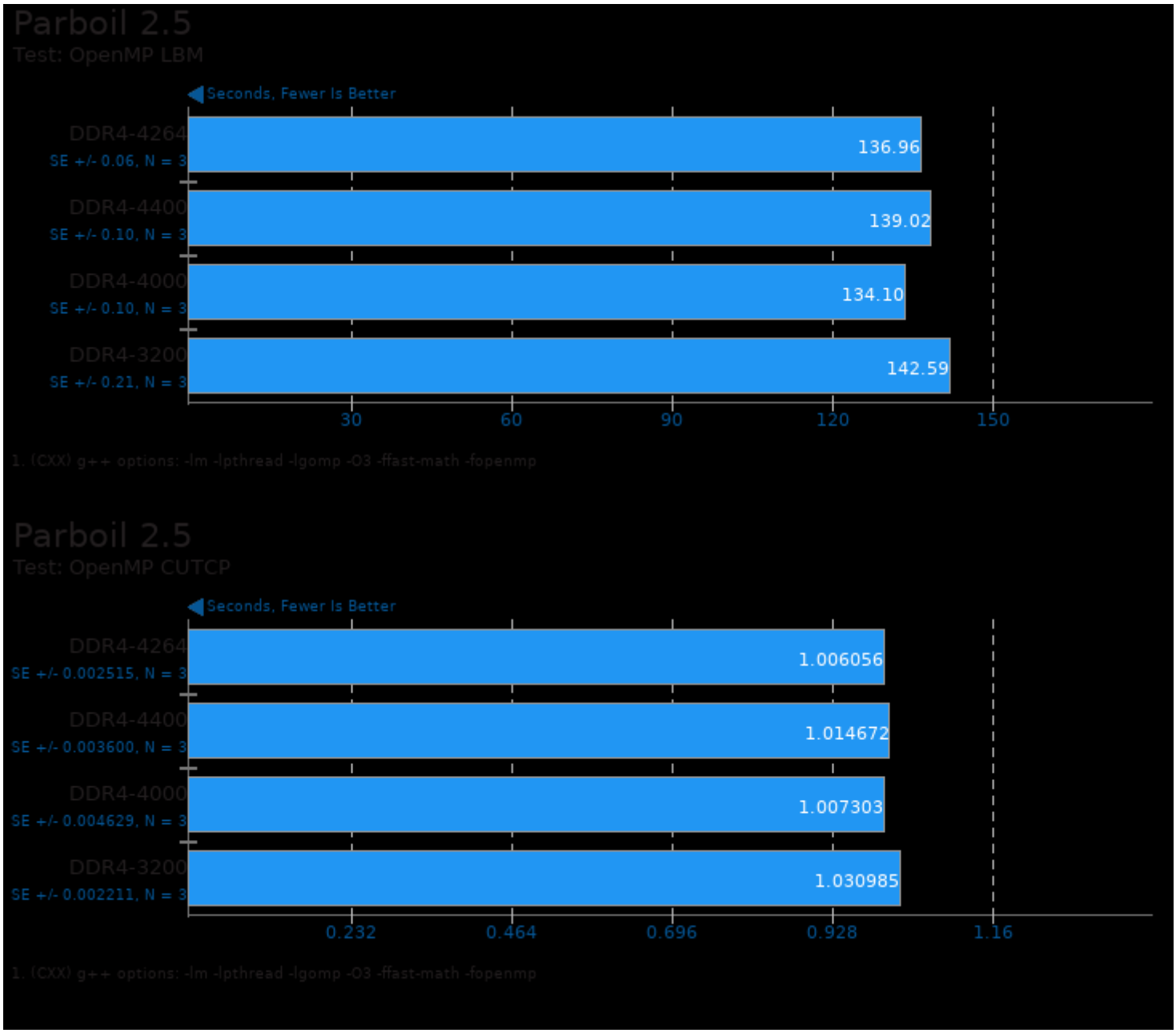
Memory Scaling



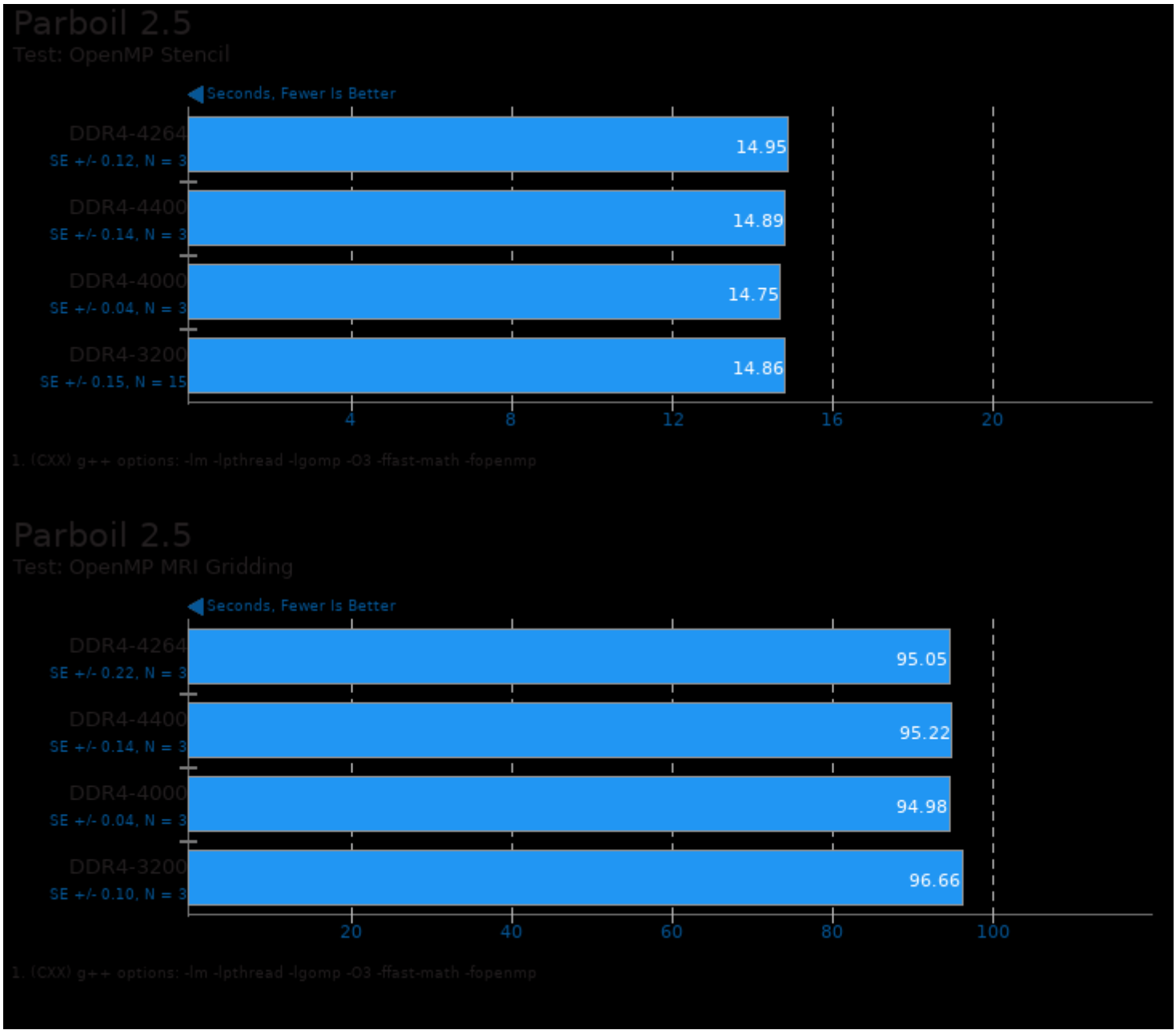
Memory Scaling



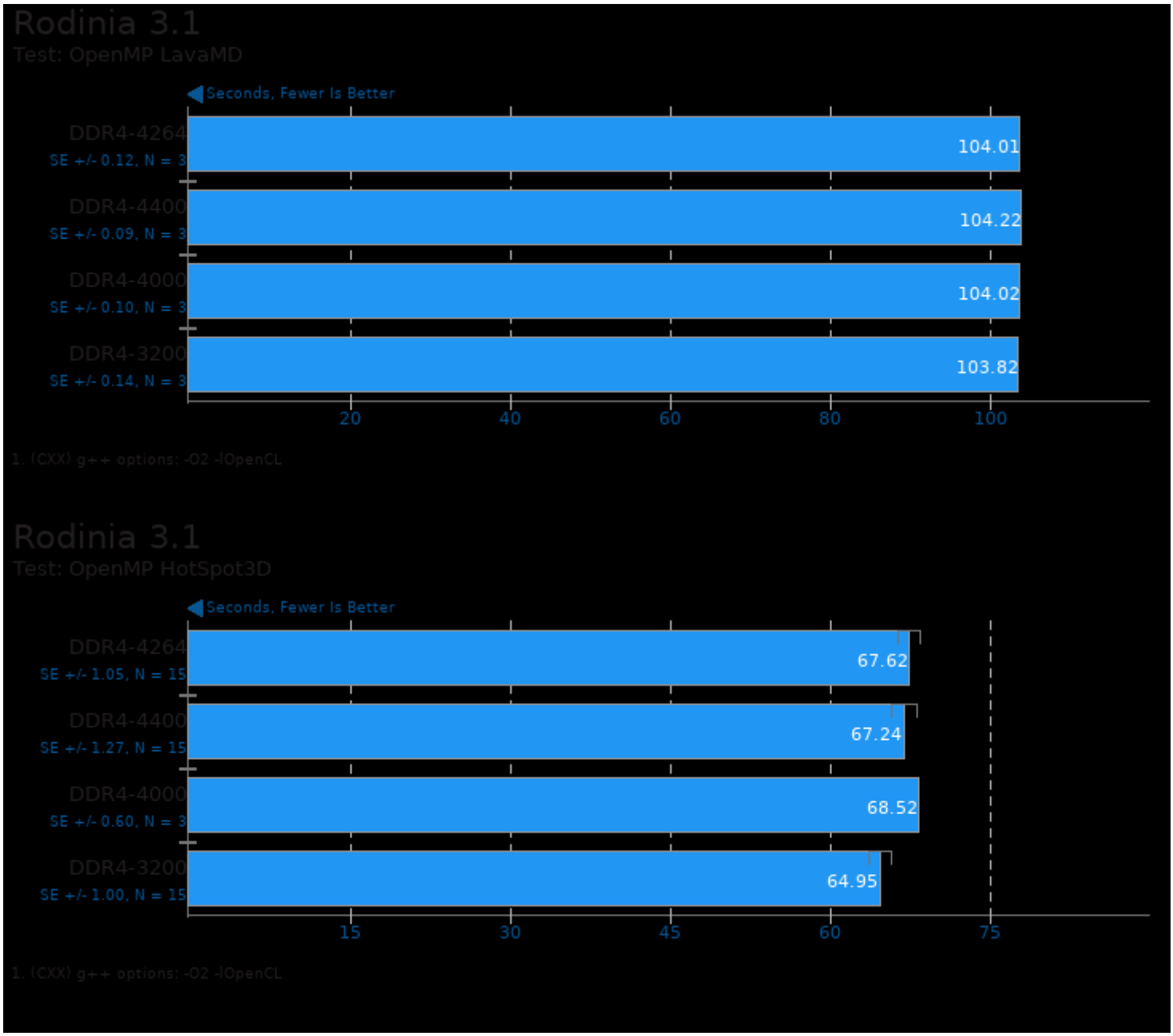
Memory Scaling



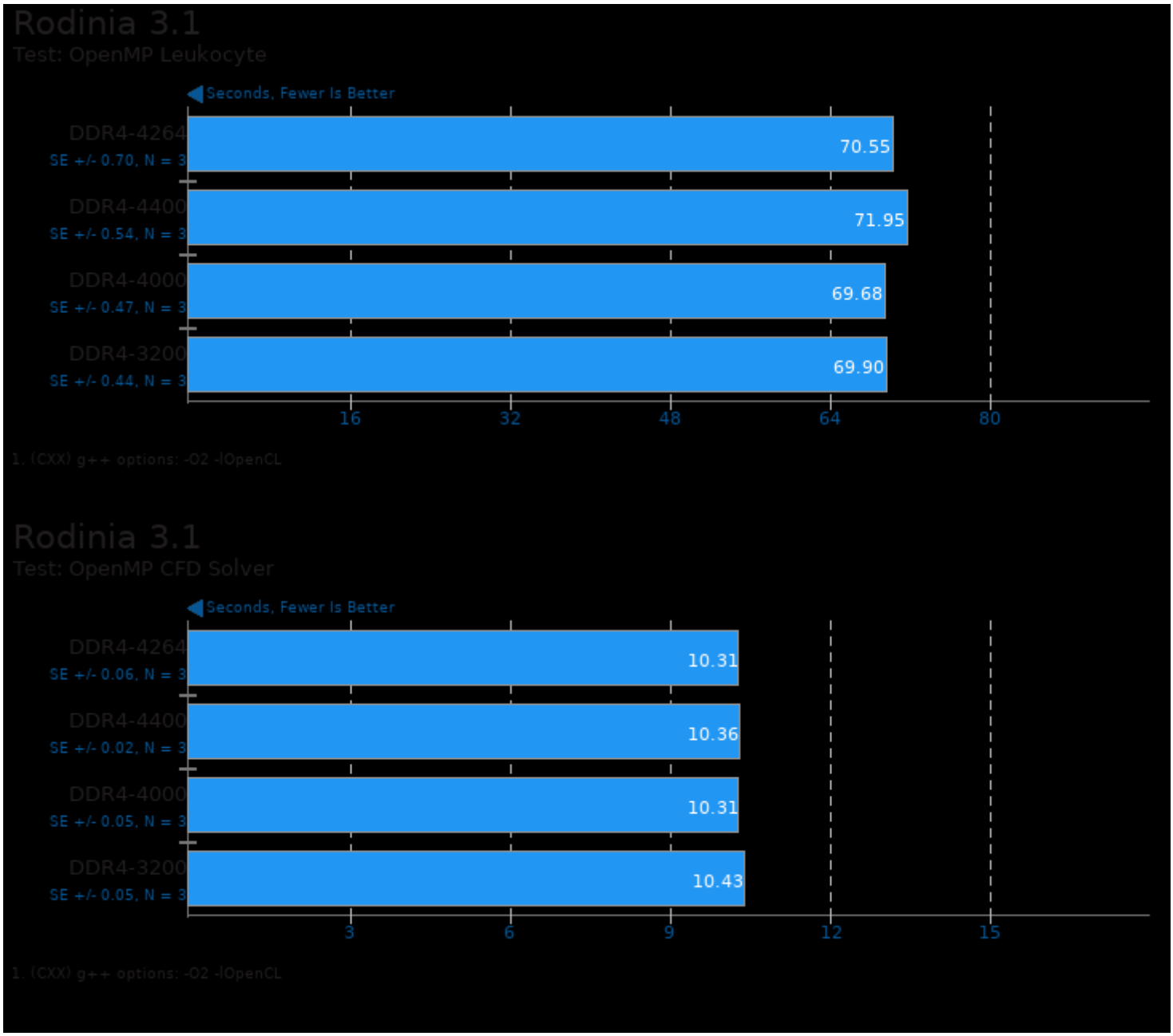
Memory Scaling



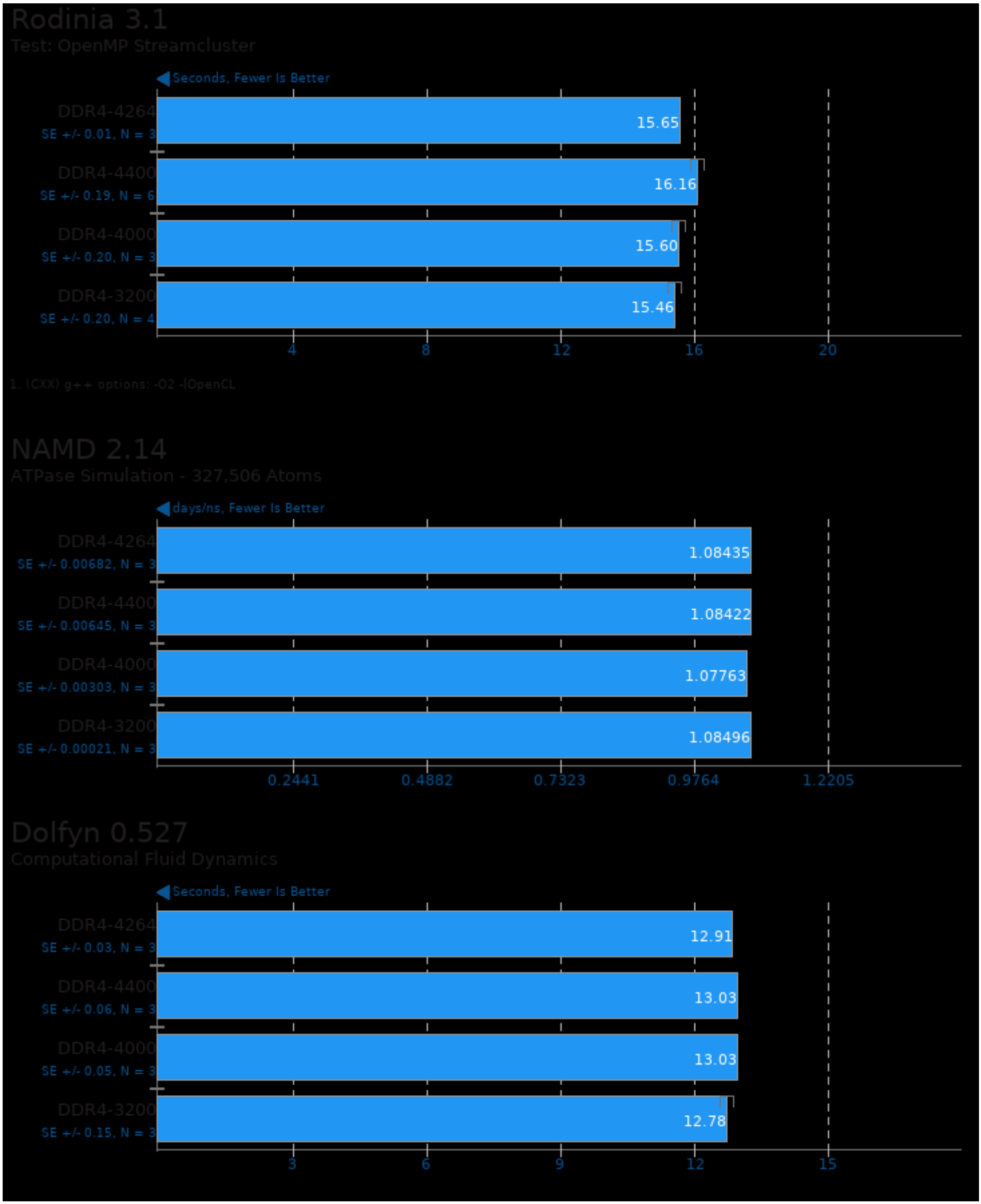
Memory Scaling



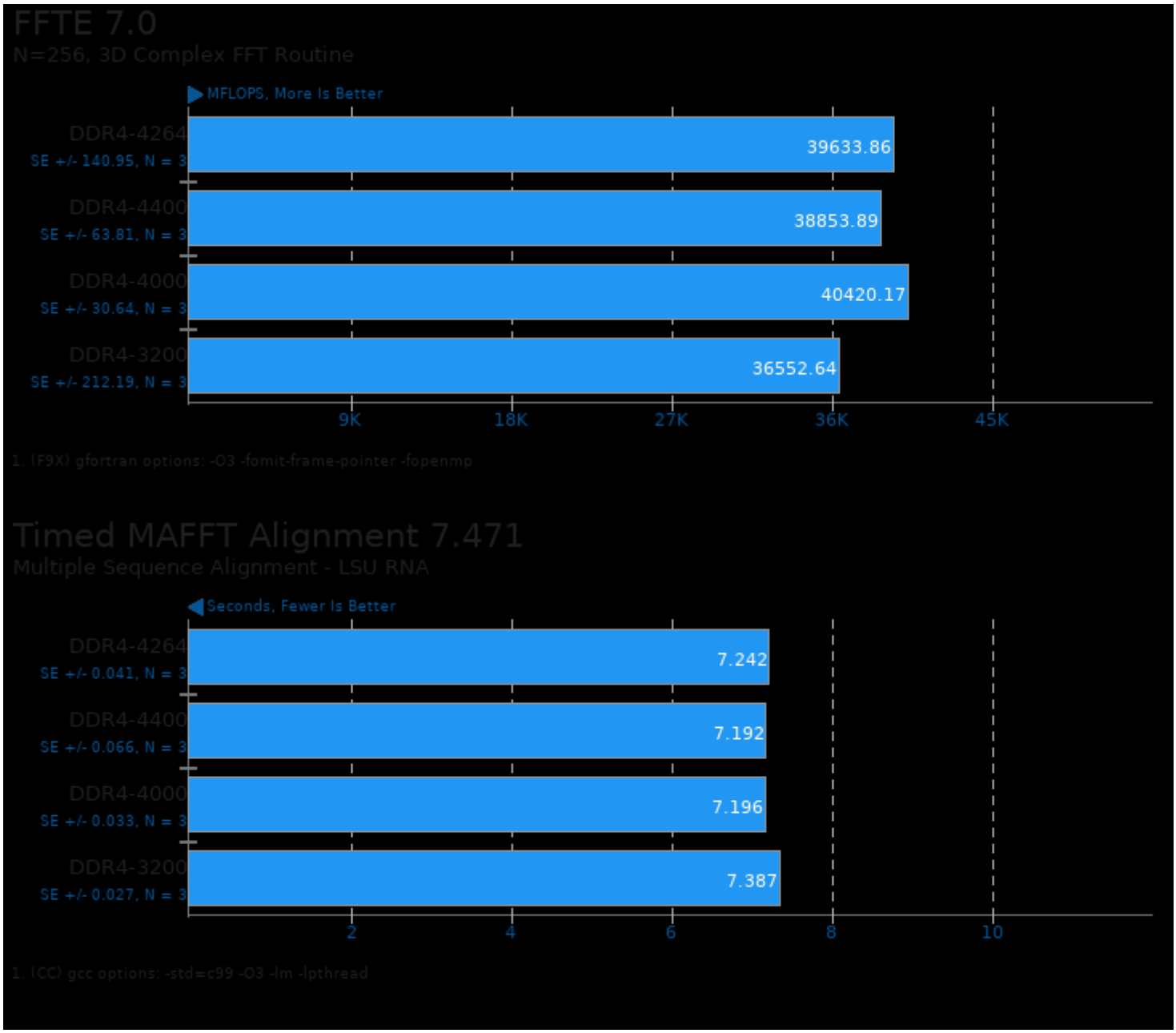
Memory Scaling



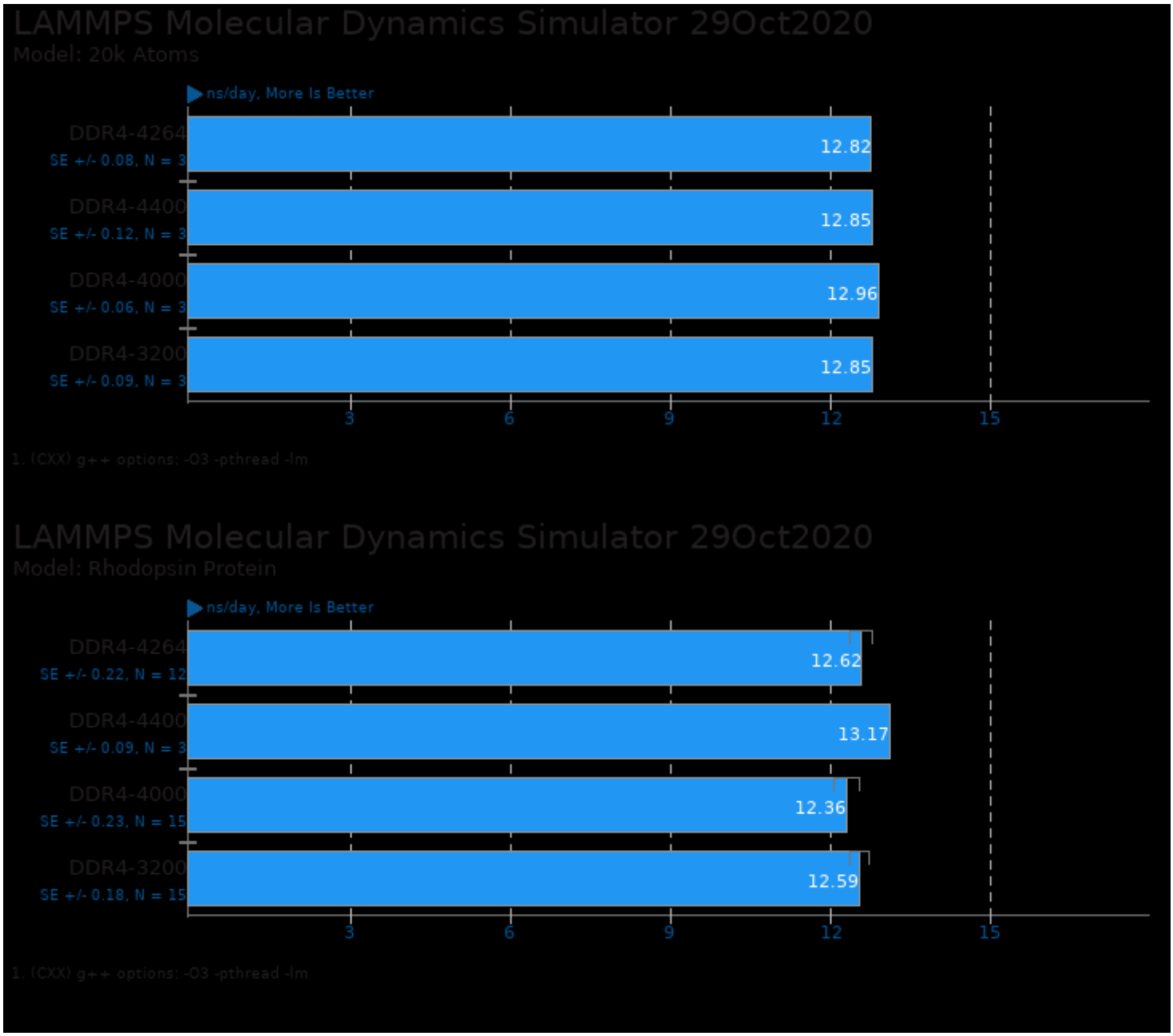
Memory Scaling



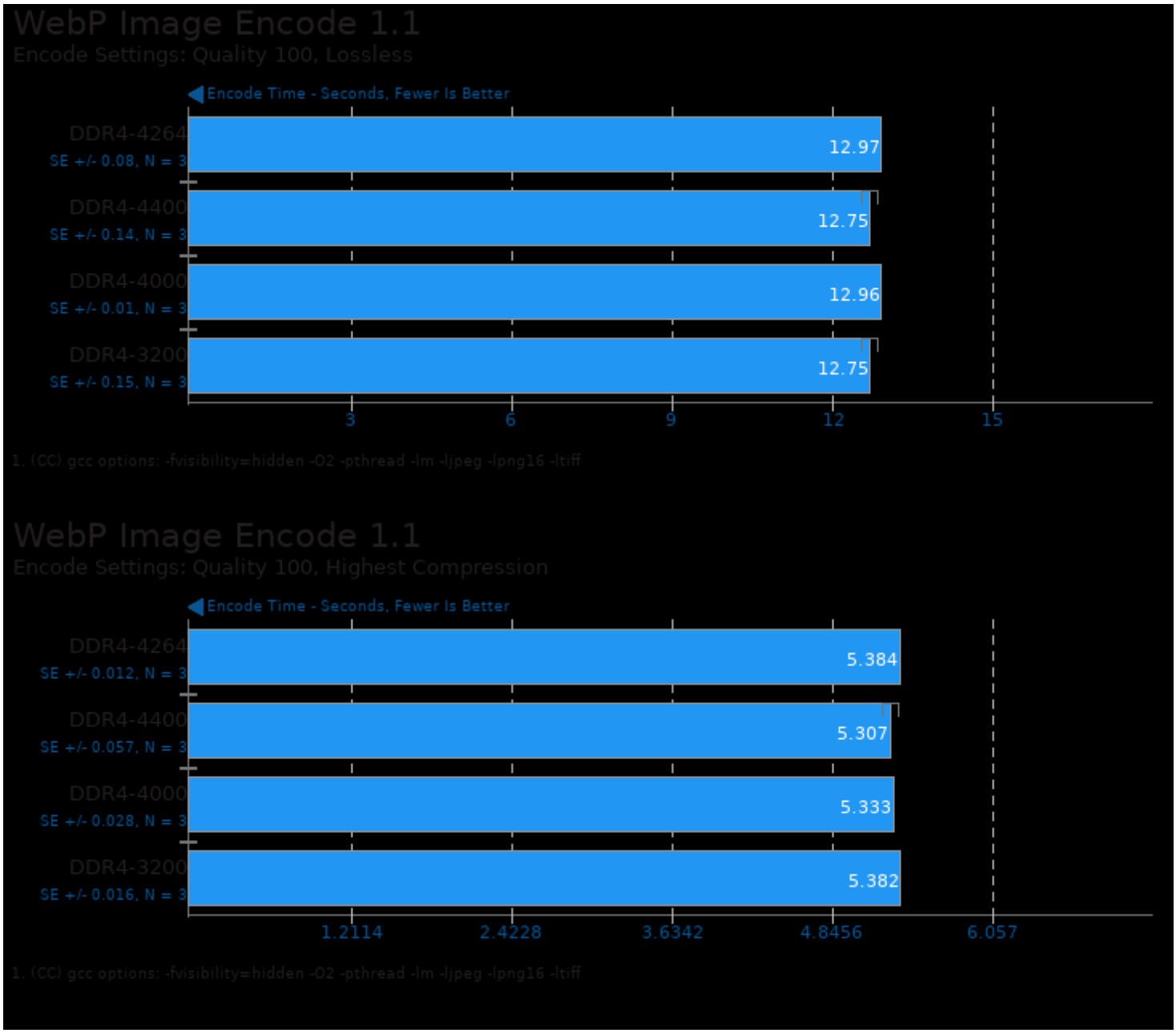
Memory Scaling



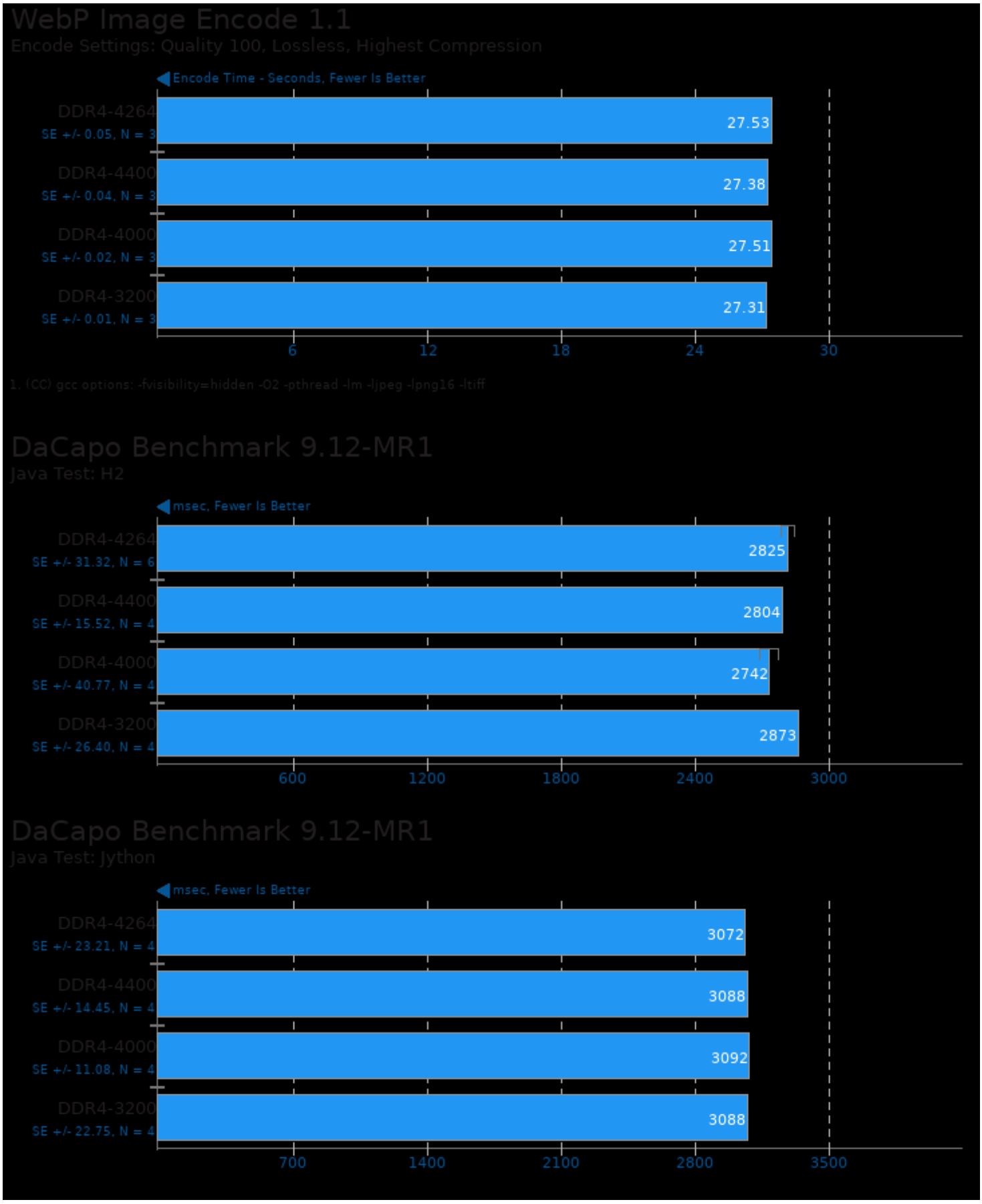
Memory Scaling



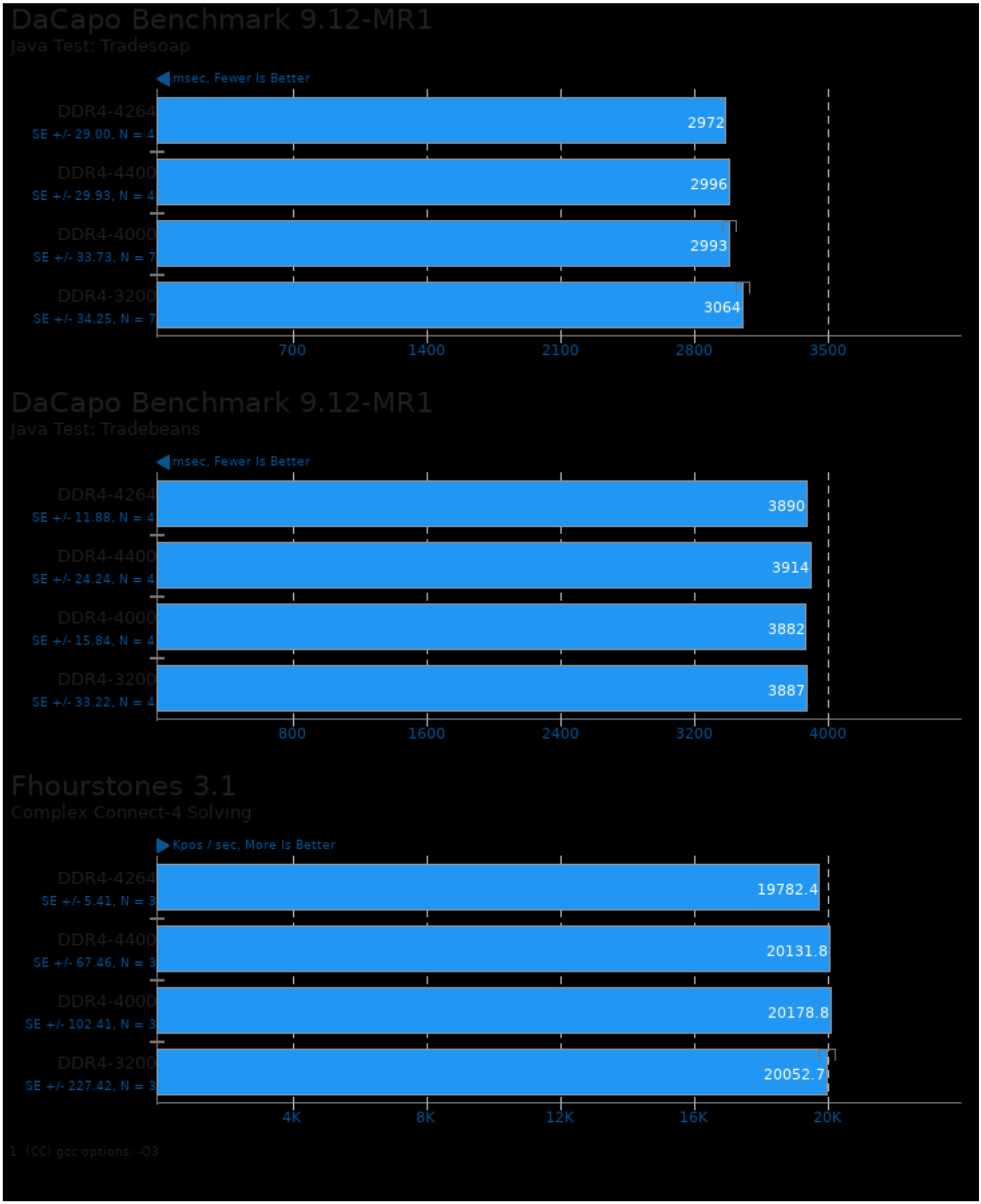
Memory Scaling



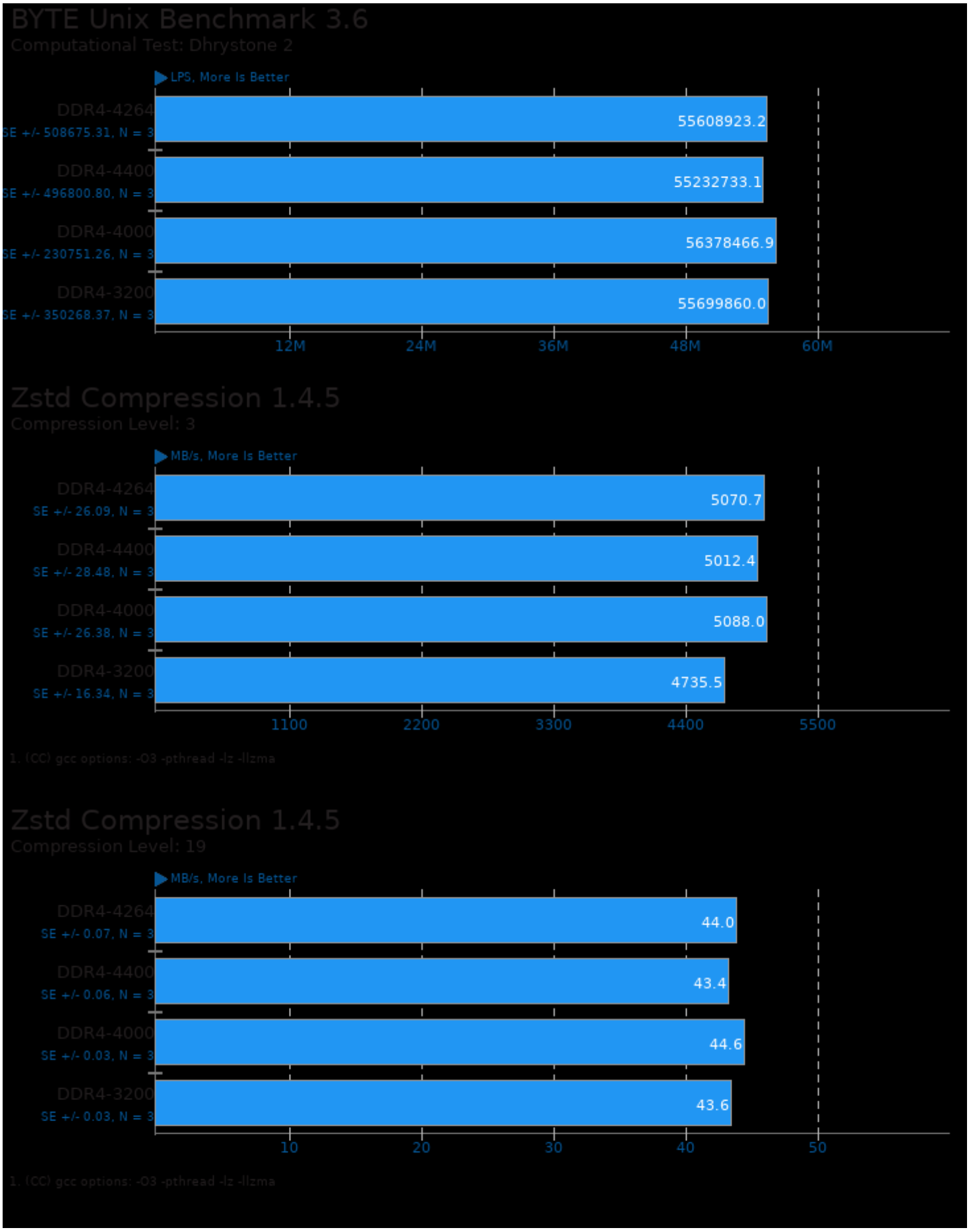
Memory Scaling



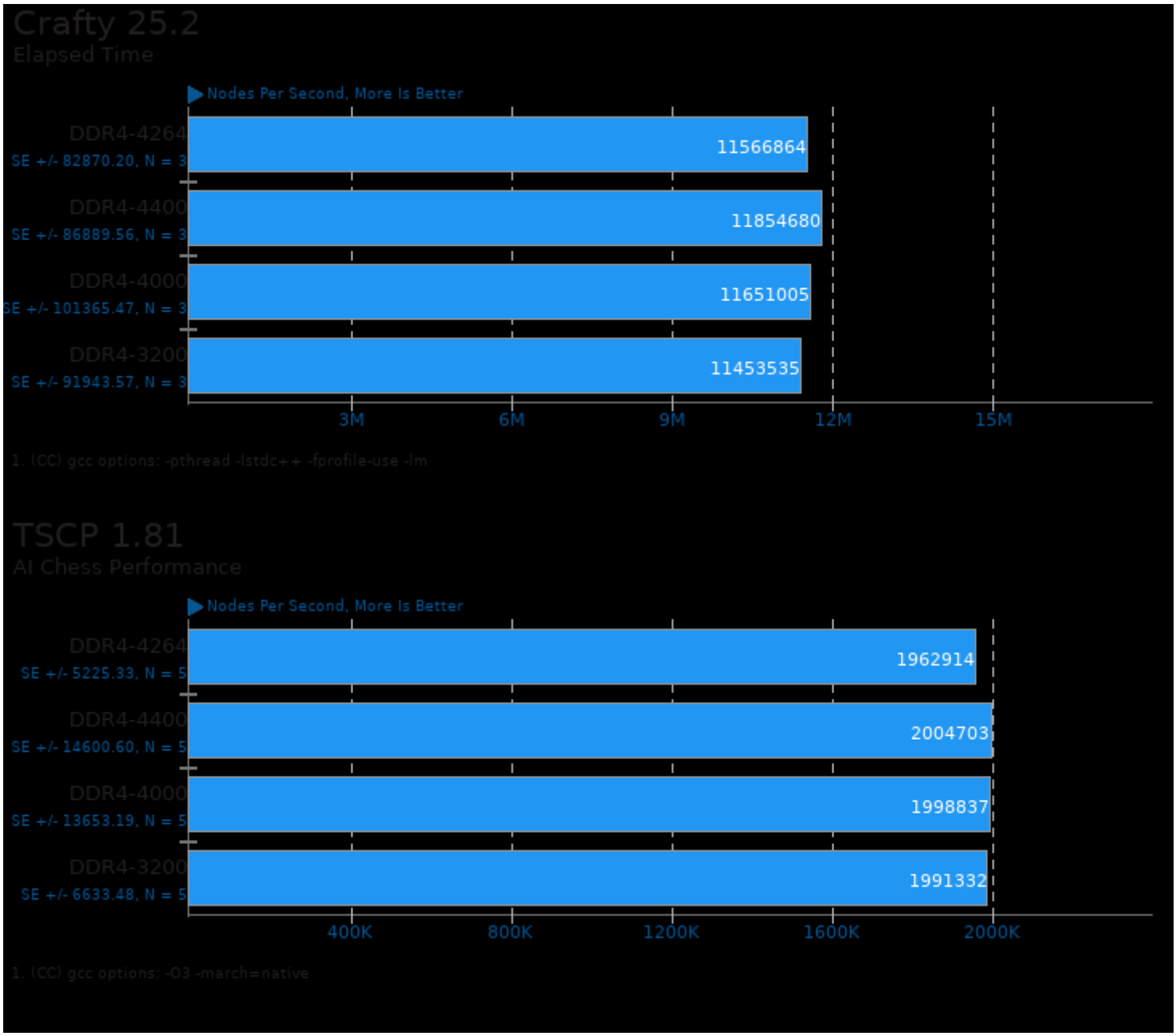
Memory Scaling



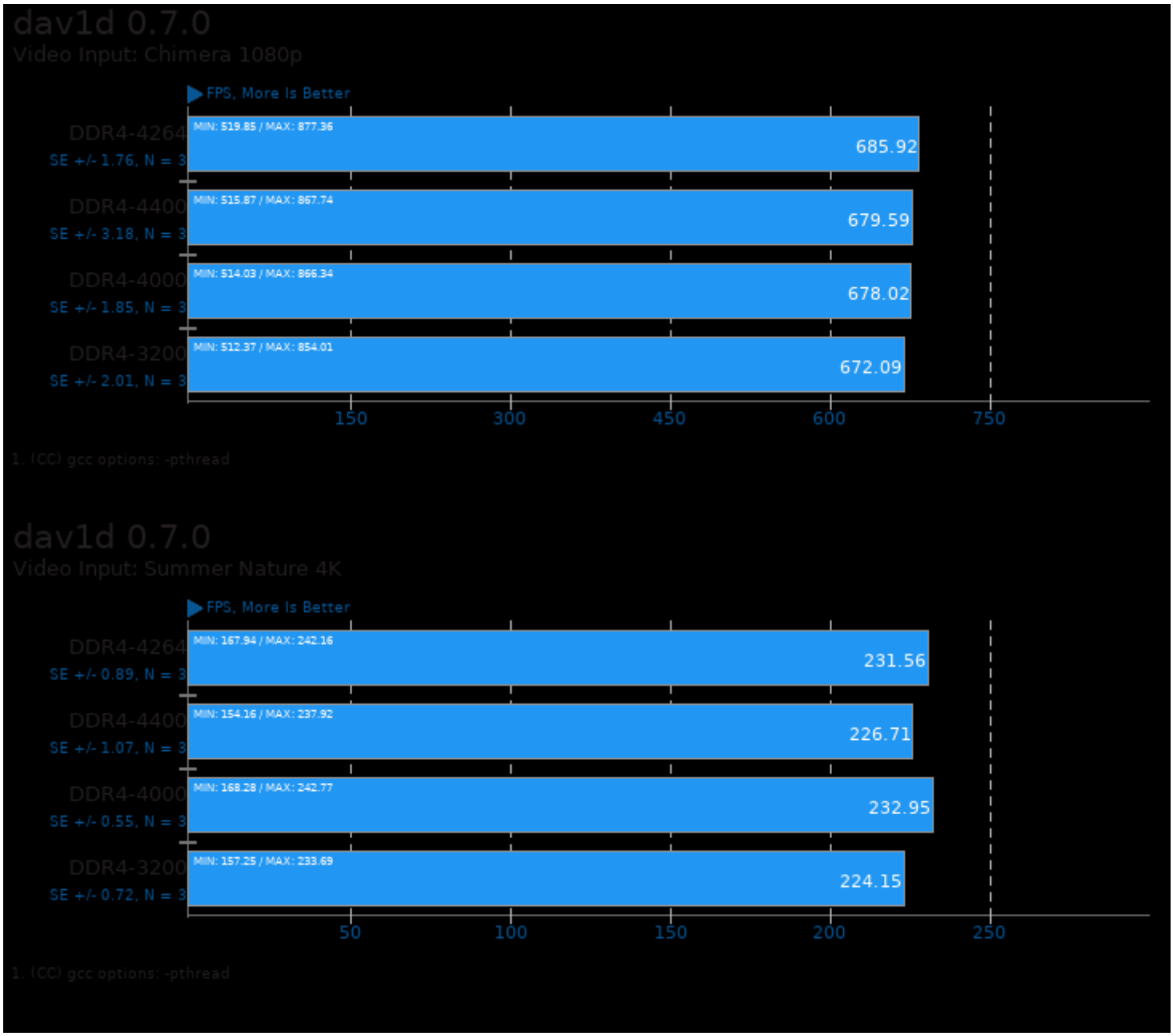
Memory Scaling



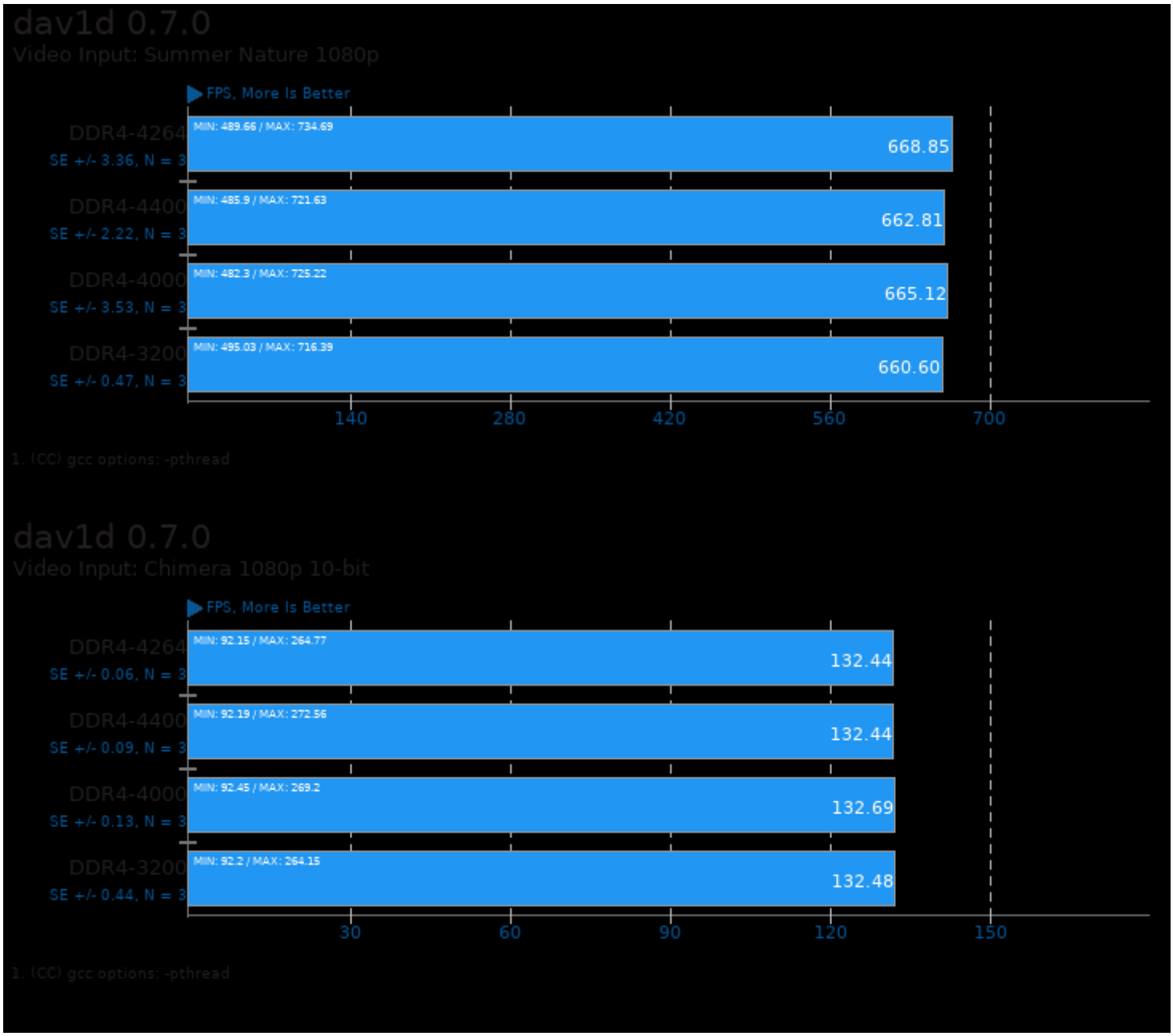
Memory Scaling



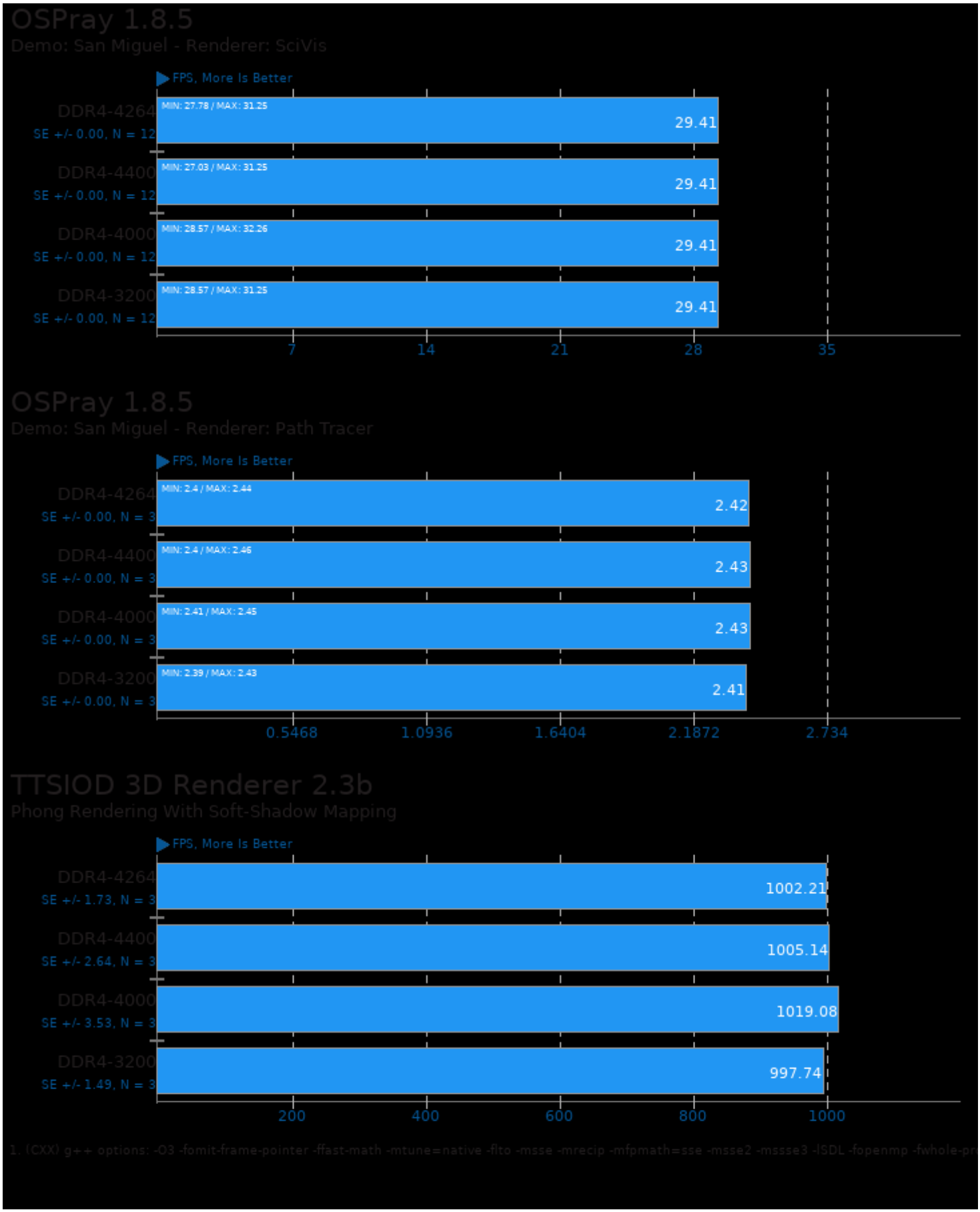
Memory Scaling



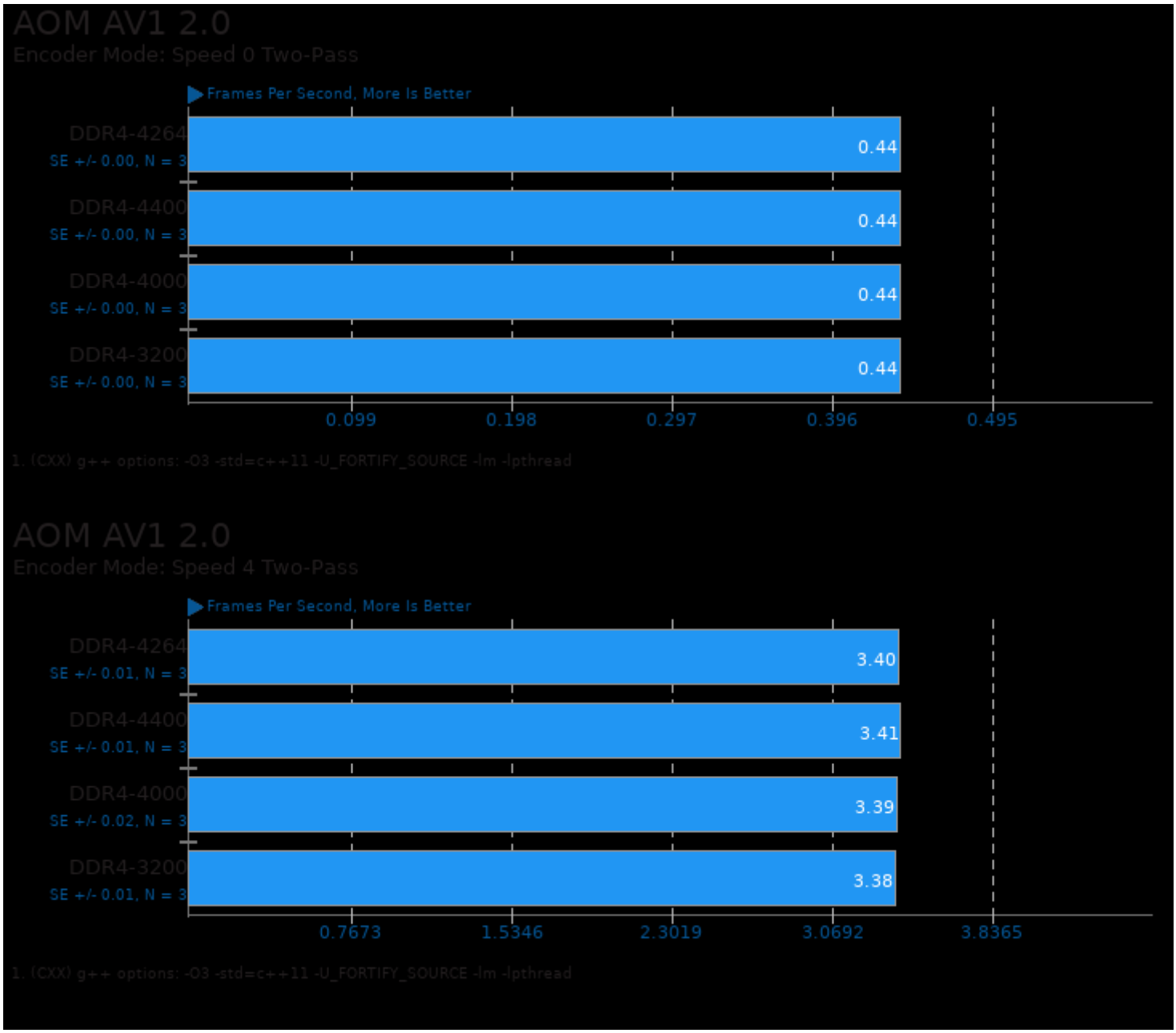
Memory Scaling



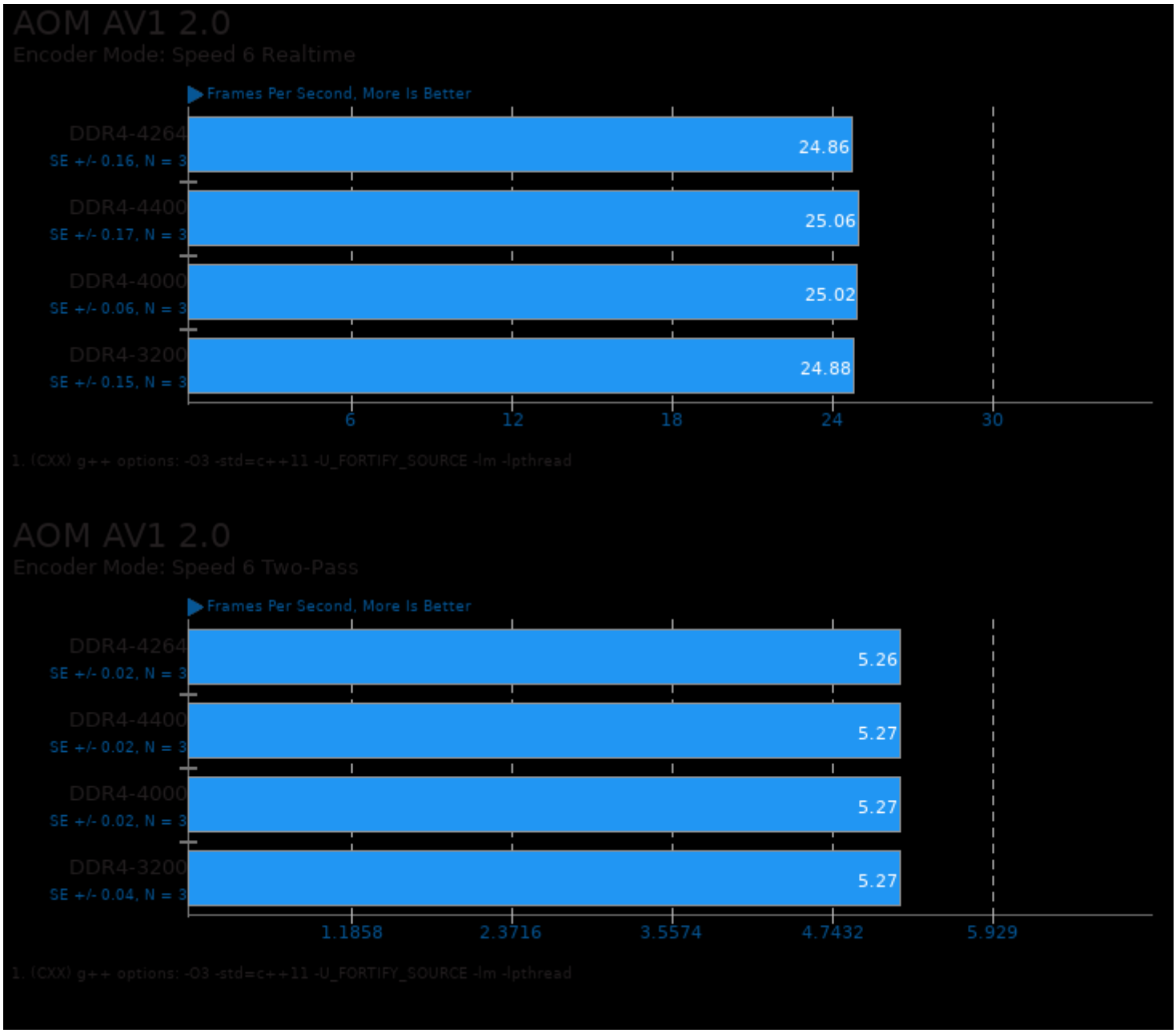
Memory Scaling



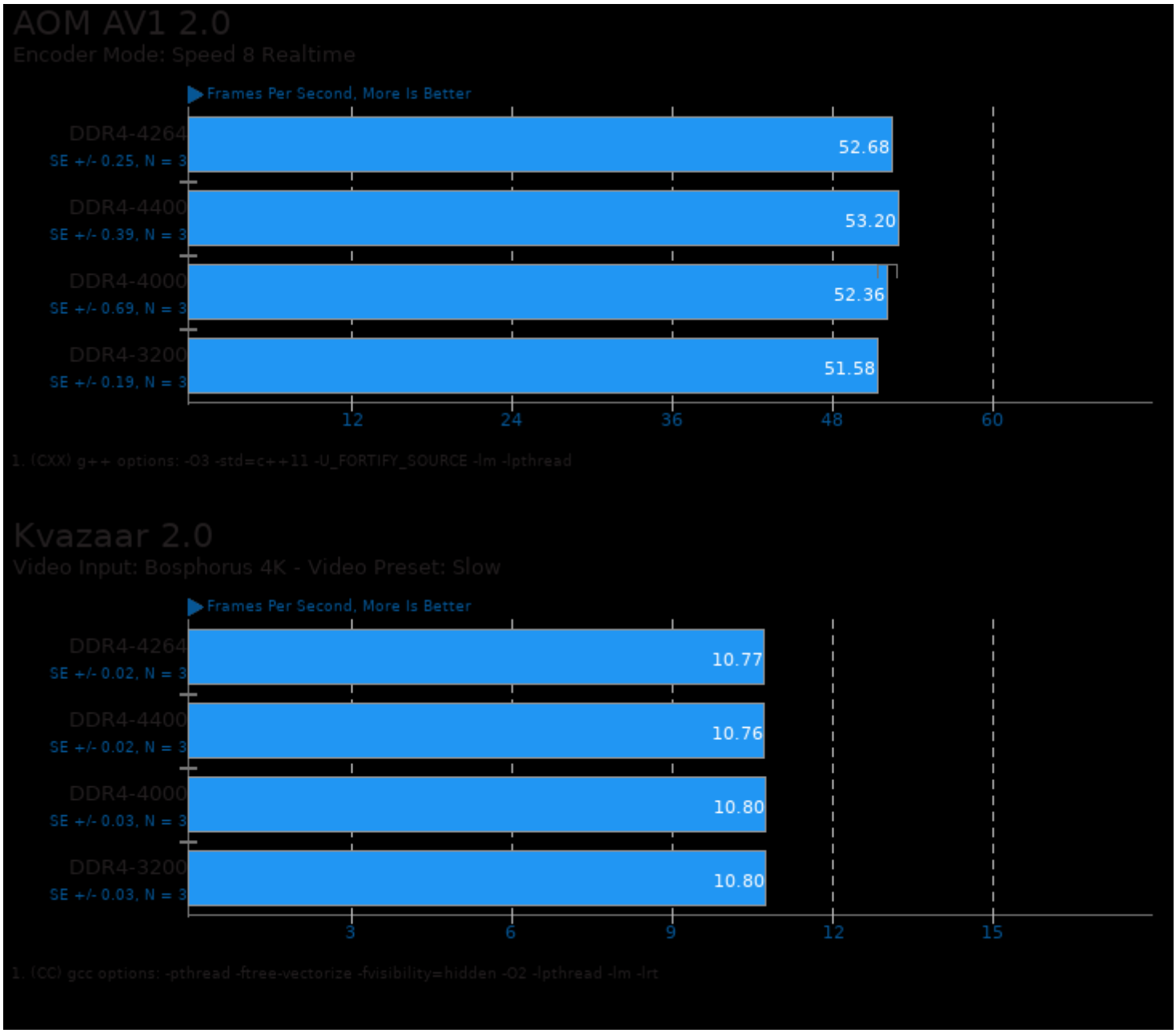
Memory Scaling



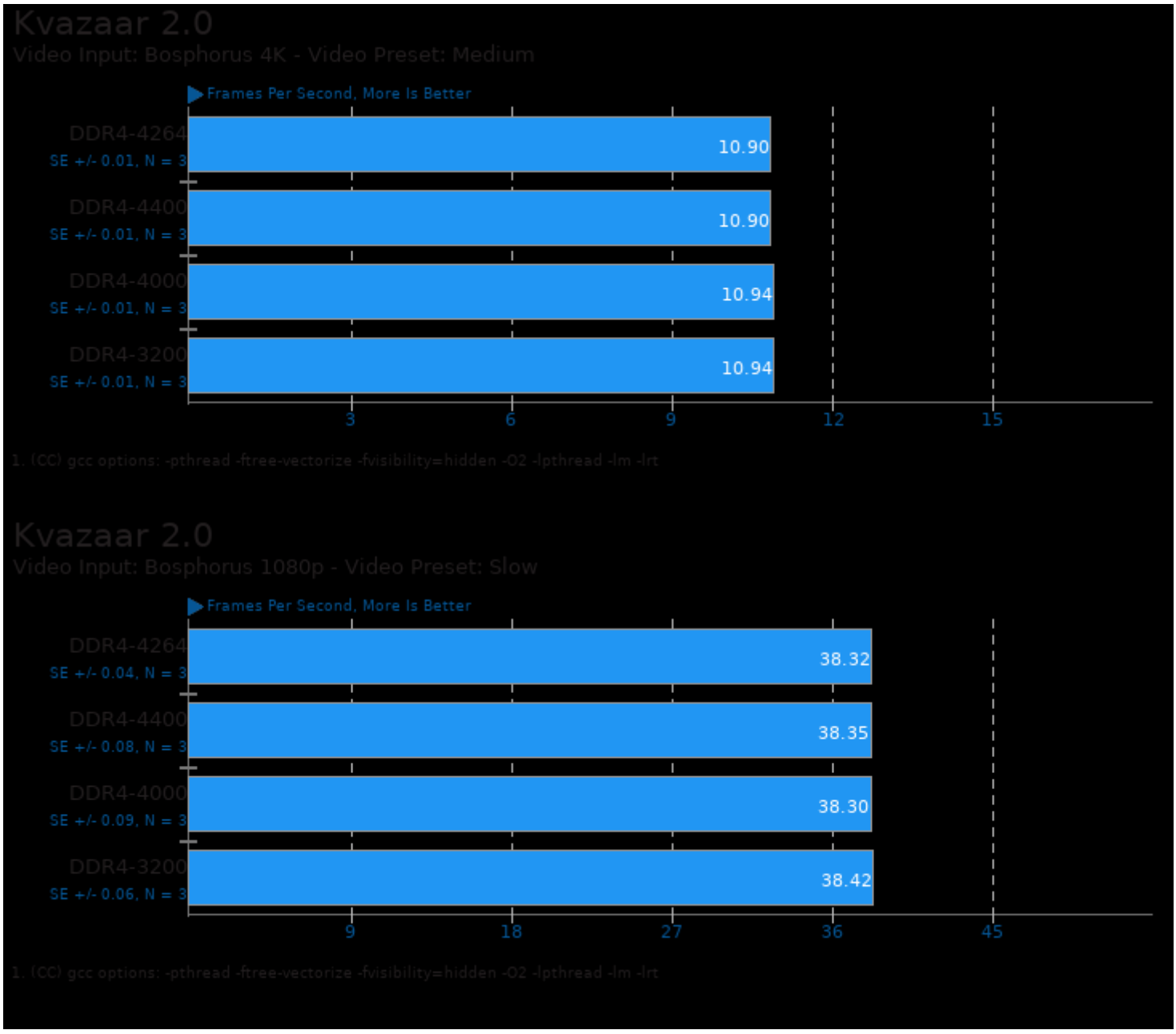
Memory Scaling



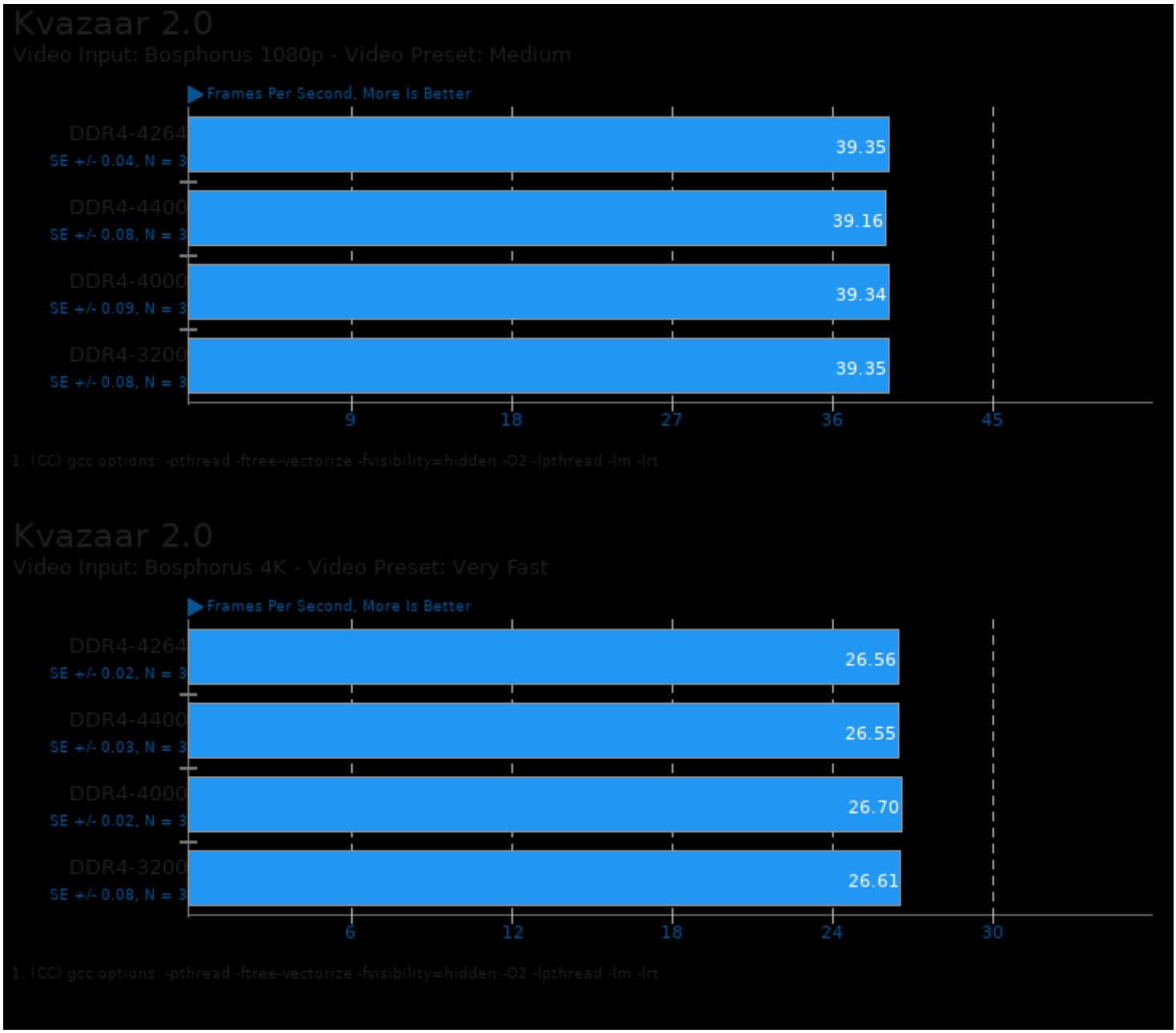
Memory Scaling



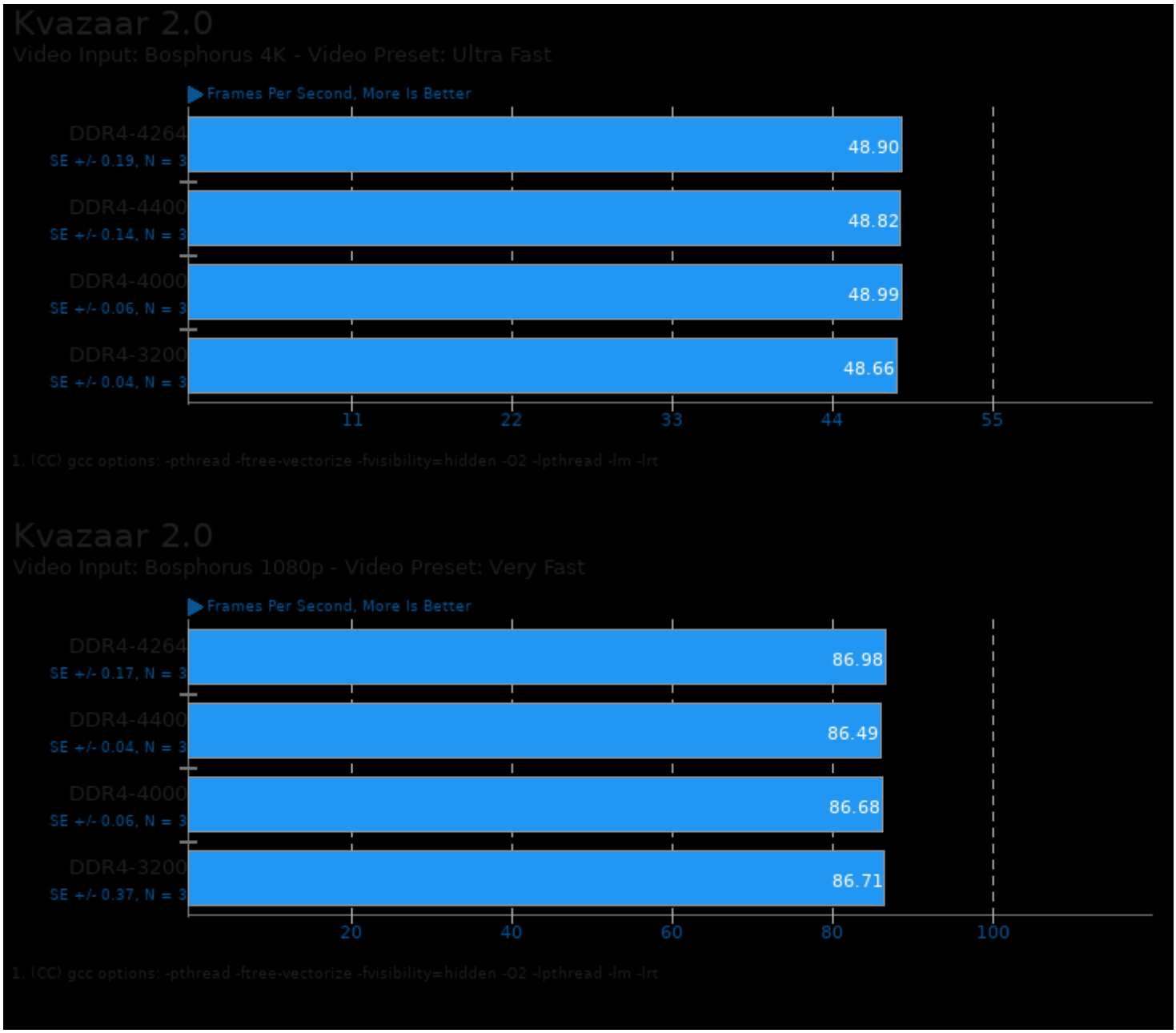
Memory Scaling



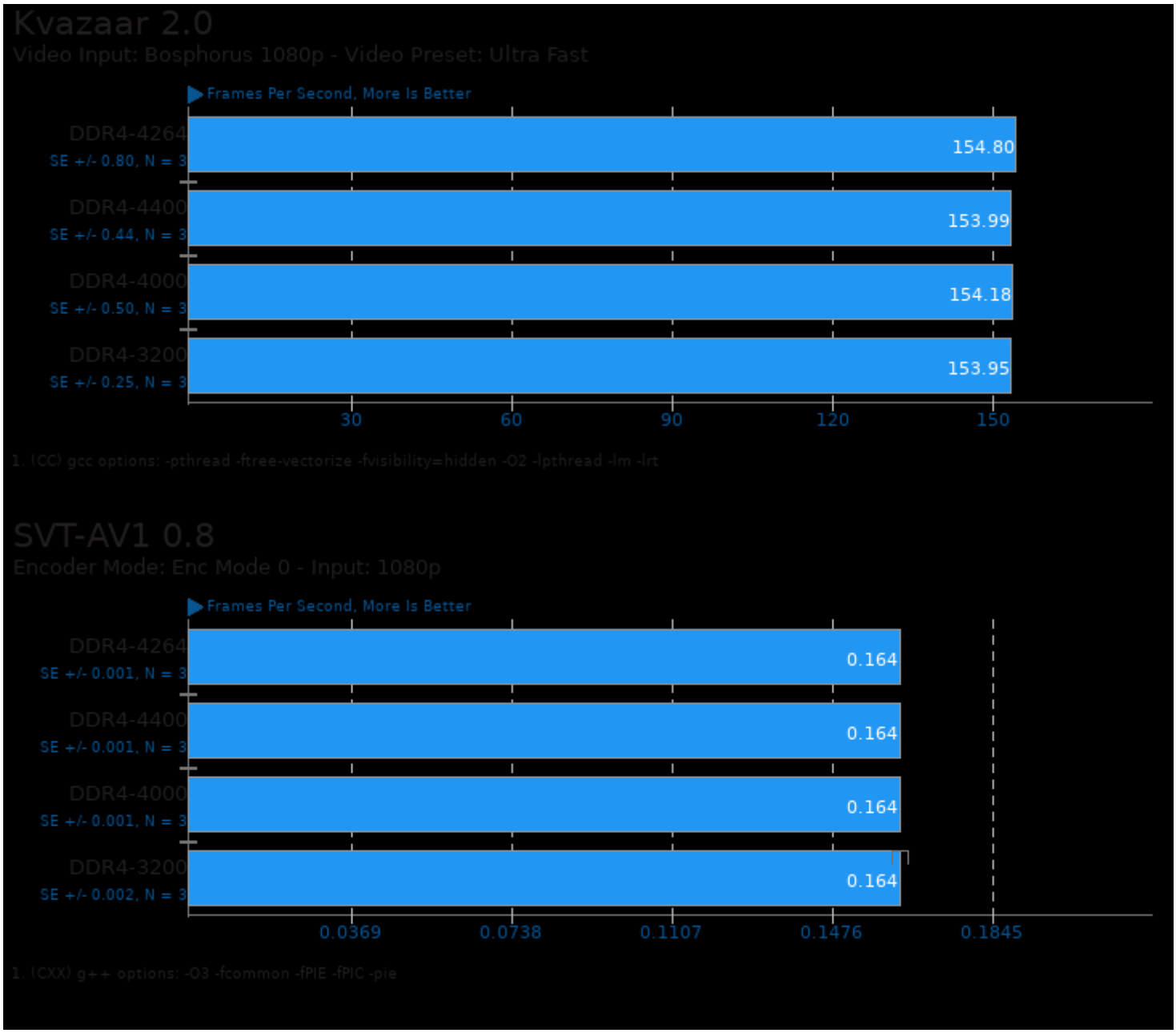
Memory Scaling



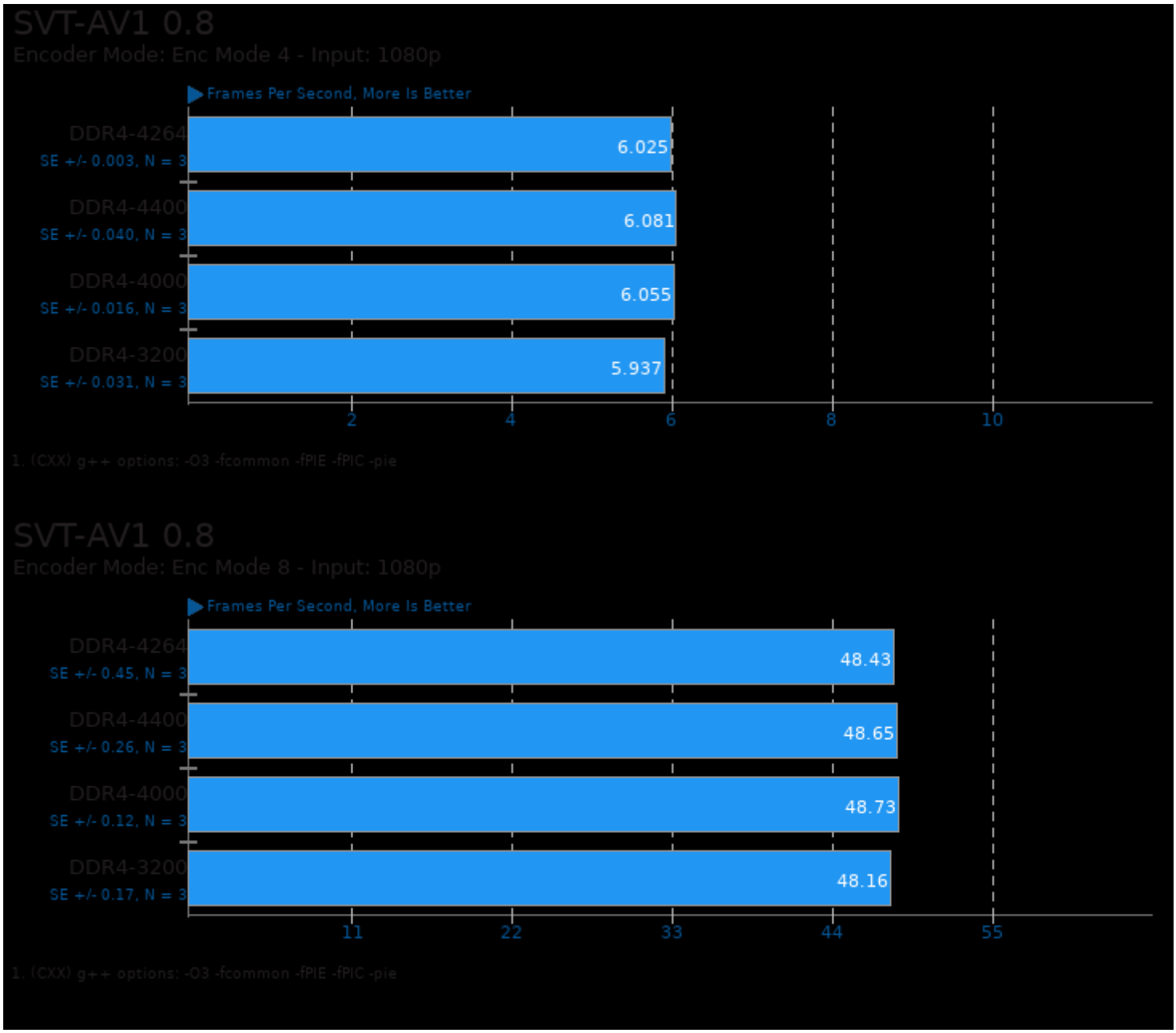
Memory Scaling



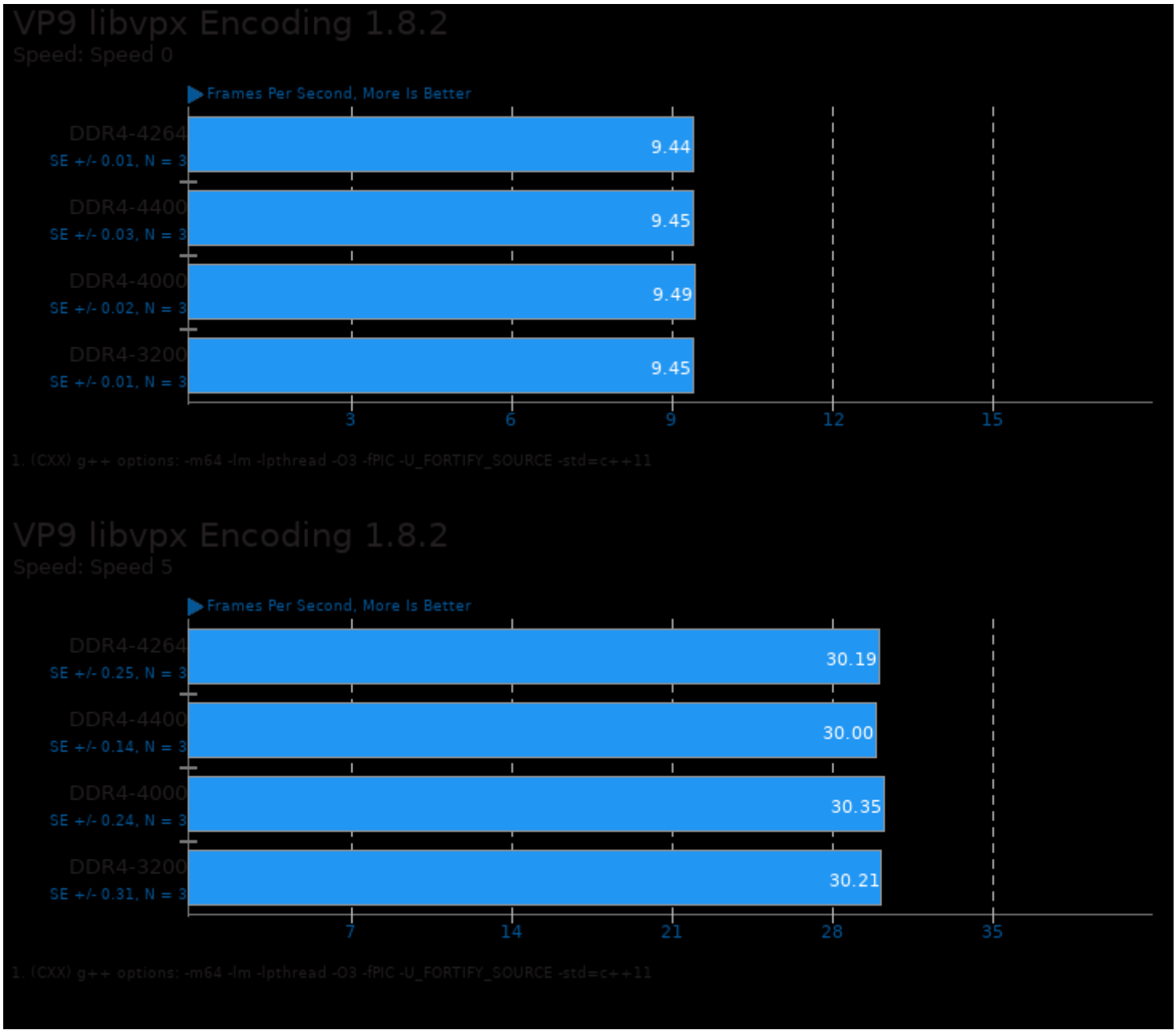
Memory Scaling



Memory Scaling



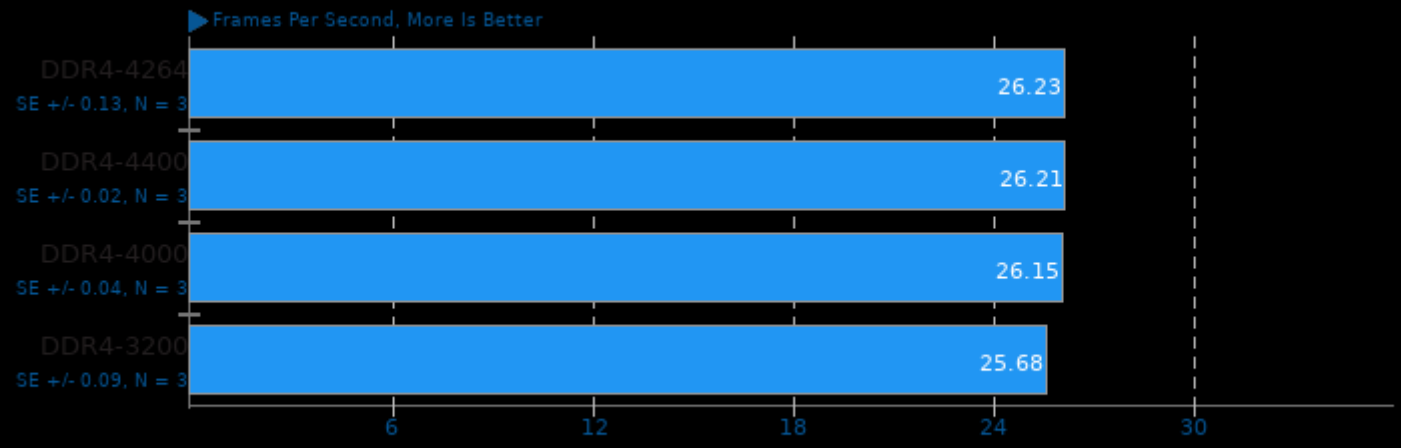
Memory Scaling



Memory Scaling

x265 3.4

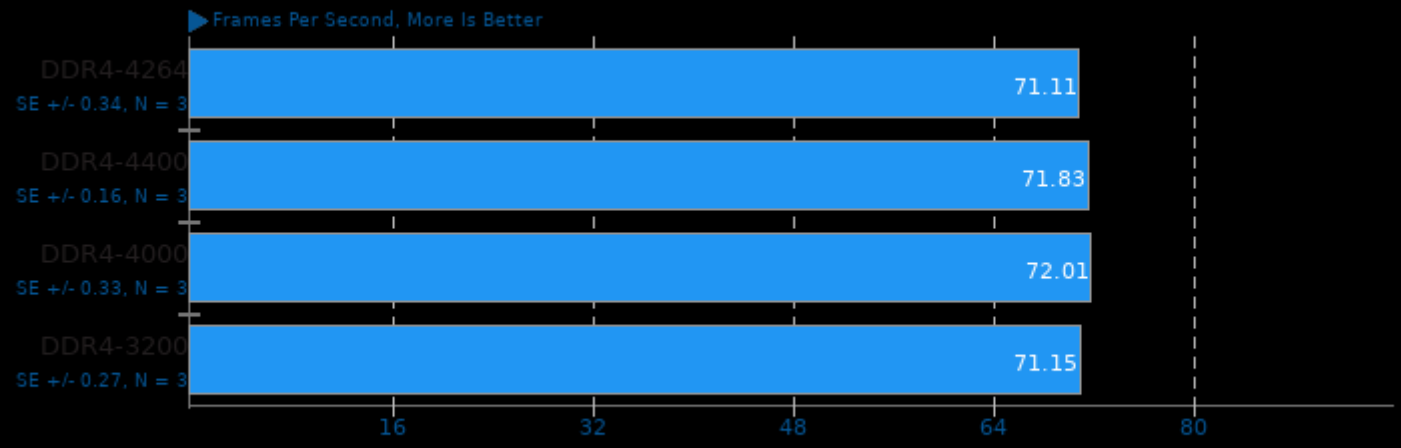
Video Input: Bosphorus 4K



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

x265 3.4

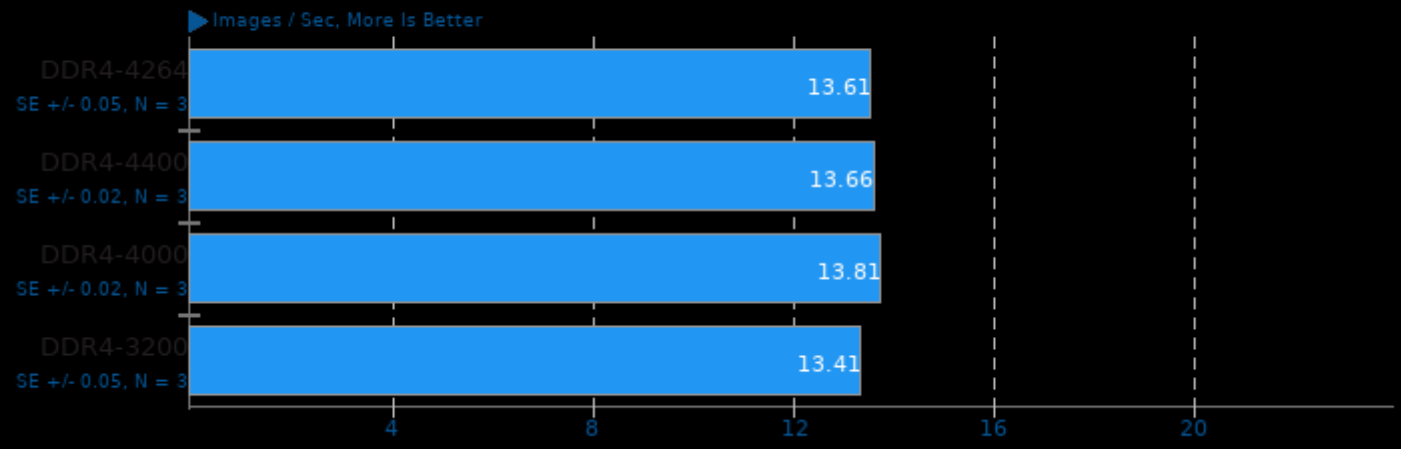
Video Input: Bosphorus 1080p



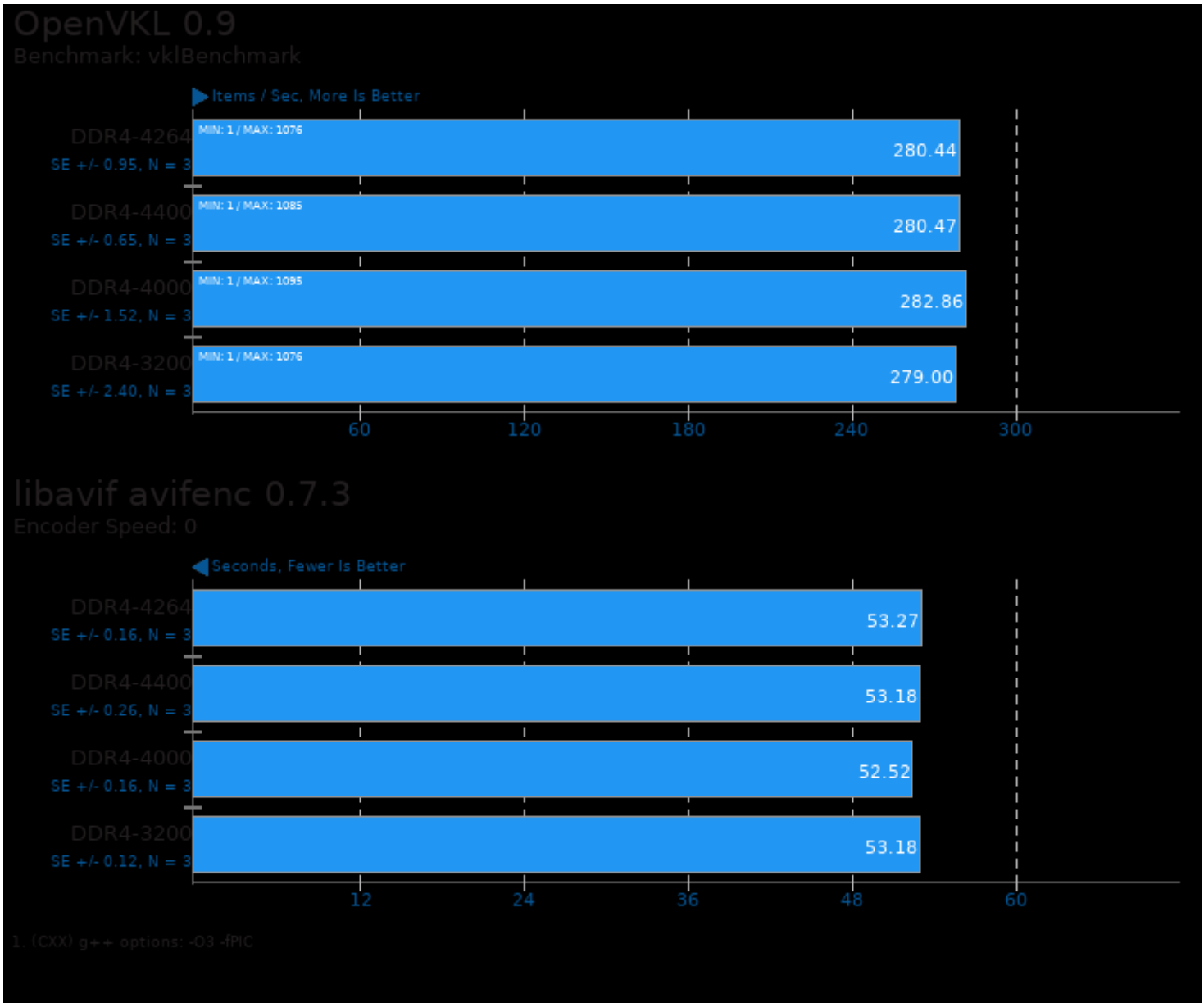
1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

Intel Open Image Denoise 1.2.0

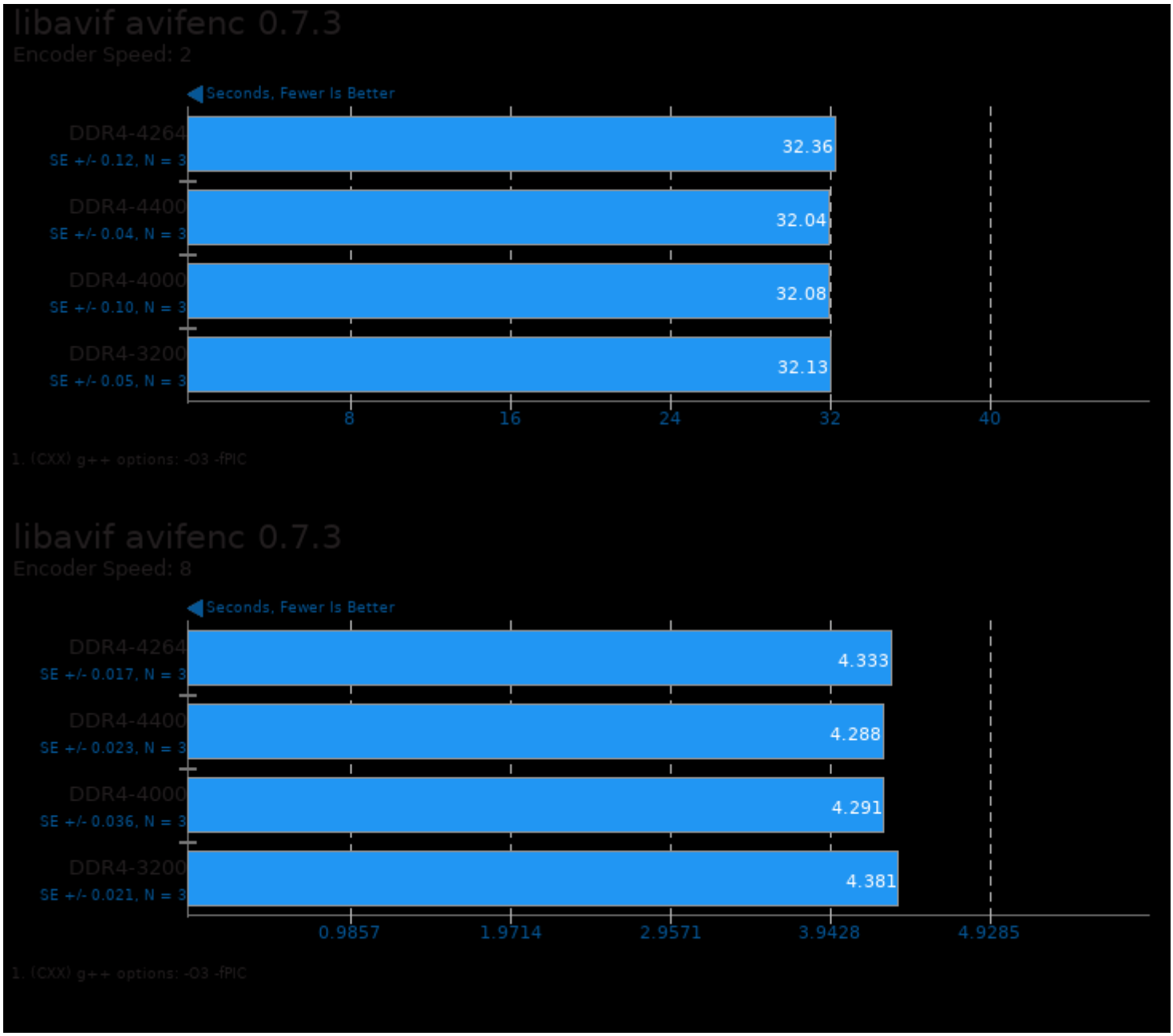
Scene: Memorial

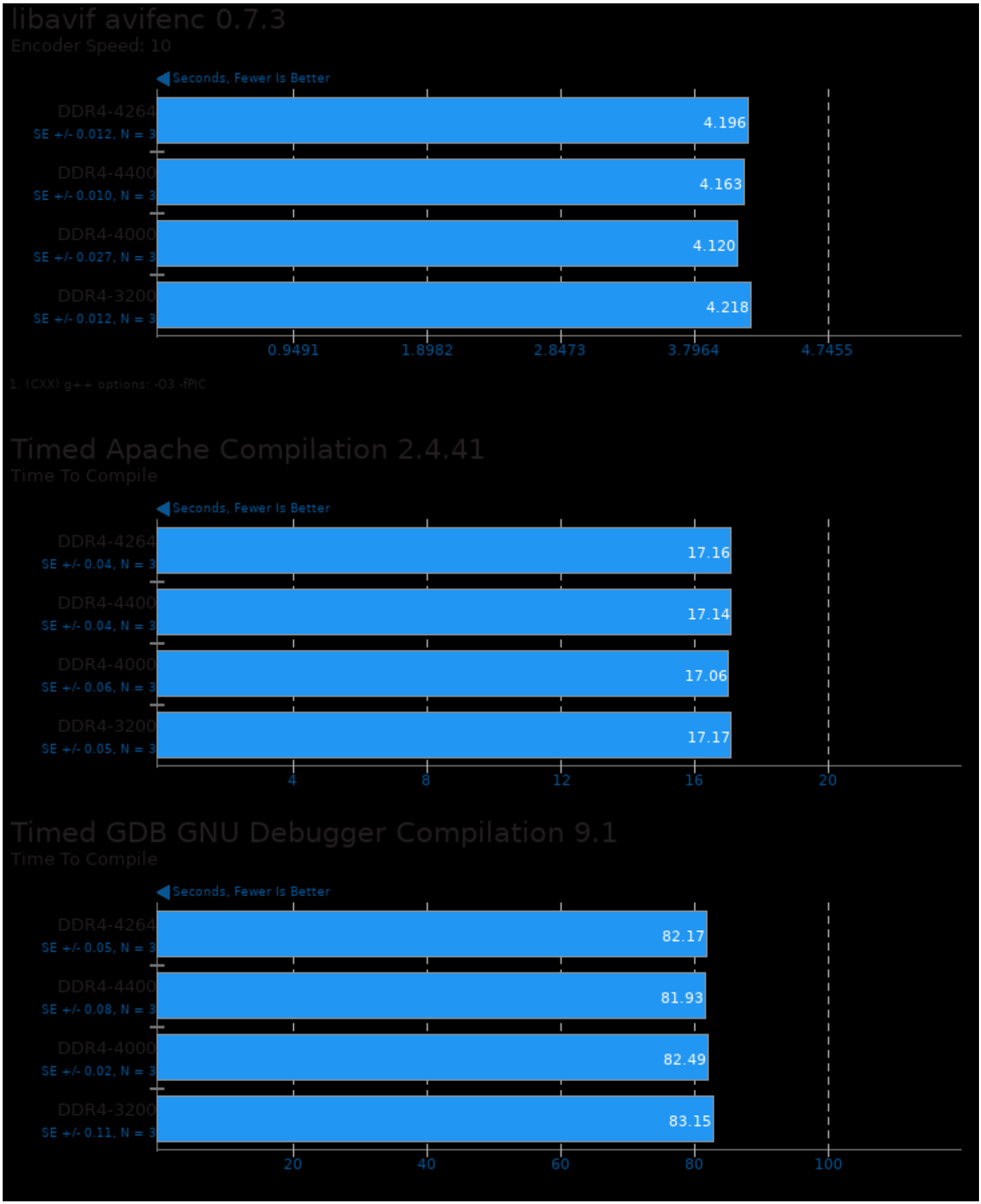


Memory Scaling

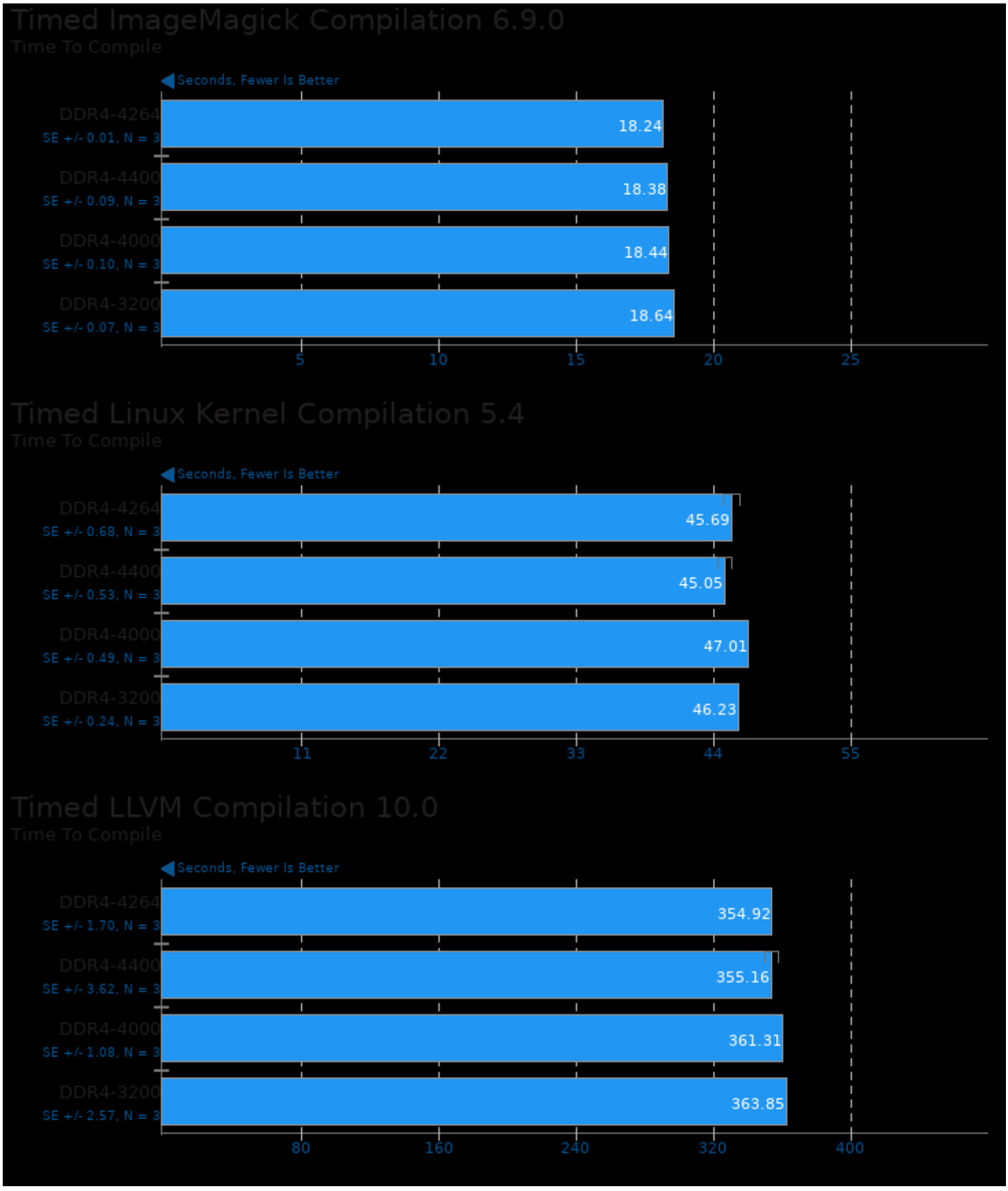


Memory Scaling

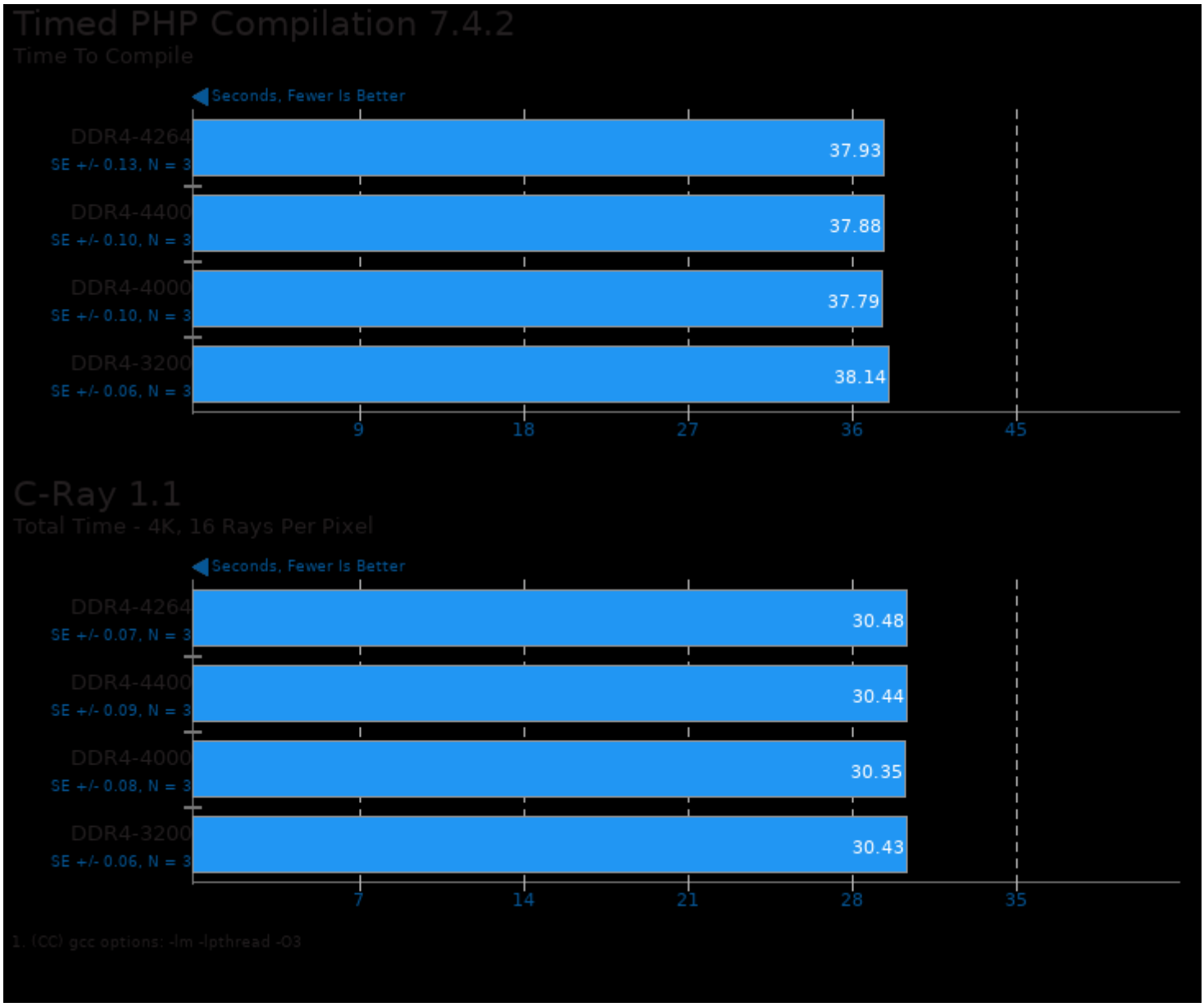



libavif avifenc 0.7.3
Encoder Speed: 10
Seconds, Fewer Is Better
DDR4-4264
SE +/- 0.012, N = 3
4.196
DDR4-4400
SE +/- 0.010, N = 3
4.163
DDR4-4000
SE +/- 0.027, N = 3
4.120
DDR4-3200
SE +/- 0.012, N = 3
4.218
0.9491
1.8982
2.8473
3.7964
4.7455
1. (CXX) g++ options: -O3 -fPIC
Timed Apache Compilation 2.4.41
Time To Compile
Seconds, Fewer Is Better
DDR4-4264
SE +/- 0.04, N = 3
17.16
DDR4-4400
SE +/- 0.04, N = 3
17.14
DDR4-4000
SE +/- 0.06, N = 3
17.06
DDR4-3200
SE +/- 0.05, N = 3
17.17
4
8
12
16
20
Timed GDB GNU Debugger Compilation 9.1
Time To Compile
Seconds, Fewer Is Better
DDR4-4264
SE +/- 0.05, N = 3
82.17
DDR4-4400
SE +/- 0.08, N = 3
81.93
DDR4-4000
SE +/- 0.02, N = 3
82.49
DDR4-3200
SE +/- 0.11, N = 3
83.15
20
40
60
80
100

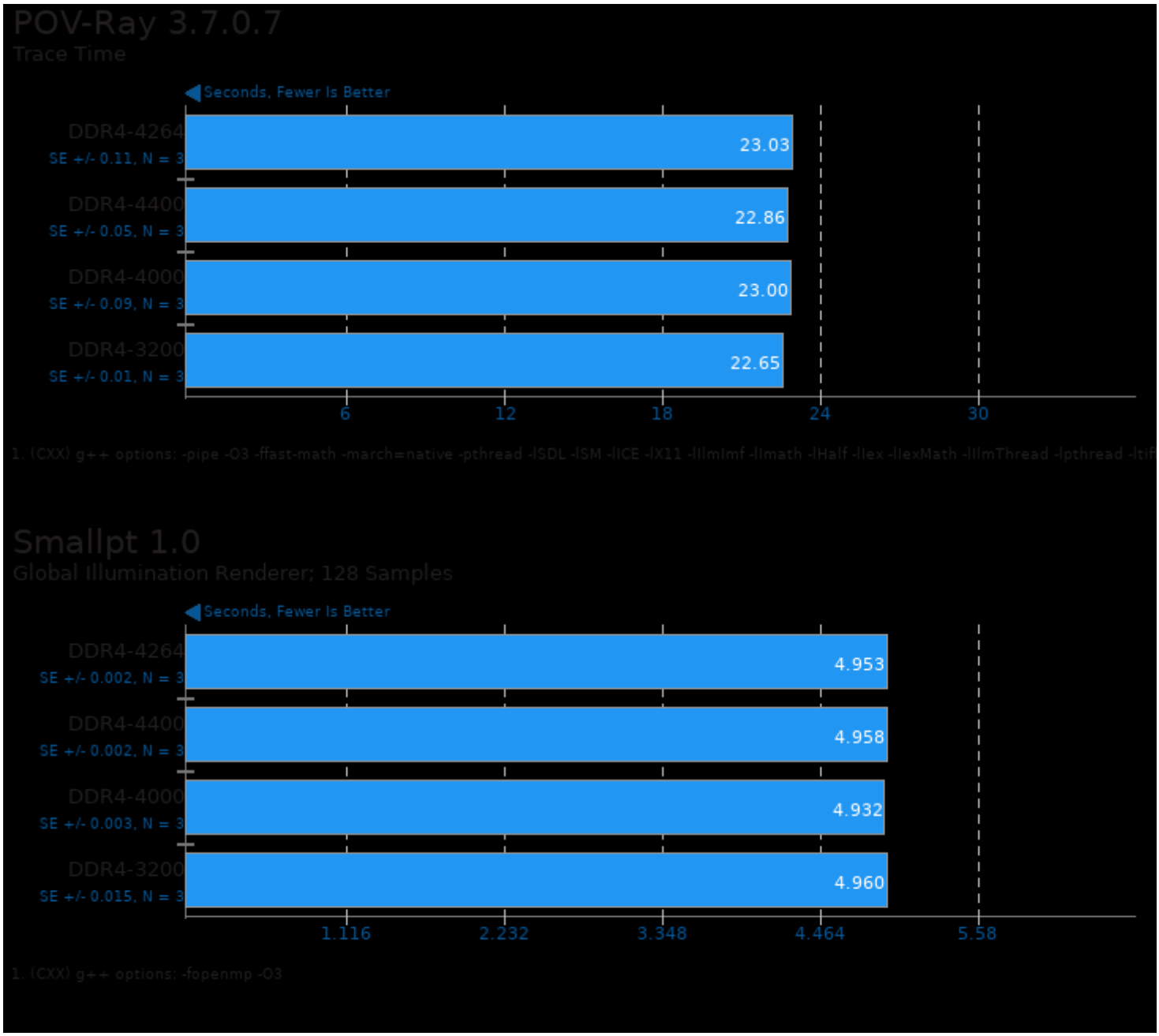
Memory Scaling



Memory Scaling

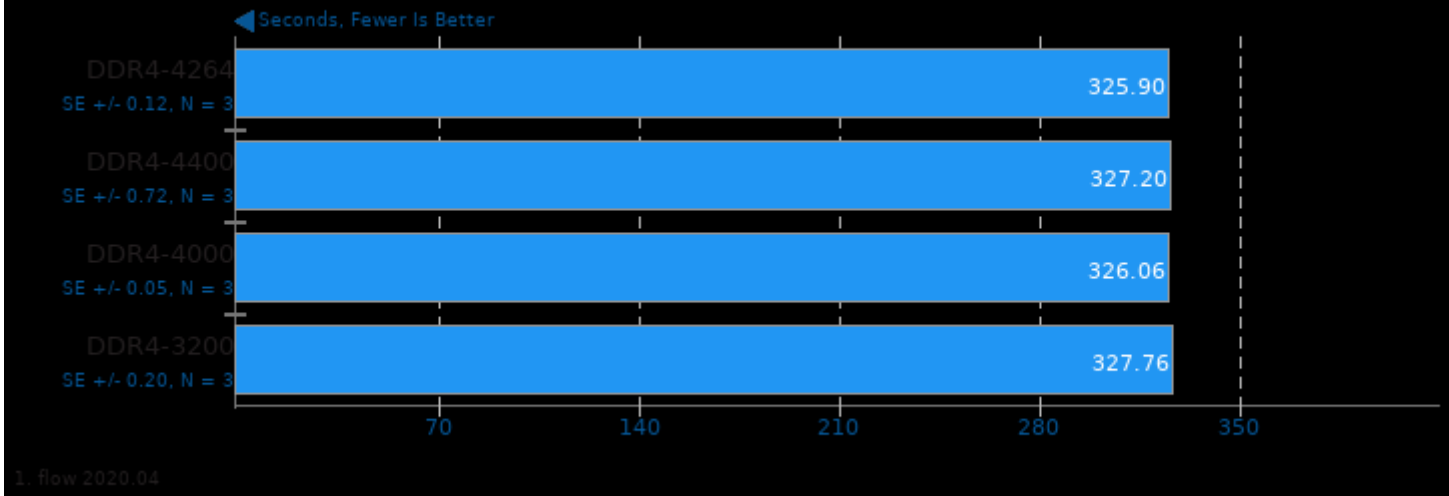


Memory Scaling



Open Porous Media

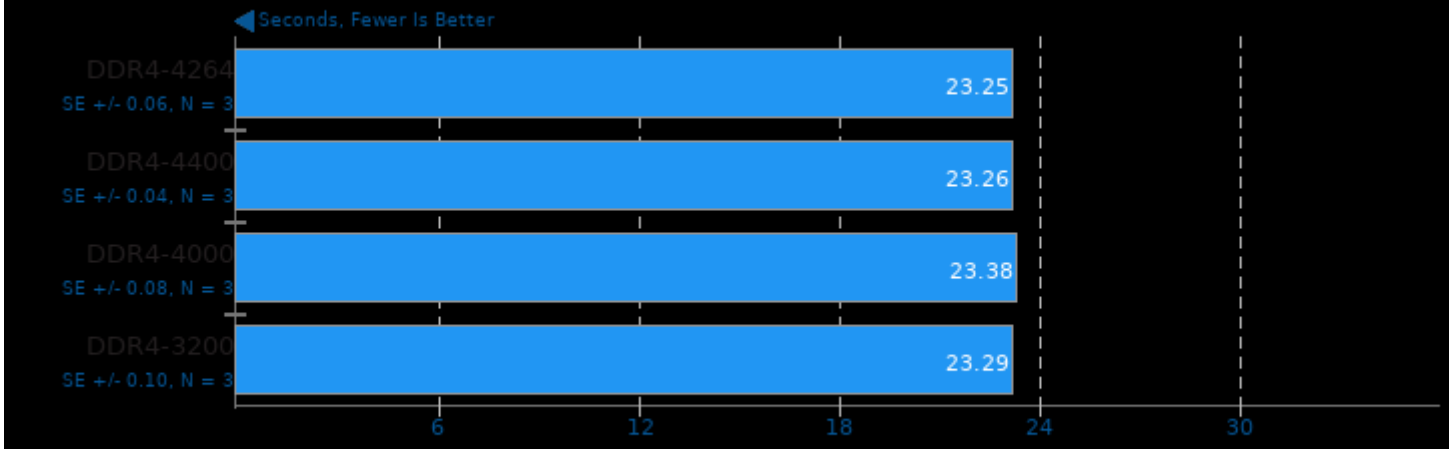
OPM Benchmark: Flow MPI Norne - Threads: 16



1. flow 2020.04

XZ Compression 5.2.4

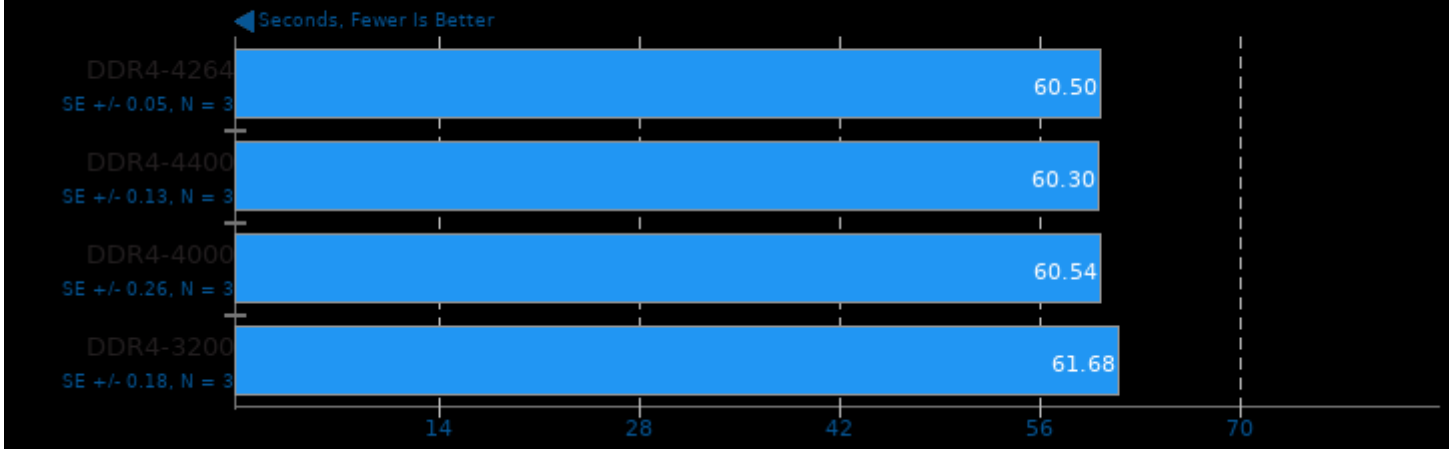
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 9



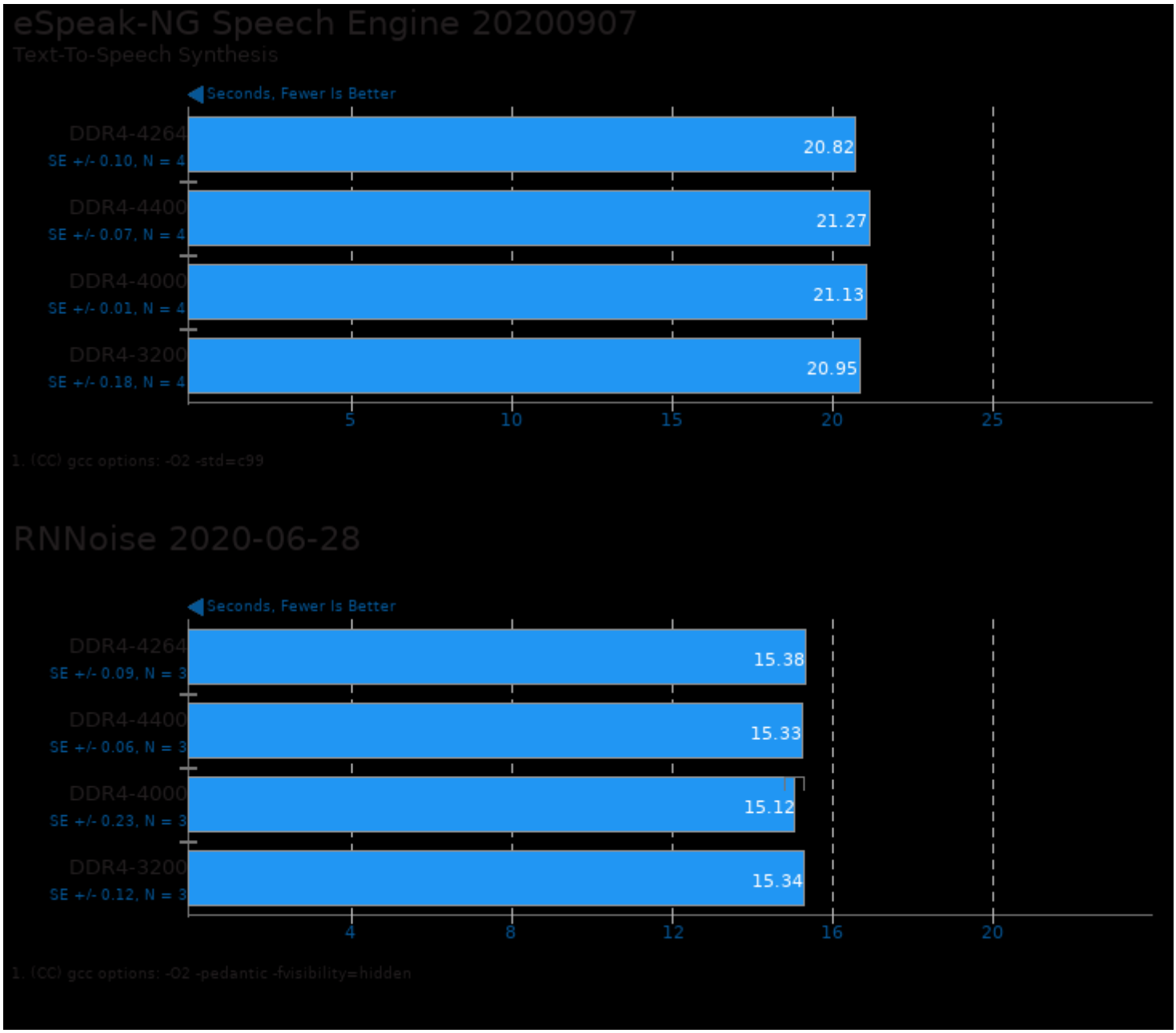
1. (CC) gcc options: -pthread -fvisibility=hidden -O2

DeepSpeech 0.6

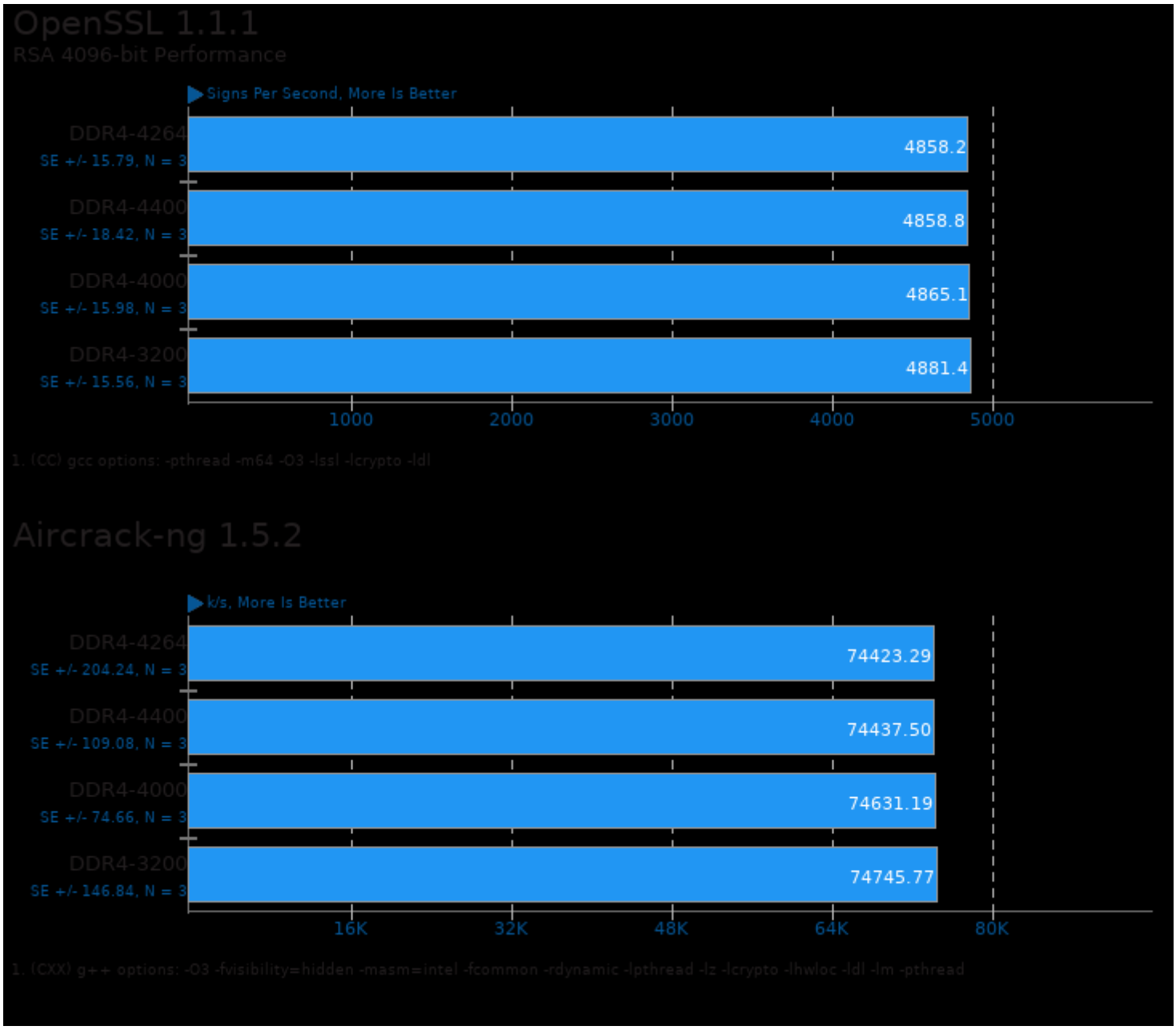
Acceleration: CPU



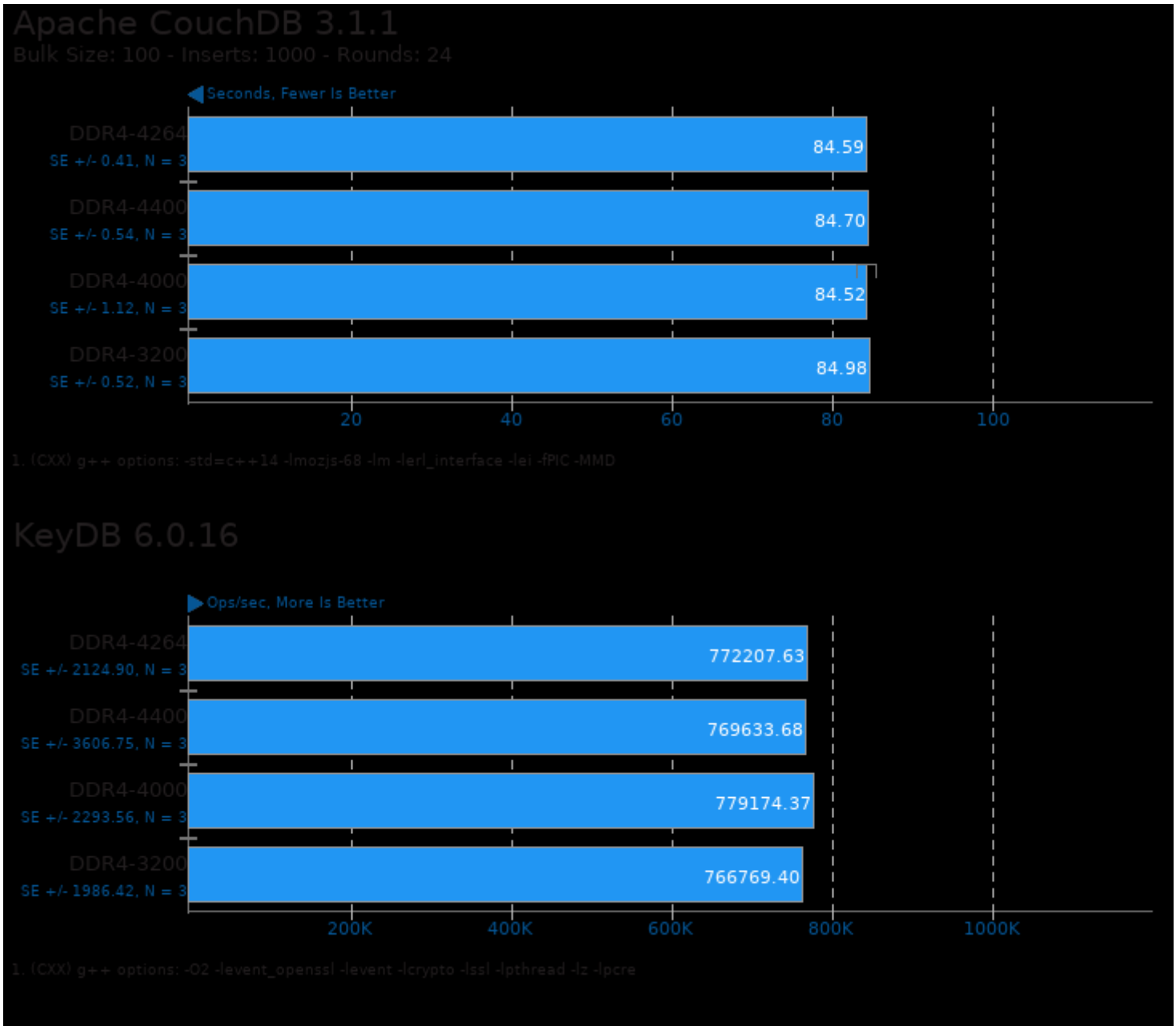
Memory Scaling



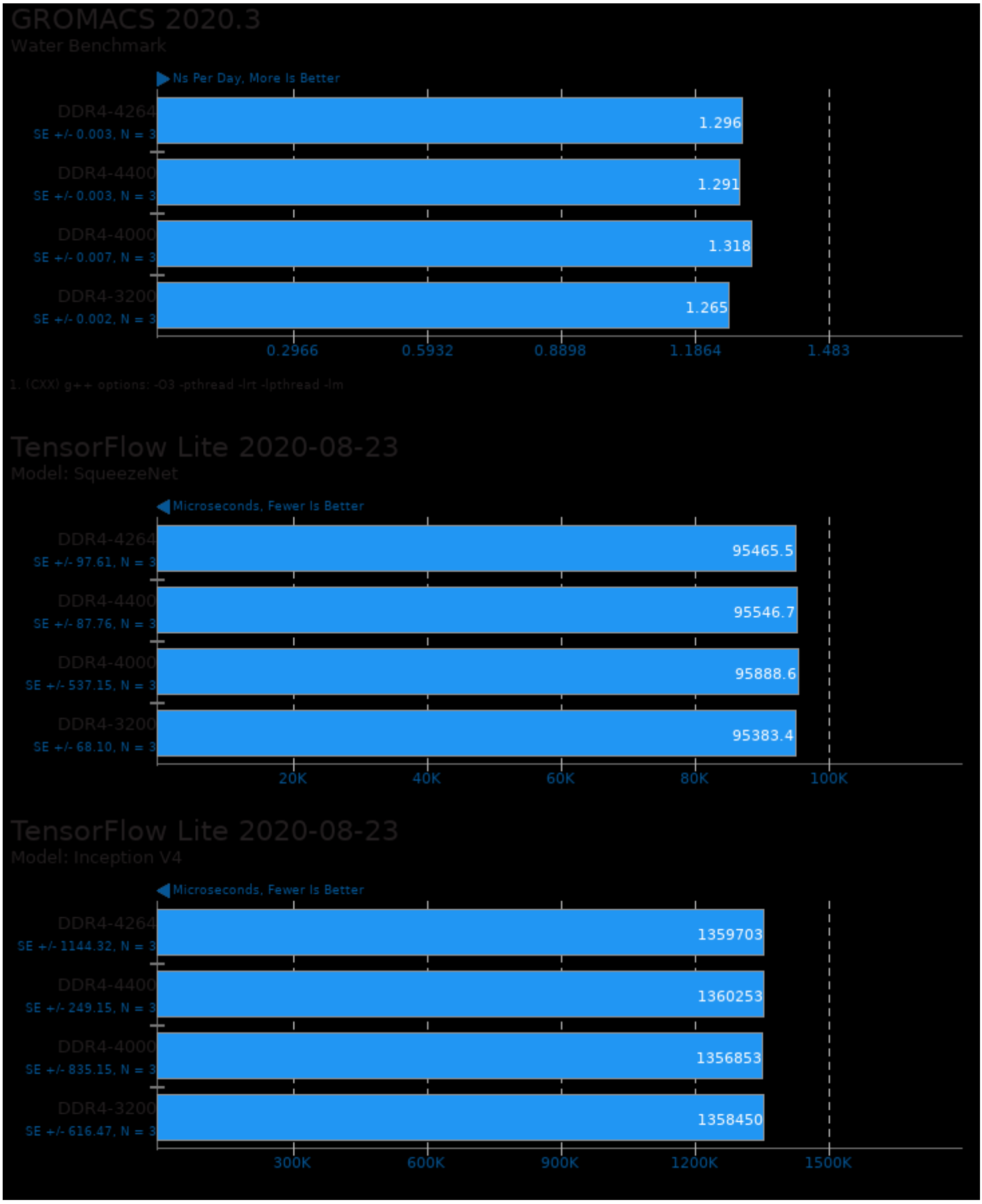
Memory Scaling



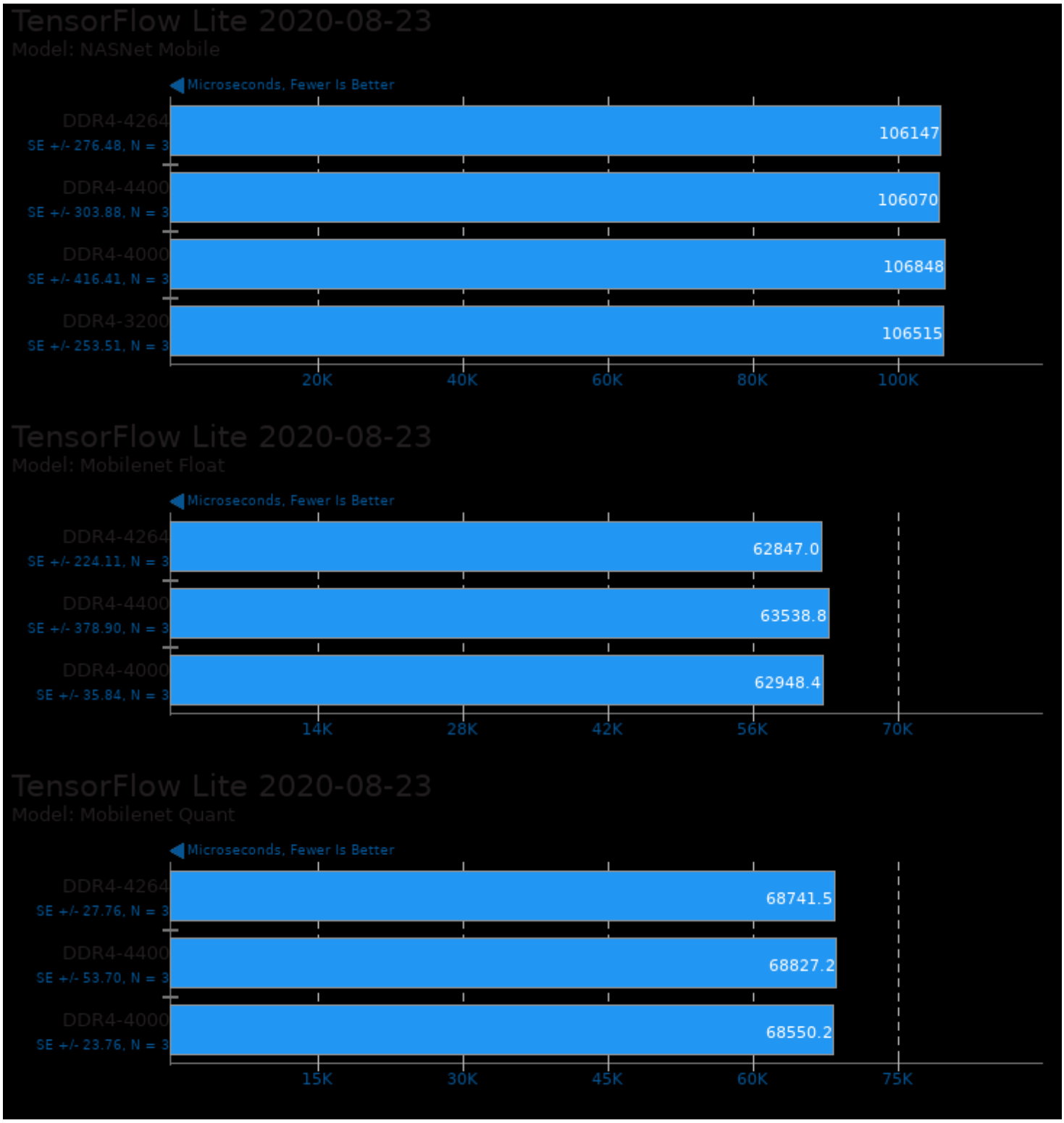
Memory Scaling



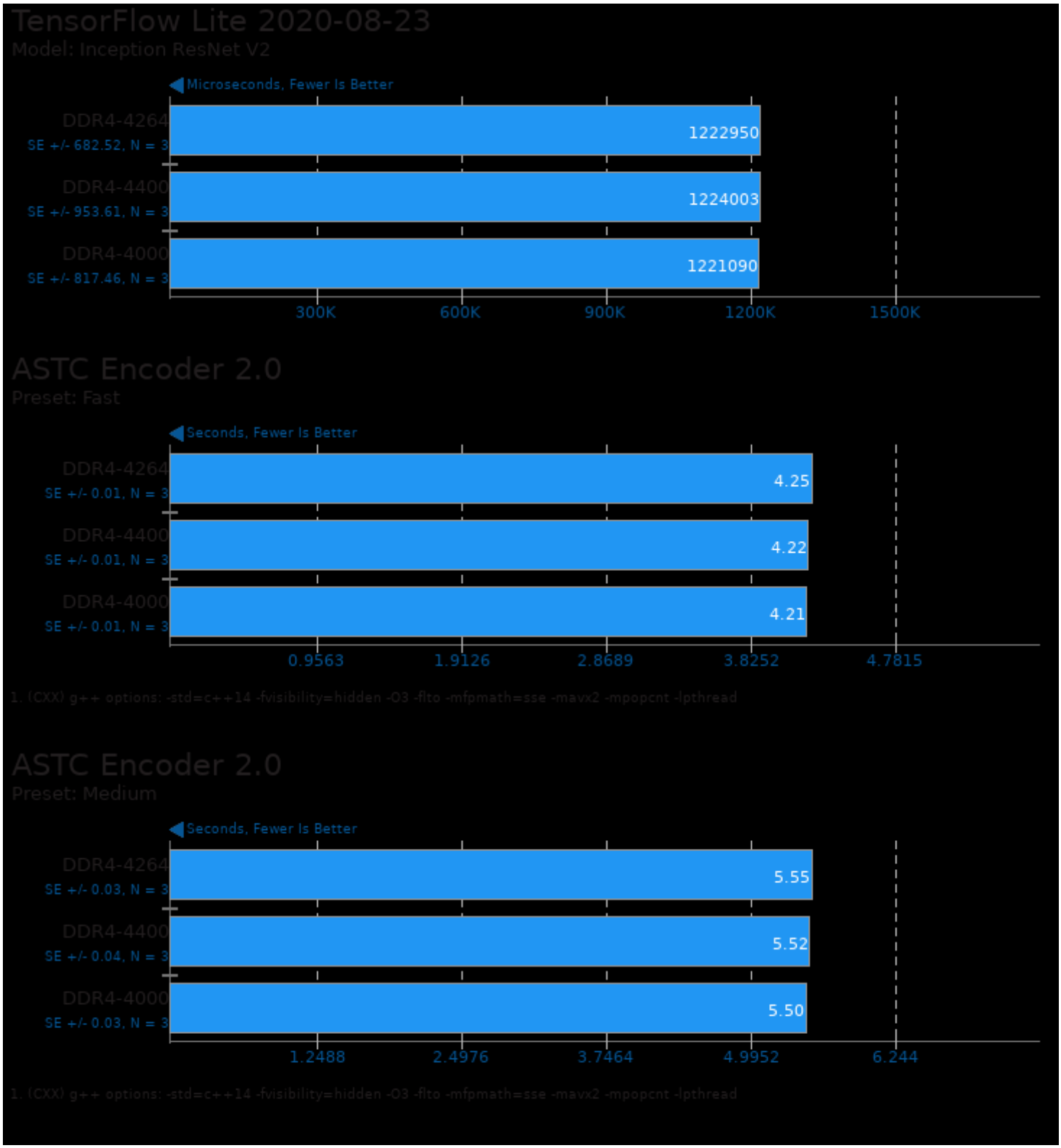
Memory Scaling

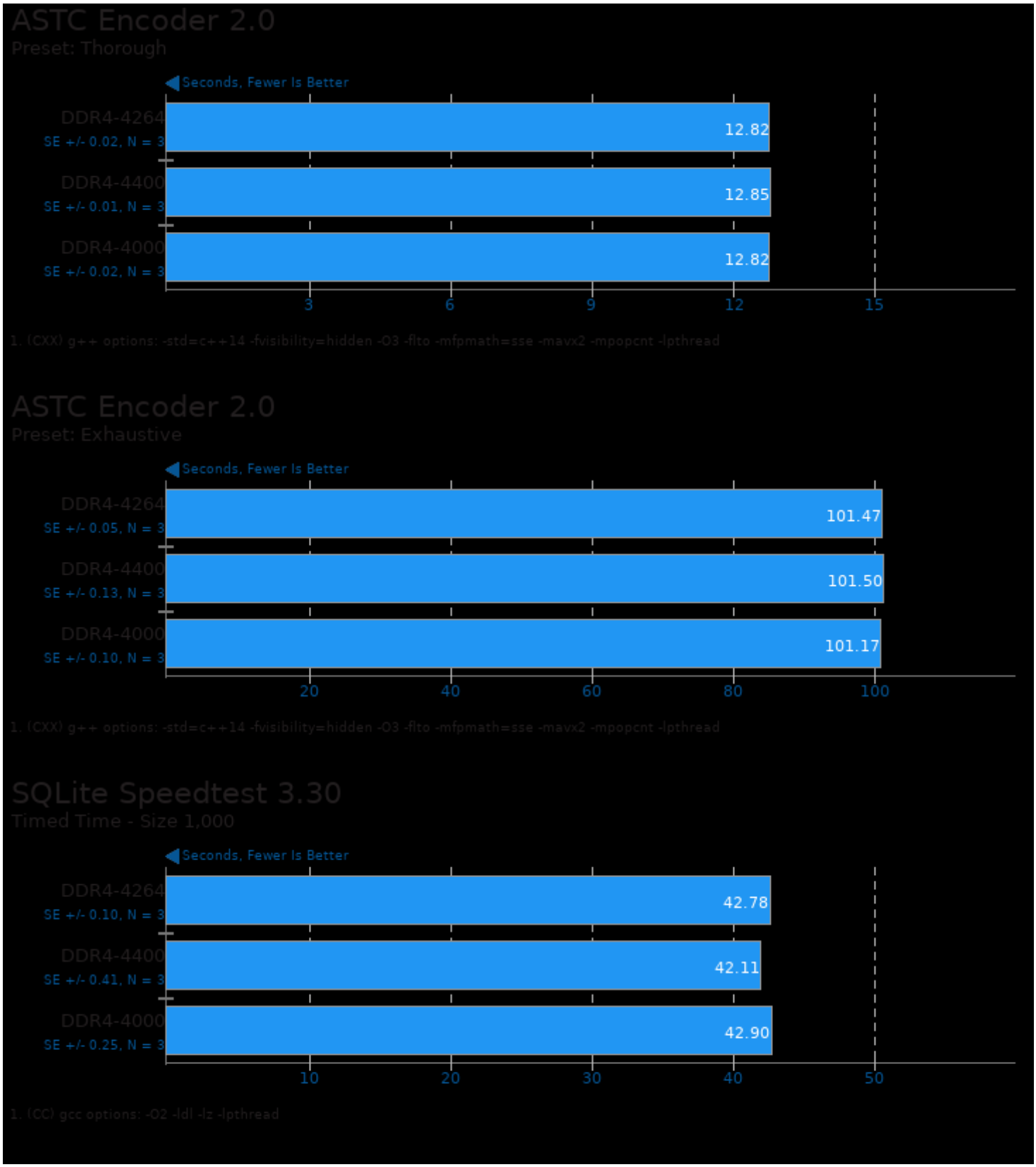


Memory Scaling

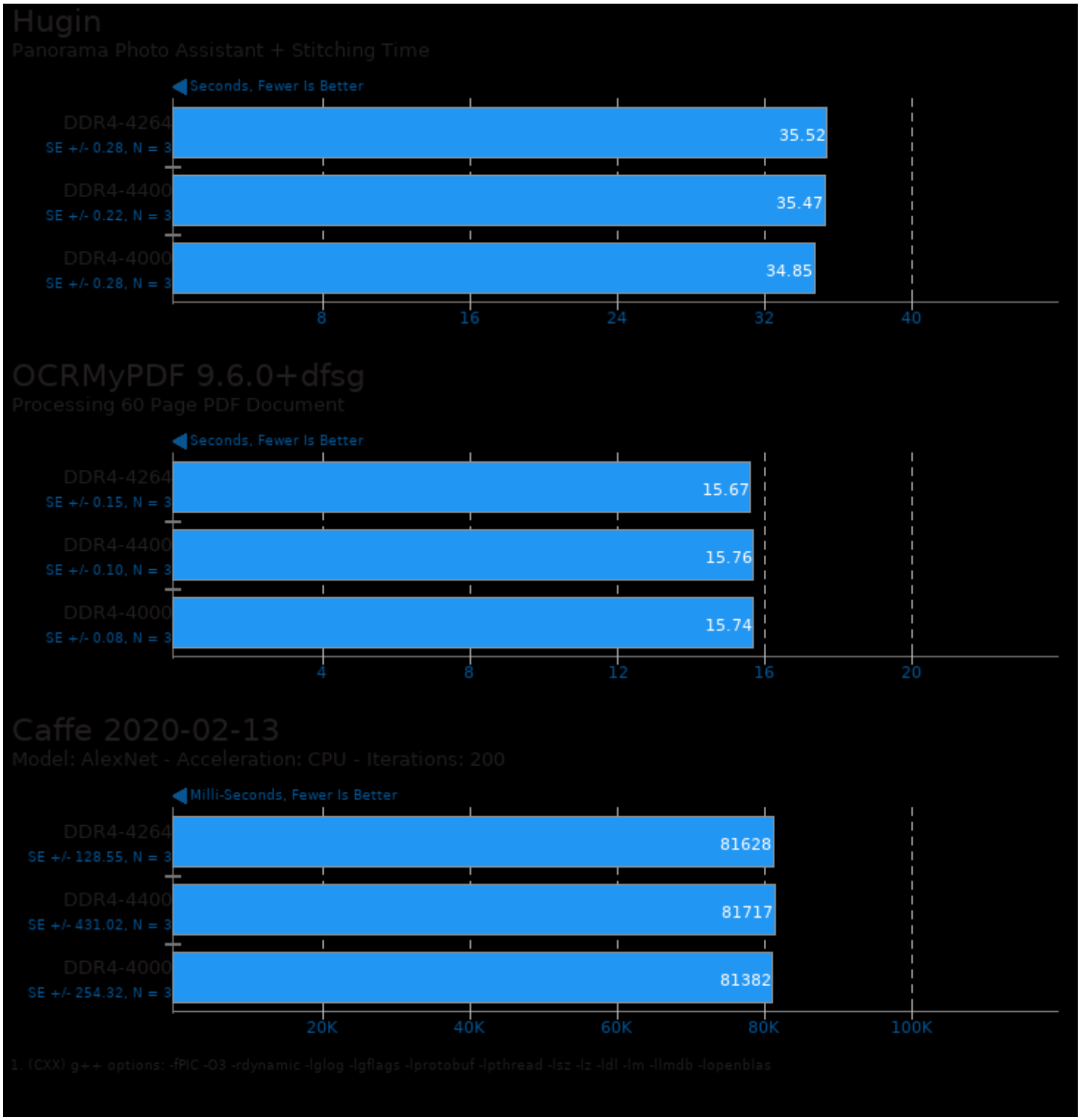


Memory Scaling

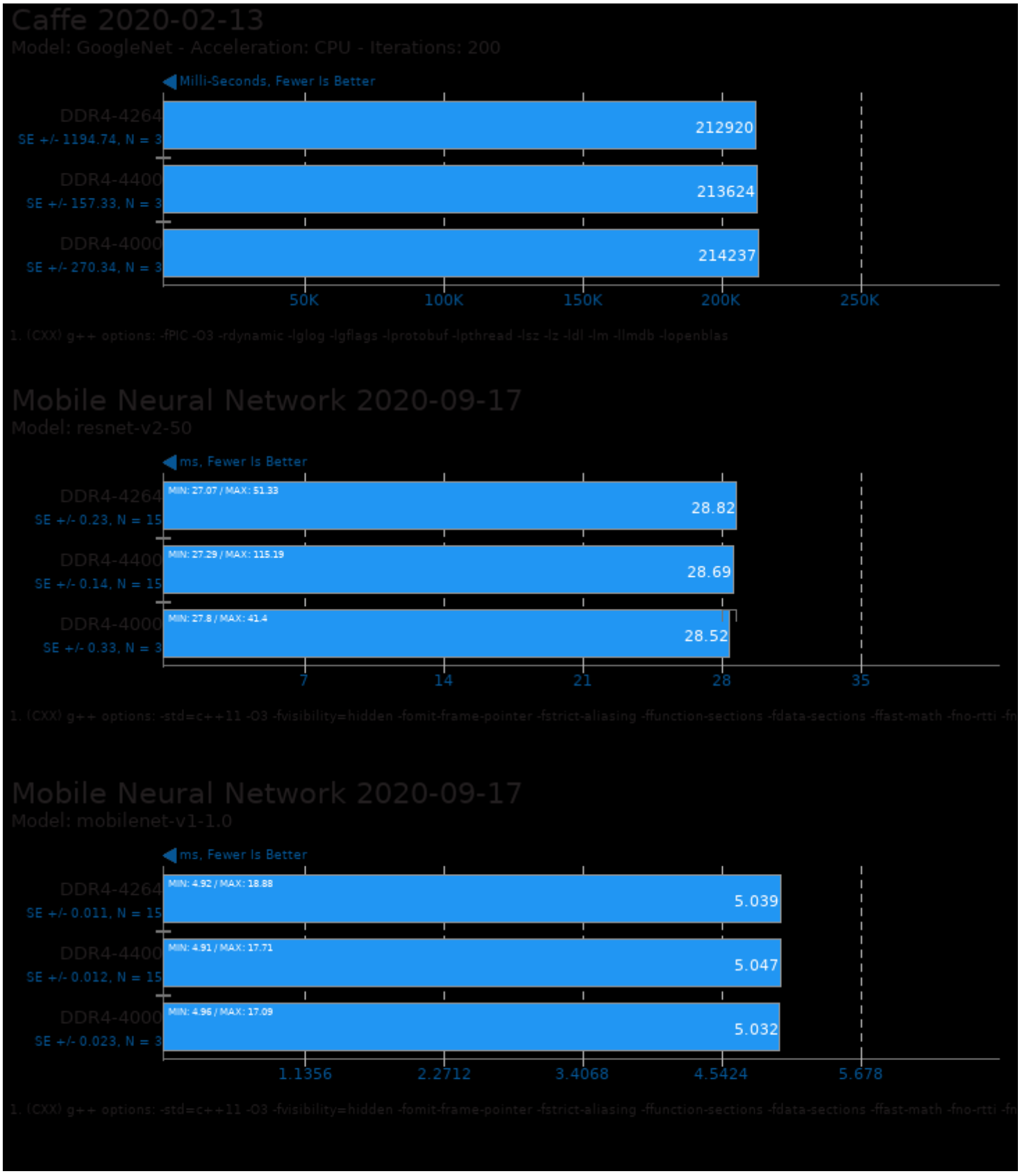



ASTC Encoder 2.0
Preset: Thorough
Seconds, Fewer Is Better
DDR4-4264
SE +/- 0.02, N = 3
12.82
DDR4-4400
SE +/- 0.01, N = 3
12.85
DDR4-4000
SE +/- 0.02, N = 3
12.82
3
6
9
12
15
1. (CXX) g++ options: -std=c++14 -fvisibility=hidden -O3 -flto -mfpmath=sse -mavx2 -mpopcnt -lpthread
ASTC Encoder 2.0
Preset: Exhaustive
Seconds, Fewer Is Better
DDR4-4264
SE +/- 0.05, N = 3
101.47
DDR4-4400
SE +/- 0.13, N = 3
101.50
DDR4-4000
SE +/- 0.10, N = 3
101.17
20
40
60
80
100
1. (CXX) g++ options: -std=c++14 -fvisibility=hidden -O3 -flto -mfpmath=sse -mavx2 -mpopcnt -lpthread
SQLite Speedtest 3.30
Timed Time - Size 1,000
Seconds, Fewer Is Better
DDR4-4264
SE +/- 0.10, N = 3
42.78
DDR4-4400
SE +/- 0.41, N = 3
42.11
DDR4-4000
SE +/- 0.25, N = 3
42.90
10
20
30
40
50
1. (CC) gcc options: -O2 -ldl -lz -lpthread

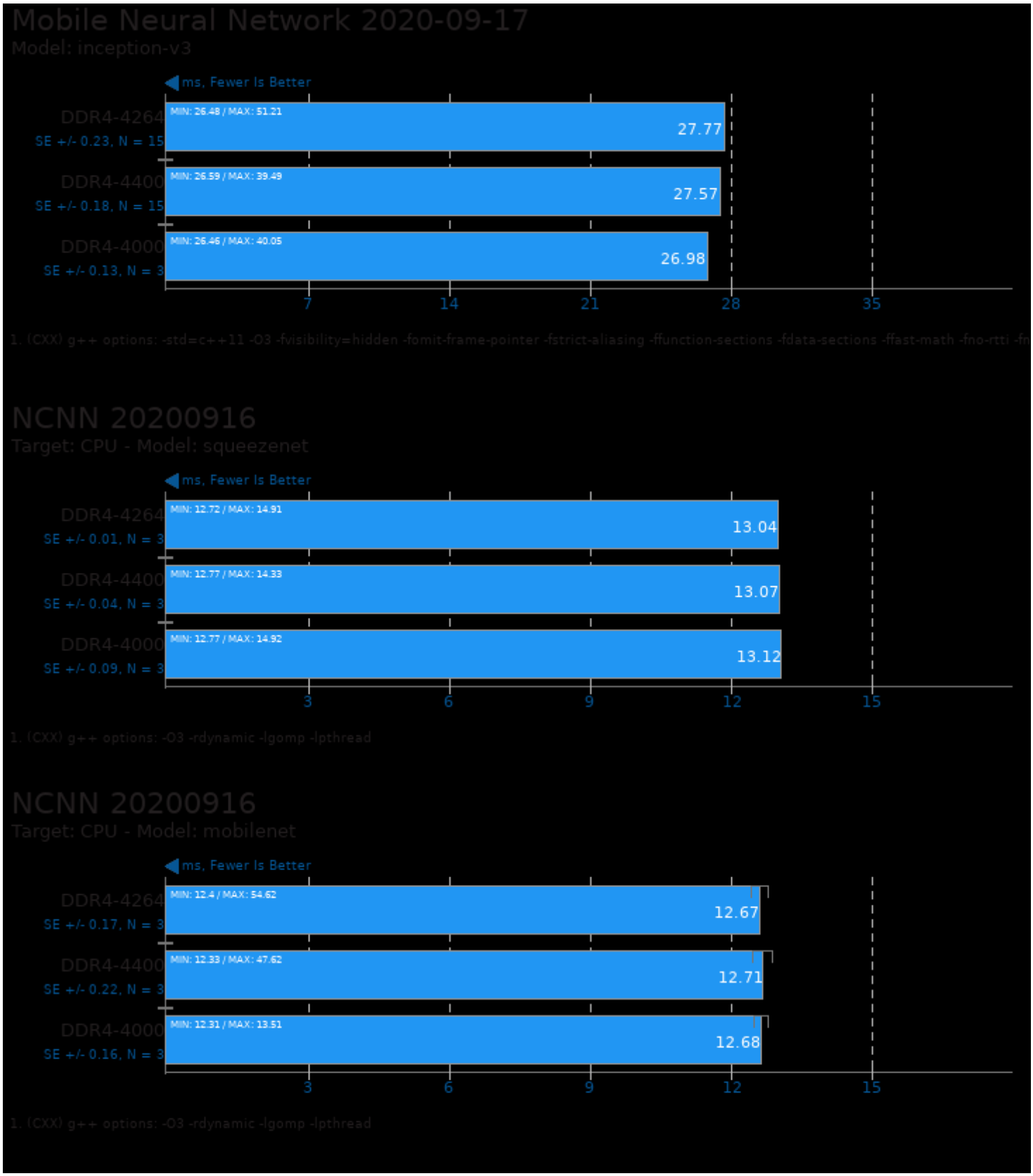
Memory Scaling



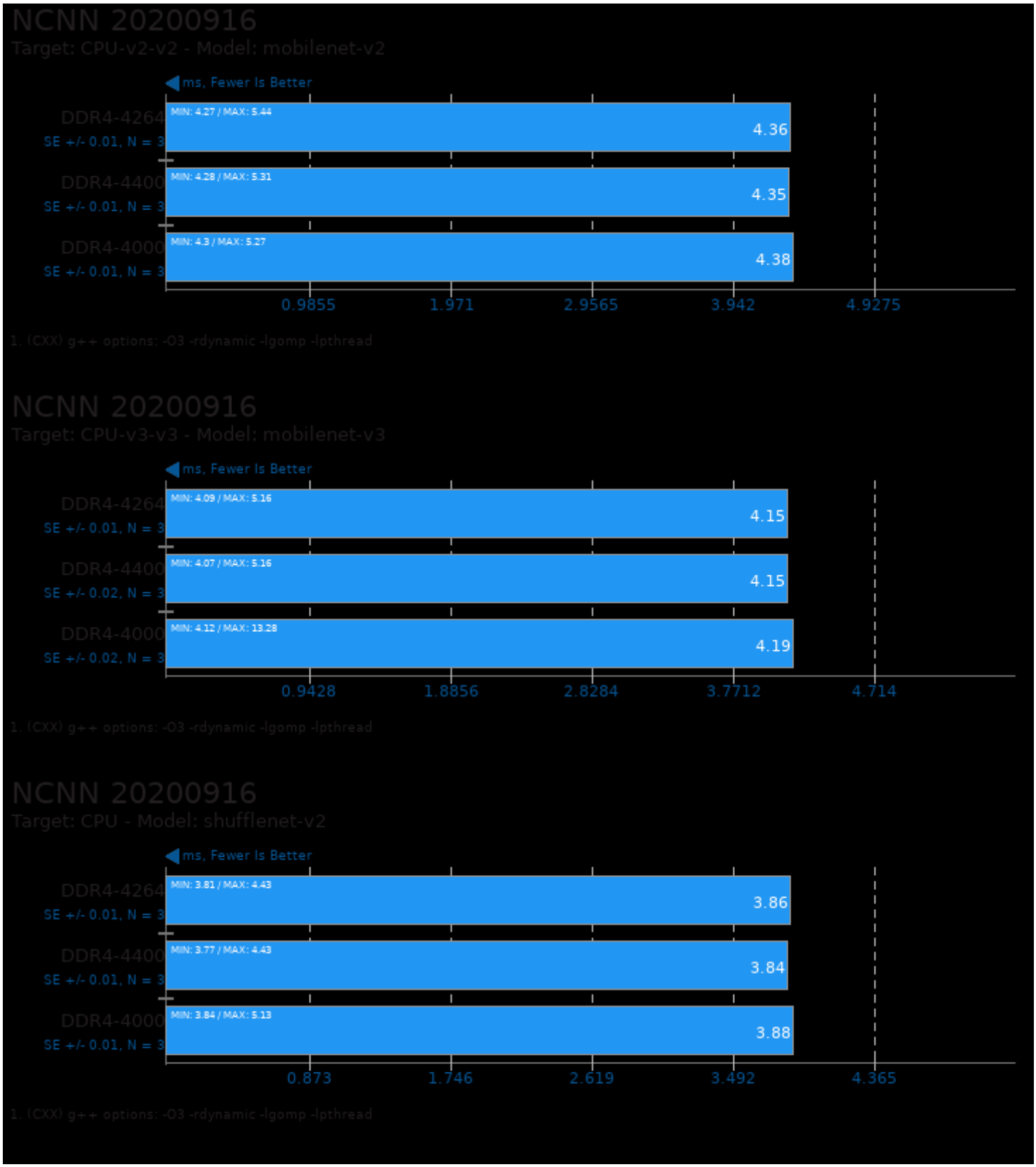
Memory Scaling



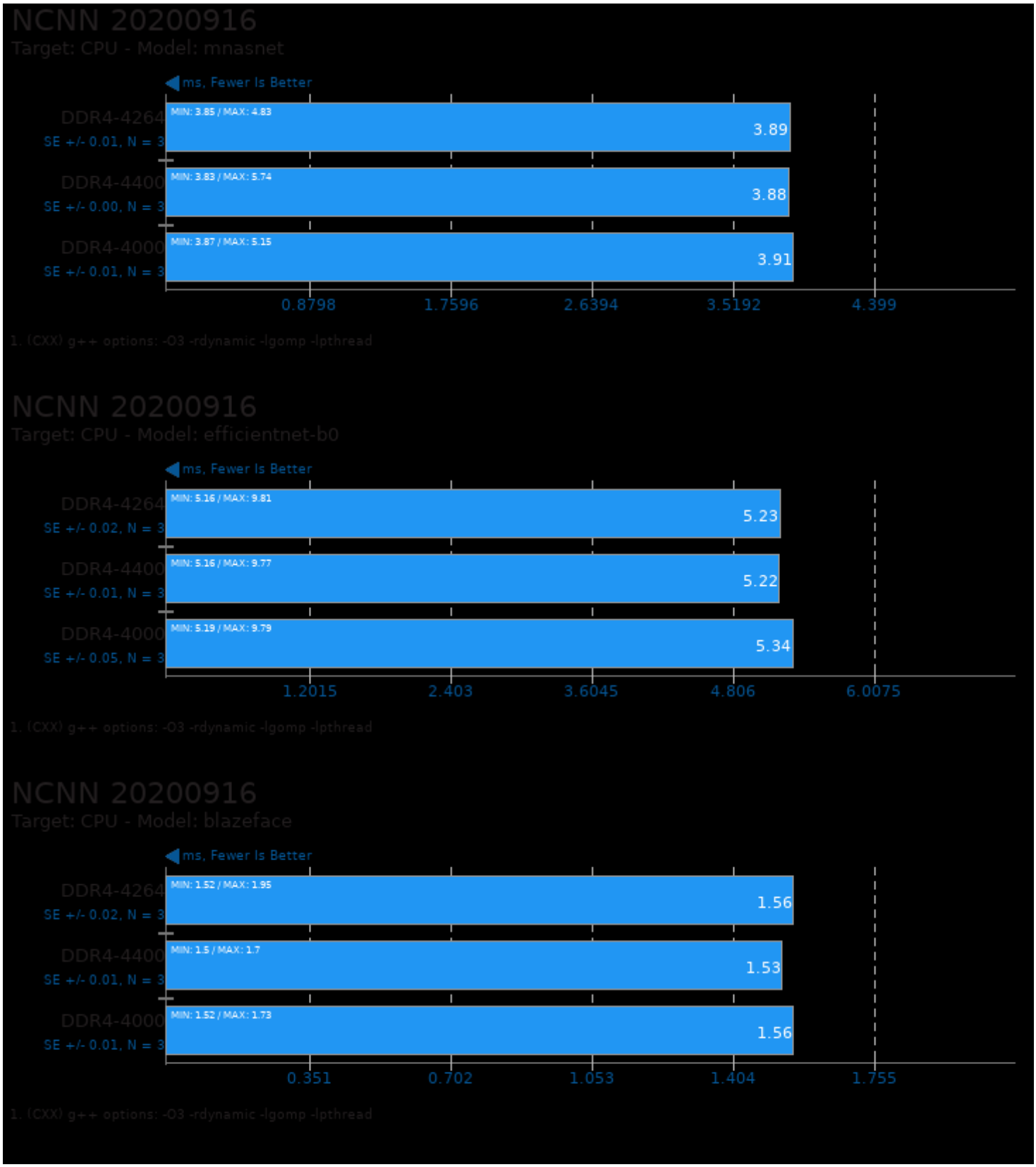
Memory Scaling



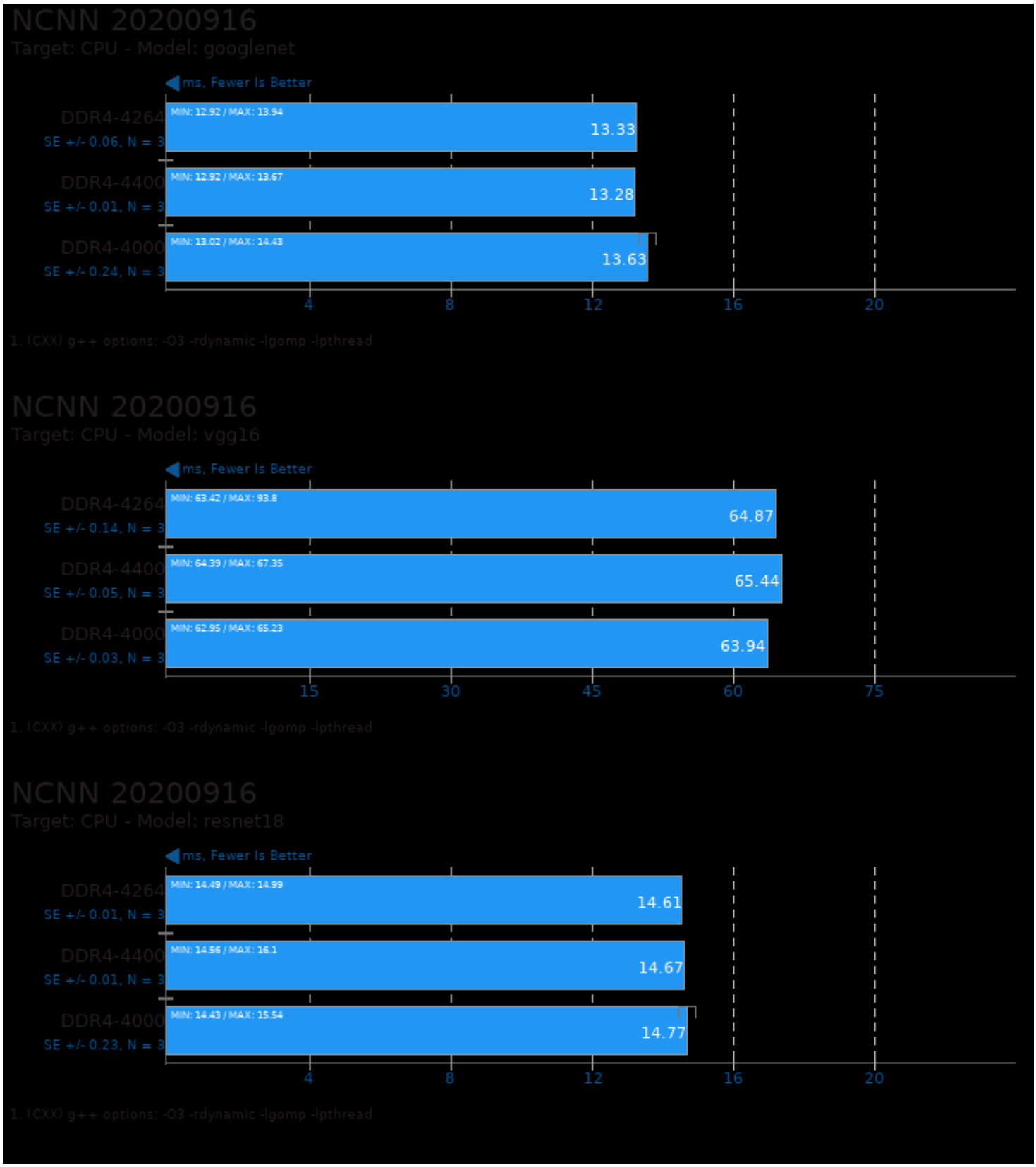
Memory Scaling



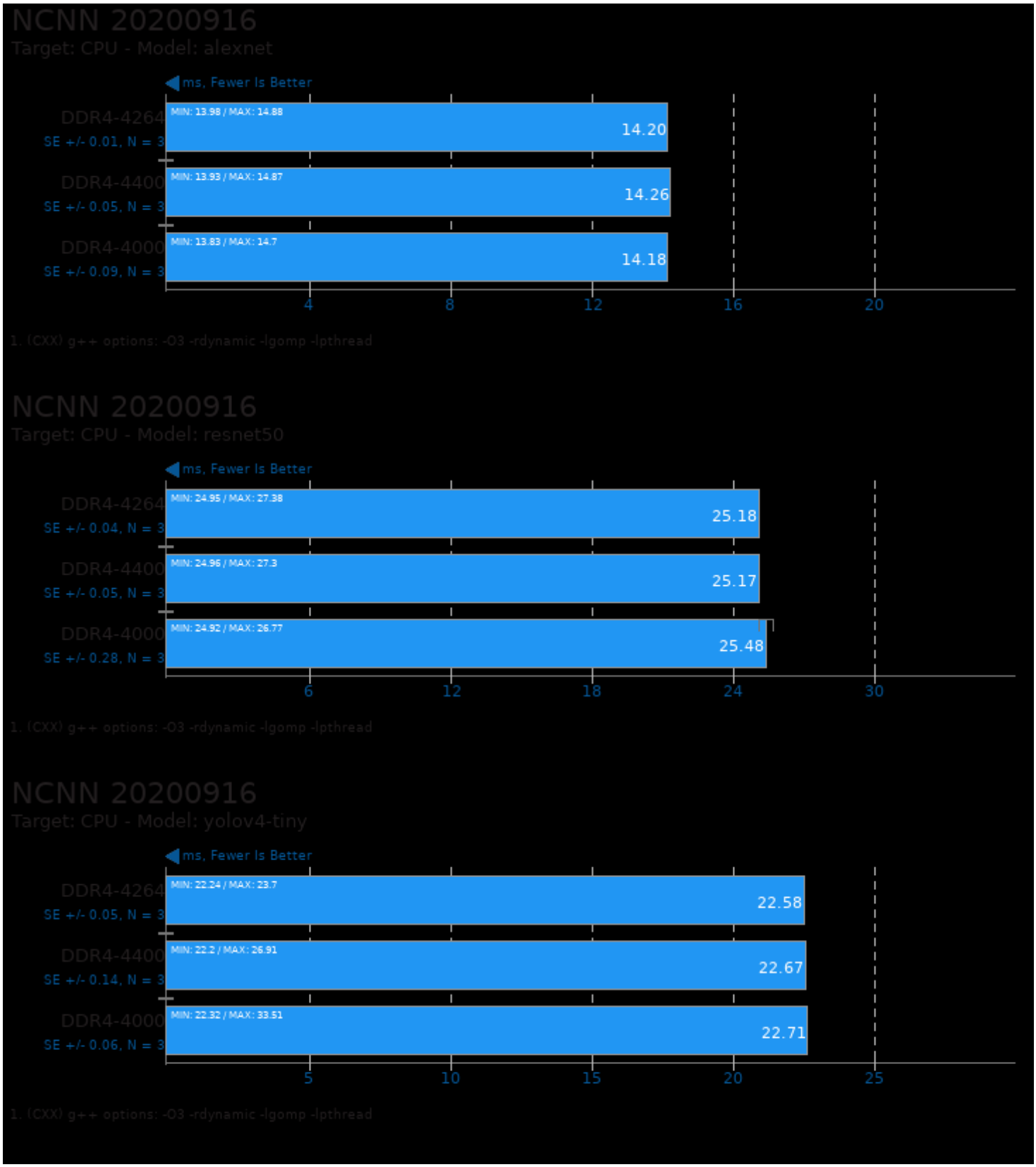
Memory Scaling



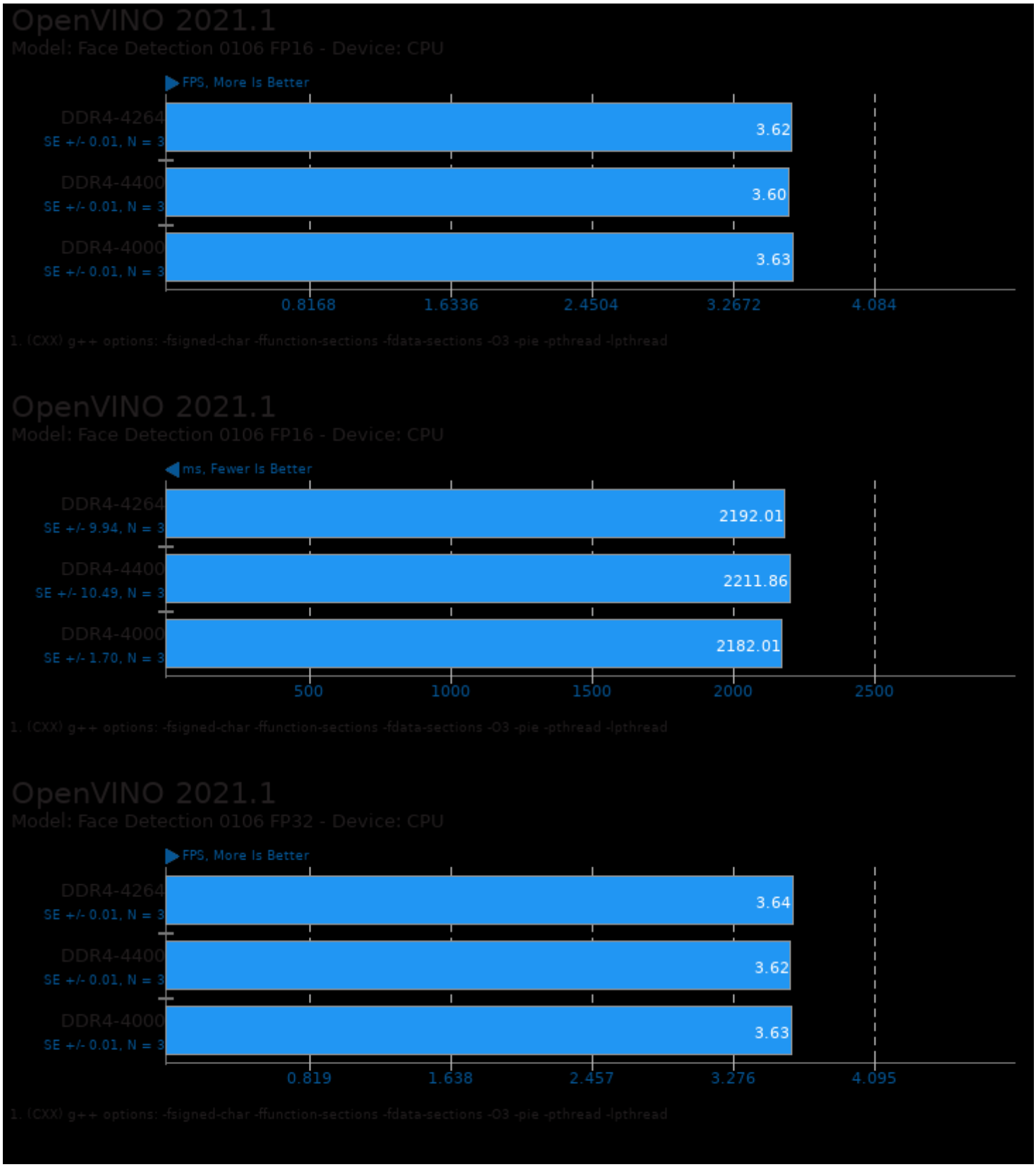
Memory Scaling



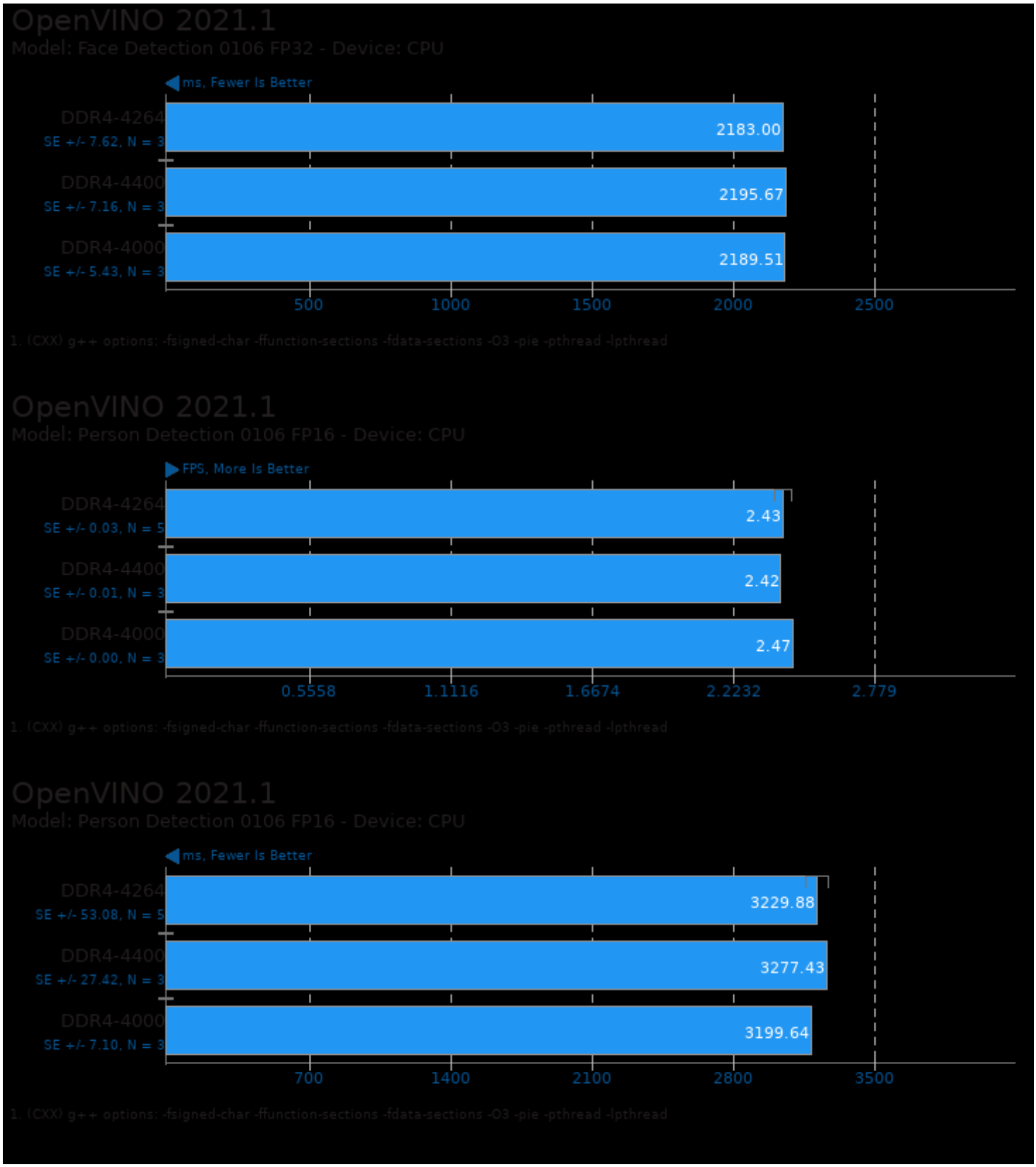
Memory Scaling



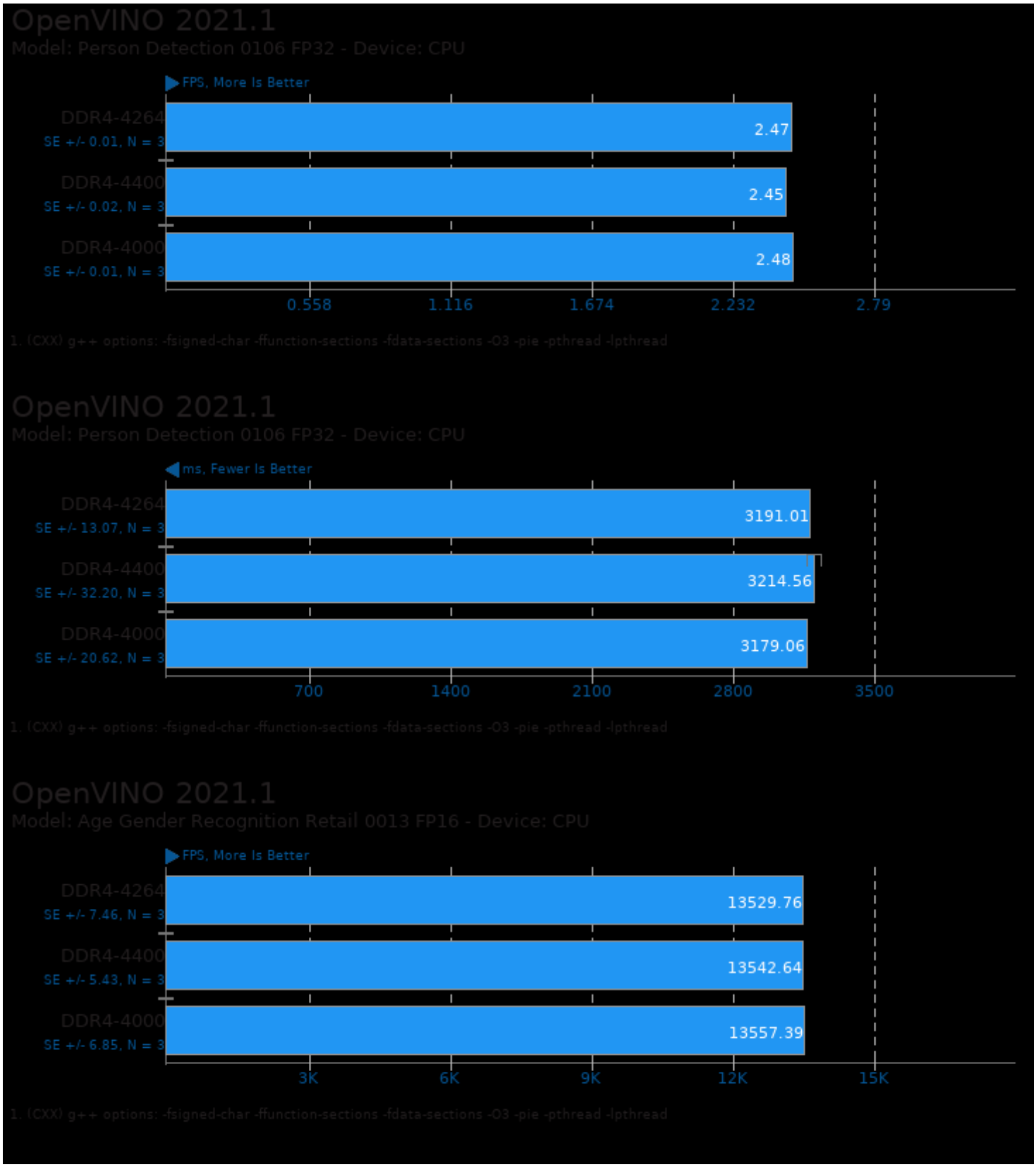
Memory Scaling



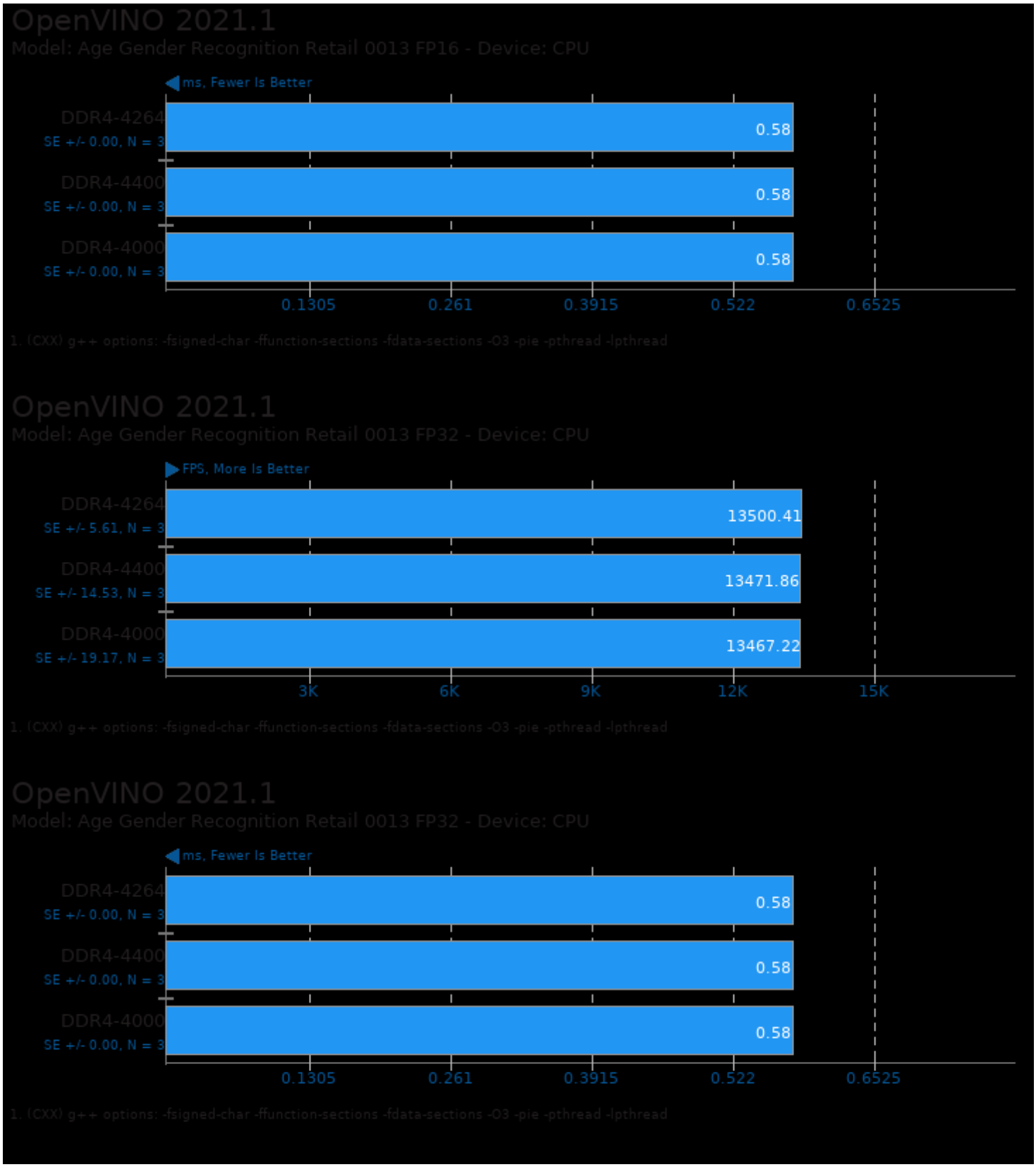
Memory Scaling



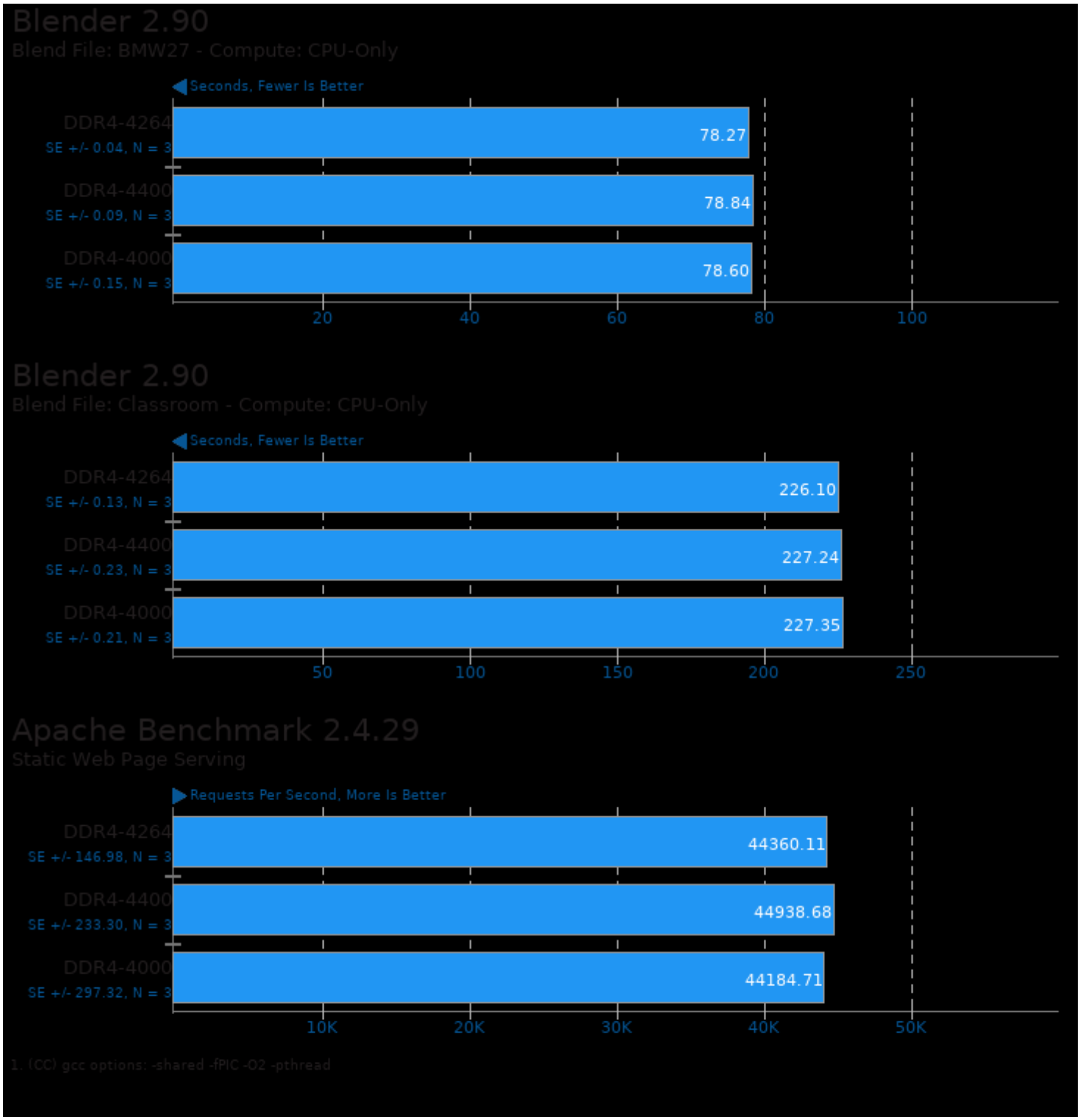
Memory Scaling



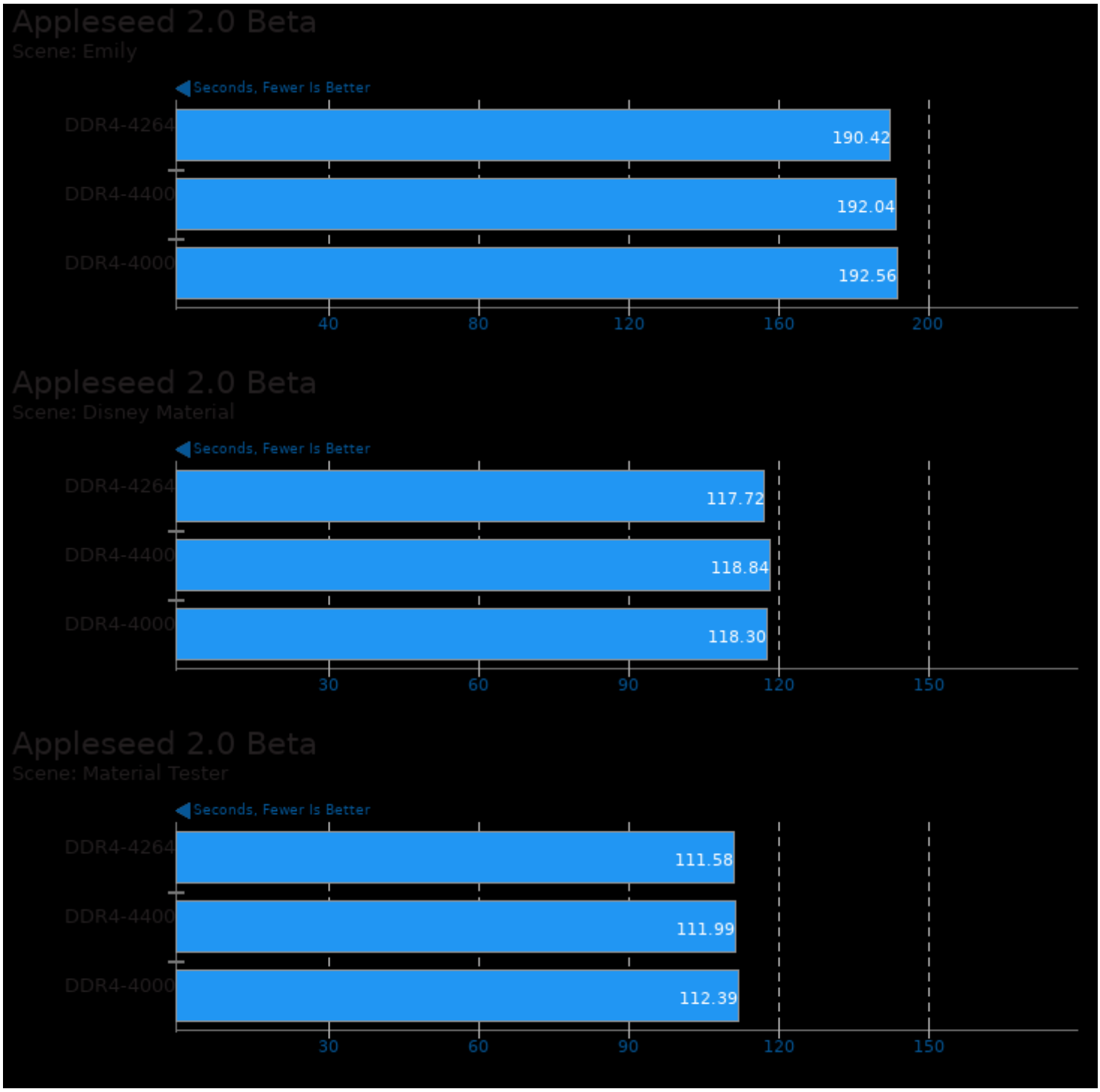
Memory Scaling



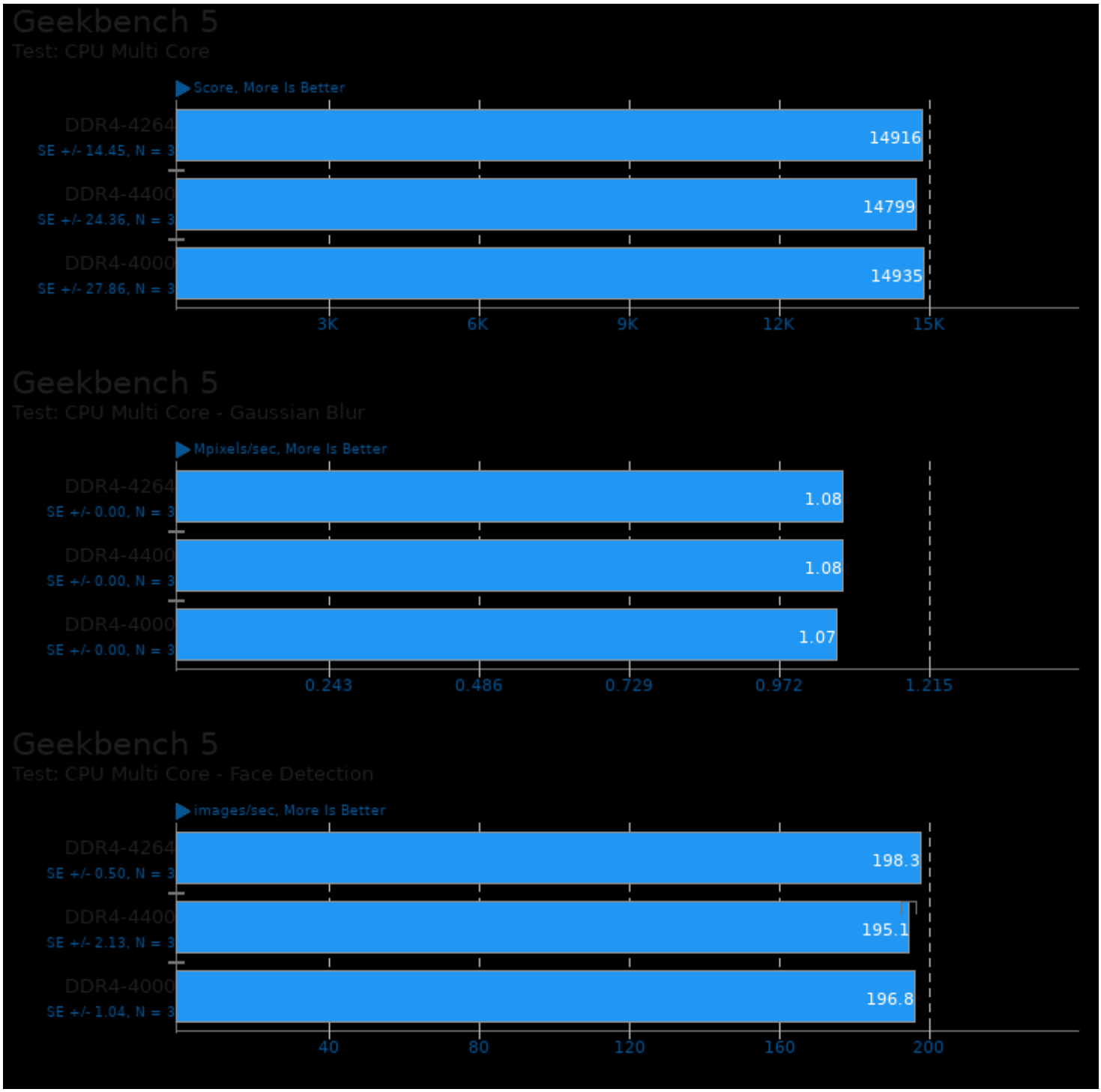
Memory Scaling



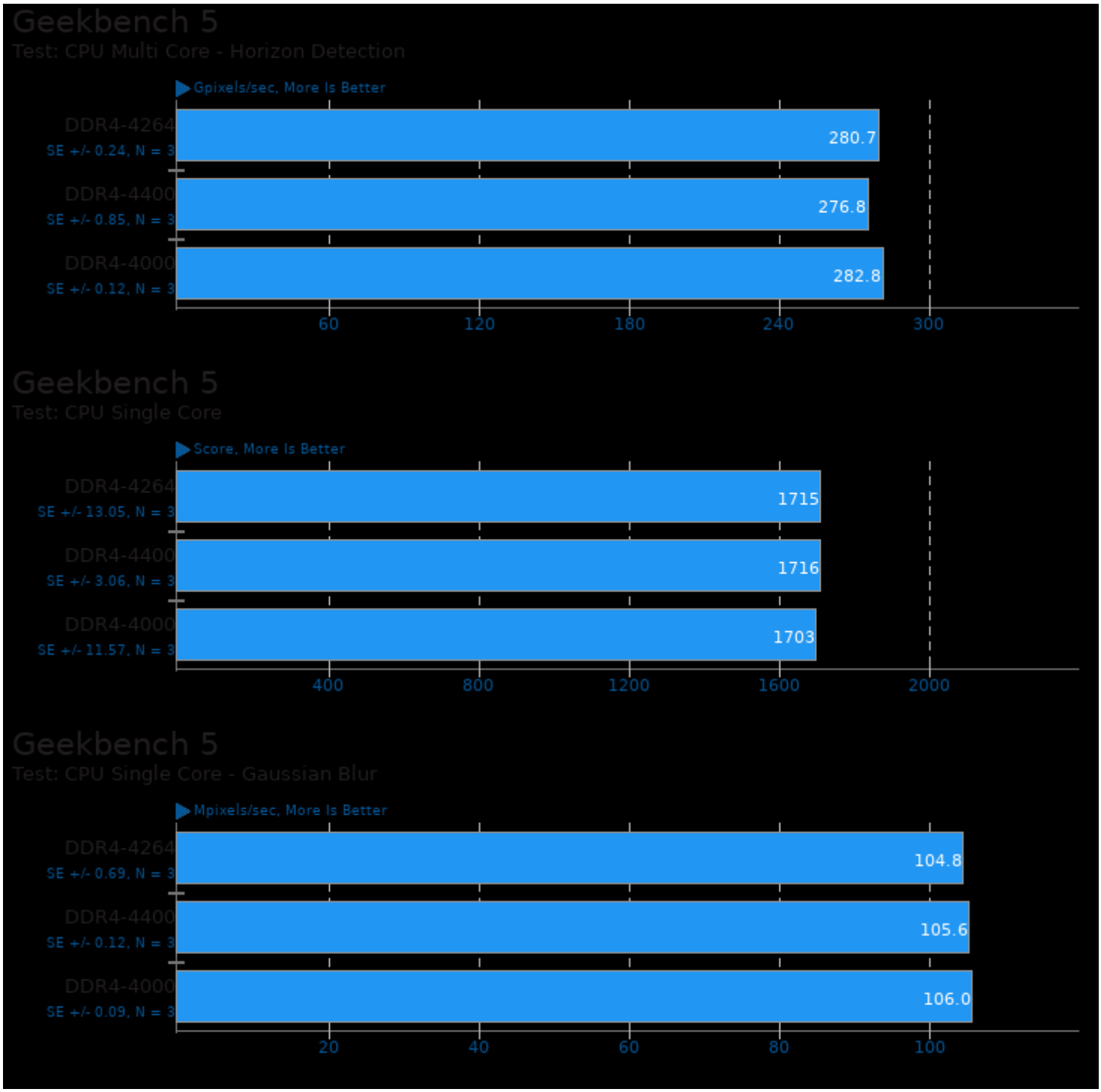
Memory Scaling



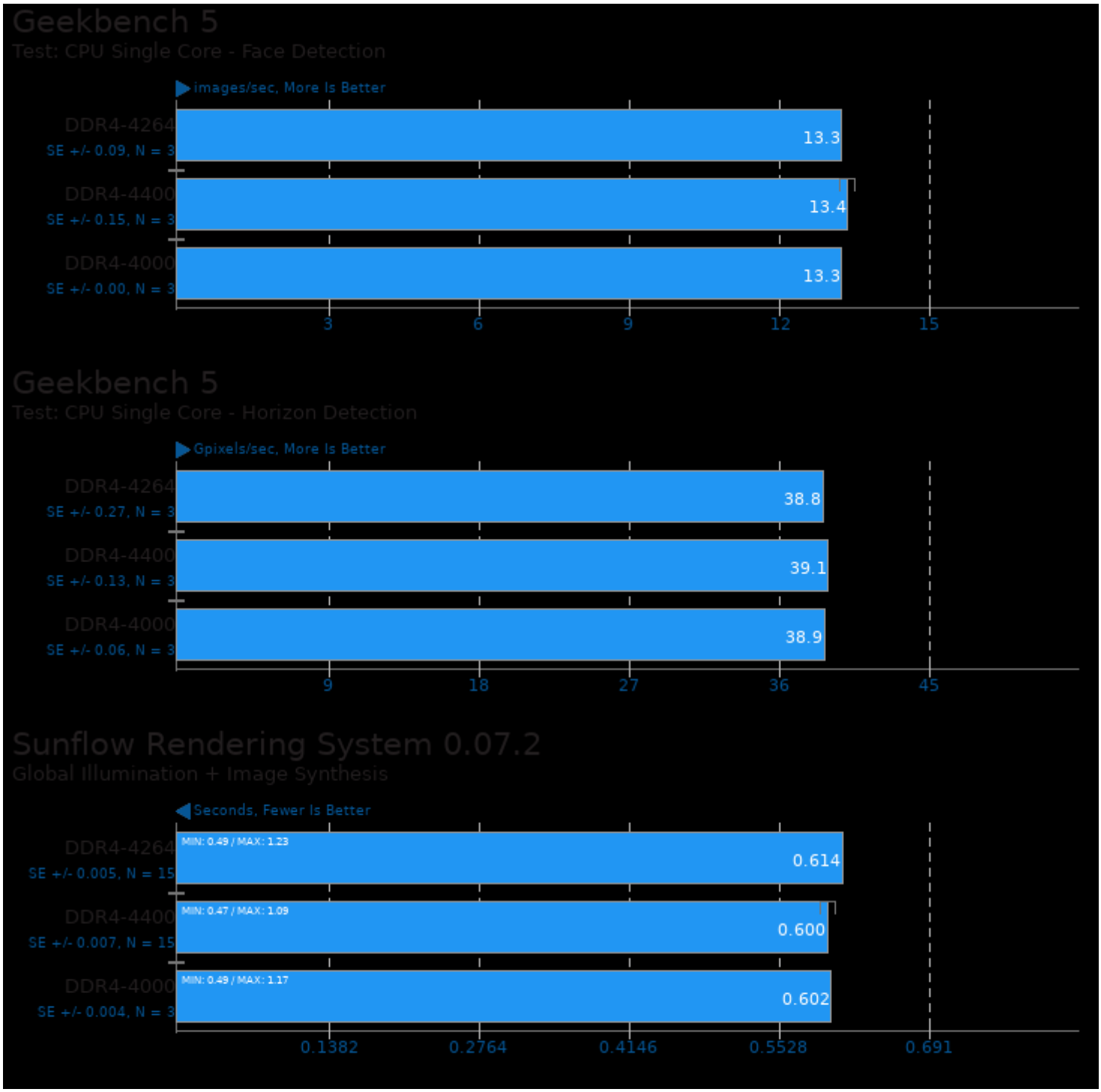
Memory Scaling

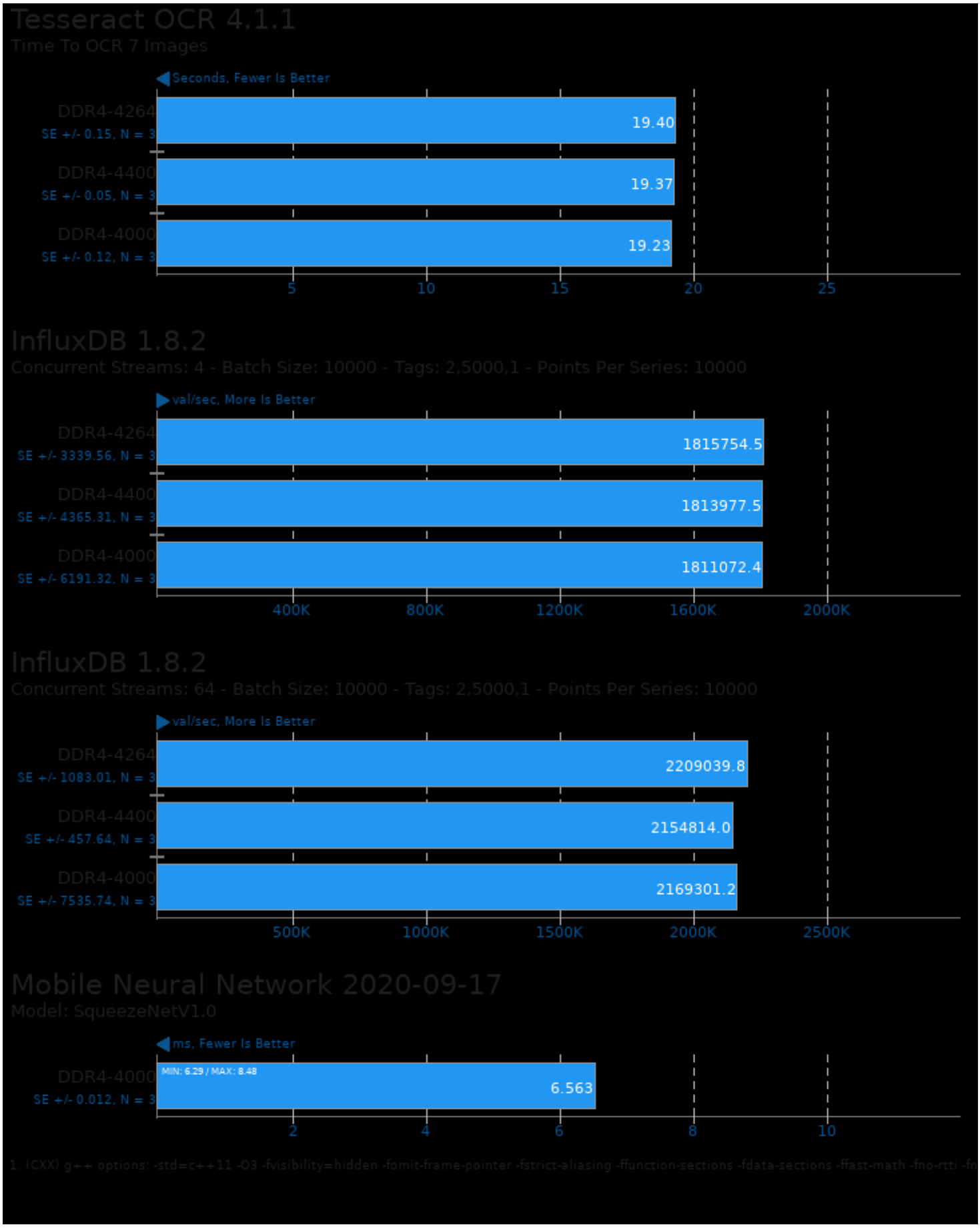


Memory Scaling

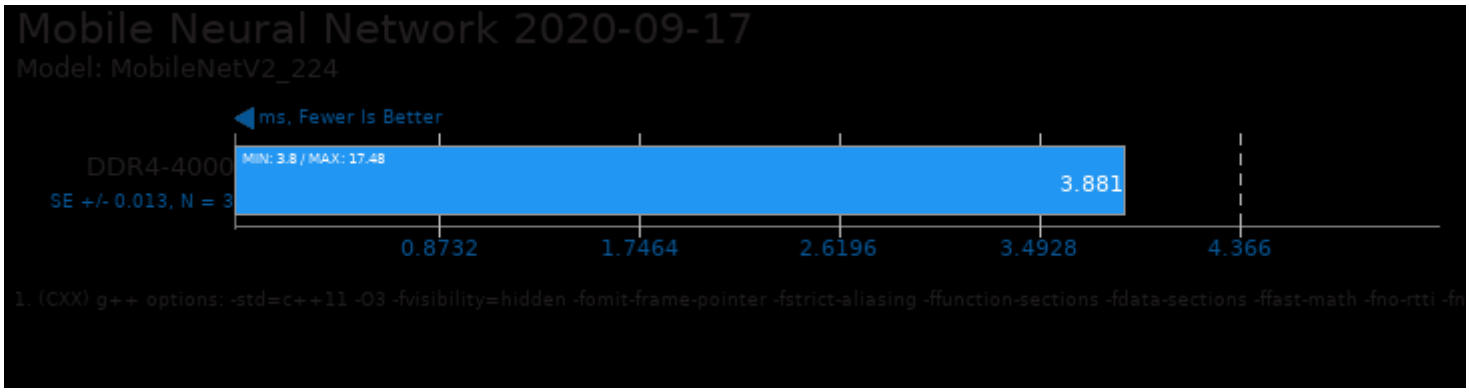


Memory Scaling



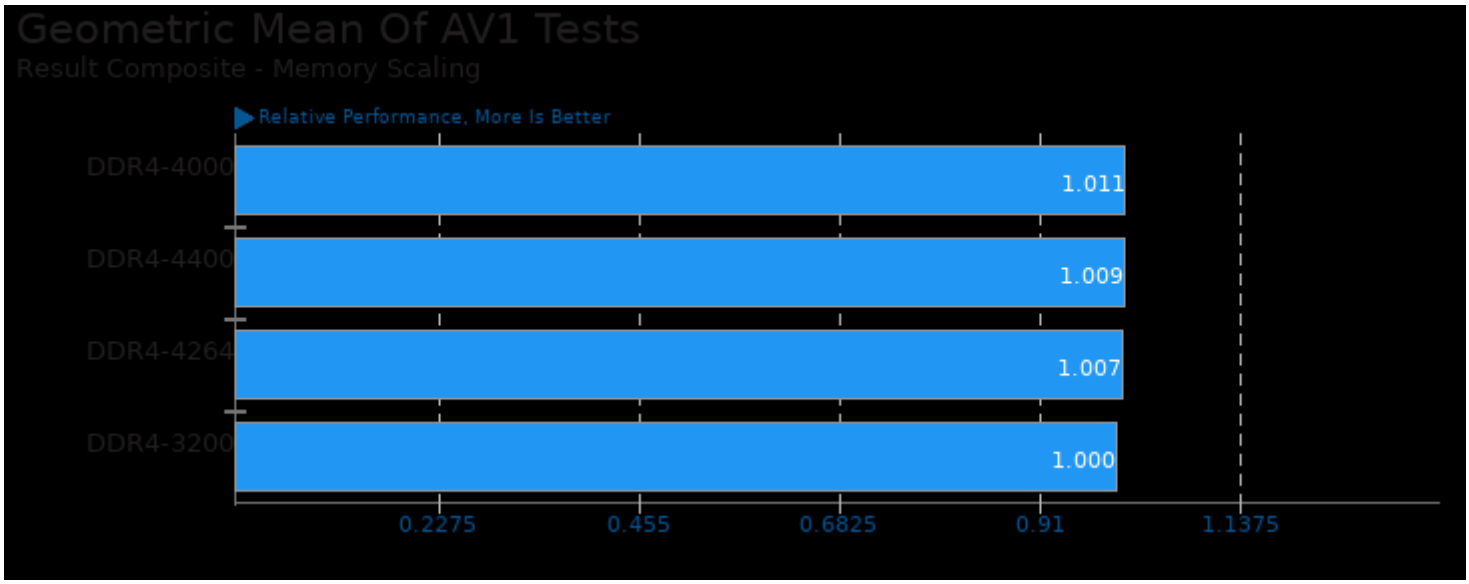

Tesseract OCR 4.1.1
Time To OCR 7 Images
Seconds, Fewer Is Better
DDR4-4264
SE +/- 0.15, N = 3
19.40
DDR4-4400
SE +/- 0.05, N = 3
19.37
DDR4-4000
SE +/- 0.12, N = 3
19.23
5
10
15
20
25
InfluxDB 1.8.2
Concurrent Streams: 4 - Batch Size: 10000 - Tags: 2,5000,1 - Points Per Series: 10000
val/sec, More Is Better
DDR4-4264
SE +/- 3339.56, N = 3
1815754.5
DDR4-4400
SE +/- 4365.31, N = 3
1813977.5
DDR4-4000
SE +/- 6191.32, N = 3
1811072.4
400K
800K
1200K
1600K
2000K
InfluxDB 1.8.2
Concurrent Streams: 64 - Batch Size: 10000 - Tags: 2,5000,1 - Points Per Series: 10000
val/sec, More Is Better
DDR4-4264
SE +/- 1083.01, N = 3
2209039.8
DDR4-4400
SE +/- 457.64, N = 3
2154814.0
DDR4-4000
SE +/- 7535.74, N = 3
2169301.2
500K
1000K
1500K
2000K
2500K
Mobile Neural Network 2020-09-17
Model: SqueezeNetV1.0
ms, Fewer Is Better
DDR4-4000
SE +/- 0.012, N = 3
MIN: 6.29 / MAX: 8.48
6.563
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 -fv

Memory Scaling

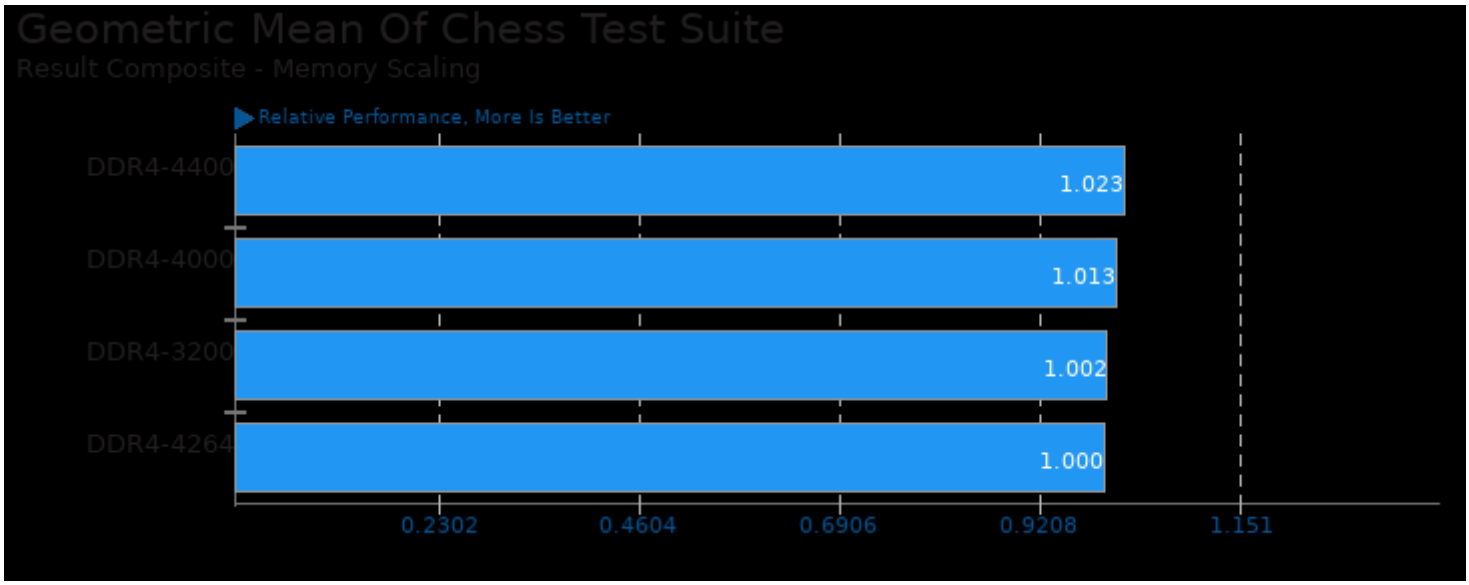


Memory Scaling

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

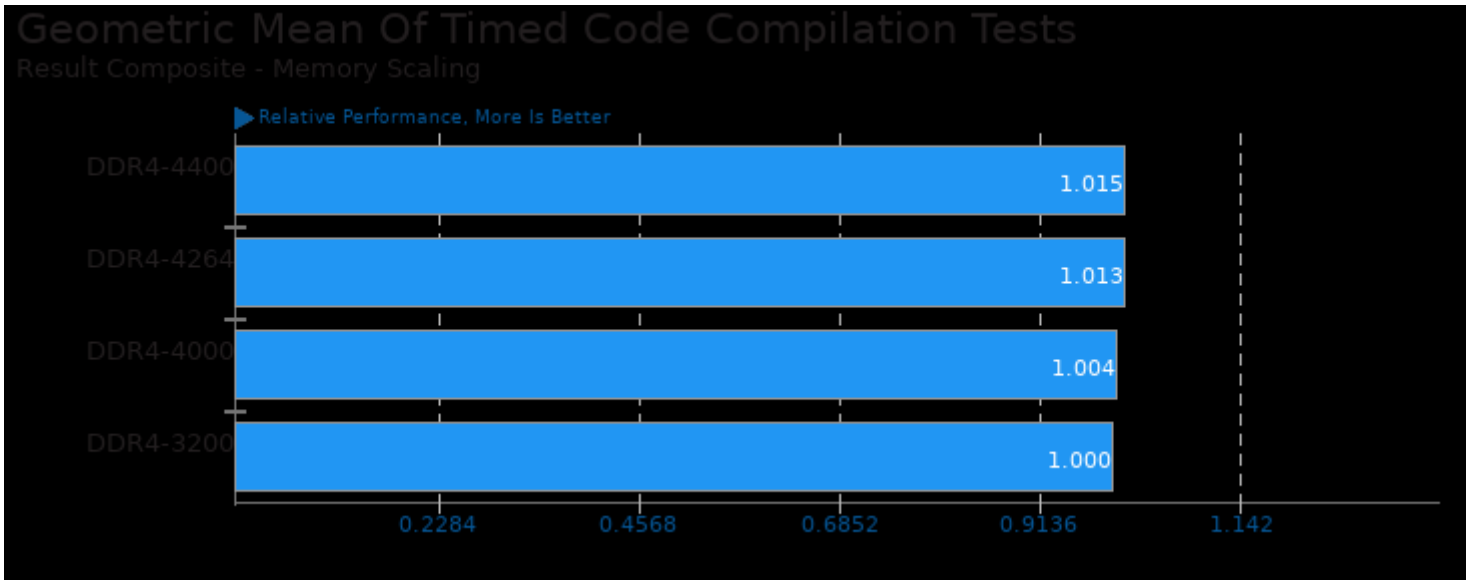


Geometric mean based upon tests: pts/dav1d, pts/aom-av1, pts/svt-av1 and pts/avifenc

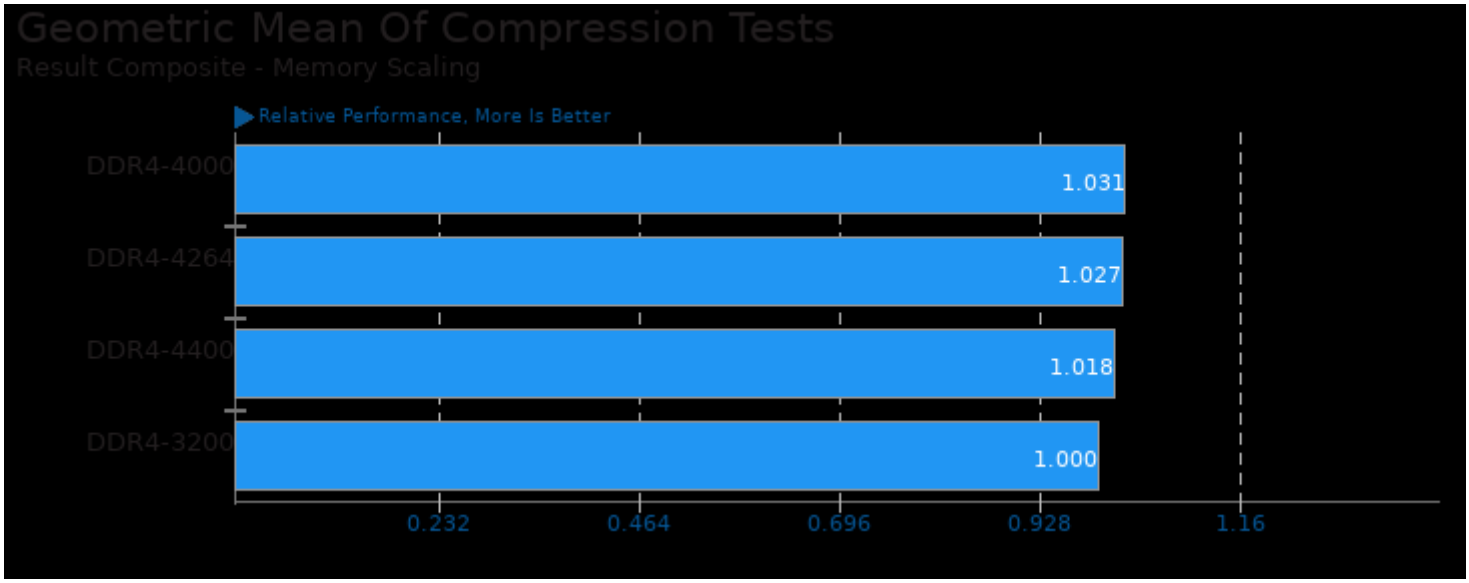


Geometric mean based upon tests: pts/crafty and pts/tscp

Memory Scaling

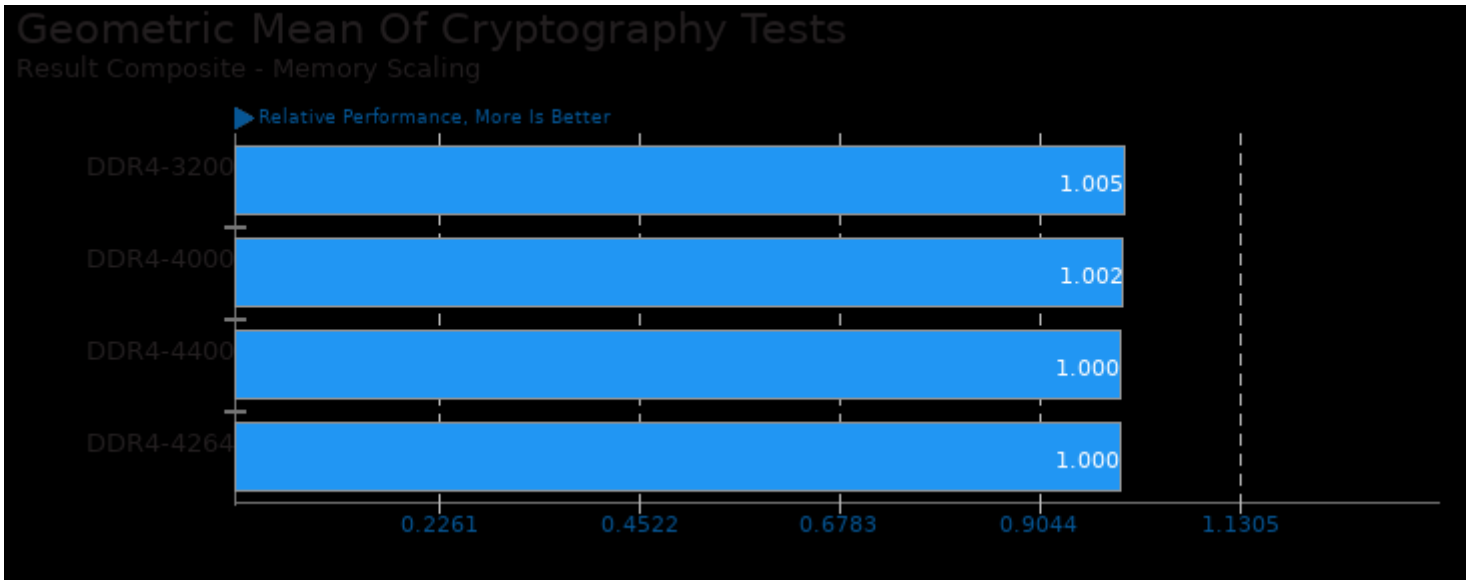


Geometric mean based upon tests: pts/build-apache, pts/build-php, pts/build-linux-kernel, pts/build-imagemagick, pts/build-gdb and pts/build-llvm



Geometric mean based upon tests: pts/compress-zstd and pts/compress-xz

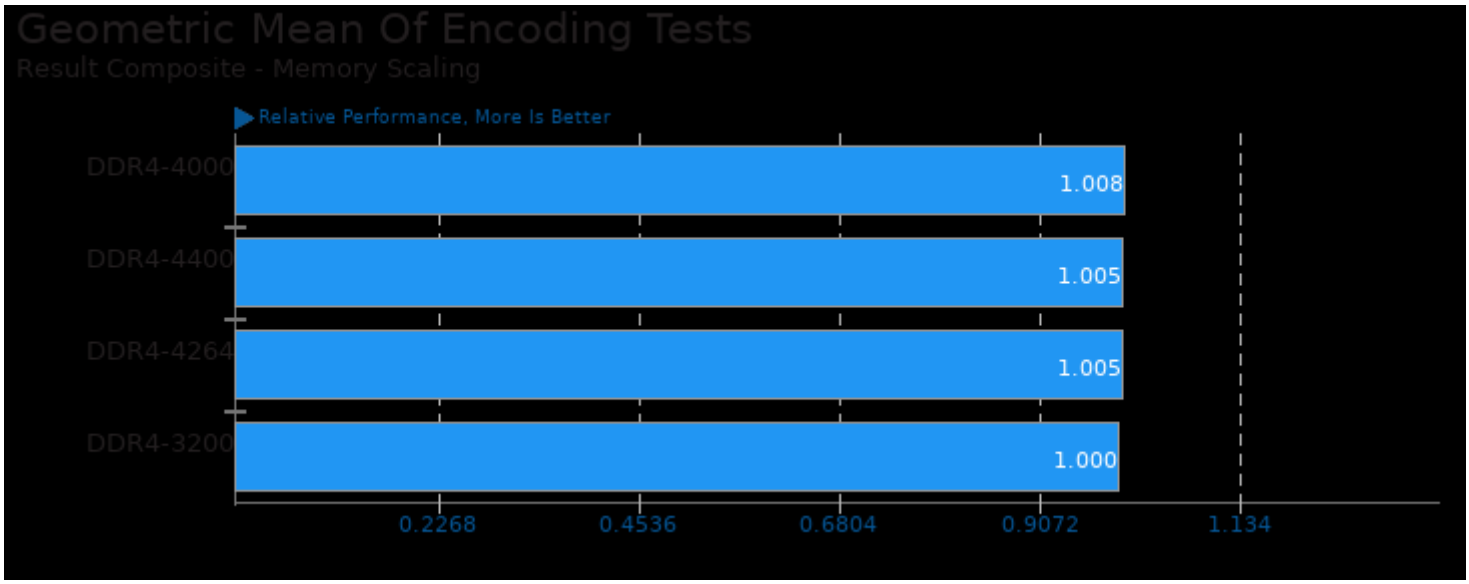
Memory Scaling



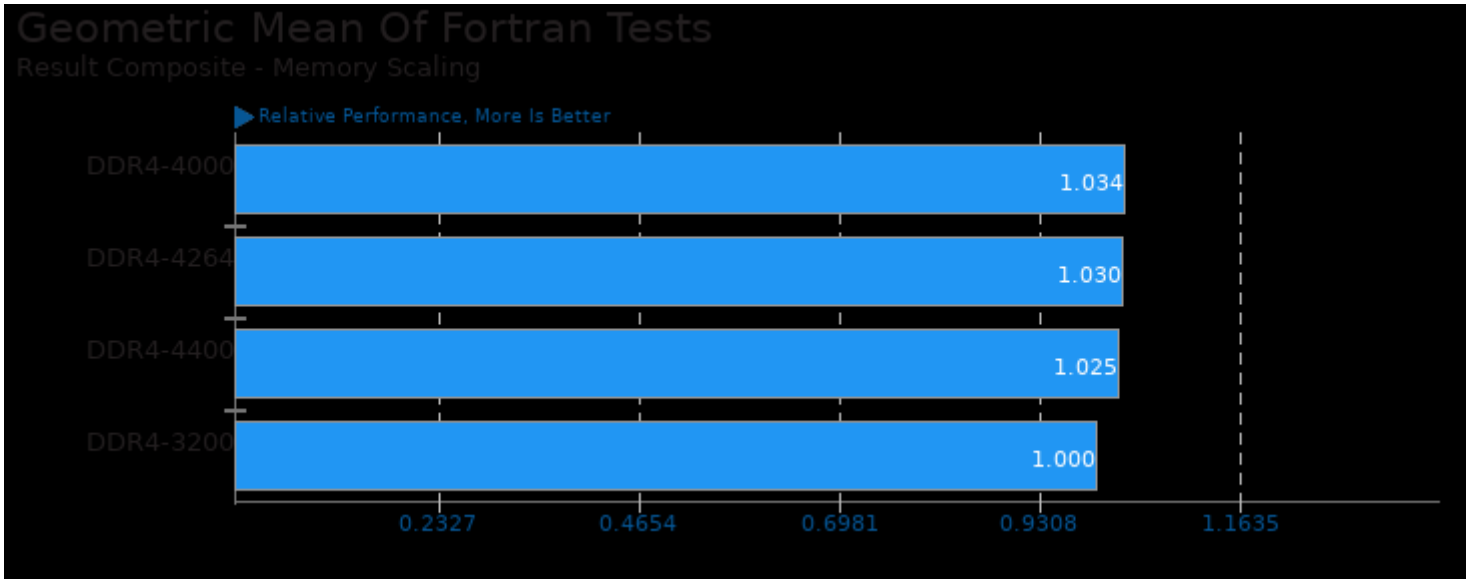
Geometric mean based upon tests: pts/openssl and pts/aircrack-ng

Geometric mean based upon tests: pts/sqlite-speedtest, pts/keydb, pts/couchdb and pts/influxdb

Memory Scaling

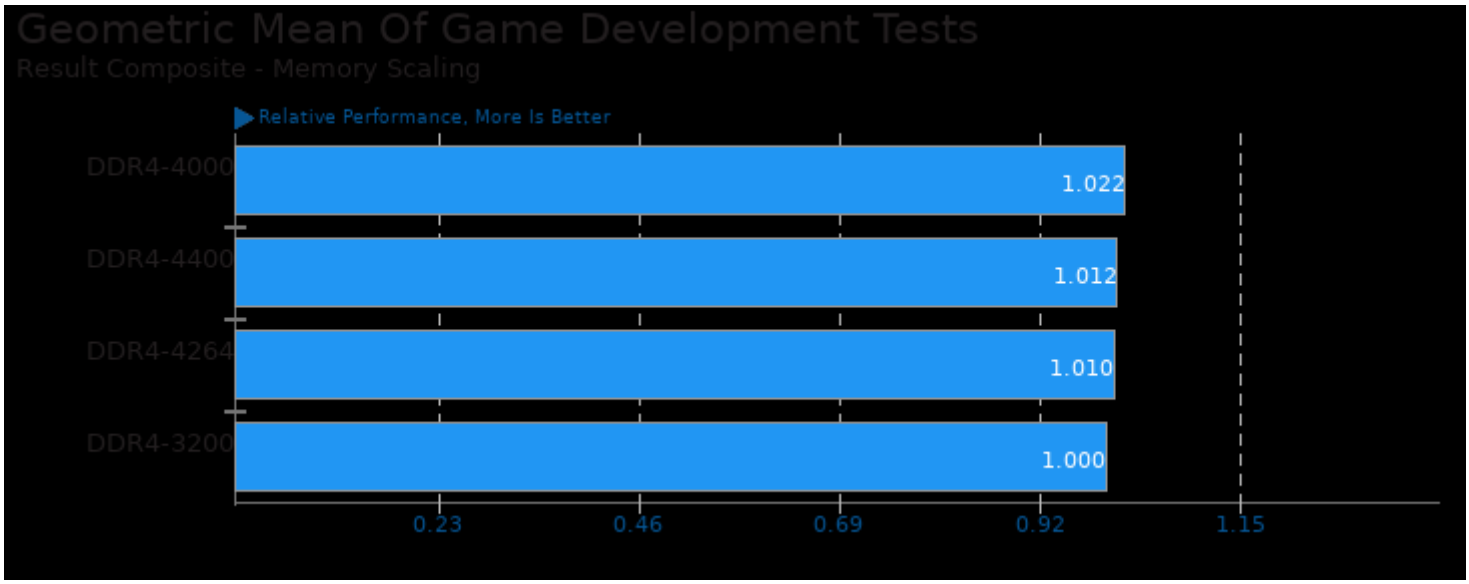


Geometric mean based upon tests: pts/x265, pts/kvazaar, pts/vpxenc, pts/dav1d, pts/aom-av1, pts/svt-av1 and pts/avifenc

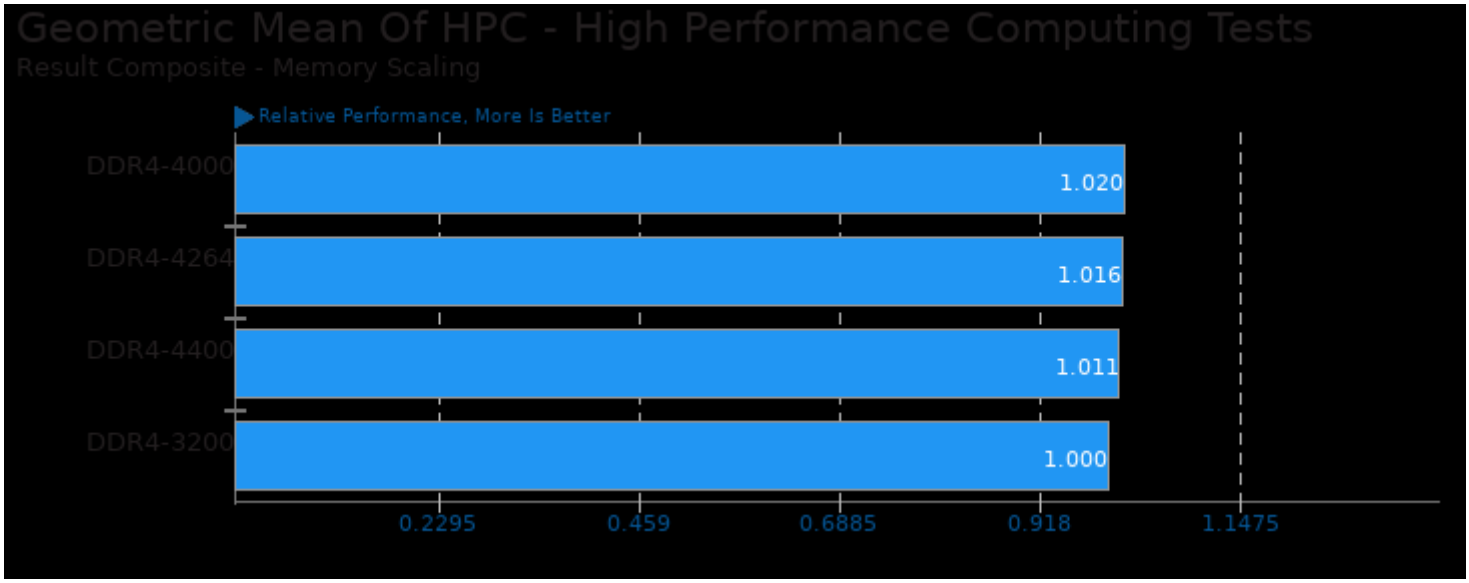


Geometric mean based upon tests: pts/hpcg, pts/npb, pts/dolfyn, pts/ffte and pts/lammps

Memory Scaling



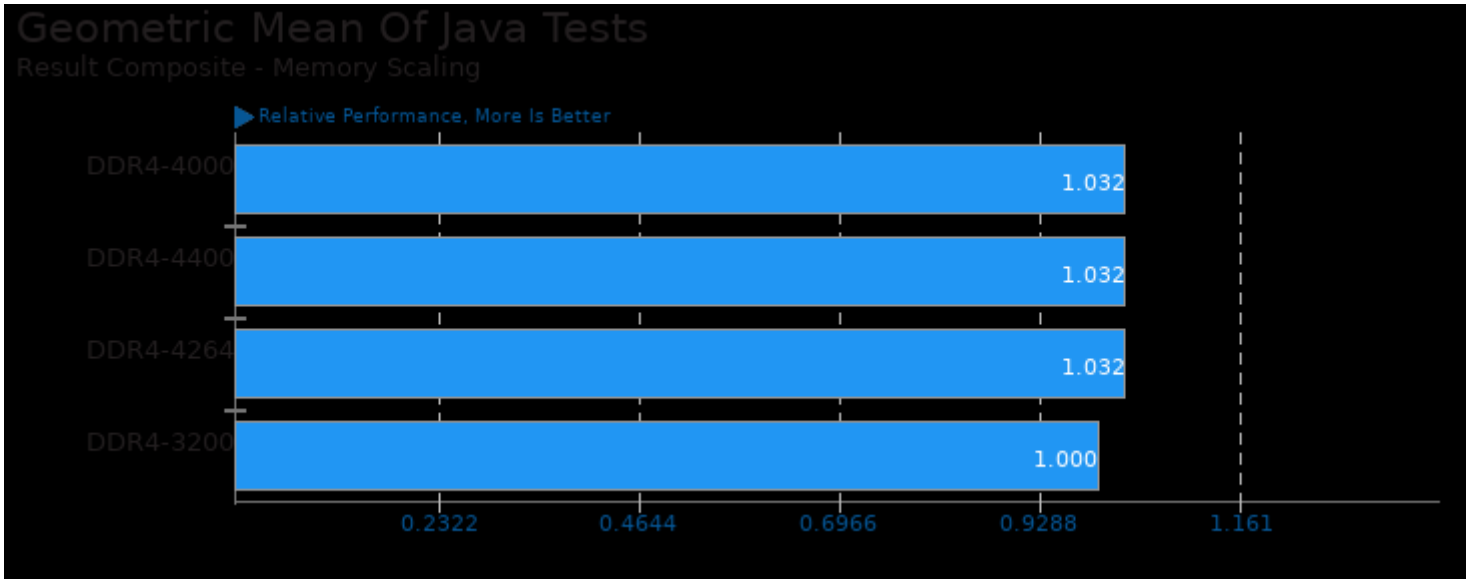
Geometric mean based upon tests: pts/astcenc, pts/blender, pts/oidn and pts/openvkl



Geometric mean based upon tests: pts/npb, pts/rodinia, pts/parboil, pts/hpcg, pts/ffte, pts/namd, pts/gromacs, pts/dolfyn, pts/lammps, pts/mafft, pts/mnn, pts/ncnn, pts/caffe, pts/deepspeech, pts/rnnoise, pts/tensorflow-lite and pts/openvino

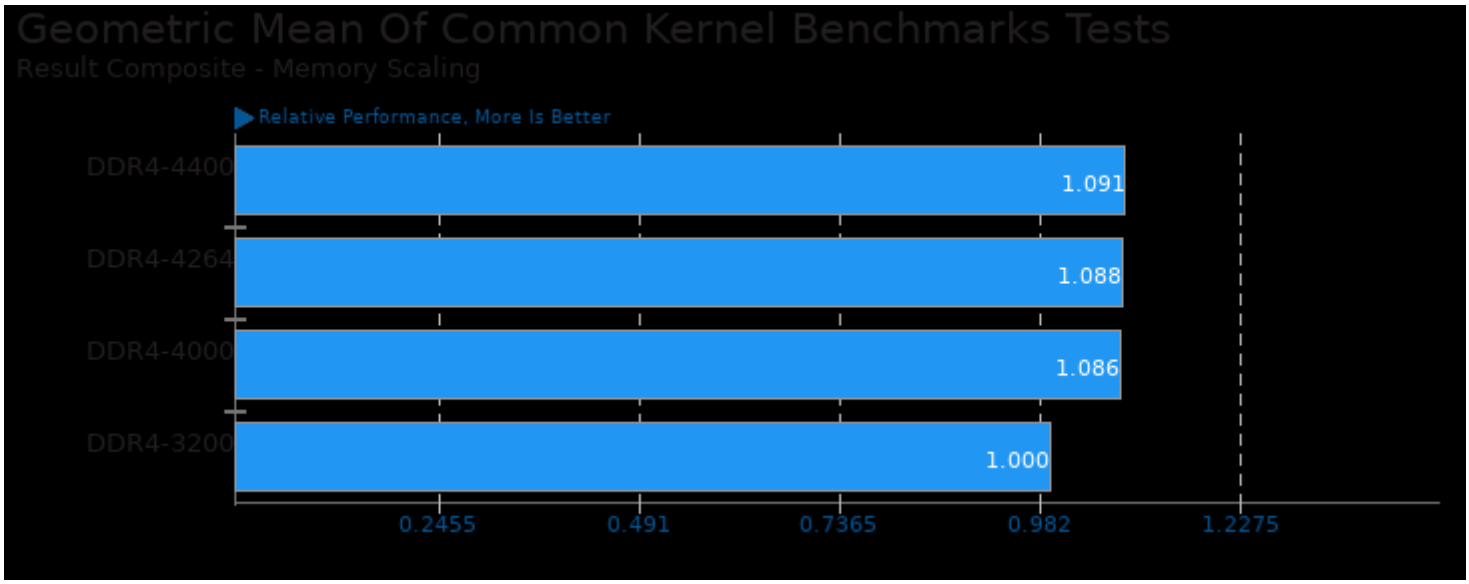
Memory Scaling

Geometric mean based upon tests: pts/webp, system/hugin and pts/avifenc

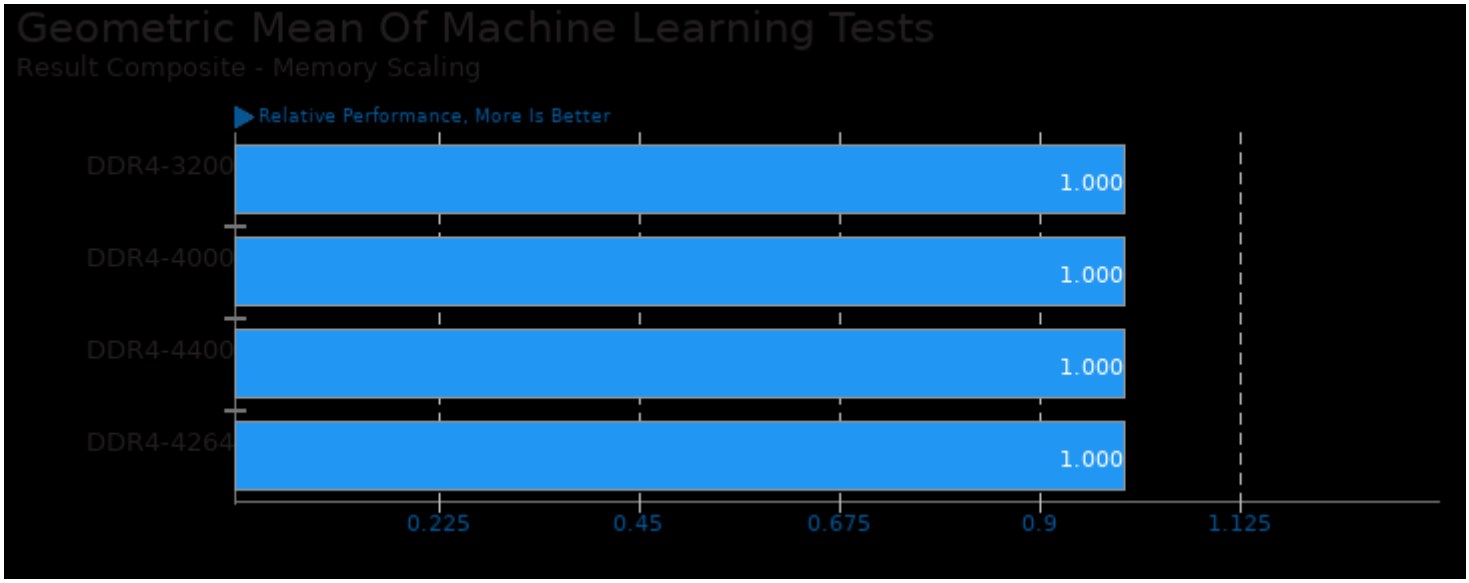


Geometric mean based upon tests: pts/sunflow and pts/dacapobench

Memory Scaling



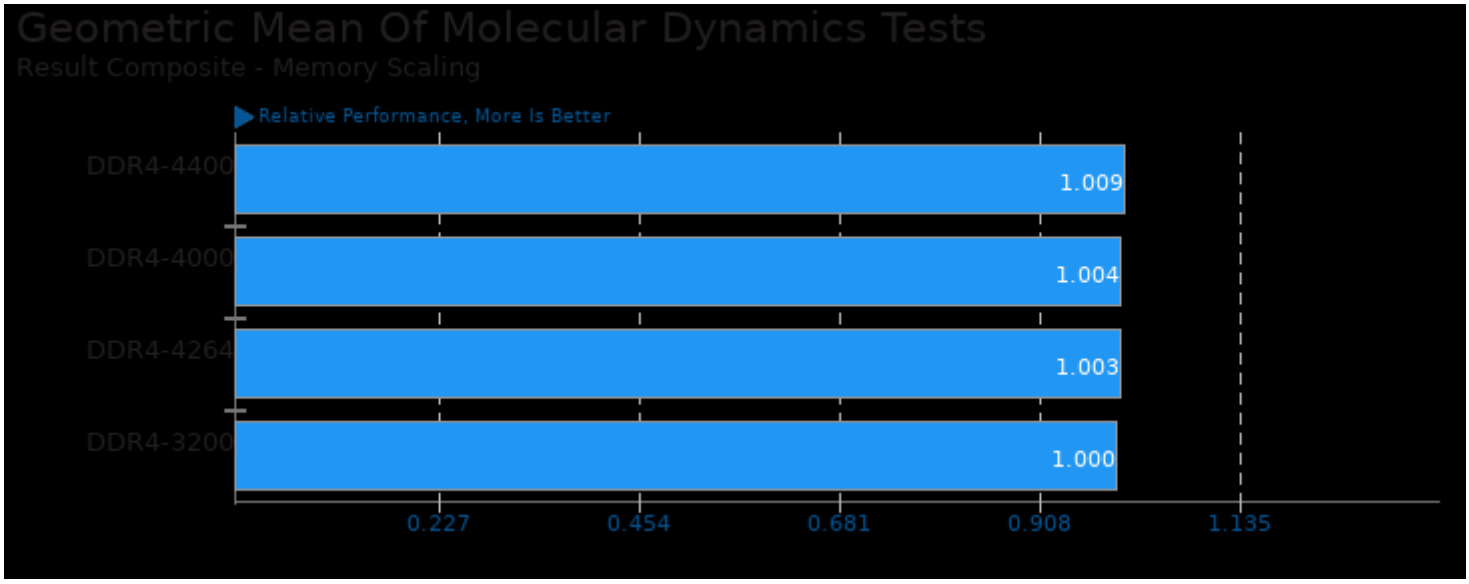
Geometric mean based upon tests: pts/apache, pts/sqlite-speedtest, pts/tinymembench, pts/mbw and pts/openssl



Geometric mean based upon tests: pts/mnn, pts/ncnn, pts/caffe, pts/deepspeech, pts/rnnoise, pts/tensorflow-lite and pts/openvino

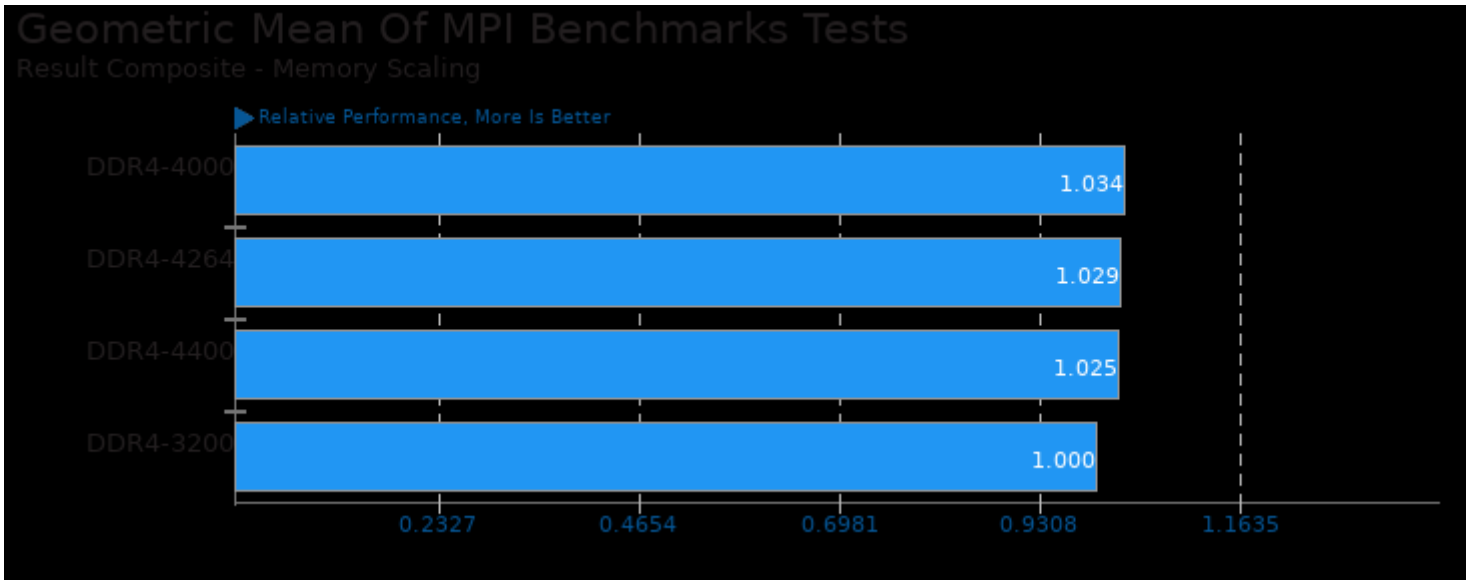
Memory Scaling

Geometric mean based upon tests: pts/ramspeed, pts/stream, pts/tinymembench and pts/mbw

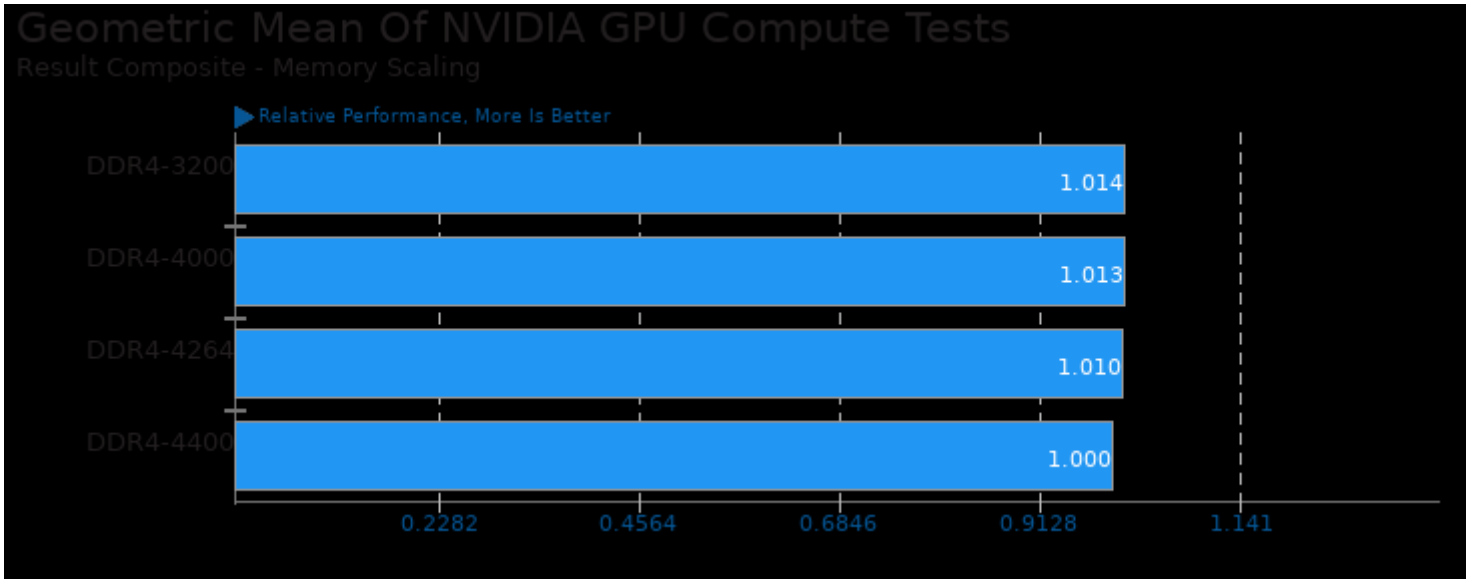


Geometric mean based upon tests: pts/namd, pts/gromacs, pts/dolfyn and pts/lammps

Memory Scaling

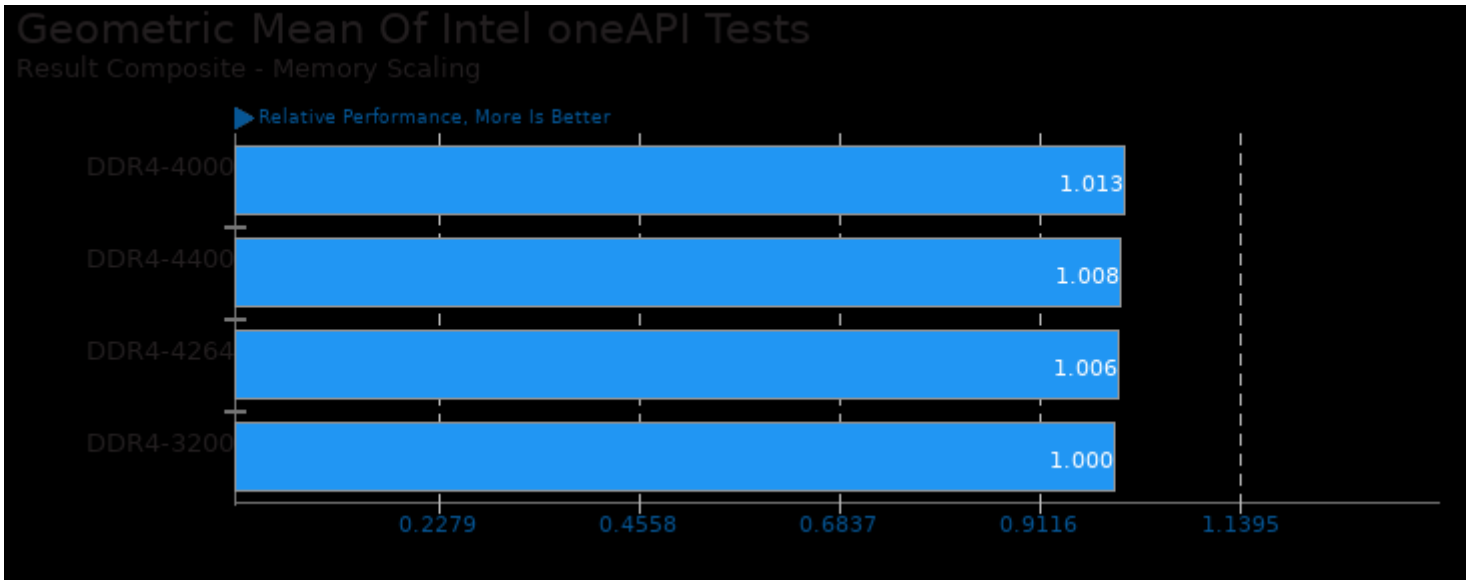


Geometric mean based upon tests: pts/lammps, pts/gromacs, pts/hpcg and pts/npb

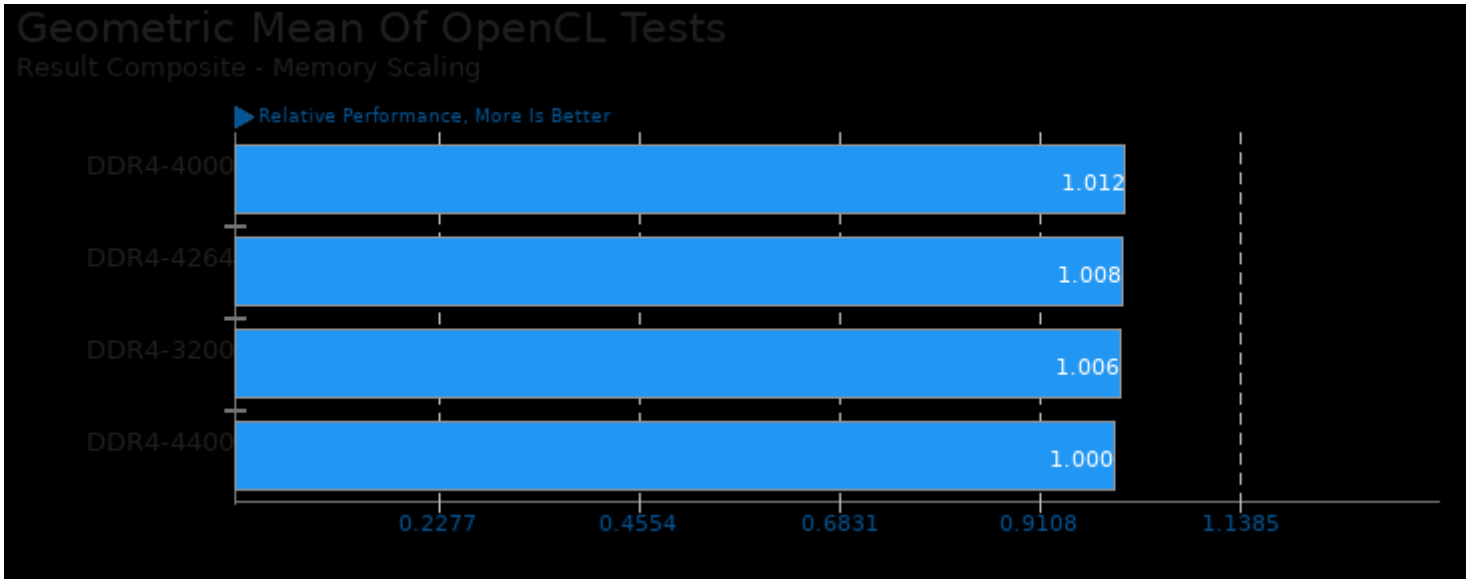


Geometric mean based upon tests: pts/gromacs, pts/rodinia, pts/blender, pts/caffe and pts/ncnn

Memory Scaling

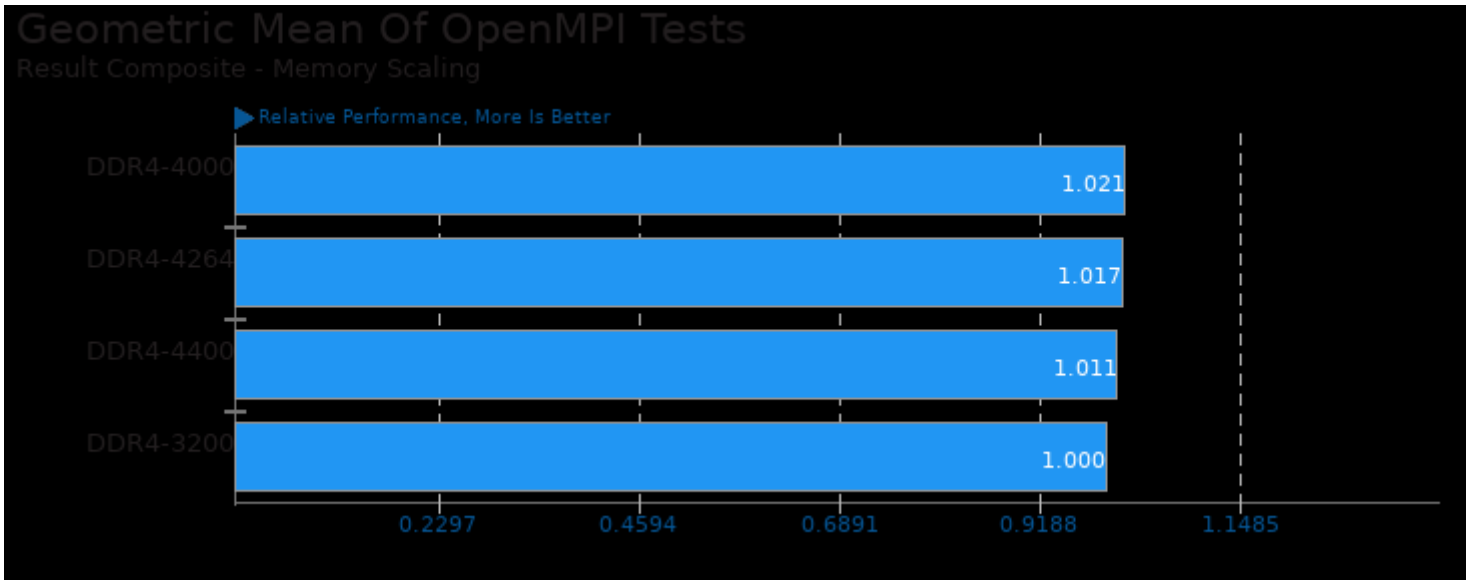


Geometric mean based upon tests: pts/oidn, pts/ospray, pts/openvkl and pts/openvino

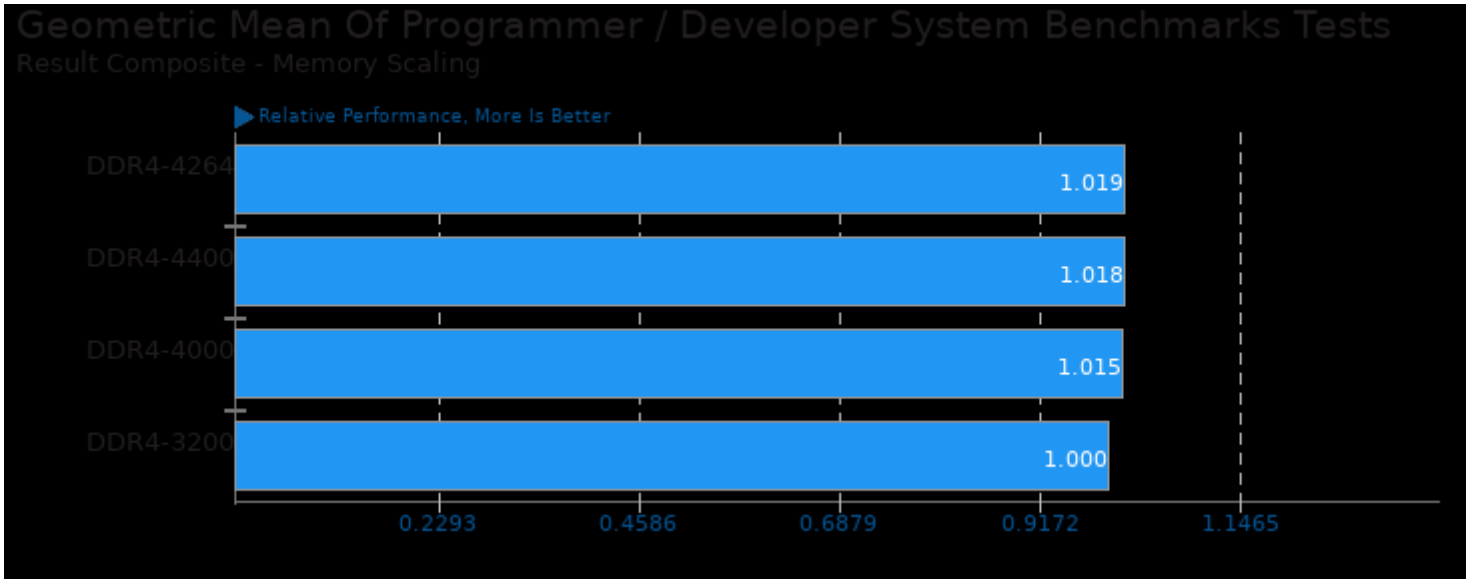


Geometric mean based upon tests: pts/rodinia and pts/parboil

Memory Scaling

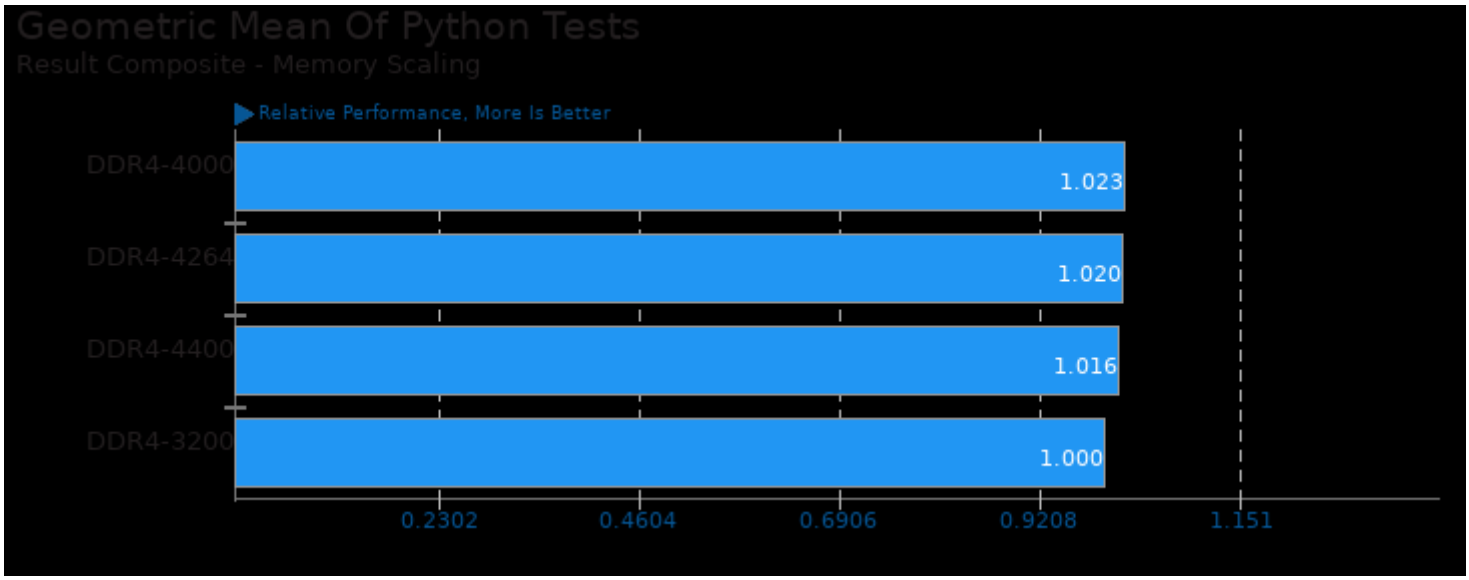


Geometric mean based upon tests: pts/hpcg, pts/npb, pts/parboil, pts/rodinia, pts/lammps, system/opm and pts/gromacs

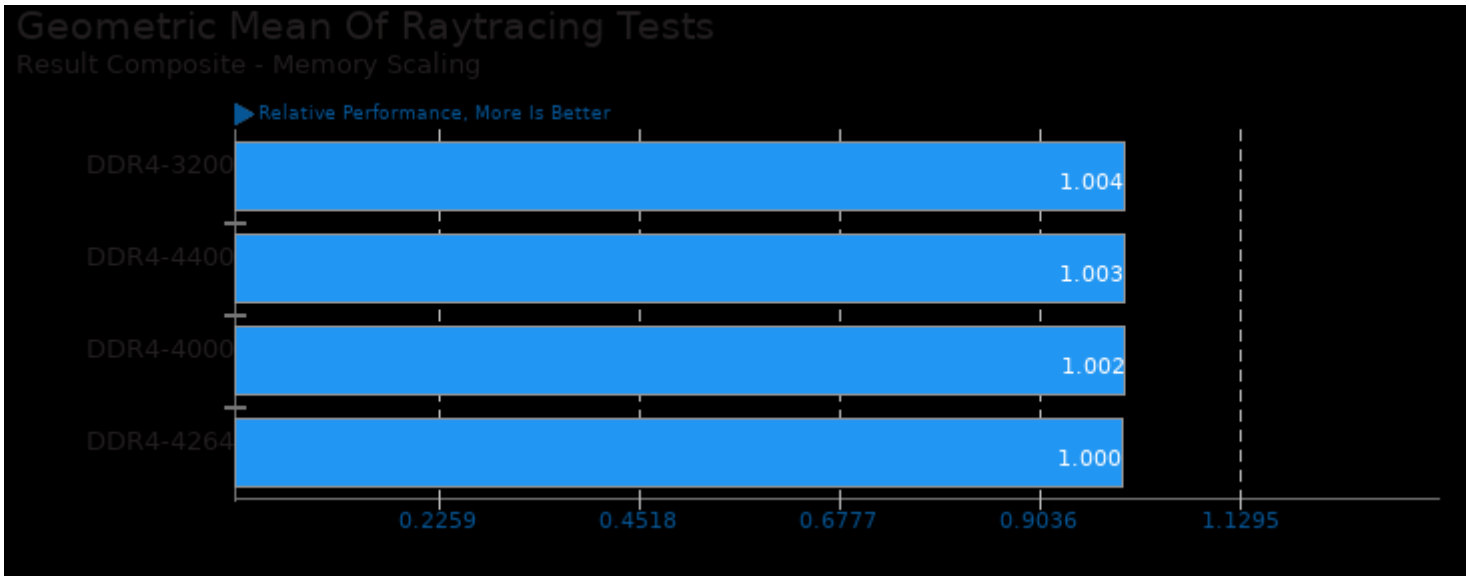


Geometric mean based upon tests: pts/sqlite-speedtest, pts/compress-zstd, pts/build-apache, pts/build-php, pts/build-linux-kernel, pts/build-imagemagick, pts/build-gdb and pts/build-llvm

Memory Scaling



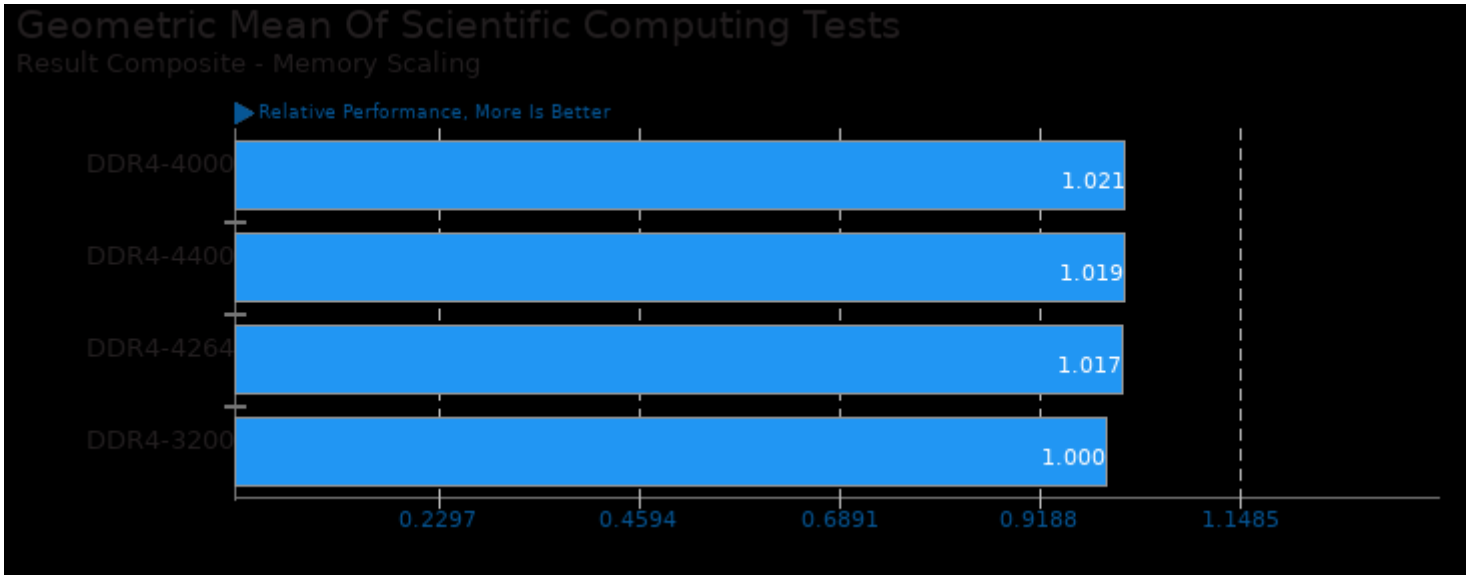
Geometric mean based upon tests: pts/parboil, pts/build-llvm, system/ocrmypdf, pts/caffe and pts/openvino



Geometric mean based upon tests: pts/ospray, pts/c-ray and pts/povray

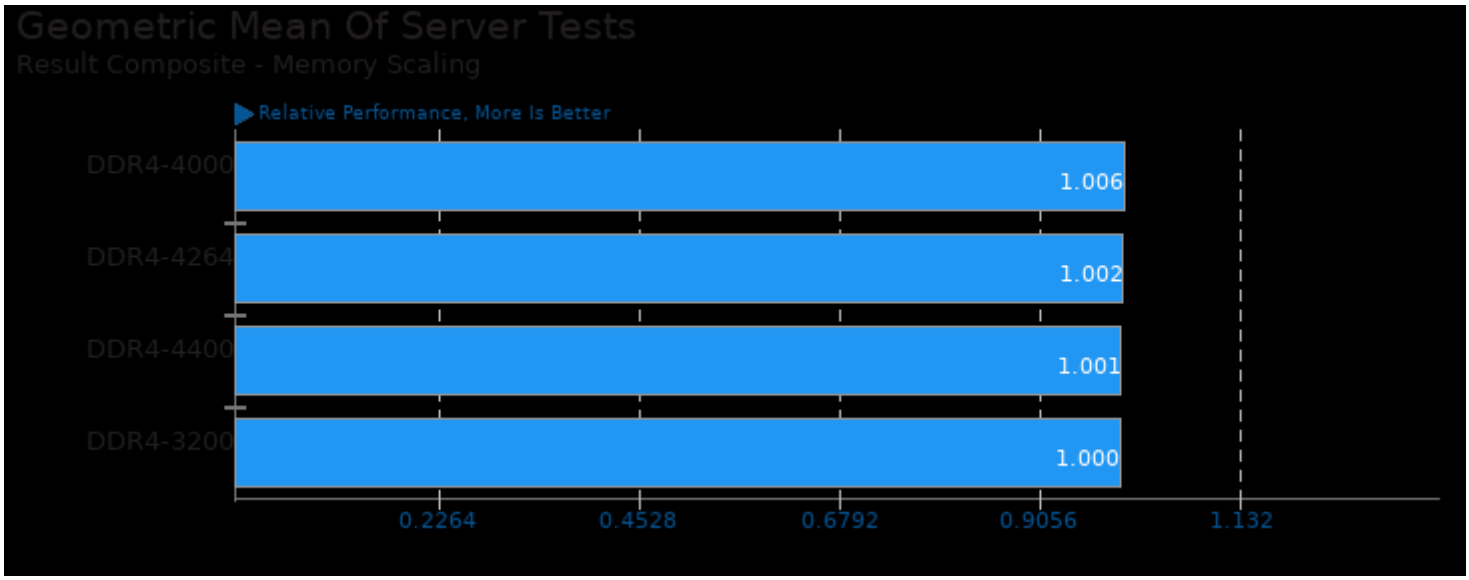
Memory Scaling

Geometric mean based upon tests: pts/ospray, pts/c-ray, pts/povray, pts/blender, pts/appleseed, pts/smallpt and pts/ttsiod-renderer

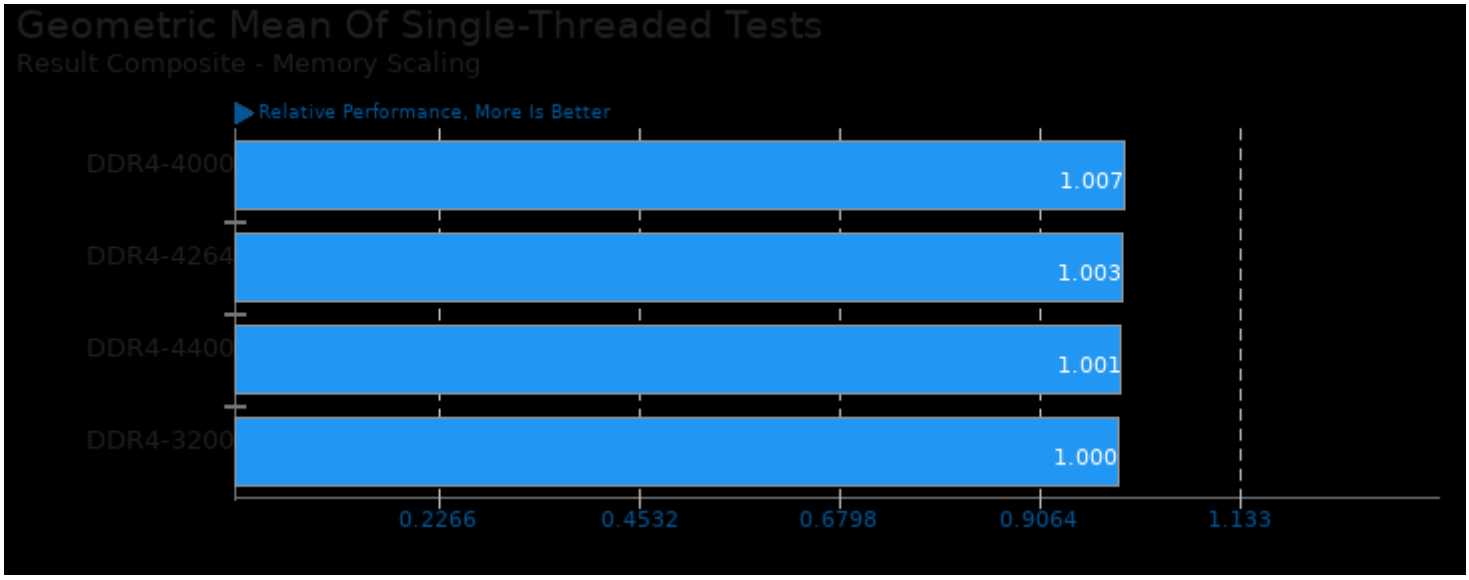


Geometric mean based upon tests: pts/ffte, pts/namd, pts/gromacs, pts/dolfyn, pts/lammps and pts/mafft

Memory Scaling

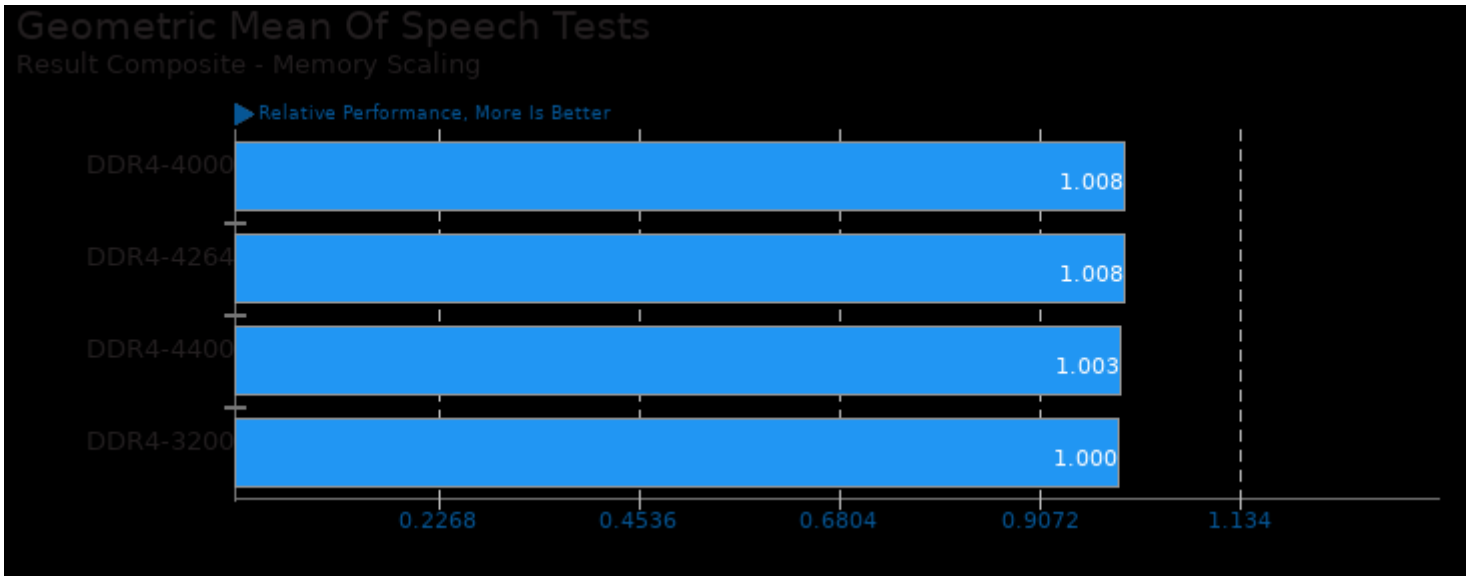


Geometric mean based upon tests: pts/apache, pts/keydb, pts/openssl, pts/sqlite-speedtest, pts/couchdb and pts/influxdb

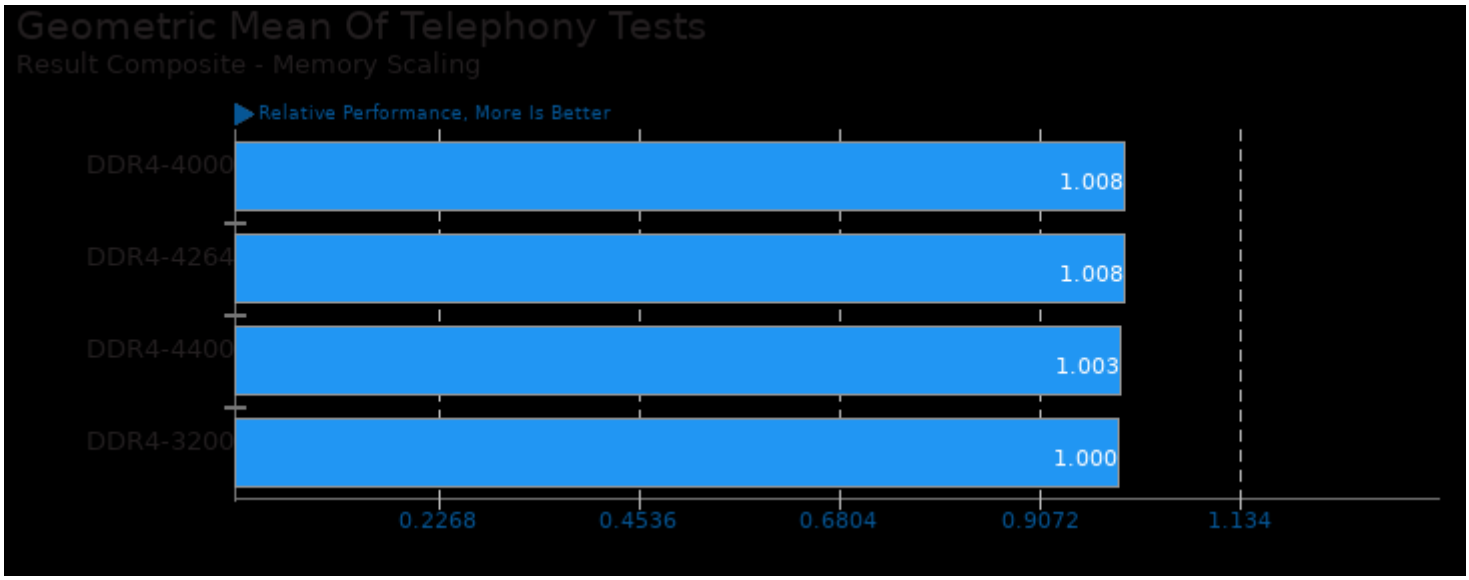


Geometric mean based upon tests: pts/fhourstones, pts/byte, pts/deepspeech, pts/espeak and system/tesseract-ocr

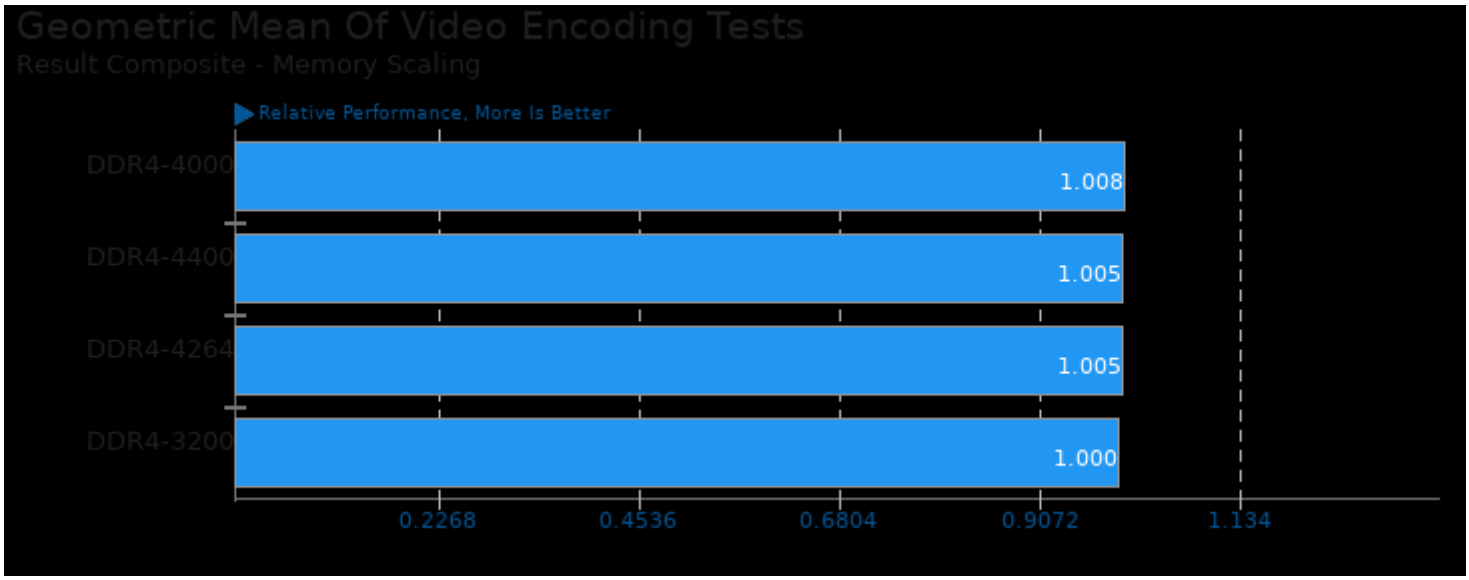
Memory Scaling



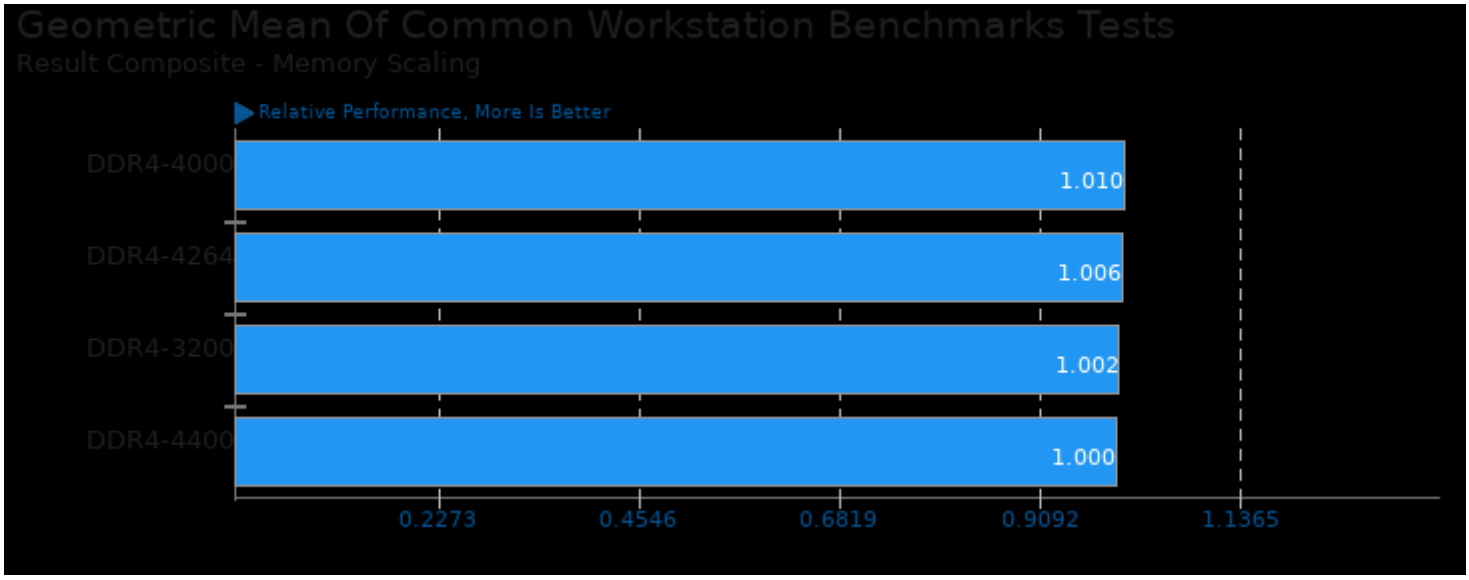
Geometric mean based upon tests: pts/espeak, pts/deepspeech and pts/rnnoise



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



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



Geometric mean based upon tests: pts/blender, pts/rodinia, pts/parboil and pts/x265

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 09:43.