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lnxbuild-9-9900

Intel Core i9-9900 testing with a Gigabyte Z370 AORUS Ultra Gaming-CF (F16a BIOS) and AMD Radeon RX 56/64 8GB on ManjaroLinux 22.0.0 via the Phoronix Test Suite.

Test Systems:

lnxbuild-i9-9900-20201213

numpy

graphics-magick-2.02

cython-i9-9900

x265

ramspeed

lz4

onednn

onednn-2nd

onednn-100A

onednn-110A

numpy-110A

build-linux-ker-110A

build-linux-kernel-110A

build-linux-kernel-110A-2nd

onednn-50A

onednn-75A

Processor: Intel Core i9-9900 @ 5.00GHz (8 Cores / 16 Threads), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF (F16a BIOS), Chipset: Intel 8th/9th, Memory: 64GB, Disk: 960GB Corsair Force MP510 + 1000GB KINGSTON SA2000M81000G + 512GB Crucial CT512MX1 + 120GB INTEL SSDSC2CT12 + 3001GB TOSHIBA HDWA130 + 320GB Western Digital WD3200AAJS-0, Graphics: Sapphire AMD Radeon RX 470/480/570/570X/580/580X/590 8GB (1340/2000MHz), Audio: Realtek ALC1220, Monitor: Q3279WG5B, Network: Intel I219-V + Realtek RTL8125 2.5GbE

OS: ManjaroLinux 20.2, Kernel: 5.4.74-1-MANJARO (x86_64), Desktop: Xfce 4.14, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 20.2.1 (LLVM 10.0.1), Vulkan: 1.2.131, Compiler: GCC 10.2.0 + Clang 10.0.1 + LLVM 10.0.1, File-System: ext4, Screen Resolution: 2560x1440

Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Mitigation of TSX disabled + tsx_async_abort: Mitigation of TSX disabled

onednn-85A

Processor: Intel Core i9-9900 @ 5.00GHz (8 Cores / 16 Threads), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF (F16a BIOS), Chipset: Intel 8th/9th, Memory: 64GB, Disk: 960GB Corsair Force MP510 + 1000GB KINGSTON SA2000M81000G + 512GB Crucial CT512MX1 + 120GB INTEL SSDSC2CT12 + 320GB Western Digital WD3200AAJS-0 + 3001GB TOSHIBA HDWA130, Graphics: Sapphire AMD Radeon RX 470/480/570/570X/580/580X/590 8GB (1340/2000MHz), Audio: Realtek ALC1220, Monitor: Q3279WG5B, Network: Intel I219-V + Realtek RTL8125 2.5GbE

OS: ManjaroLinux 20.2, Kernel: 5.4.74-1-MANJARO (x86_64), Desktop: Xfce 4.14, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 20.2.1 (LLVM 10.0.1), Vulkan: 1.2.131, Compiler: GCC 10.2.0 + Clang 10.0.1 + LLVM 10.0.1,

File-System: ext4, Screen Resolution: 2560x1440

Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Mitigation of TSX disabled + tsx_async_abort: Mitigation of TSX disabled

onednn-95A

onednn-95A-perf

build-linux-ker-95A-perf

numpy-95A

onednn-130A

build-linux-kernel-130A

numpy-130A

onednn-avx-130A

scimark2-130A

luxcorerender-130A

hmmer-130A

Processor: Intel Core i9-9900 @ 5.00GHz (8 Cores / 16 Threads), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF (F16a BIOS), Chipset: Intel 8th/9th, Memory: 64GB, Disk: 960GB Corsair Force MP510 + 1000GB KINGSTON SA2000M81000G + 512GB Crucial CT512MX1 + 120GB INTEL SSDSC2CT12 + 3001GB TOSHIBA HDWA130 + 320GB Western Digital WD3200AAJS-0, Graphics: Sapphire AMD Radeon RX 470/480/570/570X/580/580X/590 8GB (1340/2000MHz), Audio: Realtek ALC1220, Monitor: Q3279WG5B, Network: Intel I219-V + Realtek RTL8125 2.5GbE

OS: ManjaroLinux 20.2, Kernel: 5.4.74-1-MANJARO (x86_64), Desktop: Xfce 4.14, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 20.2.1 (LLVM 10.0.1), Vulkan: 1.2.131, Compiler: GCC 10.2.0 + Clang 10.0.1 + LLVM 10.0.1, File-System: ext4, Screen Resolution: 2560x1440

Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Mitigation of TSX disabled + tsx_async_abort: Mitigation of TSX disabled

ADATA SX8200PNP - Intel Core i9-9900

Intel Core i9-9900 - Gigabyte Intel UHD 630 CFL GT2

Intel Core i9-9900

Processor: Intel Core i9-9900 @ 5.00GHz (8 Cores / 16 Threads), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF (F16a BIOS), Chipset: Intel 8th/9th, Memory: 32GB, Disk: 2048GB ADATA SX8200PNP + 500GB Western Digital WDS500G2B0C-00PXH0 + 512GB Crucial CT512MX1 + 3001GB TOSHIBA HDWA130 + 320GB Western Digital WD3200AAJS-0, Graphics: Gigabyte Intel UHD 630 CFL GT2 3GB (1200MHz), Audio: Realtek ALC1220, Monitor: Q3279WG5B, Network: Intel I219-V + Realtek RTL8125 2.5GbE

OS: ManjaroLinux 21.2.5, Kernel: 5.10.105-1-MANJARO (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.21.1.3, OpenGL: 4.6 Mesa 21.3.7, Compiler: GCC 11.2.0 + Clang 13.0.1 + LLVM 13.0.1, File-System: ext4, Screen Resolution: 2560x1440

Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: intel_pstate powersave (EPP: balance_performance) - CPU Microcode: 0xec
Python Notes: sh: line 1: /home/axel/scripts/python: Is a directory + Python 3.10.2
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Vulnerable: eIBRS with unprivileged eBPF + srbds: Mitigation of TSX disabled + tsx_async_abort: Mitigation of TSX disabled

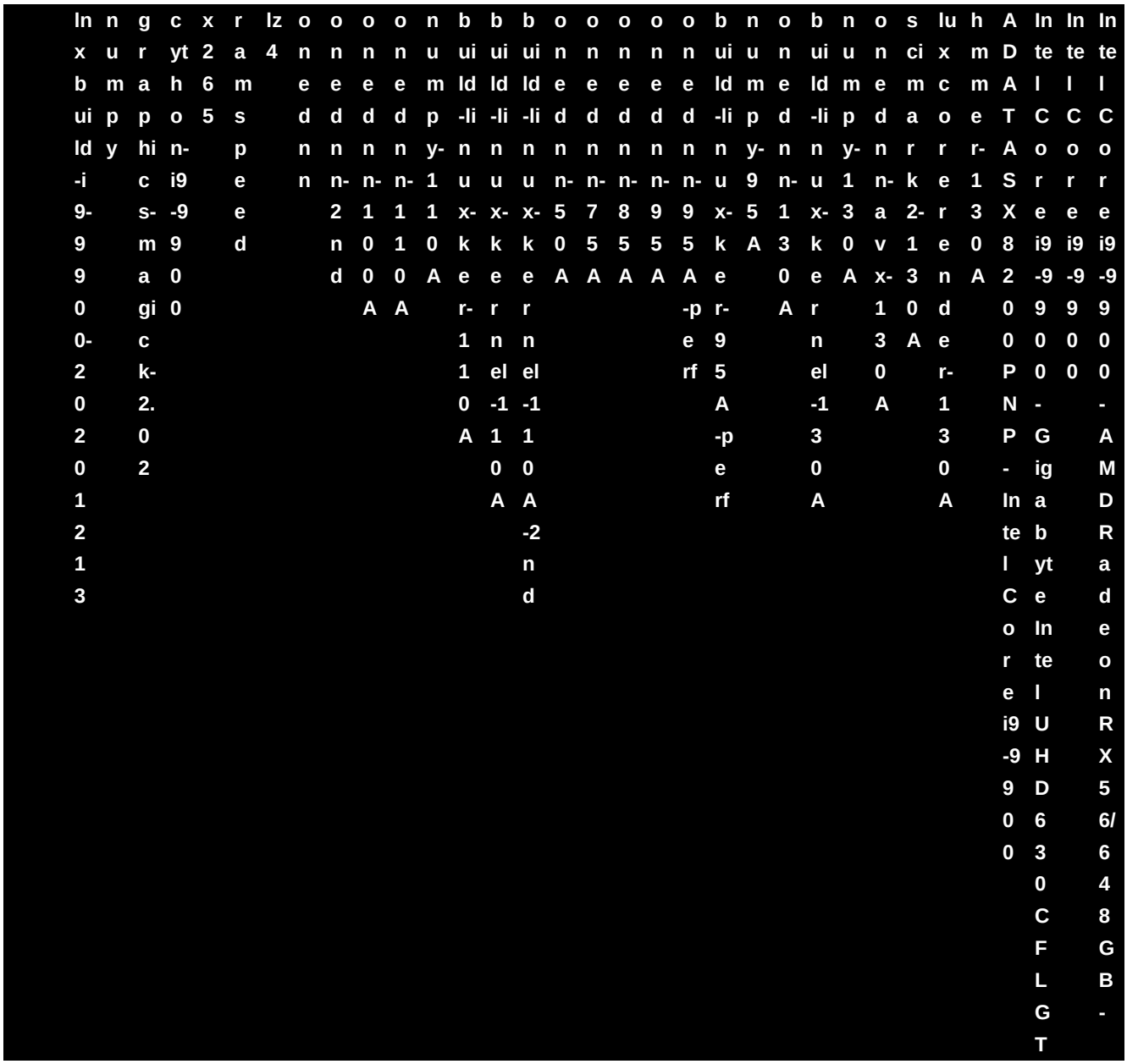
Intel Core i9-9900 - AMD Radeon RX 56/64 8GB -

Processor: Intel Core i9-9900 @ 5.00GHz (8 Cores / 16 Threads), Motherboard: Gigabyte Z370 AORUS Ultra Gaming-CF (F16a BIOS), Chipset: Intel 8th/9th, Memory: 64GB, Disk: 2048GB ADATA SX8200PNP + 500GB Western Digital WDS500G2B0C-00PXH0 + 512GB Crucial CT512MX1 + 3001GB TOSHIBA HDWA130 + 320GB Western Digital WD3200AAJS-0, Graphics: AMD Radeon RX 56/64 8GB (1590/800MHz), Audio: Realtek ALC1220, Monitor: Q3279WG5B, Network: Intel I219-V + Realtek RTL8125 2.5GbE

OS: ManjaroLinux 22.0.0, Kernel: 6.0.11-1-MANJARO (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.21.1.4, OpenGL: 4.6 Mesa 22.2.4 (LLVM 14.0.6 DRM 3.48), Vulkan: 1.3.224, Compiler: GCC 12.2.0 + Clang 14.0.6 + LLVM 14.0.6, File-System: ext4, Screen Resolution: 2560x1440

Kernel Notes: Transparent Huge Pages: always
Processor Notes: Scaling Governor: intel_pstate powersave (EPP: balance_performance) - CPU Microcode: 0xf4
Python Notes: sh: line 1: /home/axel/scripts/python: Is a directory + Python 3.10.8
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Mitigation of Clear buffers; SMT vulnerable + retbleed: Mitigation of Enhanced IBRS + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling PBRSB-eIBRS: SW sequence + srbds: Mitigation of Microcode + tsx_async_abort: Mitigation of TSX disabled

lnxbuild-9-9900



lnxbuild-9-9900

Timed Linux Kernel Compilation - Time To Compile	9	2.	9	9	3				1	1	0	0	4.	4.	1	5	8	8	0	5	1	1	1.	8	6	1	9	8.	4	1	0	
Normalized	10	0	%						89	.2	6										88	.9	2				83	.1	3		94	.5	%	
Standard Deviat	0.	9	%						1.	2	%										1.	6	%				1.	2	%		1.	6	%	
Numpy Benchmark (Score)	4	0	7.	9	5				4	1	5.	8	0								4	1	4.	9	6		4	1	8.	8	5		4	5	7.	0	0
Normalized	89	.2	7						90	.9	8										90	.8	%				91	.6	5		10	0	%	
Standard Deviat	1.	1	%						0.	2	%										1.	1	%				0.	6	%		1.	1	%	
Graphics Magick - Swirl (Iterations/min)	3	8	5																															
Standard Deviation	1.	3	%																															

Graphics Magick - Rotate (Iterations/min)	90
Standard Deviation	3.3%
Graphics Magick - Sharpen (Iterations/min)	125
Standard Deviation	1.2%
Graphics Magick - Enhanced (Iterations/min)	198
Standard Deviation	0.5%

Graphics Magick - Resizing (Iterations/min)	916
Standard Deviation	0.3%
Graphics Magick - Noise-Gaussian (Iterations/min)	250
Standard Deviation	0.6%
Graphics Magick - HWB Color Space (Iterations	991
Standard Deviation	0.7%

Cython benchmark (sec)	19.270
Standard Deviation	0.8%
x265 - Bosphorus 4K (FPS)	13.74
Standard Deviation	2.4%
x265 - Bosphorus 1080p (FPS	58.71
Standard Deviation	1%

RAM speed SMP - Add - Integer (MB/	2 9 0 5 5
Standard Deviat	0. 3 %
RAM speed SMP - Copy - Integer (MB/s)	2 7 1 5 6
Standard Deviation	0. 5 %

RAM speed SMP - Scale - Integer (MB/s)	2 7 3 4 6
Standard Deviat	0. 3 %
RAM speed SMP - Triad - Integer (MB/s)	2 9 0 6 7
Standard Deviation	0. 3 %

RAM speed SMP - Average - Integer (MB/s)	28110
Standard Deviation	0.1%
RAM speed SMP - Add - Floating Point (MB/	29031
Standard Deviation	0.2%

RAM speed SMP - Copy - Floating Point (MB/s)	2 7 1 1 2
Standard Deviation	0. 8 %
RAM speed SMP - Scale - Floating Point (MB/s)	2 6 9 9 1
Standard Deviation	0. 6 %

RAM speed SMP - Triad - Floating Point (MB/s)	28851
Standard Deviation	0.5%
RAM speed SMP - Average - Floating Point (MB/s)	27859
Standard Deviation	1.1%

LZ4 Compression - 1 - Compression Speed (MB/s)	9 0 2 4
Standard Deviat	0. 6 %
LZ4 Compression - 1 - D.S (MB/s)	1 0 9 9 3
Standard Deviation	0. 3 %

LZ4 Compression - 3 - Compression Speed (MB/s)	5 5. 3 3
Standard Deviat	2. 3 %
LZ4 Compression - 3 - D.S (MB/s)	1 0 6 7 1
Standard Deviation	0. 5 %

LZ4 Compression - 9 - Compression Speed (MB/s)	5 4. 2 2							
Standard Deviat	2. 1 %							
LZ4 Compression - 9 - D.S (MB/s)	1 0 6 8 2							
Standard Deviat	0. 3 %							
oneDNN - R.N.N.T - f32 - CPU (ms)		3 5 2 4	3 3 7 7	4 1 3 8	4 7 1 2	4 3 4 7	3 6 6 3	
Normalized		95 .8 1	10 0 %	81 .6 %	71 .6 6	77 .6 7	92 .2 %	
Standard Deviation		0. 2 %	0. 2 %	2 %	3. 2 %	1. 4 %	0. 5 %	

lnxbuild-9-9900

oneD	3	4	4	4	3	
NN -	6	0	6	2	6	
R.N.	0	9	1	6	8	
N.T -	4	1	9	8	7	
u8s8						
f32 -						
CPU						
(ms)						
Norma	10	88	78	84	97	
lized	0	.0	.0	.4	.7	
	%	9	1	3	4	
Stand	3.	0.	0.	0	1.	
ard	1	5	4	%	2	
Deviat	%	%	%		%	

oneD		4	4	3	3	
NN -		0	6	6	8	
R.N.		7	1	4	5	
N.T -		3	1	7	8	
bf16						
bf16						
bf16						
-						
CPU						
Norma		89	79	85	10	94
lized		.5	.1	.2	0	.5
		5	%	3	%	5
Stand		0.	0.	0.	0.	1.
ard		2	5	2	3	3
Deviat		%	%	%	%	%

oneD		2
NN -		2
R.N.		3
N.I -		1
f32 -		
CPU		
(ms)		
Stand		3.
ard		3
Deviat		%
ion		

oneDNN - R.N. - u8s8f32 - CPU (ms)	2	
	2	
	1	
	3	
Standard Deviation	0.4 %	
oneDNN - R.N. - bf16bf16bf16 - CPU	259	135
Normalized	94.53 %	100 %
Standard Deviation	3 %	0.2 %
SciMark - Composite (Mflops)		738.45
Standard Deviation		0.3 %

SciMark - Monte Carlo (Mflops)	15
Standard Deviation	8.16%
SciMark - F.F.T (Mflops)	28
Standard Deviation	6.08%
SciMark - S.M.M (Mflops)	83
Standard Deviation	8.57%
SciMark - D.L.M.F (Mflops)	10
Standard Deviation	6.24%
SciMark - J.S.O.R (Mflops)	13

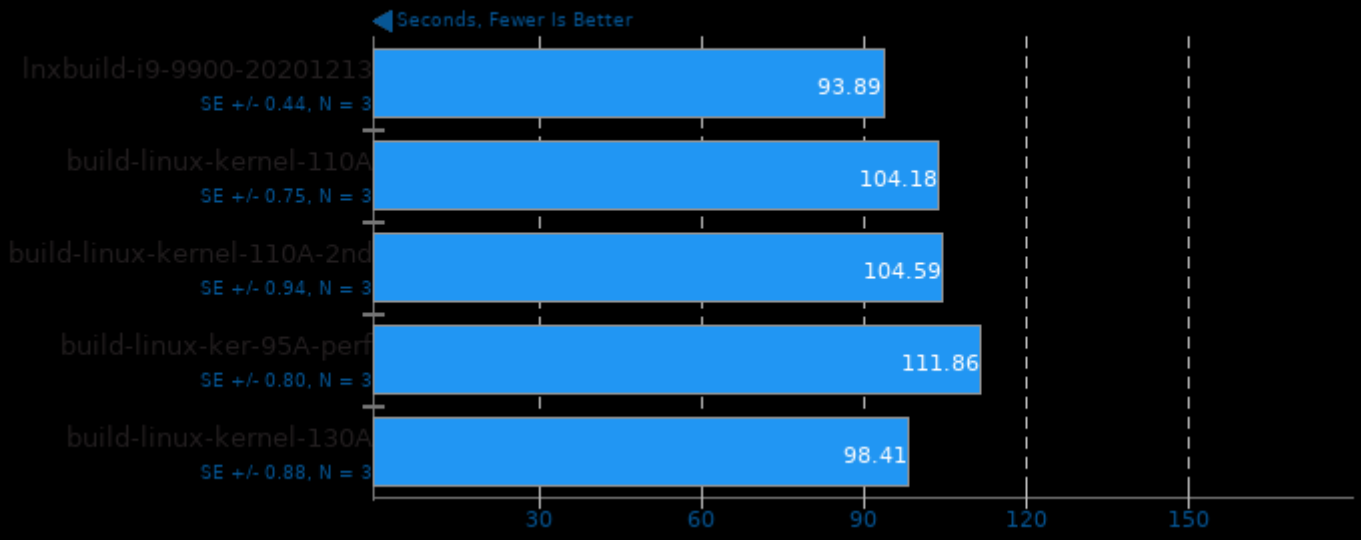
Standard Deviation	0.3 %
LuxCoreRender - DLSC (M samples/sec)	1.51
Standard Deviation	1.7 %
LuxCoreRender - R.C.a.P (M samples/sec)	1.66
Standard Deviation	0.4 %
Timed HMMer Search - P.D.S (sec)	104.598
Standard Deviation	0 %

Timed Linux Kernel Compilation - defconfig	14 8.7 0
Standard Deviation	1 %
Timed Linux Kernel Compilation - defconfig	12 8.4 23
Standard Deviation	1.1 %
PyBench - T.F.A.T.T (Milliseconds)	90 0
Standard Deviation	0.4 %

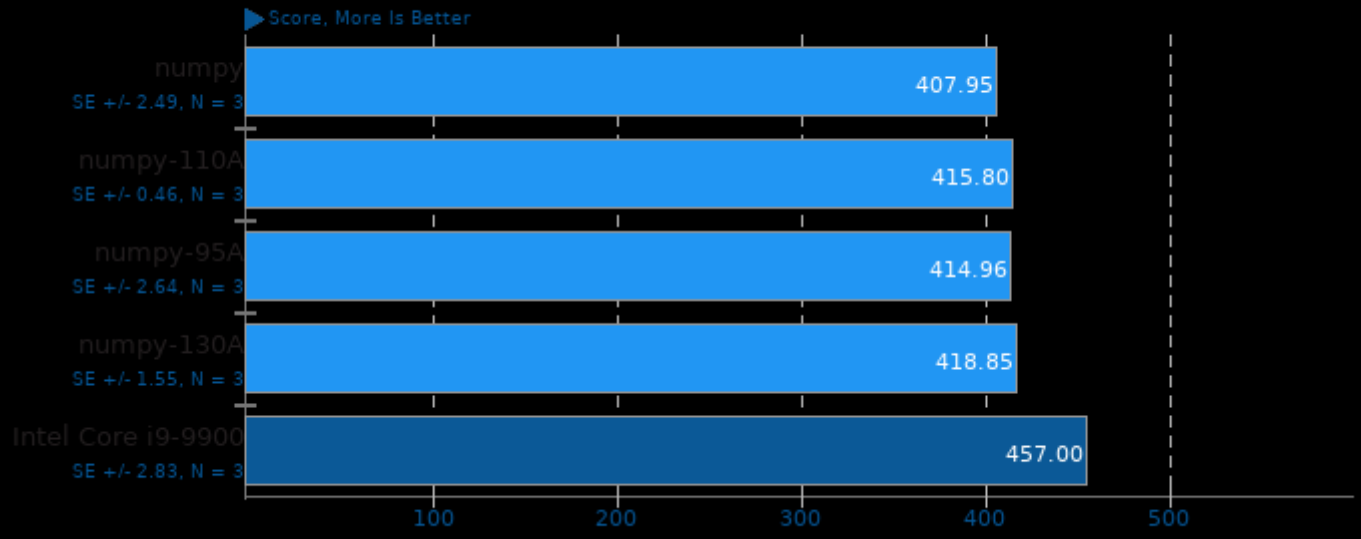
Cython Benchmark - N-Queens (sec)	2 0. 3 5 8
Standard Deviation	0. 8 %

Timed Linux Kernel Compilation 5.4

Time To Compile

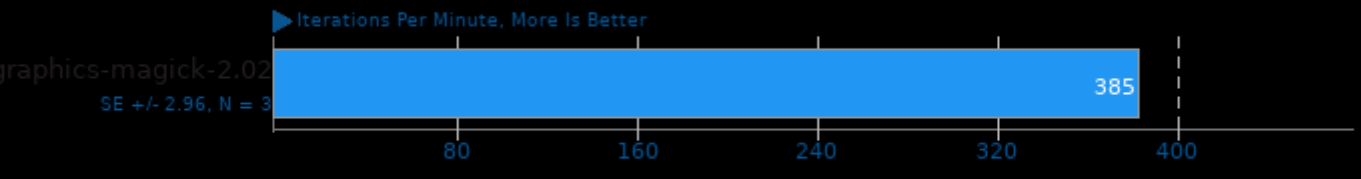


Numpy Benchmark

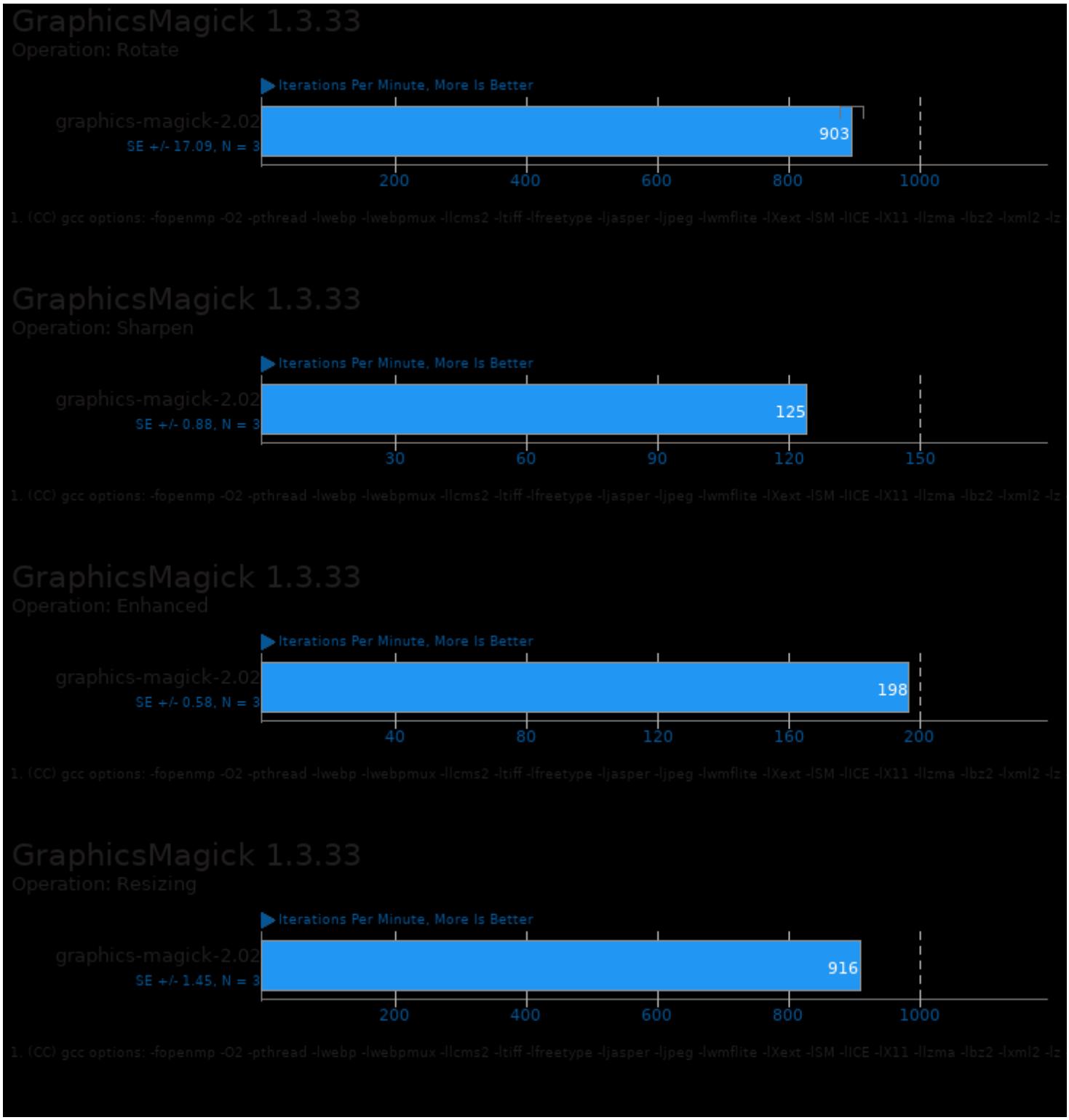


GraphicsMagick 1.3.33

Operation: Swirl

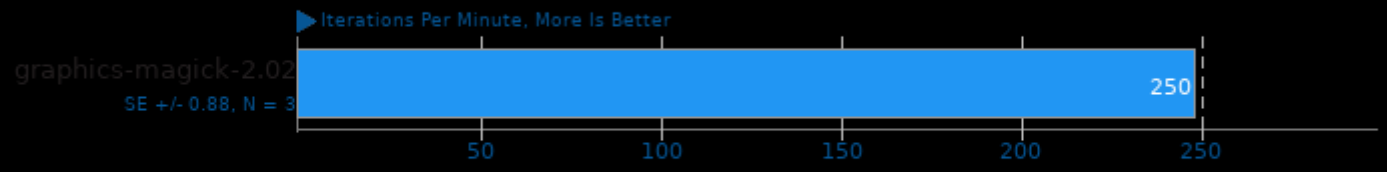


1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz


GraphicsMagick 1.3.33
Operation: Rotate
Iterations Per Minute, More Is Better
graphics-magick-2.02
SE +/- 17.09, N = 3
903
200
400
600
800
1000
1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz
GraphicsMagick 1.3.33
Operation: Sharpen
Iterations Per Minute, More Is Better
graphics-magick-2.02
SE +/- 0.88, N = 3
125
30
60
90
120
150
1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz
GraphicsMagick 1.3.33
Operation: Enhanced
Iterations Per Minute, More Is Better
graphics-magick-2.02
SE +/- 0.58, N = 3
198
40
80
120
160
200
1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz
GraphicsMagick 1.3.33
Operation: Resizing
Iterations Per Minute, More Is Better
graphics-magick-2.02
SE +/- 1.45, N = 3
916
200
400
600
800
1000
1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz

GraphicsMagick 1.3.33

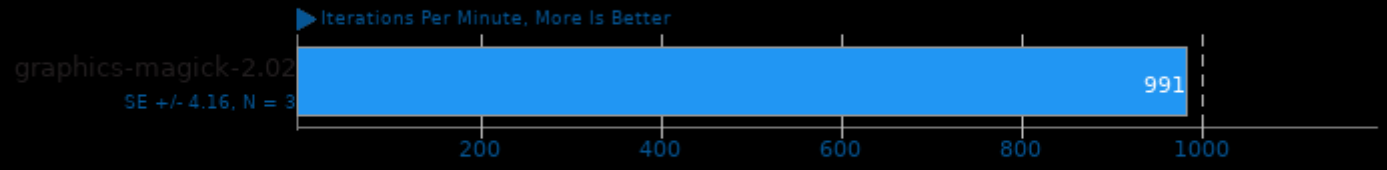
Operation: Noise-Gaussian



1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz

GraphicsMagick 1.3.33

Operation: HWB Color Space



1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz

Cython benchmark 0.27



x265 3.4

Video Input: Bosphorus 4K



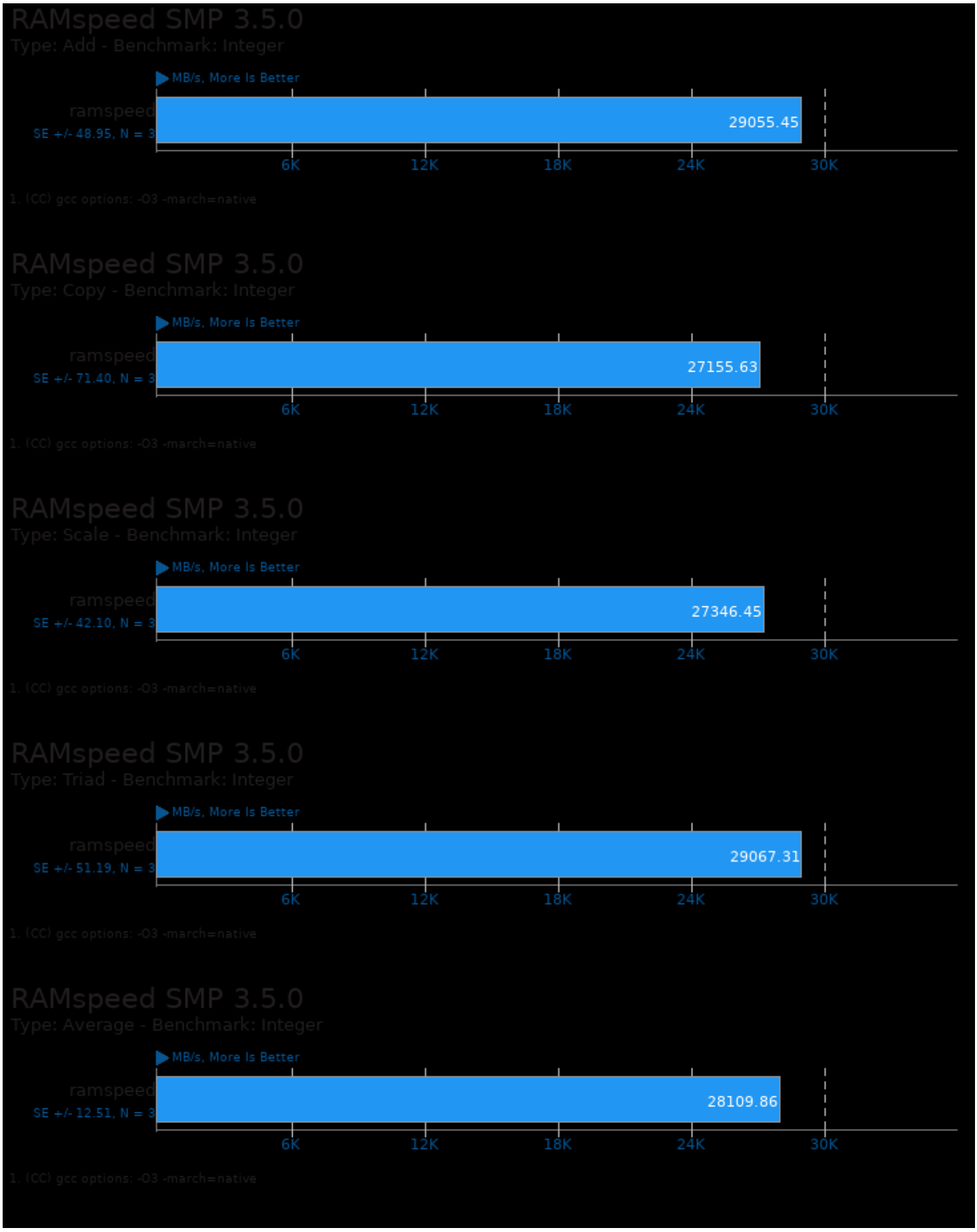
1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

x265 3.4

Video Input: Bosphorus 1080p

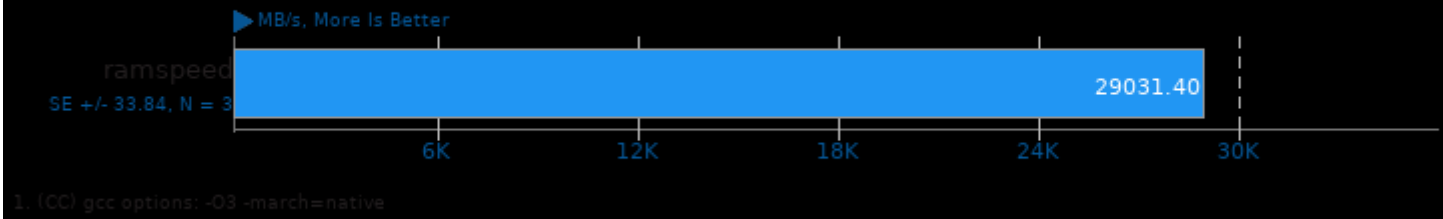


1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma


RAMspeed SMP 3.5.0
Type: Add - Benchmark: Integer
MB/s, More Is Better
ramspeed
SE +/- 48.95, N = 3
29055.45
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Copy - Benchmark: Integer
MB/s, More Is Better
ramspeed
SE +/- 71.40, N = 3
27155.63
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Integer
MB/s, More Is Better
ramspeed
SE +/- 42.10, N = 3
27346.45
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Triad - Benchmark: Integer
MB/s, More Is Better
ramspeed
SE +/- 51.19, N = 3
29067.31
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Average - Benchmark: Integer
MB/s, More Is Better
ramspeed
SE +/- 12.51, N = 3
28109.86
6K
12K
18K
24K
30K
1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

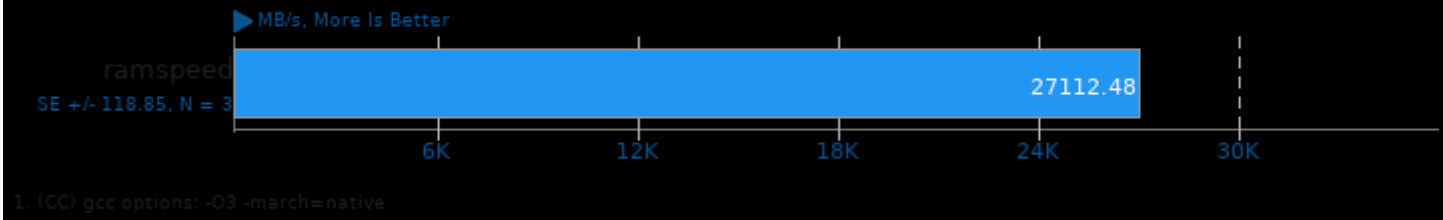
Type: Add - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

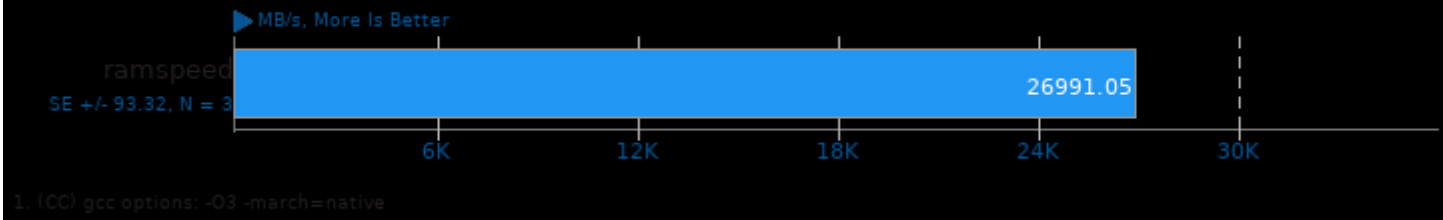
Type: Copy - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

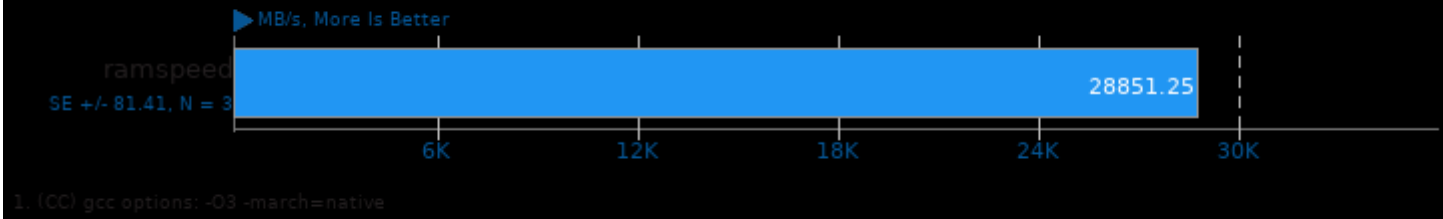
Type: Scale - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

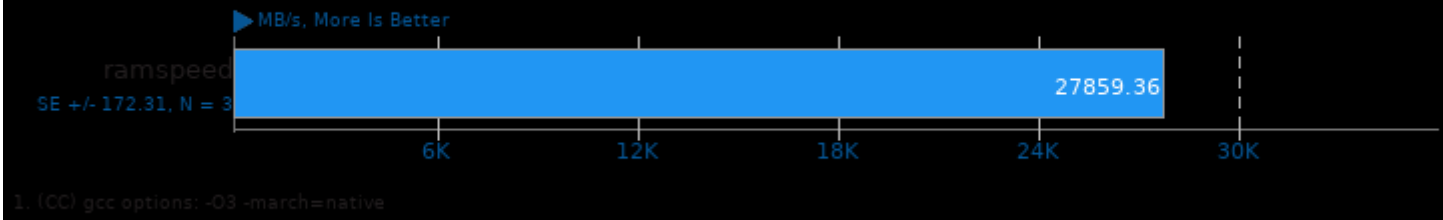
Type: Triad - Benchmark: Floating Point



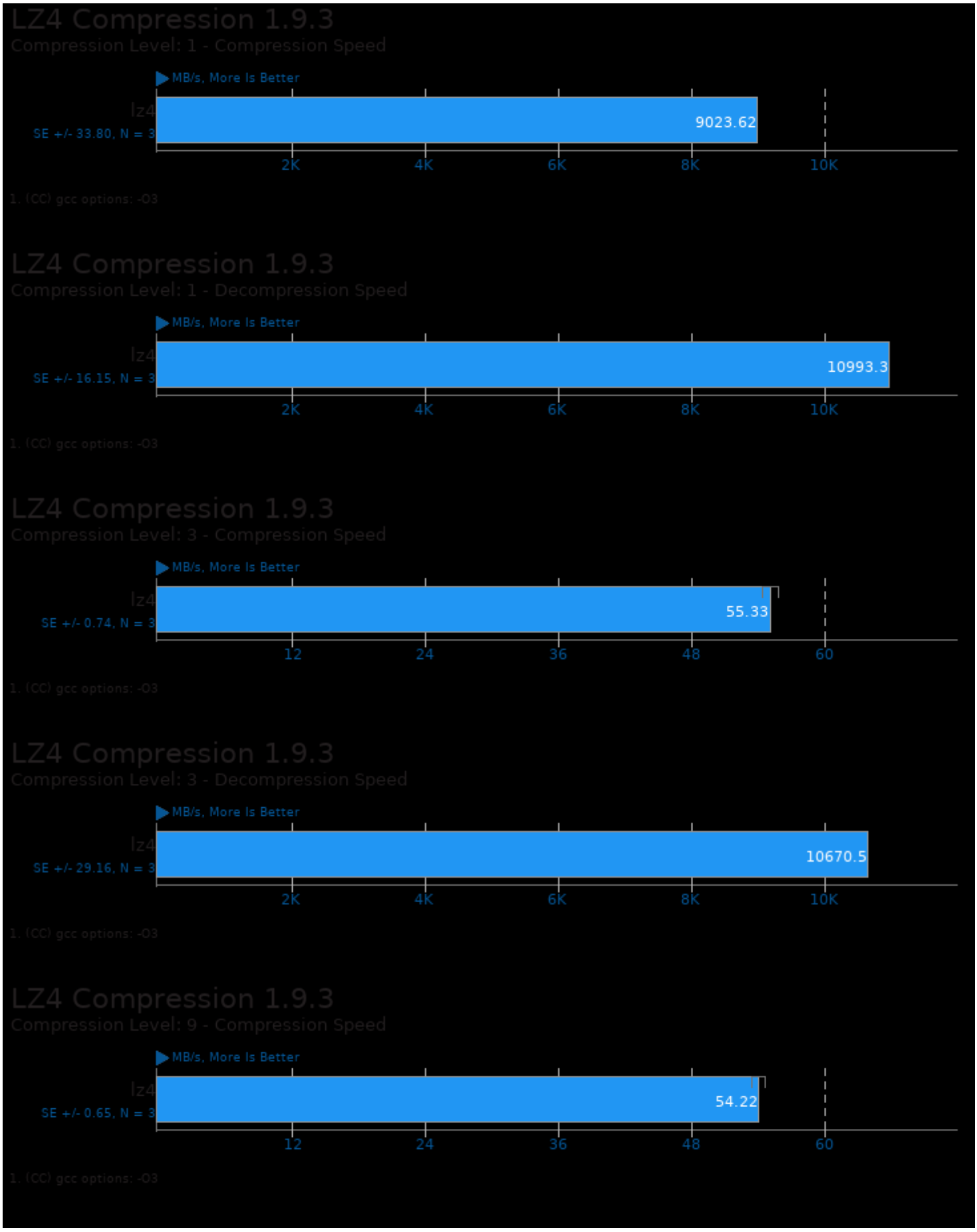
1. (CC) gcc options: -O3 -march=native

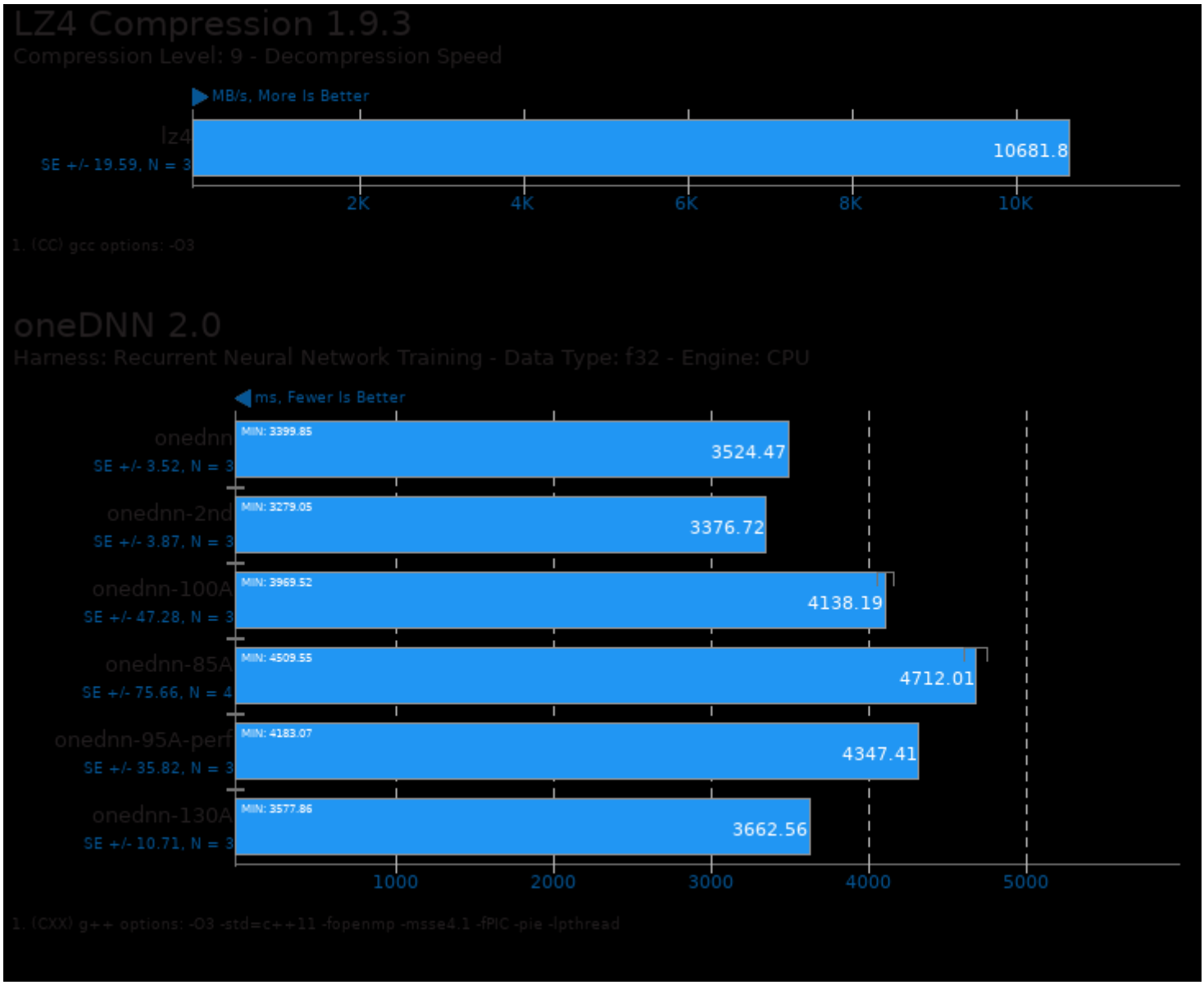
RAMspeed SMP 3.5.0

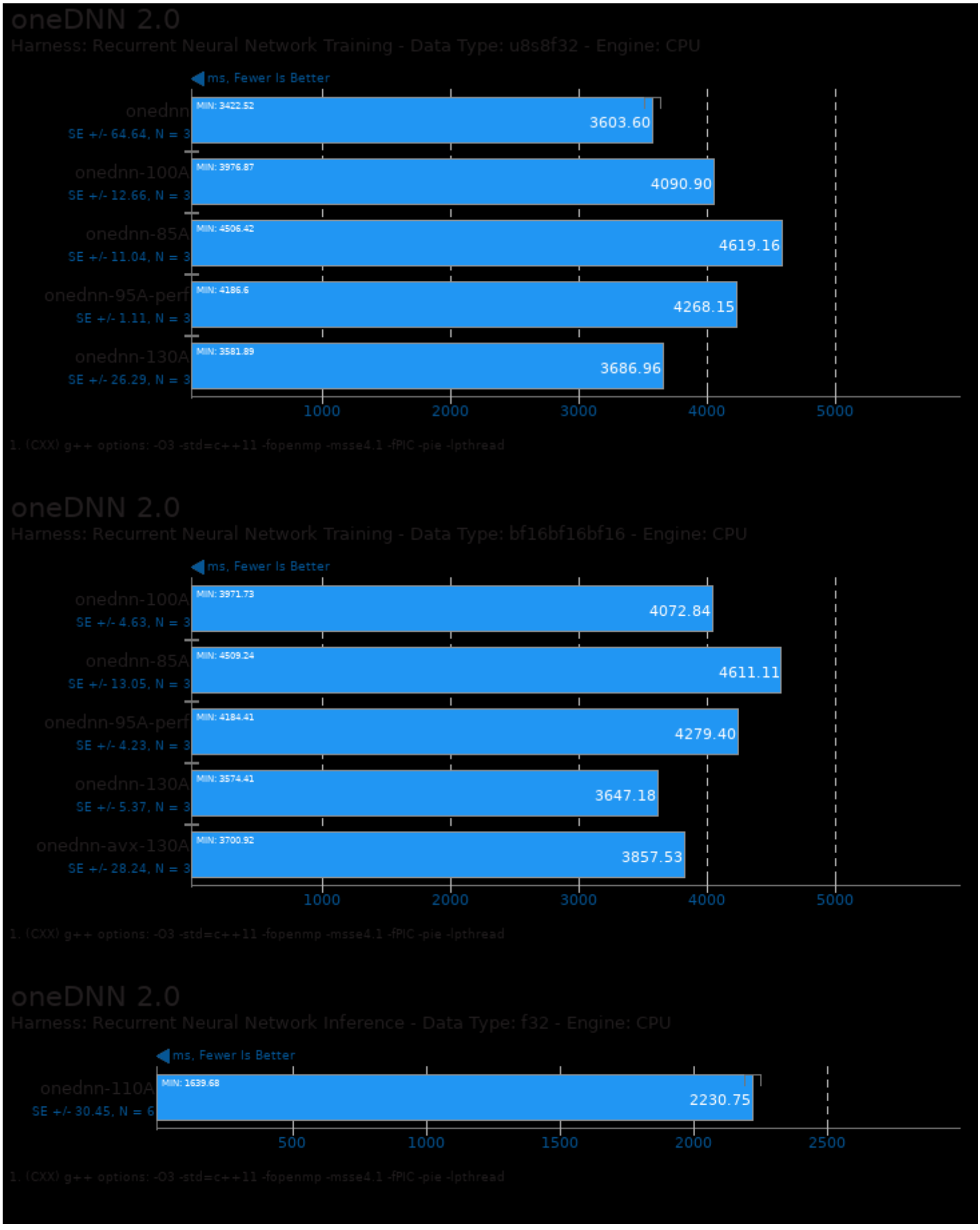
Type: Average - Benchmark: Floating Point

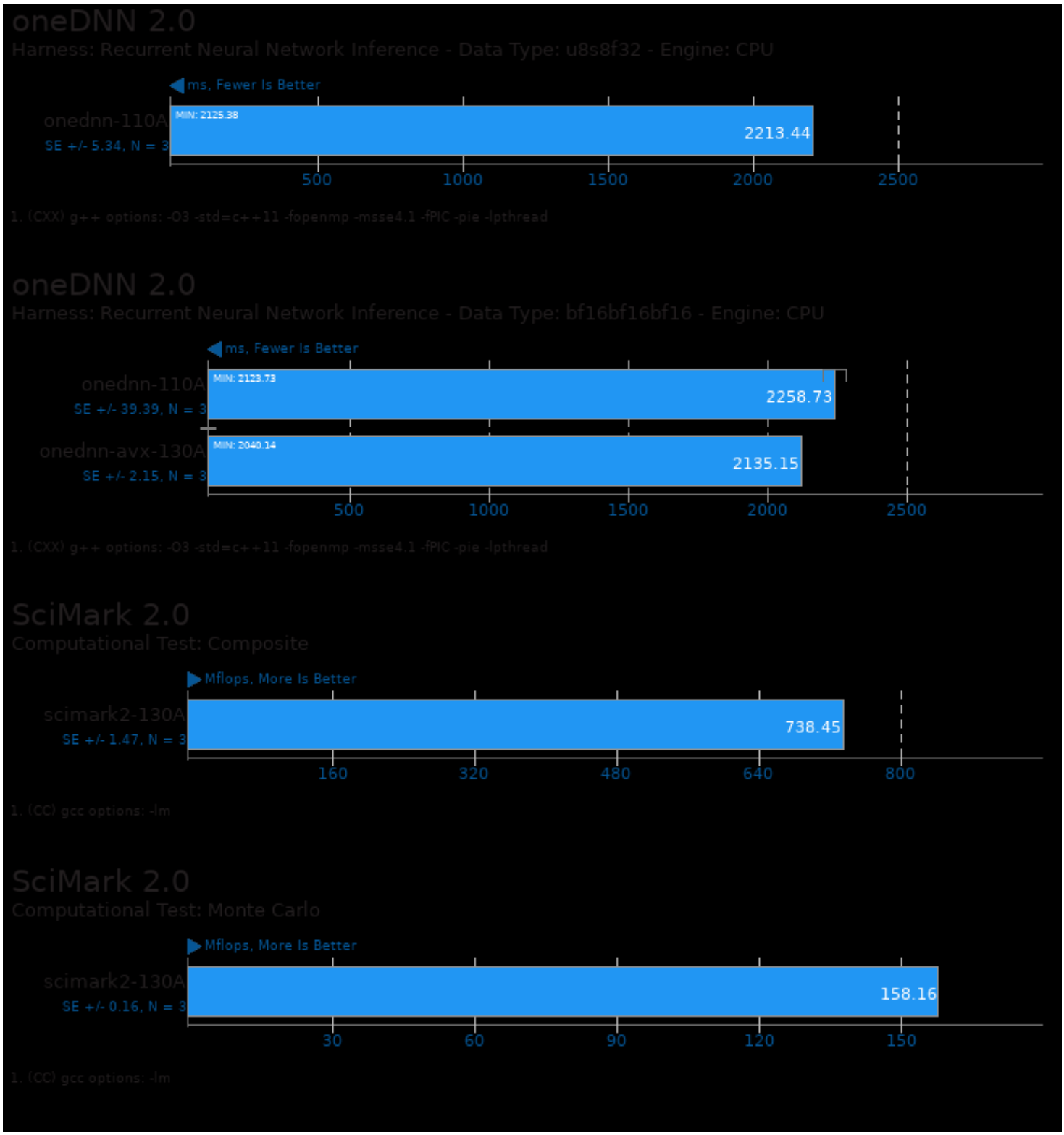


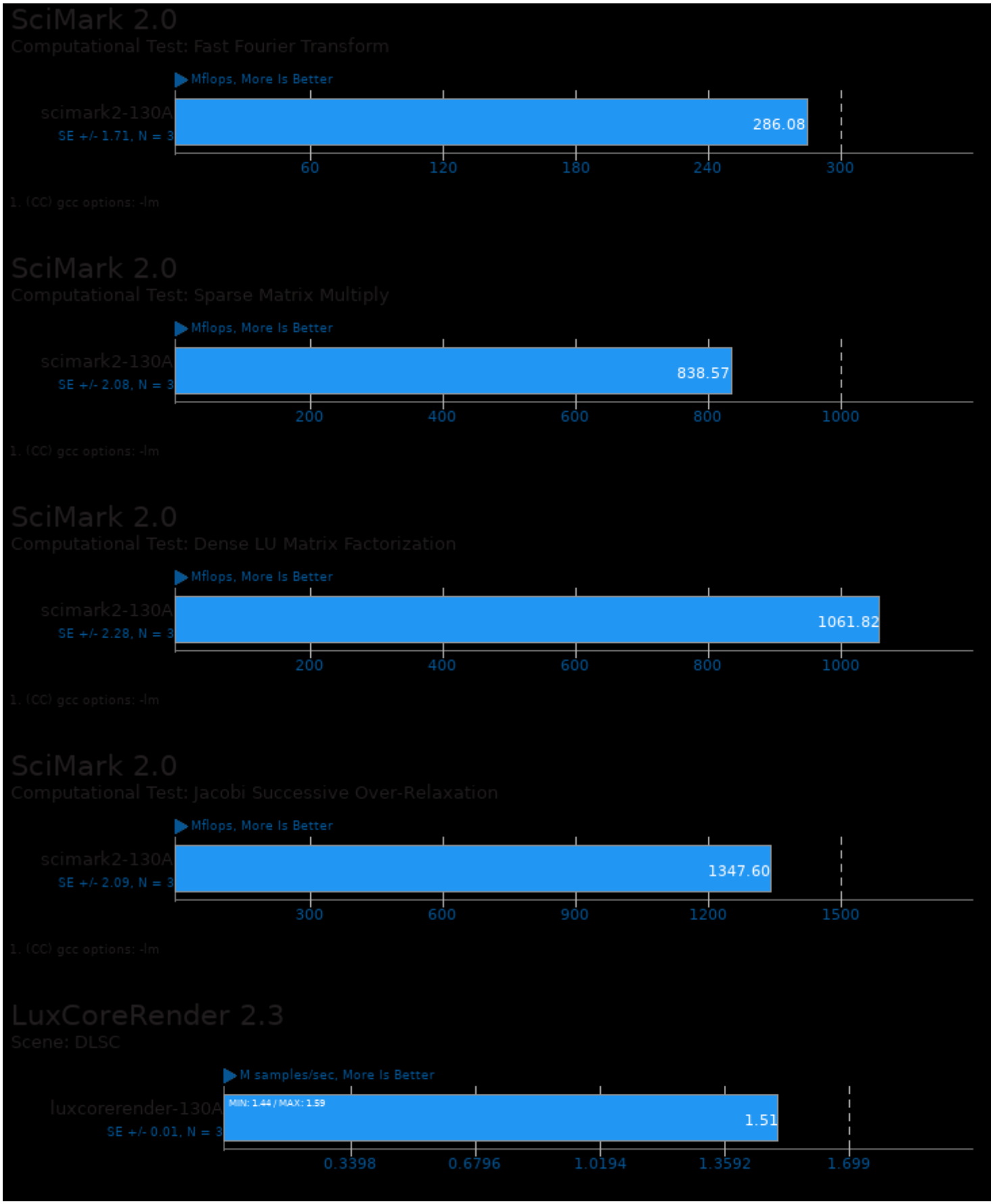
1. (CC) gcc options: -O3 -march=native


LZ4 Compression 1.9.3
Compression Level: 1 - Compression Speed
MB/s, More Is Better
lz4
SE +/- 33.80, N = 3
9023.62
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3
LZ4 Compression 1.9.3
Compression Level: 1 - Decompression Speed
MB/s, More Is Better
lz4
SE +/- 16.15, N = 3
10993.3
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3
LZ4 Compression 1.9.3
Compression Level: 3 - Compression Speed
MB/s, More Is Better
lz4
SE +/- 0.74, N = 3
55.33
12
24
36
48
60
1. (CC) gcc options: -O3
LZ4 Compression 1.9.3
Compression Level: 3 - Decompression Speed
MB/s, More Is Better
lz4
SE +/- 29.16, N = 3
10670.5
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3
LZ4 Compression 1.9.3
Compression Level: 9 - Compression Speed
MB/s, More Is Better
lz4
SE +/- 0.65, N = 3
54.22
12
24
36
48
60
1. (CC) gcc options: -O3


LZ4 Compression 1.9.3
Compression Level: 9 - Decompression Speed
MB/s, More Is Better
lz4
SE +/- 19.59, N = 3
10681.8
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3
oneDNN 2.0
Harness: Recurrent Neural Network Training - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
onednn
SE +/- 3.52, N = 3
MIN: 3399.85
3524.47
onednn-2nd
SE +/- 3.87, N = 3
MIN: 3279.05
3376.72
onednn-100A
SE +/- 47.28, N = 3
MIN: 3969.52
4138.19
onednn-85A
SE +/- 75.66, N = 4
MIN: 4509.55
4712.01
onednn-95A-perf
SE +/- 35.82, N = 3
MIN: 4183.07
4347.41
onednn-130A
SE +/- 10.71, N = 3
MIN: 3577.86
3662.56
1000
2000
3000
4000
5000
1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread

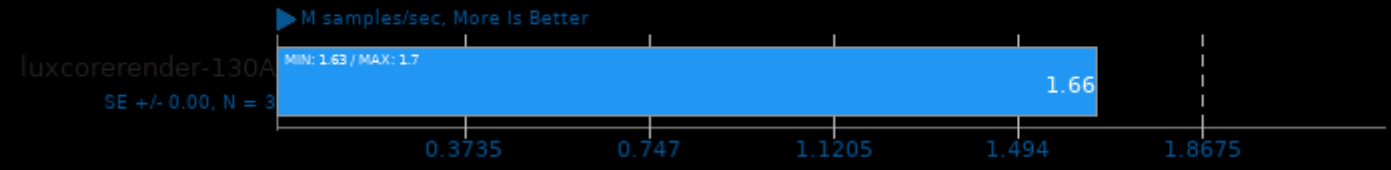

oneDNN 2.0
Harness: Recurrent Neural Network Training - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
onednn
SE +/- 64.64, N = 3
MIN: 3422.52
3603.60
onednn-100A
SE +/- 12.66, N = 3
MIN: 3976.87
4090.90
onednn-85A
SE +/- 11.04, N = 3
MIN: 4506.42
4619.16
onednn-95A-perf
SE +/- 1.11, N = 3
MIN: 4186.6
4268.15
onednn-130A
SE +/- 26.29, N = 3
MIN: 3581.89
3686.96
1000
2000
3000
4000
5000
1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread
oneDNN 2.0
Harness: Recurrent Neural Network Training - Data Type: bf16bf16bf16 - Engine: CPU
ms, Fewer Is Better
onednn-100A
SE +/- 4.63, N = 3
MIN: 3971.73
4072.84
onednn-85A
SE +/- 13.05, N = 3
MIN: 4509.24
4611.11
onednn-95A-perf
SE +/- 4.23, N = 3
MIN: 4184.41
4279.40
onednn-130A
SE +/- 5.37, N = 3
MIN: 3574.41
3647.18
onednn-avx-130A
SE +/- 28.24, N = 3
MIN: 3700.92
3857.53
1000
2000
3000
4000
5000
1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread
oneDNN 2.0
Harness: Recurrent Neural Network Inference - Data Type: f32 - Engine: CPU
ms, Fewer Is Better
onednn-110A
SE +/- 30.45, N = 6
MIN: 1639.68
2230.75
500
1000
1500
2000
2500
1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread


oneDNN 2.0
Harness: Recurrent Neural Network Inference - Data Type: u8s8f32 - Engine: CPU
ms, Fewer Is Better
onednn-110A
SE +/- 5.34, N = 3
MIN: 2125.38
2213.44
500
1000
1500
2000
2500
1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread
oneDNN 2.0
Harness: Recurrent Neural Network Inference - Data Type: bf16bf16bf16 - Engine: CPU
ms, Fewer Is Better
onednn-110A
SE +/- 39.39, N = 3
MIN: 2123.73
2258.73
onednn-avx-130A
SE +/- 2.15, N = 3
MIN: 2040.14
2135.15
500
1000
1500
2000
2500
1. (CXX) g++ options: -O3 -std=c++11 -fopenmp -msse4.1 -fPIC -pie -lpthread
SciMark 2.0
Computational Test: Composite
Mflops, More Is Better
scimark2-130A
SE +/- 1.47, N = 3
738.45
160
320
480
640
800
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Monte Carlo
Mflops, More Is Better
scimark2-130A
SE +/- 0.16, N = 3
158.16
30
60
90
120
150
1. (CC) gcc options: -lm


SciMark 2.0
Computational Test: Fast Fourier Transform
Mflops, More Is Better
scimark2-130A
SE +/- 1.71, N = 3
286.08
60
120
180
240
300
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Sparse Matrix Multiply
Mflops, More Is Better
scimark2-130A
SE +/- 2.08, N = 3
838.57
200
400
600
800
1000
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Dense LU Matrix Factorization
Mflops, More Is Better
scimark2-130A
SE +/- 2.28, N = 3
1061.82
200
400
600
800
1000
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Jacobi Successive Over-Relaxation
Mflops, More Is Better
scimark2-130A
SE +/- 2.09, N = 3
1347.60
300
600
900
1200
1500
1. (CC) gcc options: -lm
LuxCoreRender 2.3
Scene: DLSC
M samples/sec, More Is Better
luxcorerender-130A
SE +/- 0.01, N = 3
MIN: 1.44 / MAX: 1.59
1.51
0.3398
0.6796
1.0194
1.3592
1.699

LuxCoreRender 2.3

Scene: Rainbow Colors and Prism



Timed HMMer Search 3.3.1

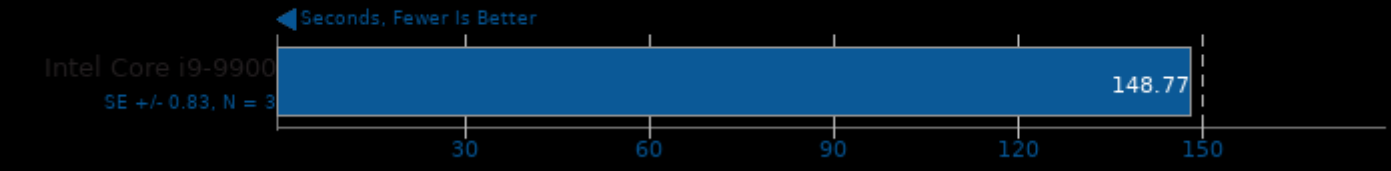
Pfam Database Search



1. (CC) gcc options: -O3 -pthread -lhmmer -leasel -lm

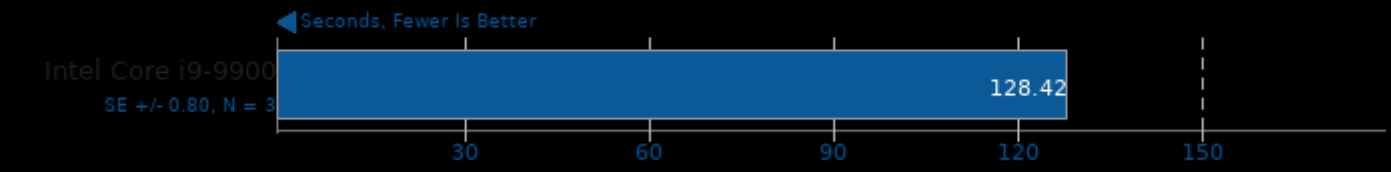
Timed Linux Kernel Compilation 6.1

Build: defconfig



Timed Linux Kernel Compilation 5.18

Build: defconfig



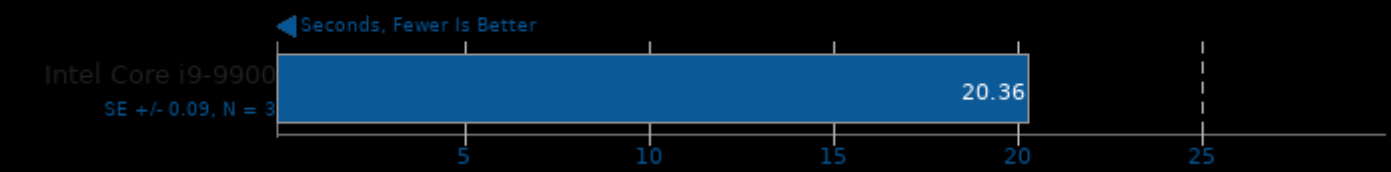
PyBench 2018-02-16

Total For Average Test Times



Cython Benchmark 0.29.21

Test: N-Queens



lnxbuild-9-9900

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 19:37.