www.phoronix-test-suite.com

720_R32_4_4

ARMv8 rev 0 testing with a Jetson-AGX and NVIDIA Tegra Xavier on Ubuntu 18.04 via the Phoronix Test Suite.

Test Systems:

eMMC

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 62GB Ultra USB 3.0 + 31GB HBG4a2, Graphics: NVIDIA TEGRA, Monitor: PHL 247E6, Network: 2 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: CFQ / data=ordered,relatime,rw / Block Size: 4096
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

USB 3.0_inno

USB 2.0

SD Card innodisk

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 62GB Ultra USB 3.0 + 31GB HBG4a2, Graphics: NVIDIA TEGRA, Monitor: PHL 247E6, Network: 2 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, OpenGL: 4.6.0, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: CFQ / data=ordered,relatime,rw / Block Size: 4096
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

mSATA

Typec C

LPDDR4

CPU Stress

CUDA Nbody

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 63GB M.2 (S80) 3MG2-P + 62GB Ultra USB 3.0 + 31GB HBG4a2 + 15GB i-TF, Graphics: NVIDIA Tegra Xavier, Monitor: PHL 247E6, Network: 2 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, Display Driver: NVIDIA 32.4.4, OpenGL: 4.6.0, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

Graphics Test

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 63GB M.2 (S80) 3MG2-P + 31GB HBG4a2 + 15GB i-TF, Graphics: NVIDIA Tegra Xavier, Monitor: B287K, Network: 2 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, Display Driver: NVIDIA 32.4.4, OpenGL: 4.6.0, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 3840x2160

Kernel Notes: Transparent Huge Pages: always
Processor Notes: Scaling Governor: tegra_cpufreq schedutil
Python Notes: Python 2.7.17 + Python 3.6.9

M.2 M SSD

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 256GB PLEXTOR PX-256M9PeGN + 31GB HBG4a2 + 15GB i-TF, Graphics: NVIDIA Tegra Xavier, Monitor: B287K, Network: 2 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, Display Driver: NVIDIA 32.4.4, OpenGL: 4.6.0, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Disk Notes: none / data=ordered,relatime,rw / Block Size: 4096
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

LAN 1

LAN 1 run 2

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 31GB HBG4a2 + 15GB i-TF, Graphics: NVIDIA Tegra Xavier, Monitor: B287K, Network: 2 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, Display Driver: NVIDIA 32.4.4, OpenGL: 4.6.0, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

LAN 1 run 3

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 31GB HBG4a2, Graphics: NVIDIA Tegra Xavier, Monitor: EDIIG0219, Network: 2 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, Display Driver: NVIDIA 32.4.4, OpenGL: 4.6.0, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

LAN 2

LAN 3

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 62GB Ultra USB 3.0 + 31GB HBG4a2, Graphics: NVIDIA Tegra Xavier, Monitor: EDIIG0219, Network: 2 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, Display Driver: NVIDIA 32.4.4, OpenGL: 4.6.0, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

WLAN AC8265

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 31GB HBG4a2 + 15GB i-TF, Graphics: NVIDIA Tegra Xavier, Monitor: B287K, Network: 2 x Intel I210 + Intel 8265 / 8275

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, Display Driver: NVIDIA 32.4.4, OpenGL: 4.6.0, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

RS232UART

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 62GB Ultra USB 3.0 + 31GB HBG4a2 + 15GB i-TF, Graphics: NVIDIA Tegra Xavier, Monitor: B287K, Network: 2 x Intel I210

OS: Ubuntu 18.04, Kernel: 4.9.140-tegra (aarch64), Desktop: Unity 7.5.0, Display Server: X Server 1.19.6, Display Driver: NVIDIA 32.4.4, OpenGL: 4.6.0, Vulkan: 1.2.131, Compiler: GCC 7.5.0 + CUDA 10.2, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: always
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

	eMMC	USB 3.0_inno	USB 2.0	SD Card inno disk	mSATA	Type c C	LPDDR4	CPU Stress	CUDA Nbody	Graphics Test	M.2 M SSD	LAN 1	LAN 1 run 2	LAN 1 run 3	LAN 2	LAN 3	WLAN AC8265	RS232UART

CUDA Mini-Nbody - Original ((NBody^2)/s)		51.532
Standard Deviation		0.1%
CUDA Mini-Nbody - Cache Blocking ((NBody^2)/s)		53.296
Standard Deviation		0%
CUDA Mini-Nbody - Loop Unrolling ((NBody^2)/s)		53.360
Standard Deviation		0%
CUDA Mini-Nbody - SOA Data Layout ((NBody^2)/s)		53.007
Standard Deviation		0.2%
CUDA Mini-Nbody - F.D.T.Z ((NBody^2)/s)		53.231
Standard Deviation		0.2%
Stress-NG - Crypto (Bogo Ops/s)	1192	
Standard Deviation	1.1%	

Stress-NG - Forking (Bogo Ops/s)	6418
Standard Deviation	0.9%
Stress-NG - CPU Stress (Bogo Ops/s)	904.9 7
Standard Deviation	2.4%
Stress-NG - Matrix Math (Bogo Ops/s)	1243 5
Standard Deviation	0.1%
Stress-NG - Vector Math (Bogo Ops/s)	4910 1
Standard Deviation	0.4%
Stress-NG - Memory Copying (Bogo Ops/s)	3232
Standard Deviation	0.6%
Stress-NG - G.C.S.F (Bogo Ops/s)	2443 14
Standard Deviation	2.9%
Stress-NG - G.Q.D.S (Bogo Ops/s)	37.99
Standard Deviation	10.2%

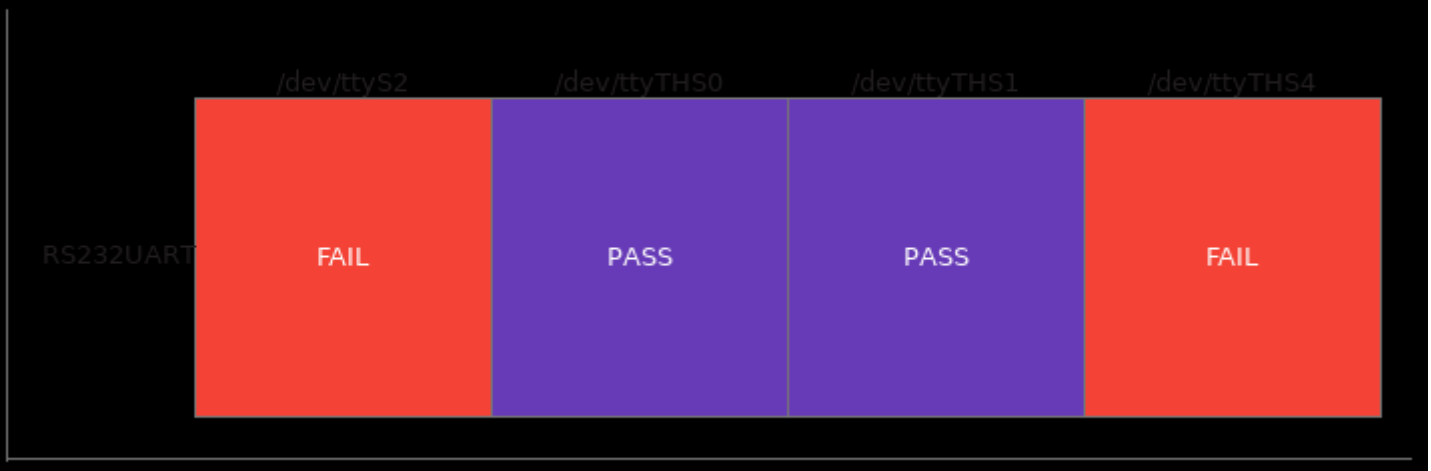
Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 4KB (IOPS)	41231	24700	**72430**	14100	51900	77200		**88067**
Normalized	46.82%	28.05%	8.22%	16.01%	58.93%	87.66%		100%
Standard Deviation	3.9%	0.4%	0.4%			0.2%		0.3%
Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 8MB (IOPS)	34	12	**3**	9	50	98		**243**
Normalized	13.99%	4.94%	1.23%	3.7%	20.58%	40.33%		100%
Standard Deviation	3.3%							15.4%
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 4KB (IOPS)	24133	6219	6362	**5911**	21600	**65300**		62960
Normalized	36.96%	9.52%	9.74%	9.05%	33.08%	100%		96.42%
Standard Deviation	1.5%	2.9%	1.1%	3.8%		0.9%		4.6%
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 8MB (IOPS)	13	**2**	3	5	9	**32**		**32**
Normalized	40.63%	6.25%	9.38%	15.63%	28.13%	100%		100%
Standard Deviation	4.3%							
Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 4KB (MB/s)	161	96.5	**28.3**	54.8	203	301		**344**
Normalized	46.8%	28.05%	8.23%	15.93%	59.01%	87.5%		100%
Standard Deviation	4%	0.3%	0.4%	1.2%		0.2%		0.3%

Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 8MB (MB/s)	302	121	**52.7**	102	427	816			**1973**
Normalized	15.31%	6.13%	2.67%	5.17%	21.64%	41.36%			100%
Standard Deviation	2.4%		1.3%			0.1%			15.2%
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 4KB (MB/s)	94.0	24.3	24.9	**23.1**	84.4	**255**			246
Normalized	36.86%	9.53%	9.76%	9.06%	33.1%	100%			96.47%
Standard Deviation	2.1%	2.9%	1%	3.8%	0.1%	0.8%			4.4%
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 8MB (MB/s)	135	**38.3**	48.8	65.9	103	**285**			**285**
Normalized	47.37%	13.44%	17.12%	23.12%	36.14%	100%			100%
Standard Deviation	1.1%	2.3%	0.8%	1.2%		0.4%			0.5%
Stream - Copy							7043		
Standard Deviation							0.8%		
Stream - Scale (MB/s)							7083		
Standard Deviation							0.8%		
Stream - Triad							6330		
Standard Deviation							0.6%		
Stream - Add (MB/s)							6239		
Standard Deviation							0.7%		

iPerf - 192.168.1.5 - 5201 - 10 Seconds - UDP - 100Mbit Objective - 1 (Mbits/s)	95.7		100	100	100	100.0
Normalized	95.7%		100%	100%	100%	100%
Standard Deviation	0%					0.1%
iPerf - 192.168.1.5 - 5201 - 10 Seconds - UDP - 1000Mbit Objective - 1 (Mbits/s)	95.7	95.7	949	956	956	124.4
Normalized	10.01 %	10.01 %	99.27 %	100%	100%	13.01 %
Standard Deviation	0%	0%	0.2%			8.3%
GLmark2 - 800 x 600 (Score)	6638					
GLmark2 - 1024 x 768 (Score)	5177					
GLmark2 - 1280 x 1024 (Score)	3732					
GLmark2 - 1600 x 1200 (Score)	2952					
GLmark2 - 1920 x 1080 (Score)	2716					
GLmark2 - 1920 x 1200 (Score)	2378					
GLmark2 - 2560 x 1440 (Score)	1639					
GLmark2 - 3840 x 2160 (Score)	832					

Serial Loopback Test

/dev/ttyS2, /dev/ttyTHS0, /dev/ttyTHS1, /dev/ttyTHS4

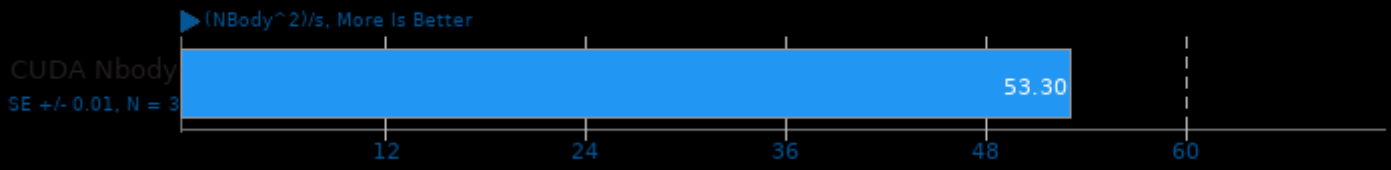


CUDA Mini-Nbody 2015-11-10

Test: Original

CUDA Mini-Nbody 2015-11-10

Test: Cache Blocking

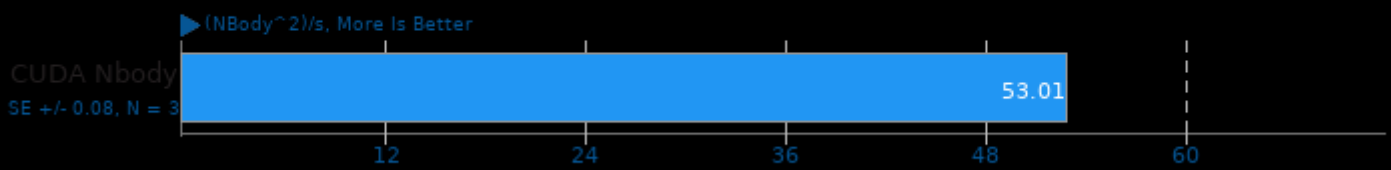


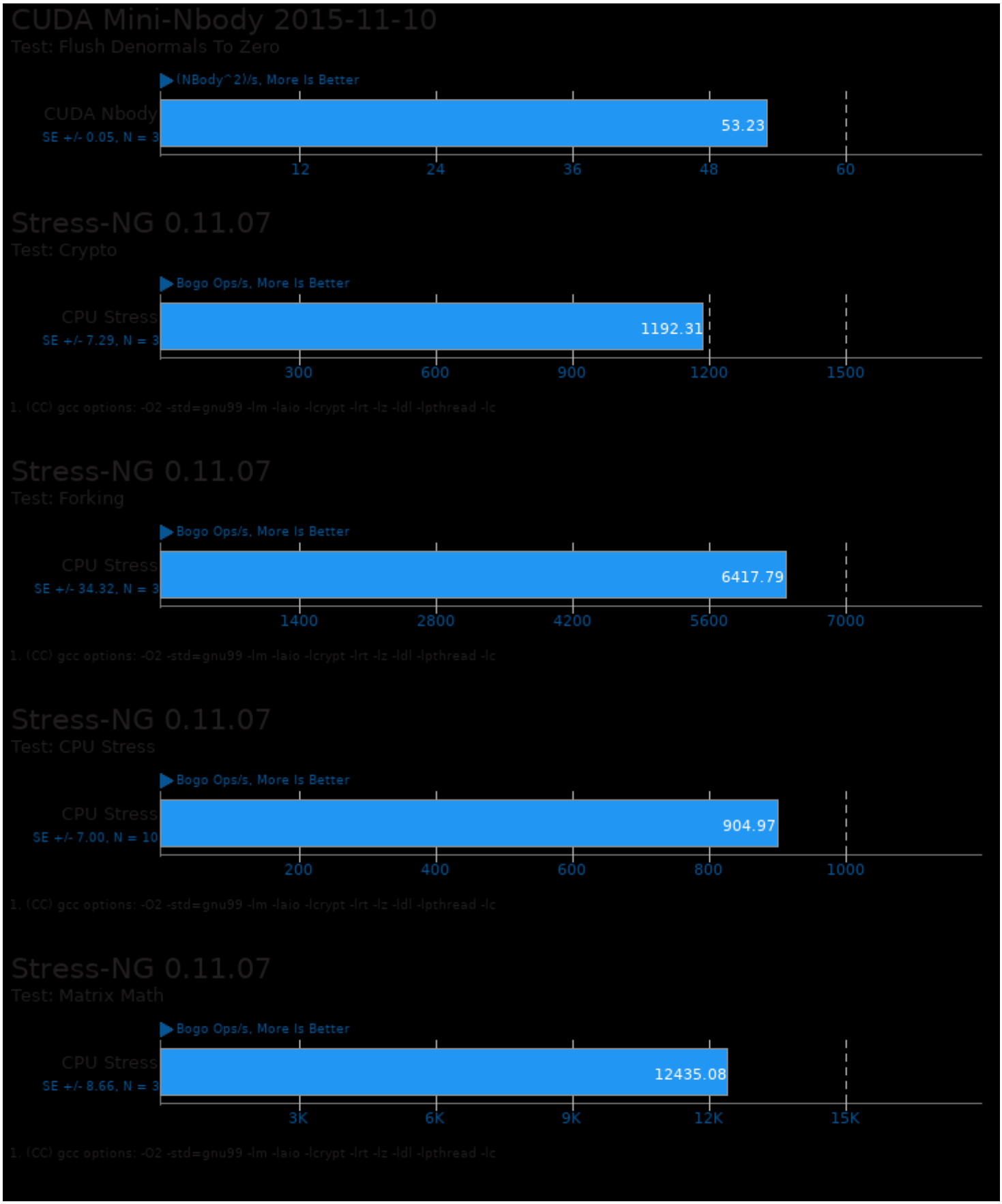
CUDA Mini-Nbody 2015-11-10

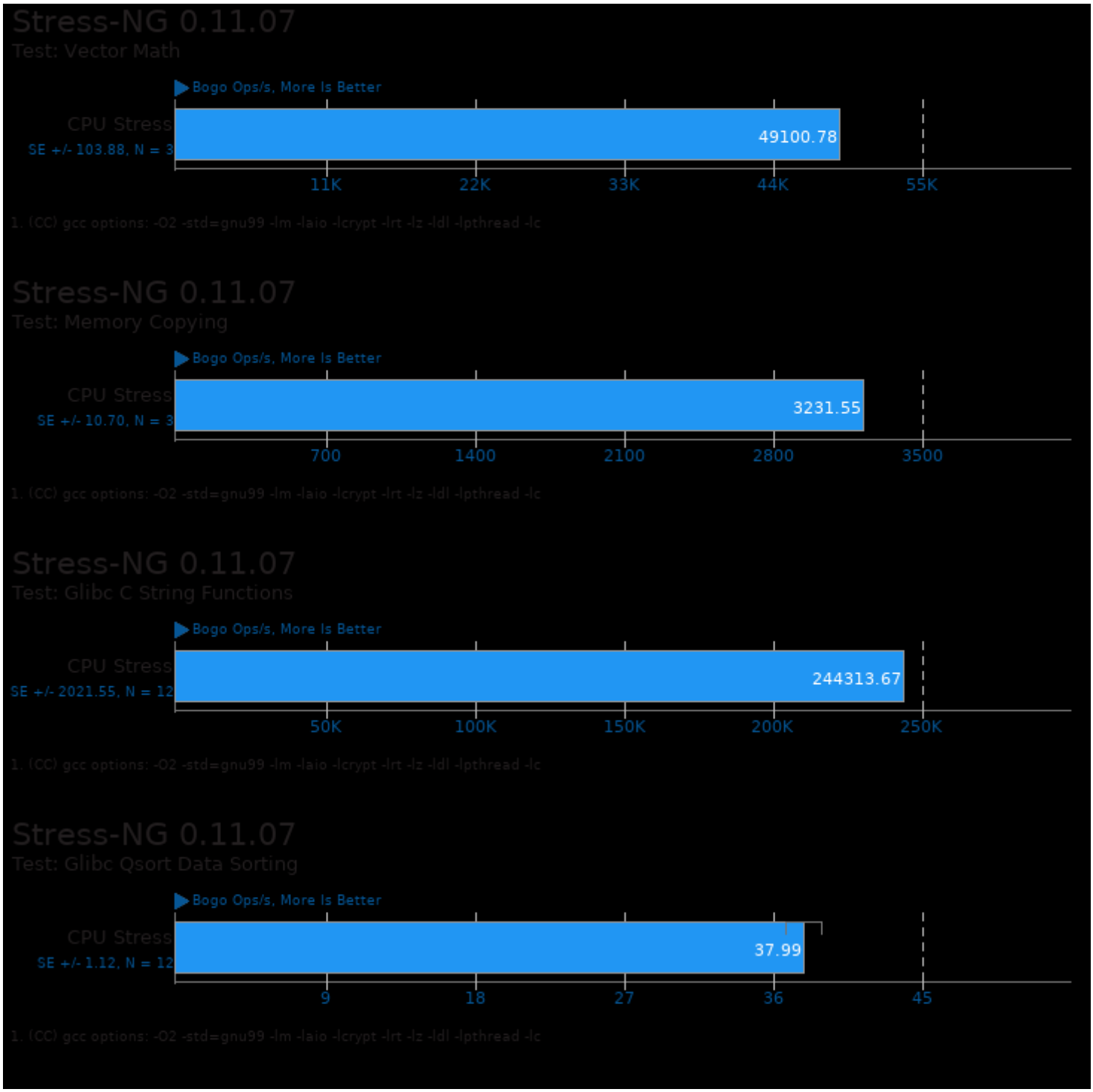
Test: Loop Unrolling

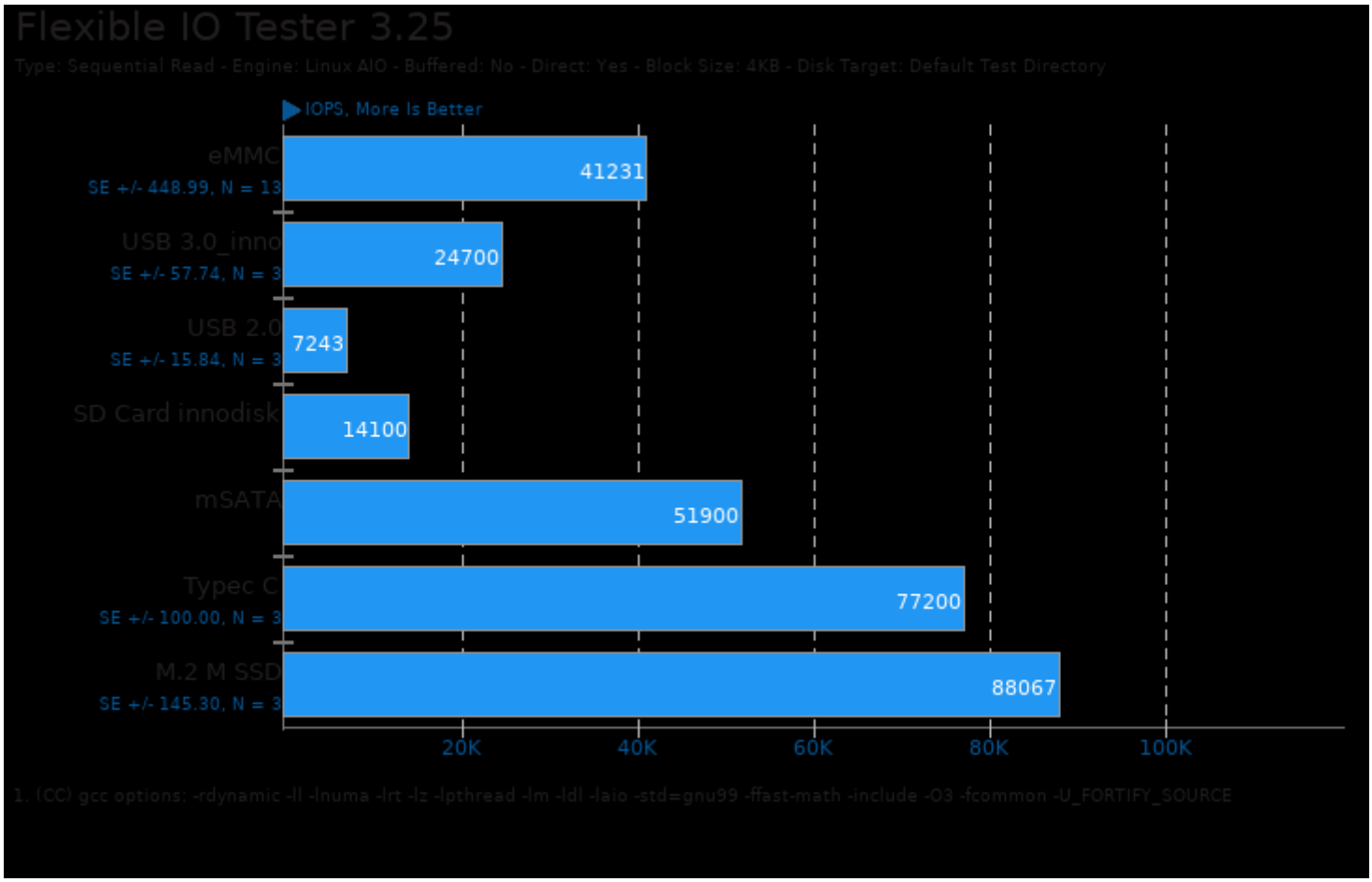
CUDA Mini-Nbody 2015-11-10

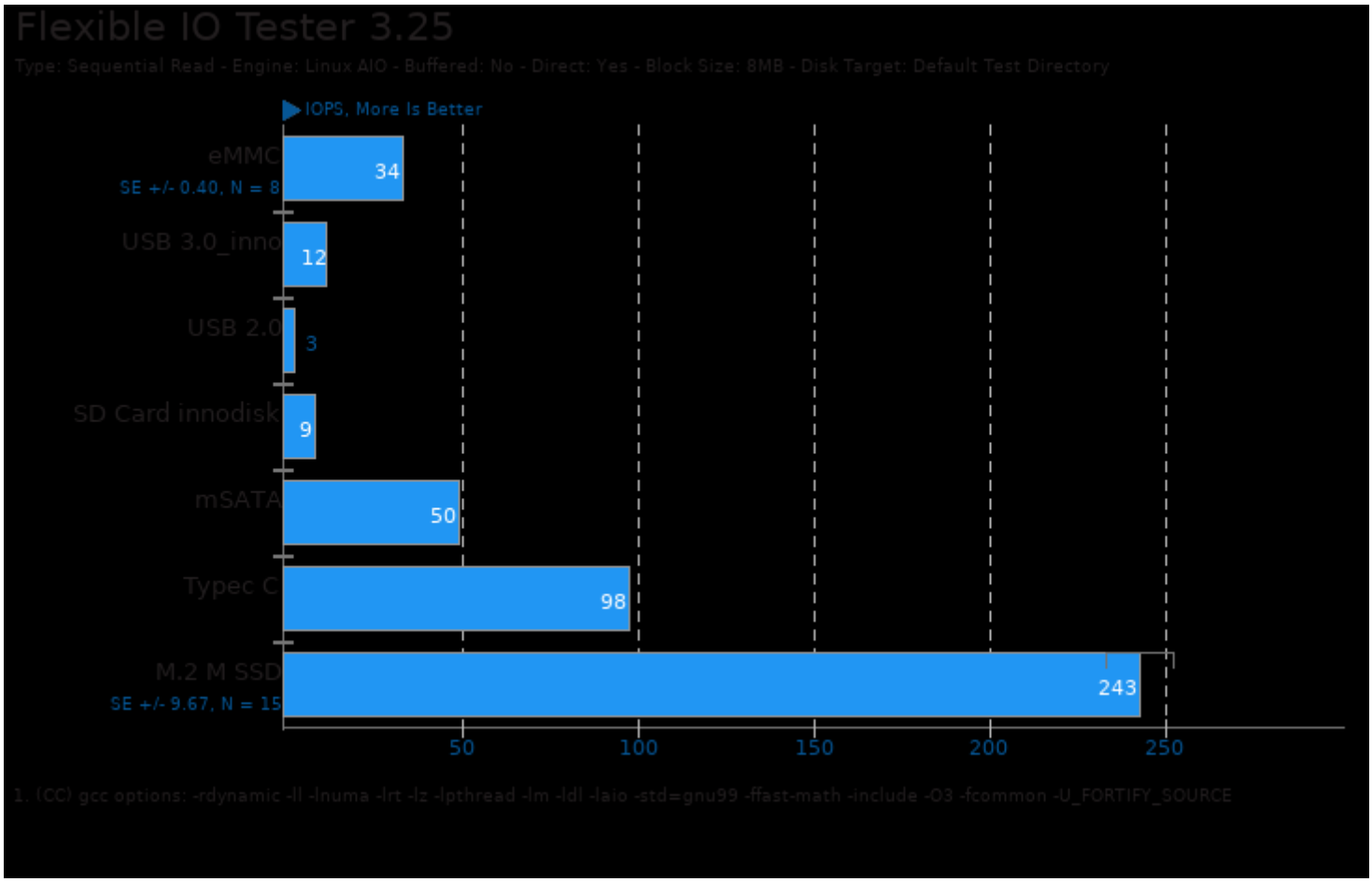
Test: SOA Data Layout

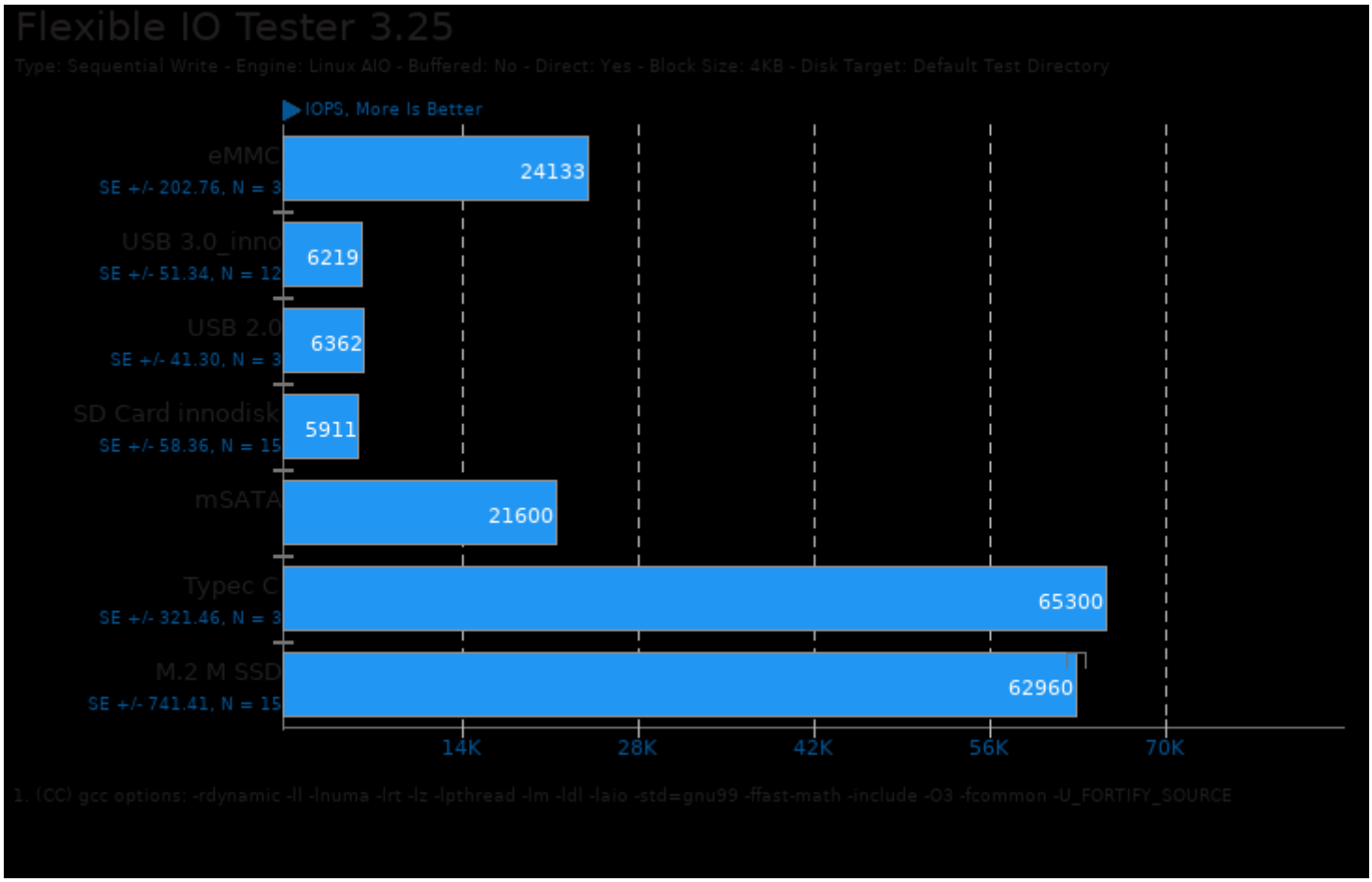


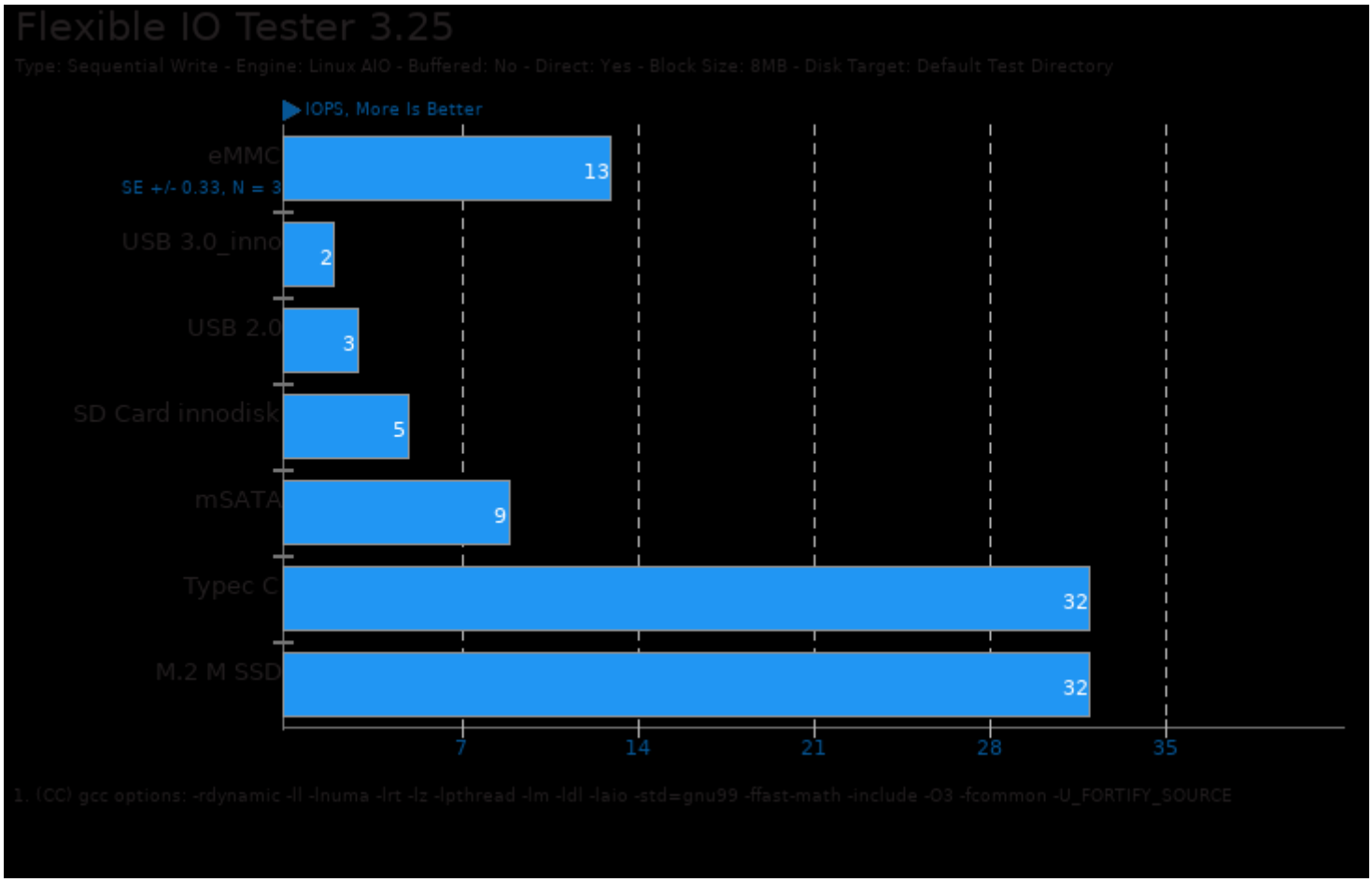

CUDA Mini-Nbody 2015-11-10
Test: Flush Denormals To Zero
(NBody^2)/s, More Is Better
CUDA Nbody
SE +/- 0.05, N = 3
53.23
12
24
36
48
60
Stress-NG 0.11.07
Test: Crypto
Bogo Ops/s, More Is Better
CPU Stress
SE +/- 7.29, N = 3
1192.31
300
600
900
1200
1500
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc
Stress-NG 0.11.07
Test: Forking
Bogo Ops/s, More Is Better
CPU Stress
SE +/- 34.32, N = 3
6417.79
1400
2800
4200
5600
7000
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc
Stress-NG 0.11.07
Test: CPU Stress
Bogo Ops/s, More Is Better
CPU Stress
SE +/- 7.00, N = 10
904.97
200
400
600
800
1000
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc
Stress-NG 0.11.07
Test: Matrix Math
Bogo Ops/s, More Is Better
CPU Stress
SE +/- 8.66, N = 3
12435.08
3K
6K
9K
12K
15K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

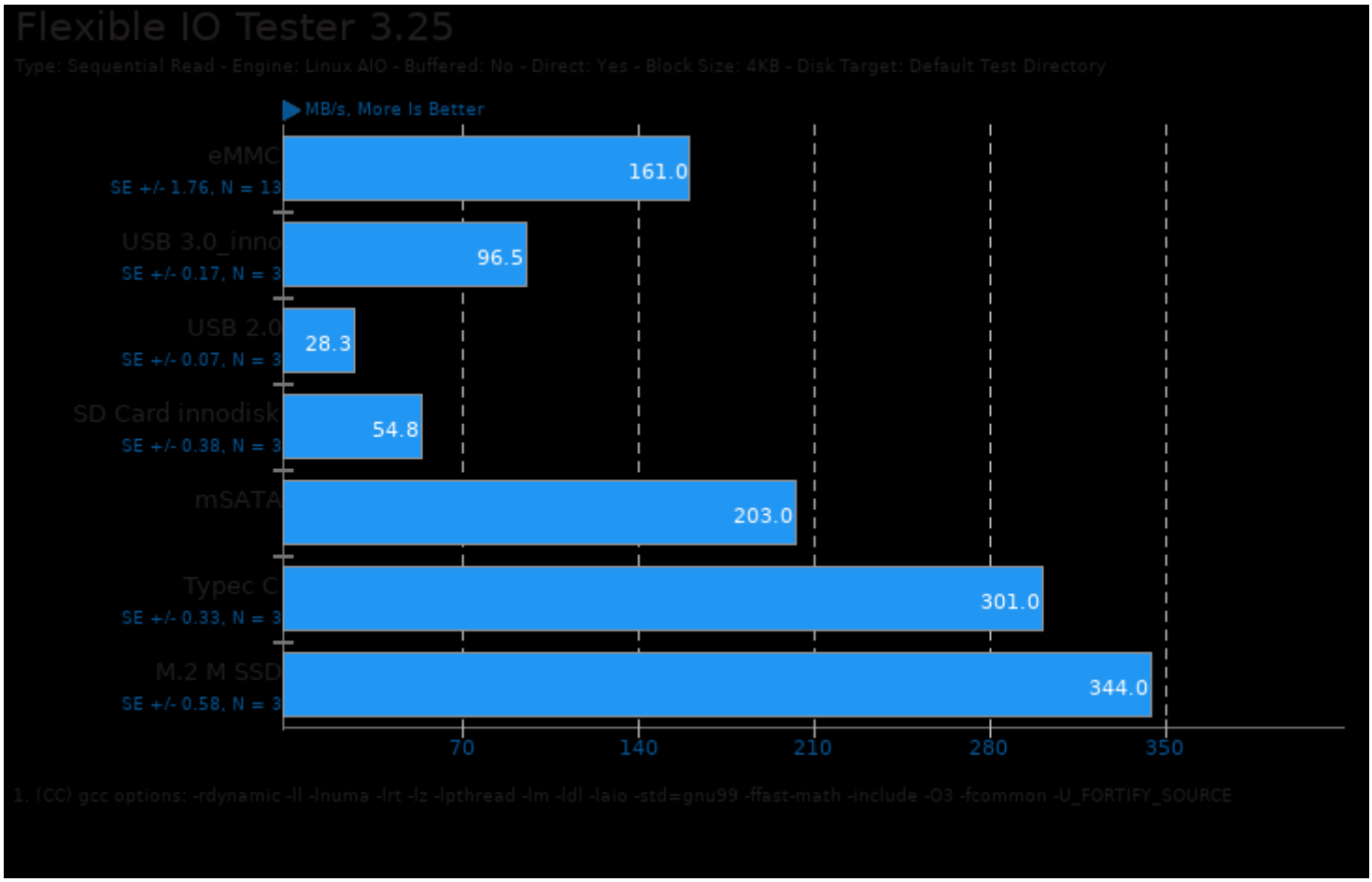

Stress-NG 0.11.07
Test: Vector Math
Bogo Ops/s, More Is Better
CPU Stress
SE +/- 103.88, N = 3
49100.78
11K
22K
33K
44K
55K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc
Stress-NG 0.11.07
Test: Memory Copying
Bogo Ops/s, More Is Better
CPU Stress
SE +/- 10.70, N = 3
3231.55
700
1400
2100
2800
3500
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc
Stress-NG 0.11.07
Test: Glibc C String Functions
Bogo Ops/s, More Is Better
CPU Stress
SE +/- 2021.55, N = 12
244313.67
50K
100K
150K
200K
250K
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc
Stress-NG 0.11.07
Test: Glibc Qsort Data Sorting
Bogo Ops/s, More Is Better
CPU Stress
SE +/- 1.12, N = 12
37.99
9
18
27
36
45
1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

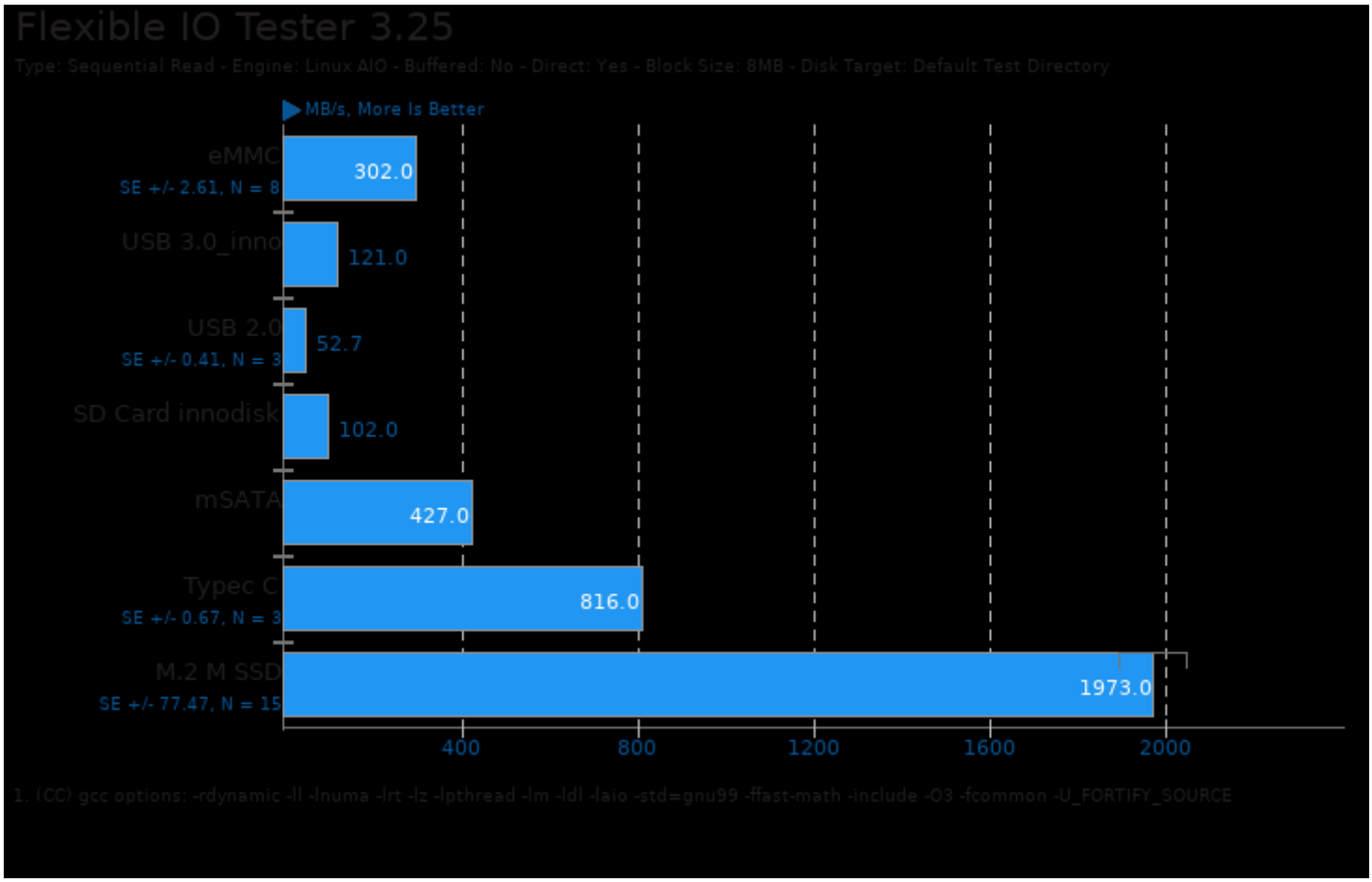

Flexible IO Tester 3.25
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
eMMC
SE +/- 448.99, N = 13
41231
USB 3.0_inno
SE +/- 57.74, N = 3
24700
USB 2.0
SE +/- 15.84, N = 3
7243
SD Card innodisk
14100
mSATA
51900
Typec C
SE +/- 100.00, N = 3
77200
M.2 M SSD
SE +/- 145.30, N = 3
88067
20K
40K
60K
80K
100K
1. (CC) gcc options: -rdynamic -ll -lnuma -lrt -lz -lpthread -lm -ldl -laio -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE

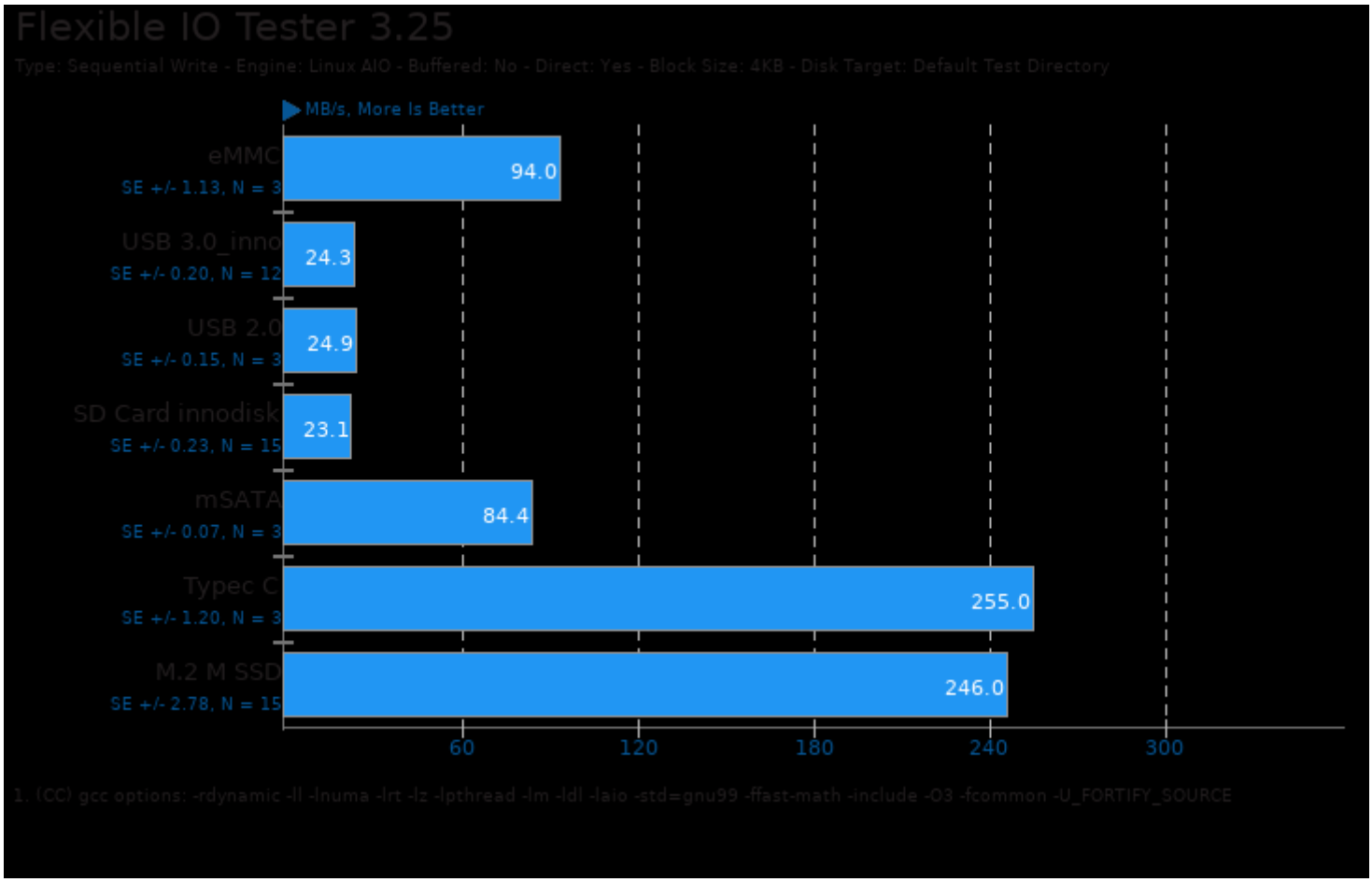

Flexible IO Tester 3.25
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
IOPS, More Is Better
eMMC
SE +/- 0.40, N = 8
34
USB 3.0_inno
12
USB 2.0
3
SD Card innodisk
9
mSATA
50
Typec C
98
M.2 M SSD
SE +/- 9.67, N = 15
243
50
100
150
200
250
1. (CC) gcc options: -rdynamic -ll -lnuma -lrt -lz -lpthread -lm -ldl -laio -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE

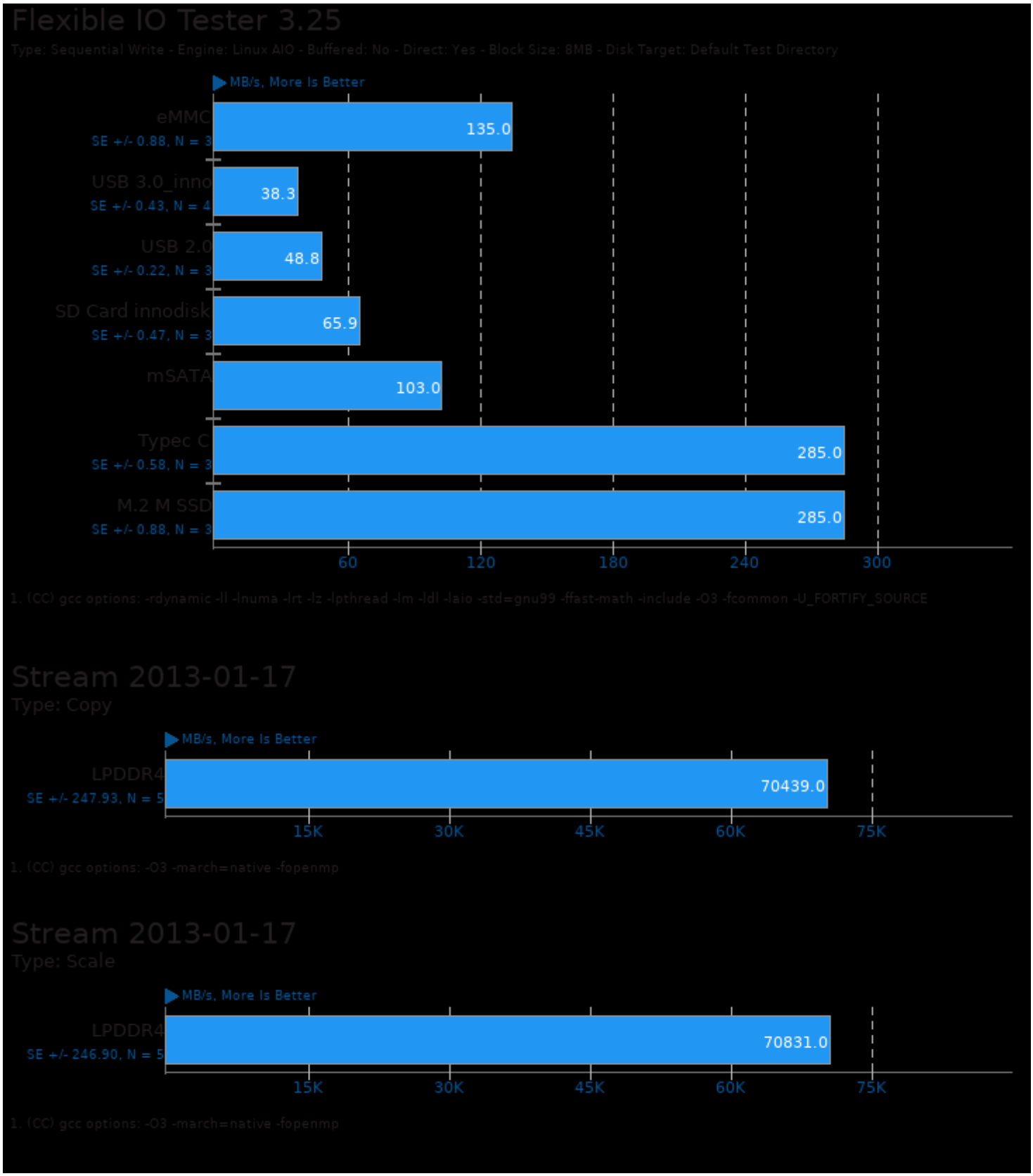

Flexible IO Tester 3.25
Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
eMMC
SE +/- 202.76, N = 3
24133
USB 3.0_inno
SE +/- 51.34, N = 12
6219
USB 2.0
SE +/- 41.30, N = 3
6362
SD Card innodisk
SE +/- 58.36, N = 15
5911
mSATA
21600
Typec C
SE +/- 321.46, N = 3
65300
M.2 M SSD
SE +/- 741.41, N = 15
62960
14K
28K
42K
56K
70K
1. (CC) gcc options: -rdynamic -ll -lnuma -lrt -lz -lpthread -lm -ldl -laio -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE

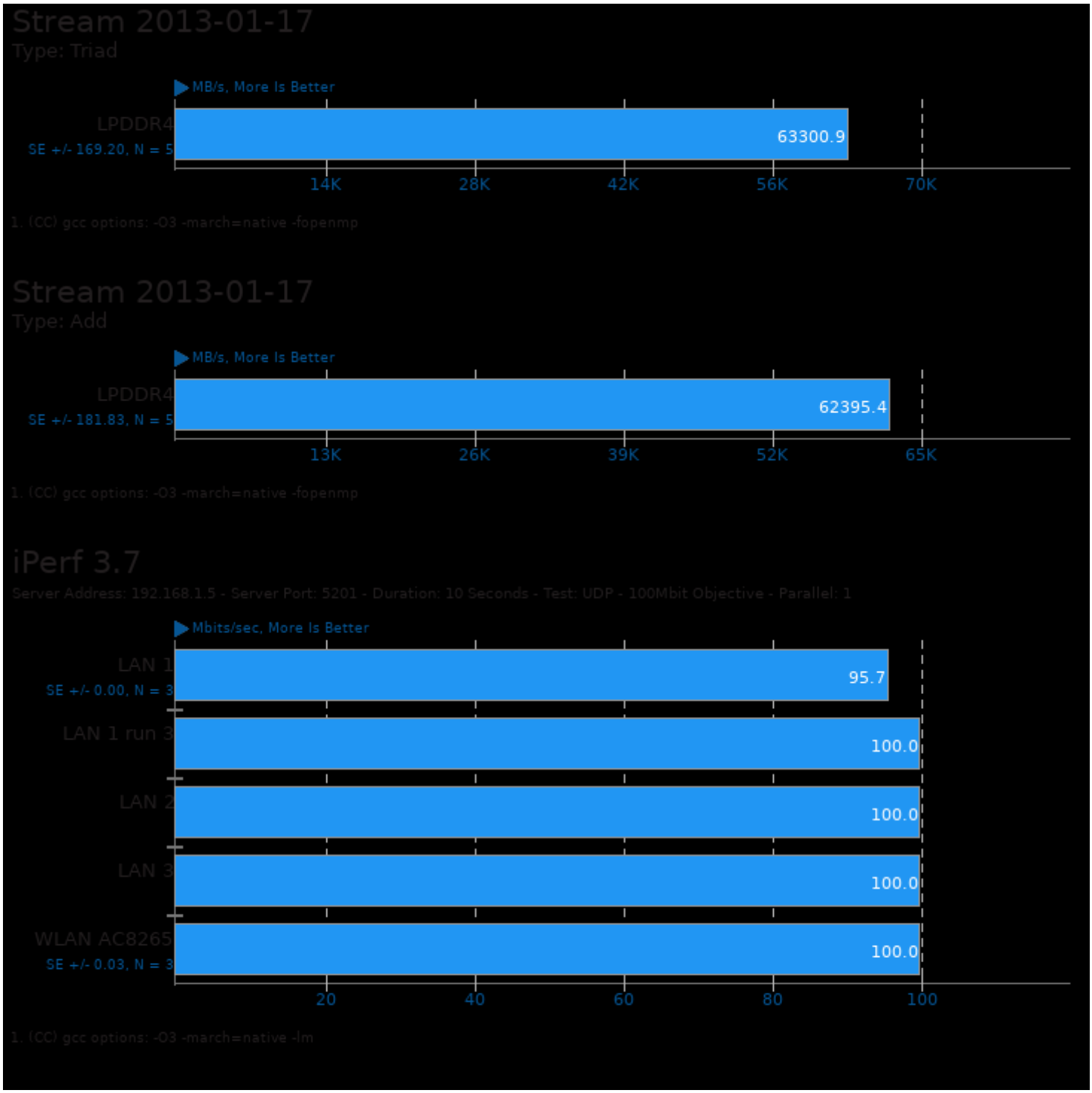

Flexible IO Tester 3.25
Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
IOPS, More Is Better
eMMC
SE +/- 0.33, N = 3
13
USB 3.0_inno
2
USB 2.0
3
SD Card innodisk
5
mSATA
9
Typec C
32
M.2 M SSD
32
7
14
21
28
35
1. (CC) gcc options: -rdynamic -ll -lnuma -lrt -lz -lpthread -lm -ldl -laio -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE

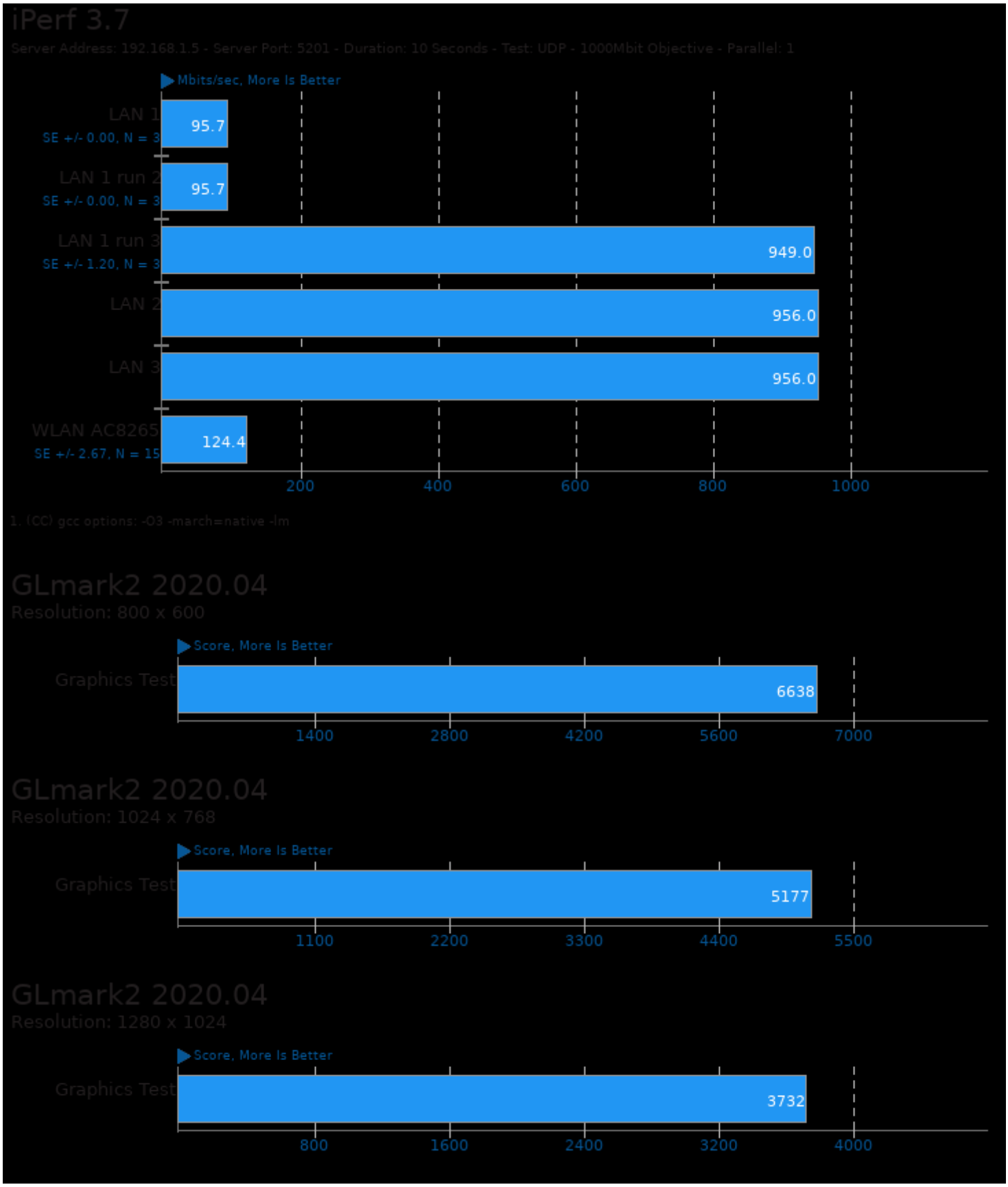

Flexible IO Tester 3.25
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
eMMC
SE +/- 1.76, N = 13
161.0
USB 3.0_inno
SE +/- 0.17, N = 3
96.5
USB 2.0
SE +/- 0.07, N = 3
28.3
SD Card innodisk
SE +/- 0.38, N = 3
54.8
mSATA
203.0
Typec C
SE +/- 0.33, N = 3
301.0
M.2 M SSD
SE +/- 0.58, N = 3
344.0
70
140
210
280
350
1. (CC) gcc options: -rdynamic -ll -lnuma -lrt -lz -lpthread -lm -ldl -laio -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE

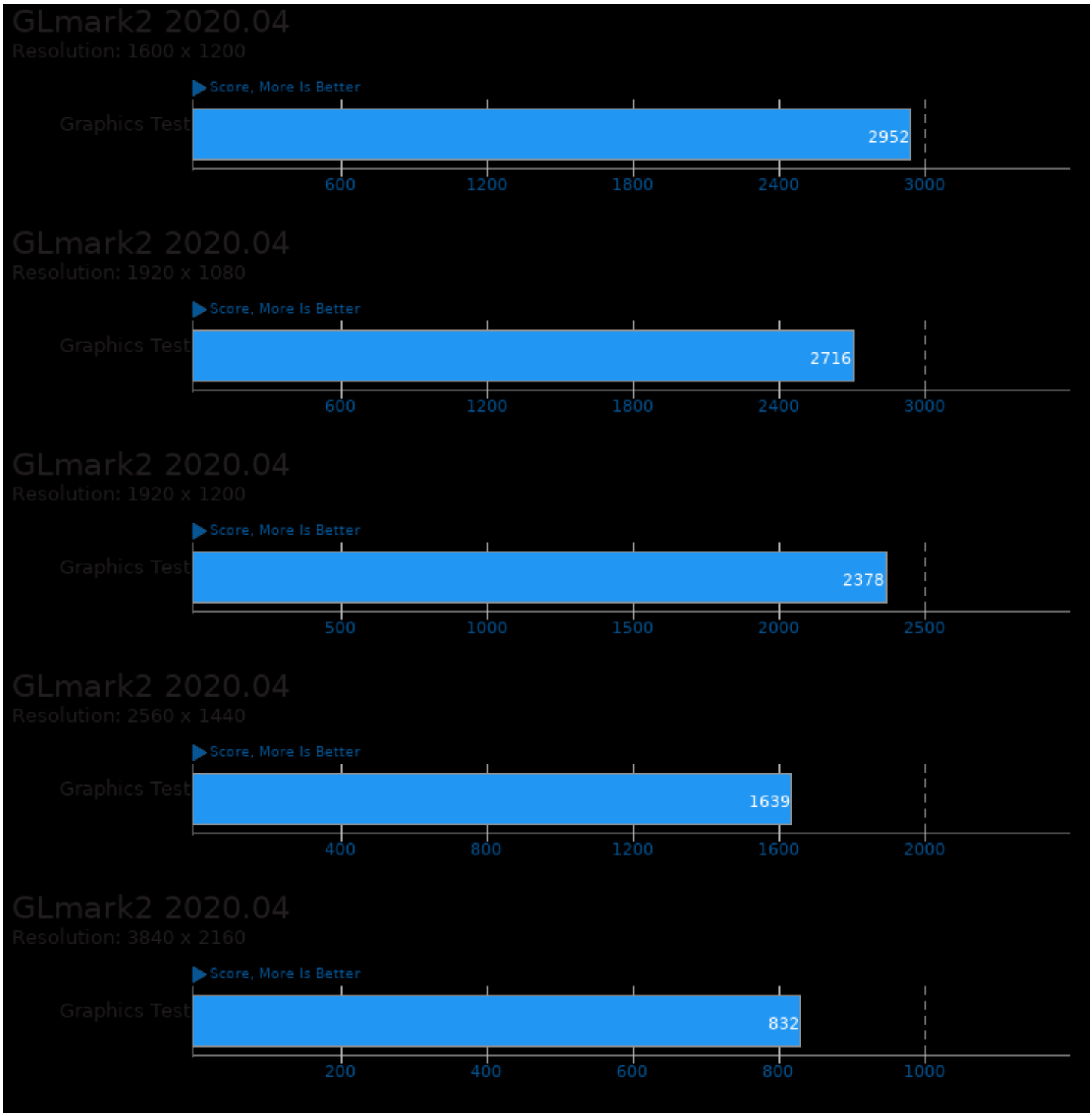

Flexible IO Tester 3.25
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
eMMC
SE +/- 2.61, N = 8
302.0
USB 3.0_inno
121.0
USB 2.0
SE +/- 0.41, N = 3
52.7
SD Card innodisk
102.0
mSATA
427.0
Typec C
SE +/- 0.67, N = 3
816.0
M.2 M SSD
SE +/- 77.47, N = 15
1973.0
400
800
1200
1600
2000
1. (CC) gcc options: -rdynamic -ll -lnuma -lrt -lz -lpthread -lm -ldl -laio -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE


Flexible IO Tester 3.25
Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
eMMC
SE +/- 1.13, N = 3
94.0
USB 3.0_inno
SE +/- 0.20, N = 12
24.3
USB 2.0
SE +/- 0.15, N = 3
24.9
SD Card innodisk
SE +/- 0.23, N = 15
23.1
mSATA
SE +/- 0.07, N = 3
84.4
Typec C
SE +/- 1.20, N = 3
255.0
M.2 M SSD
SE +/- 2.78, N = 15
246.0
60
120
180
240
300
1. (CC) gcc options: -rdynamic -ll -lnuma -lrt -lz -lpthread -lm -ldl -laio -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE


Flexible IO Tester 3.25
Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
eMMC
SE +/- 0.88, N = 3
135.0
USB 3.0_inno
SE +/- 0.43, N = 4
38.3
USB 2.0
SE +/- 0.22, N = 3
48.8
SD Card innodisk
SE +/- 0.47, N = 3
65.9
mSATA
103.0
Typec C
SE +/- 0.58, N = 3
285.0
M.2 M SSD
SE +/- 0.88, N = 3
285.0
60
120
180
240
300
1. (CC) gcc options: -rdynamic -ll -lnuma -lrt -lz -lpthread -lm -ldl -laio -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE
Stream 2013-01-17
Type: Copy
MB/s, More Is Better
LPDDR4
SE +/- 247.93, N = 5
70439.0
15K
30K
45K
60K
75K
1. (CC) gcc options: -O3 -march=native -fopenmp
Stream 2013-01-17
Type: Scale
MB/s, More Is Better
LPDDR4
SE +/- 246.90, N = 5
70831.0
15K
30K
45K
60K
75K
1. (CC) gcc options: -O3 -march=native -fopenmp


Stream 2013-01-17
Type: Triad
MB/s, More Is Better
LPDDR4
SE +/- 169.20, N = 5
63300.9
14K
28K
42K
56K
70K
1. (CC) gcc options: -O3 -march=native -fopenmp
Stream 2013-01-17
Type: Add
MB/s, More Is Better
LPDDR4
SE +/- 181.83, N = 5
62395.4
13K
26K
39K
52K
65K
1. (CC) gcc options: -O3 -march=native -fopenmp
iPerf 3.7
Server Address: 192.168.1.5 - Server Port: 5201 - Duration: 10 Seconds - Test: UDP - 100Mbit Objective - Parallel: 1
Mbits/sec, More Is Better
LAN 1
SE +/- 0.00, N = 3
95.7
LAN 1 run 3
100.0
LAN 2
100.0
LAN 3
100.0
WLAN AC8265
SE +/- 0.03, N = 3
100.0
20
40
60
80
100
1. (CC) gcc options: -O3 -march=native -lm


iPerf 3.7
Server Address: 192.168.1.5 - Server Port: 5201 - Duration: 10 Seconds - Test: UDP - 1000Mbit Objective - Parallel: 1
Mbits/sec, More Is Better
LAN 1
SE +/- 0.00, N = 3
95.7
LAN 1 run 2
SE +/- 0.00, N = 3
95.7
LAN 1 run 3
SE +/- 1.20, N = 3
949.0
LAN 2
956.0
LAN 3
956.0
WLAN AC8265
SE +/- 2.67, N = 15
124.4
200
400
600
800
1000
1. (CC) gcc options: -O3 -march=native -lm
GLmark2 2020.04
Resolution: 800 x 600
Score, More Is Better
Graphics Test
6638
1400
2800
4200
5600
7000
GLmark2 2020.04
Resolution: 1024 x 768
Score, More Is Better
Graphics Test
5177
1100
2200
3300
4400
5500
GLmark2 2020.04
Resolution: 1280 x 1024
Score, More Is Better
Graphics Test
3732
800
1600
2400
3200
4000



This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 04:08.