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JS-E02_AX720_R32_3_1

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

Automated Executive Summary

Digifusion M.2 SSD had the most wins, coming in first place for 50% of the tests.

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

Flexible IO Tester (Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory) at 567.322x
Flexible IO Tester (Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory) at 542.673x
Flexible IO Tester (Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory) at 94.257x
Flexible IO Tester (Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory) at 71.333x
Flexible IO Tester (Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory) at 50.5x
Flexible IO Tester (Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory) at 33.061x
Flexible IO Tester (Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk

Target: Default Test Directory) at 11.824x
Flexible IO Tester (Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory) at 11.809x
GLmark2 (Resolution: 800 x 600) at 1.185x
GLmark2 (Resolution: 1024 x 768) at 1.145x.

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, Display Driver: NVIDIA 1.0.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

USB3.0 Innodisk

USB2.0 Innodisk

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 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

mSATA Innodisk

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: 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

Digifusion M.2 SSD

Micro AB USB2.0_inno

Type C Digifusion

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: 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

Type C Digifusion run 2

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 256GB PLEXTOR PX-256M9PeGN + 256GB Generic + 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

Type C DIGFAST

Type C DIGFAST run 2

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 256GB PLEXTOR PX-256M9PeGN + 256GB Tech + 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

Type c USB3.0

CPU Stress

CPU Stress run

LPDDR4

CPU-7 Zip

CUDA Test

RS-232UART

Type C NST-205C3-SG

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 256GB PLEXTOR PX-256M9PeGN + 62GB Dual Drive + 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 1920x1080

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
Processor Notes: Scaling Governor: tegra_cpufreq schedutil

LAN 1

LAN 2

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 256GB PLEXTOR PX-256M9PeGN + 250GB SSD 970 EVO + 16GB USB Drive 3ME + 31GB HBG4a2 + 15GB i-TF, 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 1920x1080

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 3

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 256GB PLEXTOR PX-256M9PeGN + 16GB USB Drive 3ME + 31GB HBG4a2 + 15GB i-TF, 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 1920x1080

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

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 256GB PLEXTOR PX-256M9PeGN + 16GB USB Drive 3ME + 31GB HBG4a2 + 15GB i-TF, Graphics: NVIDIA Tegra Xavier, Monitor: Acer KG281K, 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 7680x2160

Processor Notes: Scaling Governor: tegra_cpufreq schedutil
Python Notes: Python 2.7.17 + Python 3.6.9

Gaphics 2

Processor: ARMv8 rev 0 @ 2.27GHz (8 Cores), Motherboard: Jetson-AGX, Memory: 16GB, Disk: 256GB PLEXTOR PX-256M9PeGN + 16GB USB Drive 3ME + 31GB HBG4a2 + 15GB i-TF, Graphics: NVIDIA Tegra Xavier, Monitor: Acer KG281K, 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 32.3.1, OpenGL: 4.6.0, Vulkan: 1.1.85, Compiler: GCC 7.5.0 + CUDA 10.0, File-System: ext4, Screen Resolution: 3840x2160

Processor Notes: Scaling Governor: tegra_cpufreq schedutil
Python Notes: Python 2.7.17 + Python 3.6.9

	eMMC	USB3.0 Innodisk	USB2.0 Innodisk	SD Card innodisk	mSATA Innodisk	Digifusion M.2 SSD	MicroABUSB2.0_innno	Type C Digifusion	Type C Digifusion run 2	Type C DIGFAST	Type C DIGFAST run 2	Type c USB3.0	CPU Stress	CPU Stress run	LPDDR4	CPU-7 Zip	CUDA Test	RS-232U ART	Type C NST-205C3-SG	LAN 1	LAN 2	LAN 3	Graphics	Gaphics2
7-Zip Compression - C.S.T (MIPS)																20072								
Standard Deviation																3%								
CUDA Mini-Nbody - Original ((NBody^2)/s)																	46.883							
Standard Deviation																	0.1%							
CUDA Mini-Nbody - Cache Blocking ((NBod																	55.558							
Standard Deviation																	0.4%							
CUDA Mini-Nbody - Loop Unrolling ((NBody^2)/s)																	54.863							
Standard Deviation																	0%							

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CUDA Mini-Nbody - SOA Data Layout ((NBody^2)/s)													47.75 2	
Standard Deviation													0.1 %	
CUDA Mini-Nbody - F.D.T.Z ((NBody^2)/s)													55.14 2	
Standard Deviation													0.1 %	
Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 4KB (MB/s)	95.3	97.5	28.3	55.5	19 4	**33 3**	**28.2**	38.6	30 5	30 4	30 6	11 1		31 2
Normalized	28.6 2%	29.2 8%	8.5 %	16.6 7%	58.2 6%	100 %	8.47 %	11.5 9%	91.5 9%	91.2 9%	91.8 9%	33.3 3%		93.6 9%
Standard Deviation	31.9 %	0.7 %	1.2 %	0.1 %	1%	0.6 %	0.4 %	0.3 %	0.4 %	0.4 %	0.5 %	0.9 %		0.5 %

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Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 4KB (IOPS)	24	24	72	14	49	85	72	98	78	77	78	28	79
	34	96	42	20	73	33	17	78	10	53	20	36	63
	0	7		0	3	3			0	3	0	7	3
Normalized	28.5	29.2	8.49	16.6	58.2	100	8.46	11.5	91.5	90.8	91.6	33.2	93.3
	2%	6%	%	4%	8%	%	%	8%	2%	6%	4%	4%	2%
Standard Deviation	32%	0.6	1.1		0.8	0.6	0.4	0.2	0.5	0.7	0.5	0.7	0.8
		%	%		%	%	%	%	%	%	%	%	%
Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 8MB (MB/s)	30	12	53.	10	42	17	52.	63.	82	81	81	16	82
	6	1	3	2	7	39	6	3	2	8	8	9	7
Normalized	17.6	6.96	3.06	5.87	24.5	100	3.02	3.64	47.2	47.0	47.0	9.72	47.5
	%	%	%	%	5%	%	%	%	7%	4%	4%	%	6%
Standard Deviation			0.1			0.8	1.3	0.2	0.1	0.1	0.1		0.1
			%			%	%	%	%	%	%		%

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Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 8MB (IOPS)	35	12	3	9	50	21 4	3	4	99	99	99	18	10 0
Normalized	16.3 6%	5.61 %	1.4 %	4.21 %	23.3 6%	100 %	1.4 %	1.87 %	46.2 6%	46.2 6%	46.2 6%	8.41 %	46.7 3%
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 4KB (MB/s)	81. 2	24. 7	25. 0	21. 9	85. 5	26 8	25. 1	39. 0	0.6 21	28 0	28 1	21. 6	33 7
Normalized	24.0 9%	7.33 %	7.42 %	6.5 %	25.3 7%	79.5 3%	7.45 %	11.5 7%	0.18 %	83.0 9%	83.3 8%	6.41 %	100 %
Standard Deviation	0.2 %	0.4 %	1.2 %	1.3 %	0.1 %	2.1 %	1.1 %	0.1 %	59.4 %			11.6 %	
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 4KB (IOPS)	20 76 7	63 20	63 99	55 94	21 86 7	68 30 0	64 32	99 90	15 2	71 70 0	72 06 7	55 66	86 23 3
Normalized	24.0 8%	7.33 %	7.42 %	6.49 %	25.3 6%	79.2 %	7.46 %	11.5 8%	0.18 %	83.1 5%	83.5 7%	6.45 %	100 %
Standard Deviation	0.3 %	0.4 %	1.2 %	1.4 %	0.3 %	3%	1.2 %	0.1 %	60.6 %	0.1 %	0.2 %	11.3 %	0.1 %

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Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 8MB (MB/s)	13 5	39. 0	49. 3	66. 3	10 3	28 1	49. 3	63. 7	**8.8 80**	30 0	30 1	56. 1	**83 7**
Normalized	16.1 3%	4.66 %	5.89 %	7.92 %	12.3 1%	33.5 7%	5.89 %	7.61 %	1.06 %	35.8 4%	35.9 6%	6.7 %	100 %
Standard Deviation	0.9 %	1.9 %	0.7 %	0.1 %		0.7 %	1.1 %	0.1 %	27.2 %		1.3 %	2.1 %	0.2 %
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 8MB (IOPS)	13	**2**	3	5	9	32	3	4		34	34	4	**10 1**
Normalized	12.8 7%	1.98 %	2.97 %	4.95 %	8.91 %	31.6 8%	2.97 %	3.96 %		33.6 6%	33.6 6%	3.96 %	100 %
Standard Deviation	4.3 %					1.8 %					1.7 %		
GLmark 2 - 800 x 600 (Score)													**70 59 71 67**
Normalized													100 % 84.3 %
GLmark 2 - 1024 x 768 (Score)													**54 47 44 56**
Normalized													100 % 87.3 %
GLmark 2 - 1280 x 1024 (Score)													**38 34 85 41**
Normalized													100 % 88.5 %

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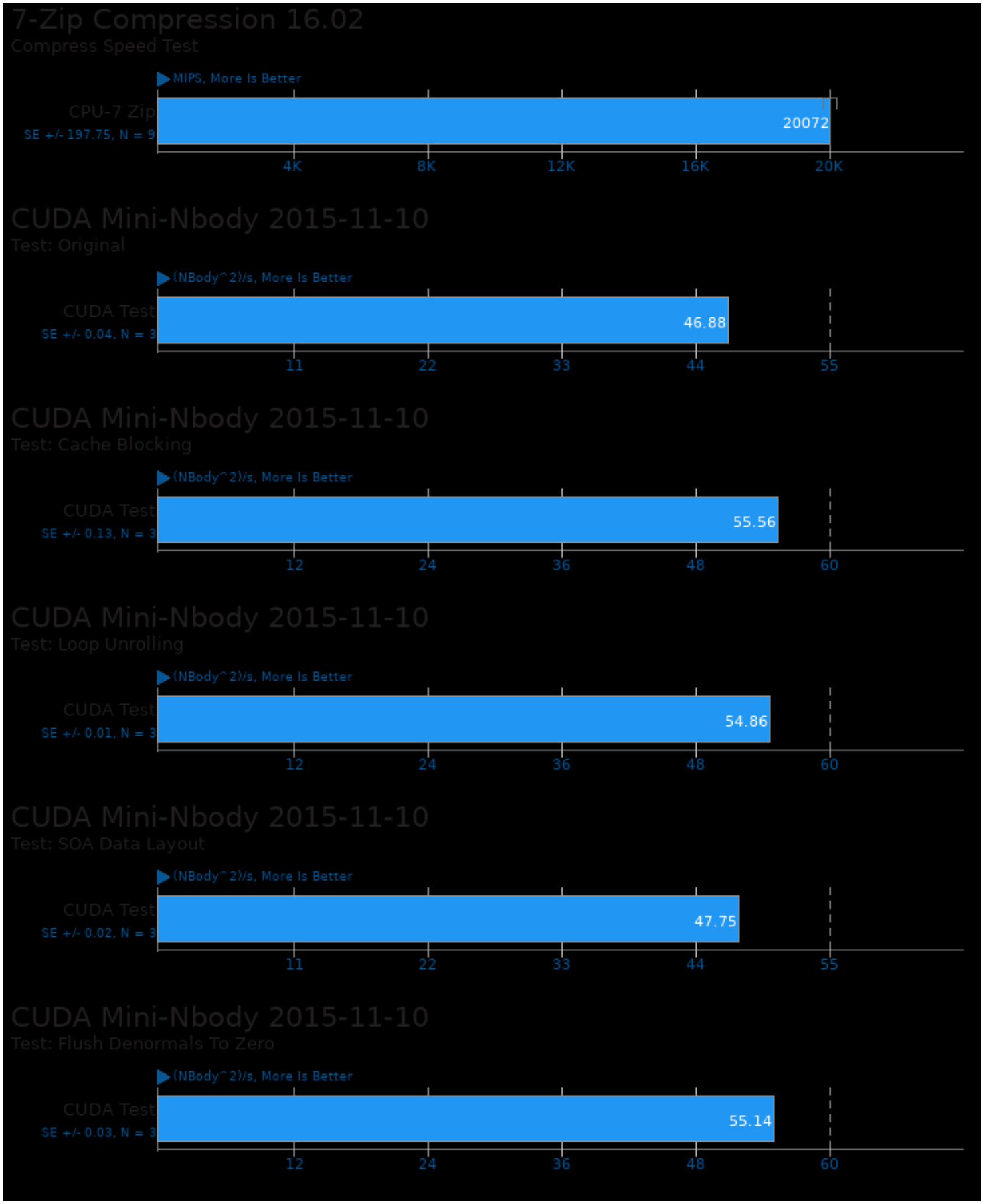
GLmark 2 - 1600 x 1200 (Score)	30 76	27 46
Normalized	100 %	89.2 7%
GLmark 2 - 1920 x 1080 (Score)	29 47	26 93
Normalized	100 %	91.3 8%
GLmark 2 - 1920 x 1200 (Score)	25 15	24 79
Normalized	100 %	98.5 7%
GLmark 2 - 2560 x 1440 (Score)	18 26	18 34
Normalized	99.5 6%	100 %
GLmark 2 - 3840 x 2160 (Score)	92 8	92 7
Normalized	100 %	99.8 9%
GLmark 2 - 7680 x 2160 (Score)	41 1	

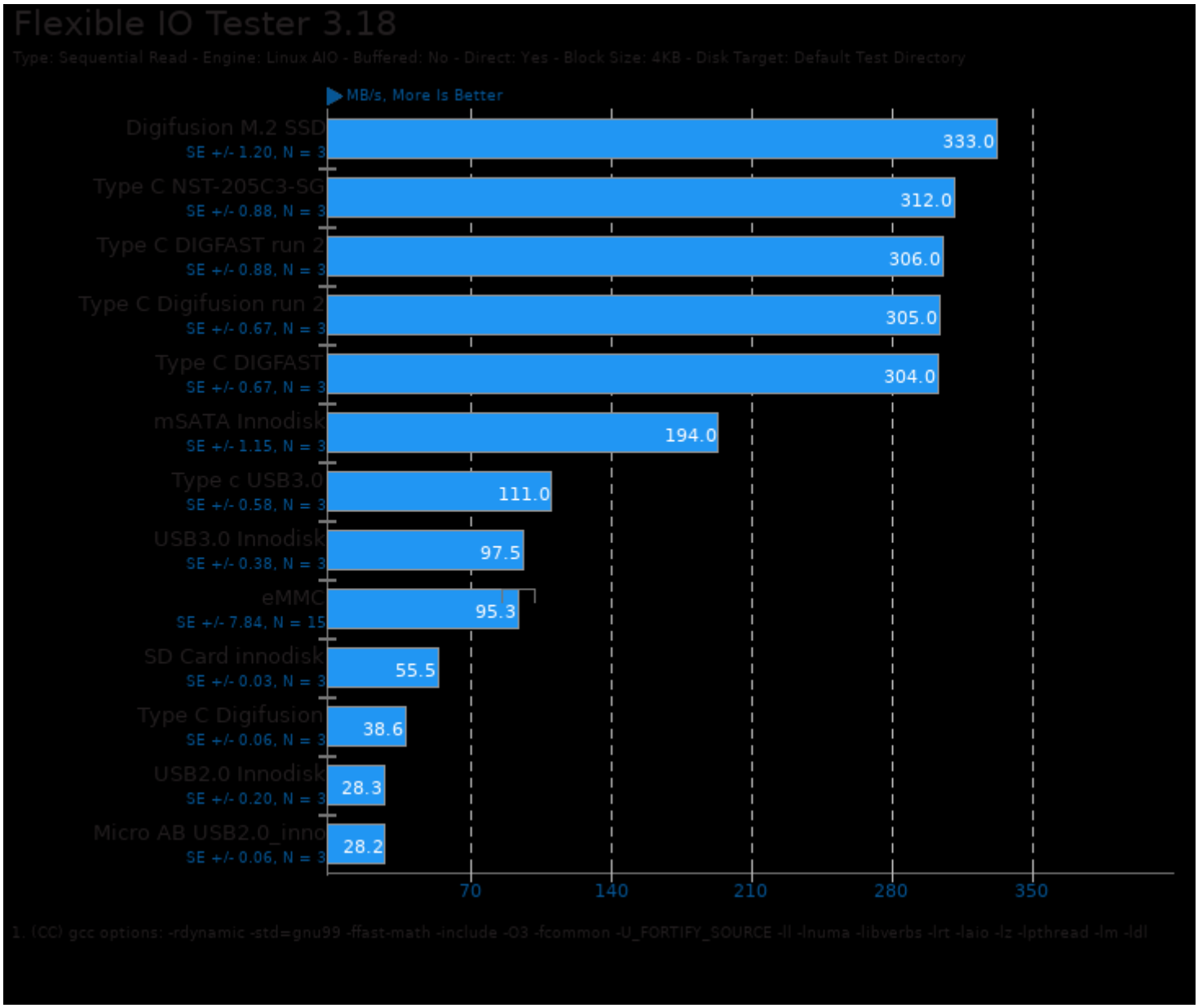
iPerf - 192.168.1.2 - 5201 - 10 Seconds - UDP - 100Mbit Objective - 1 (Mbits/s)	100	100	100
iPerf - 192.168.1.2 - 5201 - 10 Seconds - UDP - 1000Mbit Objective - 1 (Mbits/s)	951	952	956
Normalized	99.48%	99.58%	100%
Standard Deviation	0.5%	0.5%	
Stream - Copy (MB/s)	6768		
Standard Deviation	0.8%		
Stream - Scale (MB/s)	6776		
Standard Deviation	1%		
Stream - Triad (MB/s)	6003		
Standard Deviation	0.5%		

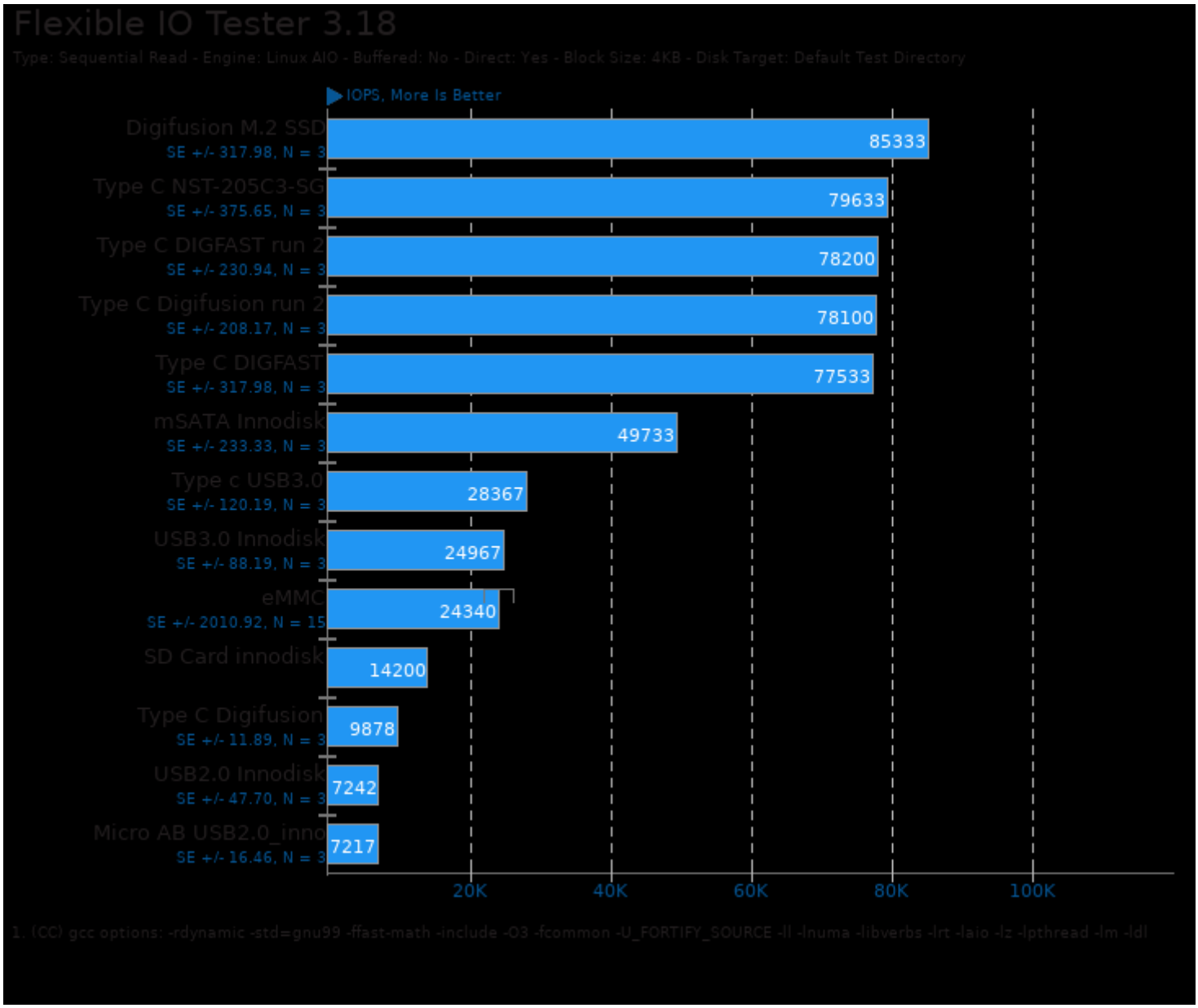
JS-E02_AX720_R32_3_1

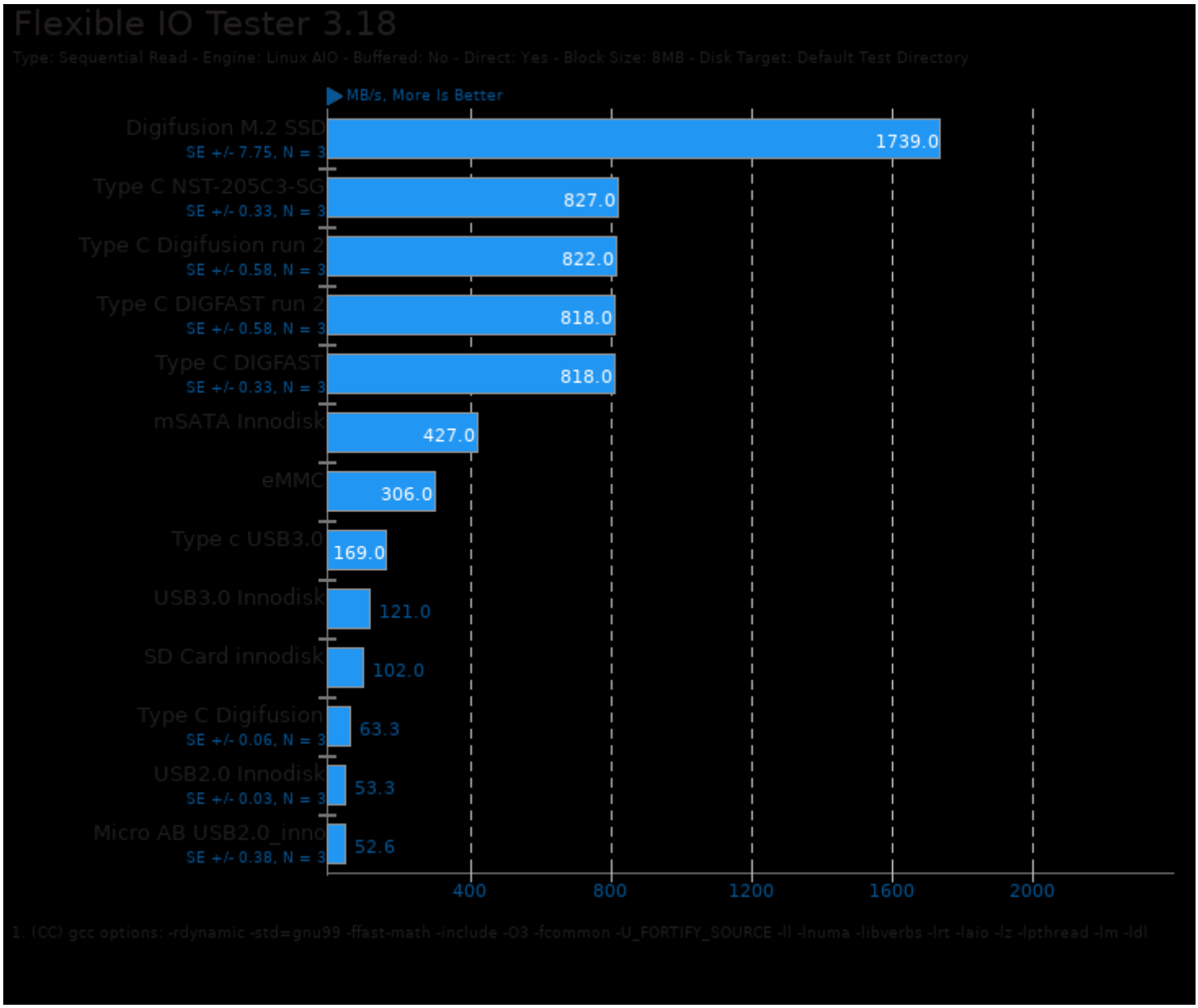
Stream - Add (MB/s)		59 94 0
Standard Deviation		0.4 %
Stress-NG - Forking (Bogo Ops/s)	71 53	70 51
Normalized	100 %	98.5 6%
Standard Deviation	0.5 %	0.4 %
Stress-NG - CPU Stress (Bogo Ops/s)	88 6.6 0	90 1.2 7
Normalized	98.3 7%	100 %
Standard Deviation	2.9 %	0.1 %
Stress-NG - Crypto (Bogo Ops/s)		12 12
Standard Deviation		1.7 %
Stress-NG - Matrix Math (Bogo Ops/s)		14 01 2
Standard Deviation		0.3 %
Stress-NG - Vector Math (Bogo Ops/s)		52 18 0
Standard Deviation		0%

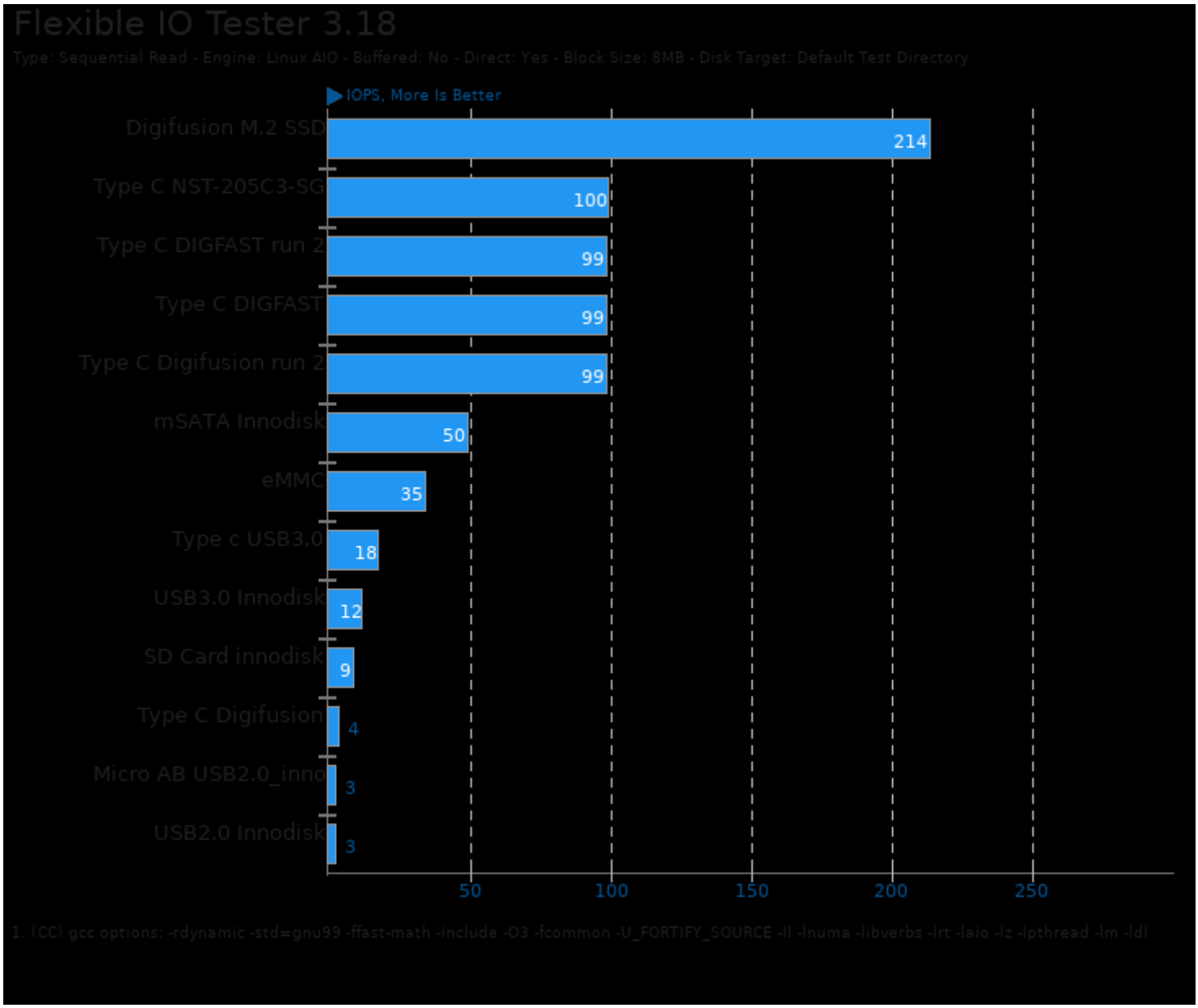
Stress-NG - Memory Copying (Bogo	32
Standard Deviation	51
Stress-NG - G.C.S.F (Bogo Ops/s)	0.3 %
Standard Deviation	22
Stress-NG - G.Q.D.S (Bogo Ops/s)	67
Standard Deviation	21
	1.4 %
	48.63
	16.8 %

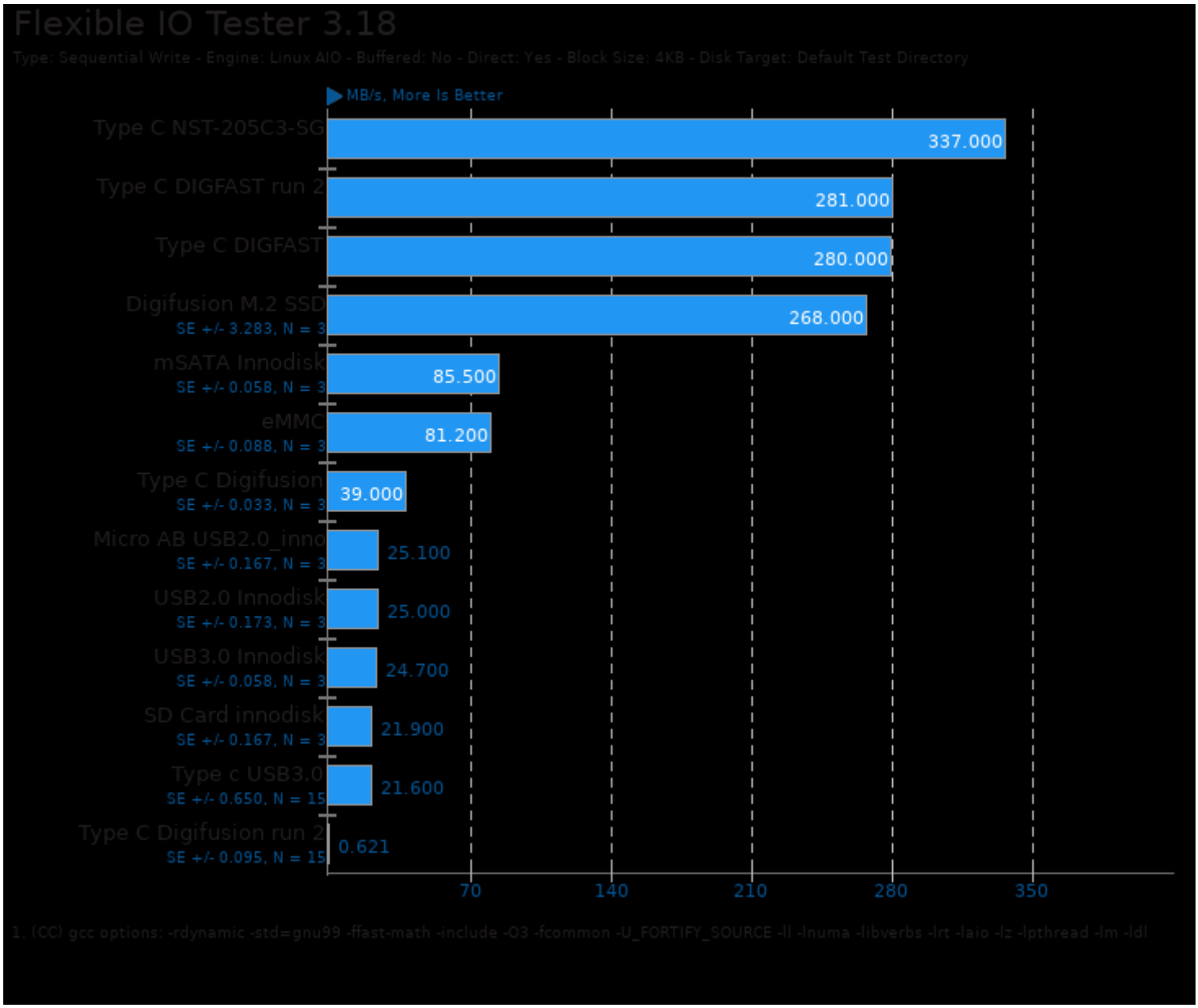

7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
CPU-7 Zip
SE +/- 197.75, N = 9
20072
4K
8K
12K
16K
20K
CUDA Mini-Nbody 2015-11-10
Test: Original
(NBody^2)/s, More Is Better
CUDA Test
SE +/- 0.04, N = 3
46.88
11
22
33
44
55
CUDA Mini-Nbody 2015-11-10
Test: Cache Blocking
(NBody^2)/s, More Is Better
CUDA Test
SE +/- 0.13, N = 3
55.56
12
24
36
48
60
CUDA Mini-Nbody 2015-11-10
Test: Loop Unrolling
(NBody^2)/s, More Is Better
CUDA Test
SE +/- 0.01, N = 3
54.86
12
24
36
48
60
CUDA Mini-Nbody 2015-11-10
Test: SOA Data Layout
(NBody^2)/s, More Is Better
CUDA Test
SE +/- 0.02, N = 3
47.75
11
22
33
44
55
CUDA Mini-Nbody 2015-11-10
Test: Flush Denormals To Zero
(NBody^2)/s, More Is Better
CUDA Test
SE +/- 0.03, N = 3
55.14
12
24
36
48
60

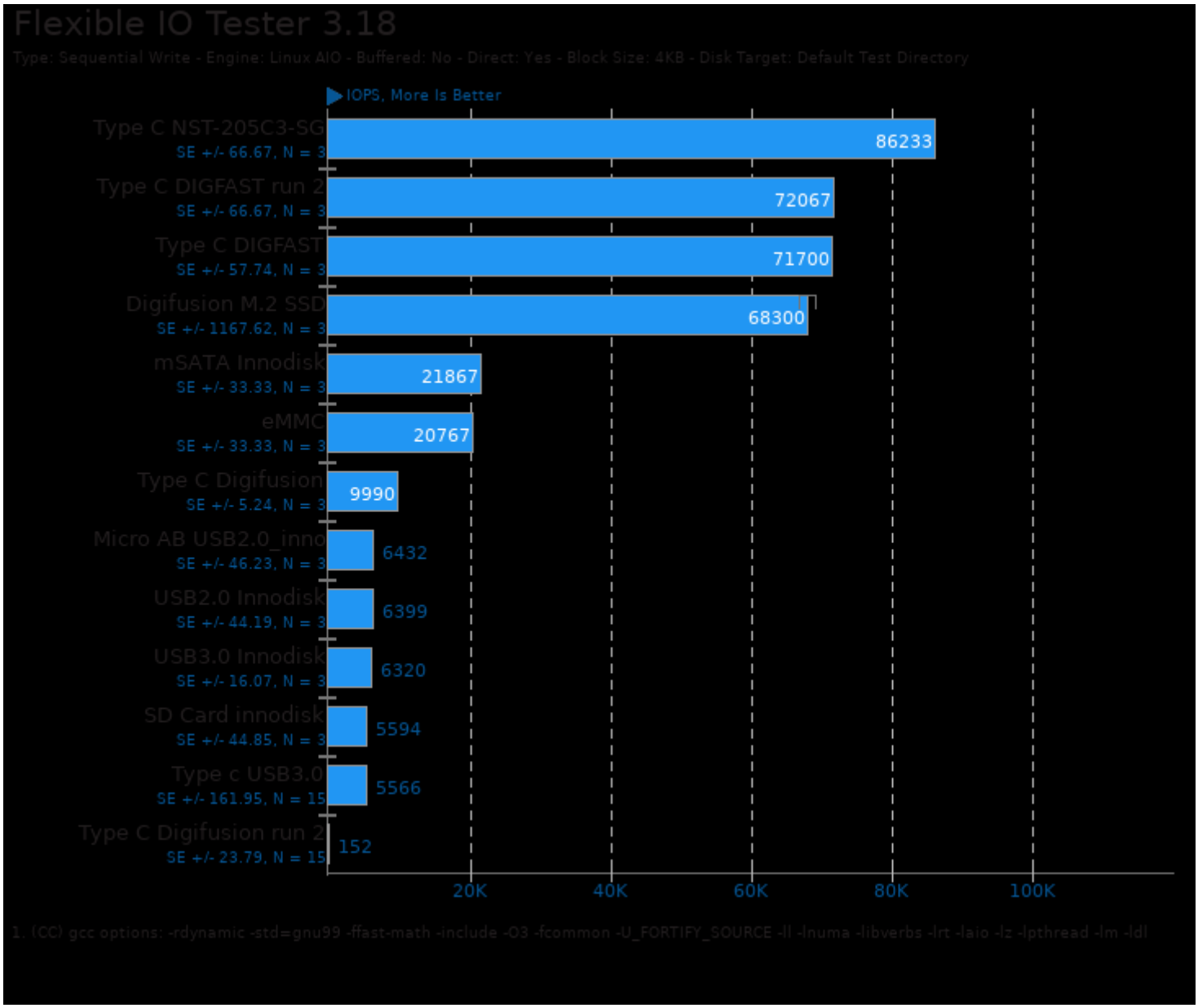

Flexible IO Tester 3.18
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
Digifusion M.2 SSD
SE +/- 1.20, N = 3
333.0
Type C NST-205C3-SG
SE +/- 0.88, N = 3
312.0
Type C DIGFAST run 2
SE +/- 0.88, N = 3
306.0
Type C Digifusion run 2
SE +/- 0.67, N = 3
305.0
Type C DIGFAST
SE +/- 0.67, N = 3
304.0
mSATA Innodisk
SE +/- 1.15, N = 3
194.0
Type c USB3.0
SE +/- 0.58, N = 3
111.0
USB3.0 Innodisk
SE +/- 0.38, N = 3
97.5
eMMC
SE +/- 7.84, N = 15
95.3
SD Card innodisk
SE +/- 0.03, N = 3
55.5
Type C Digifusion
SE +/- 0.06, N = 3
38.6
USB2.0 Innodisk
SE +/- 0.20, N = 3
28.3
Micro AB USB2.0_inno
SE +/- 0.06, N = 3
28.2
70
140
210
280
350
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -ll -lnuma -libverbs -lrt -laio -lz -lpthread -lm -ldl

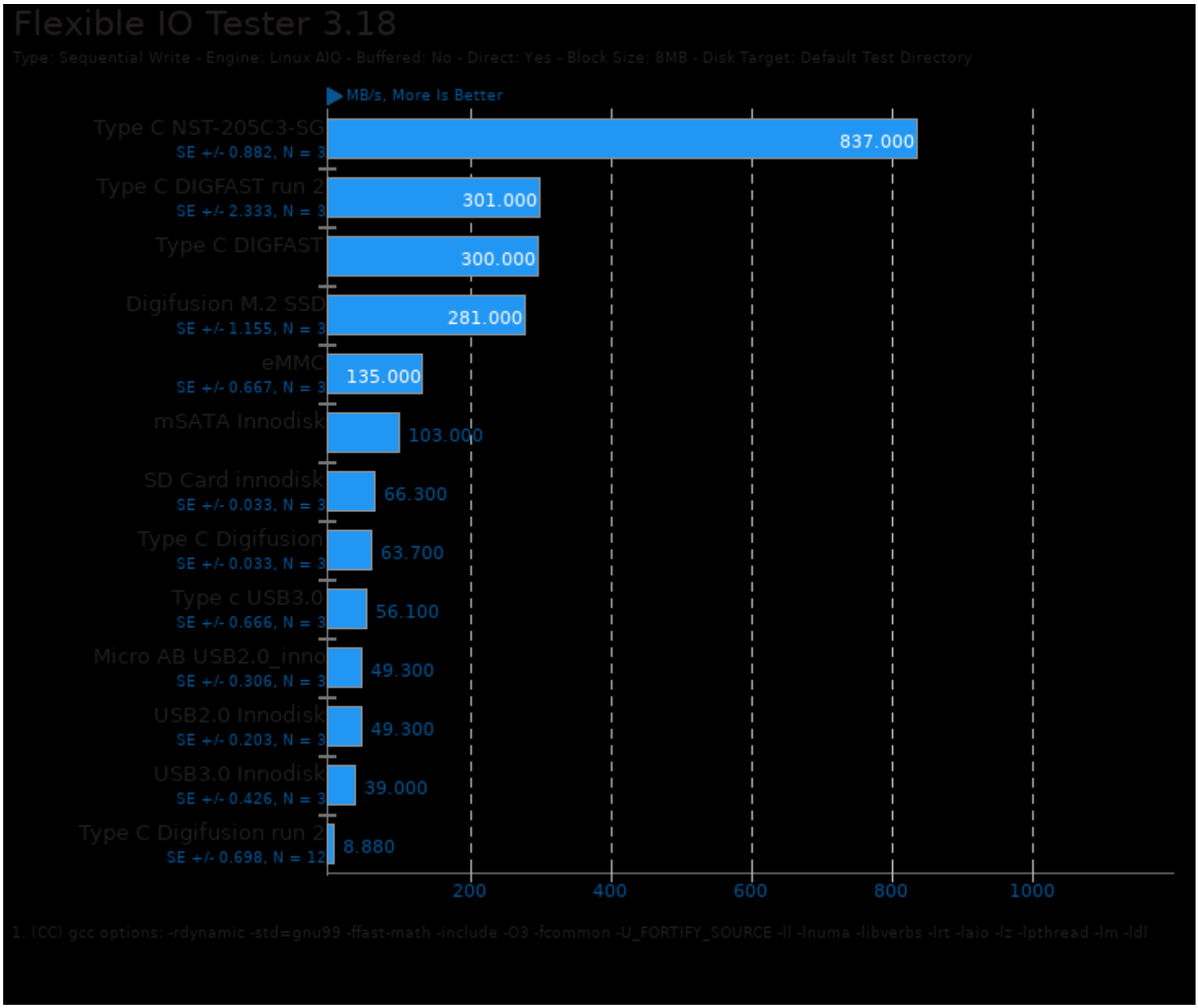

Flexible IO Tester 3.18
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
Digifusion M.2 SSD
SE +/- 317.98, N = 3
85333
Type C NST-205C3-SG
SE +/- 375.65, N = 3
79633
Type C DIGFAST run 2
SE +/- 230.94, N = 3
78200
Type C Digifusion run 2
SE +/- 208.17, N = 3
78100
Type C DIGFAST
SE +/- 317.98, N = 3
77533
mSATA Innodisk
SE +/- 233.33, N = 3
49733
Type c USB3.0
SE +/- 120.19, N = 3
28367
USB3.0 Innodisk
SE +/- 88.19, N = 3
24967
eMMC
SE +/- 2010.92, N = 15
24340
SD Card innodisk
14200
Type C Digifusion
SE +/- 11.89, N = 3
9878
USB2.0 Innodisk
SE +/- 47.70, N = 3
7242
Micro AB USB2.0_inno
SE +/- 16.46, N = 3
7217
20K
40K
60K
80K
100K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -ll -lnuma -libverbs -lrt -laio -lz -lpthread -lm -ldl

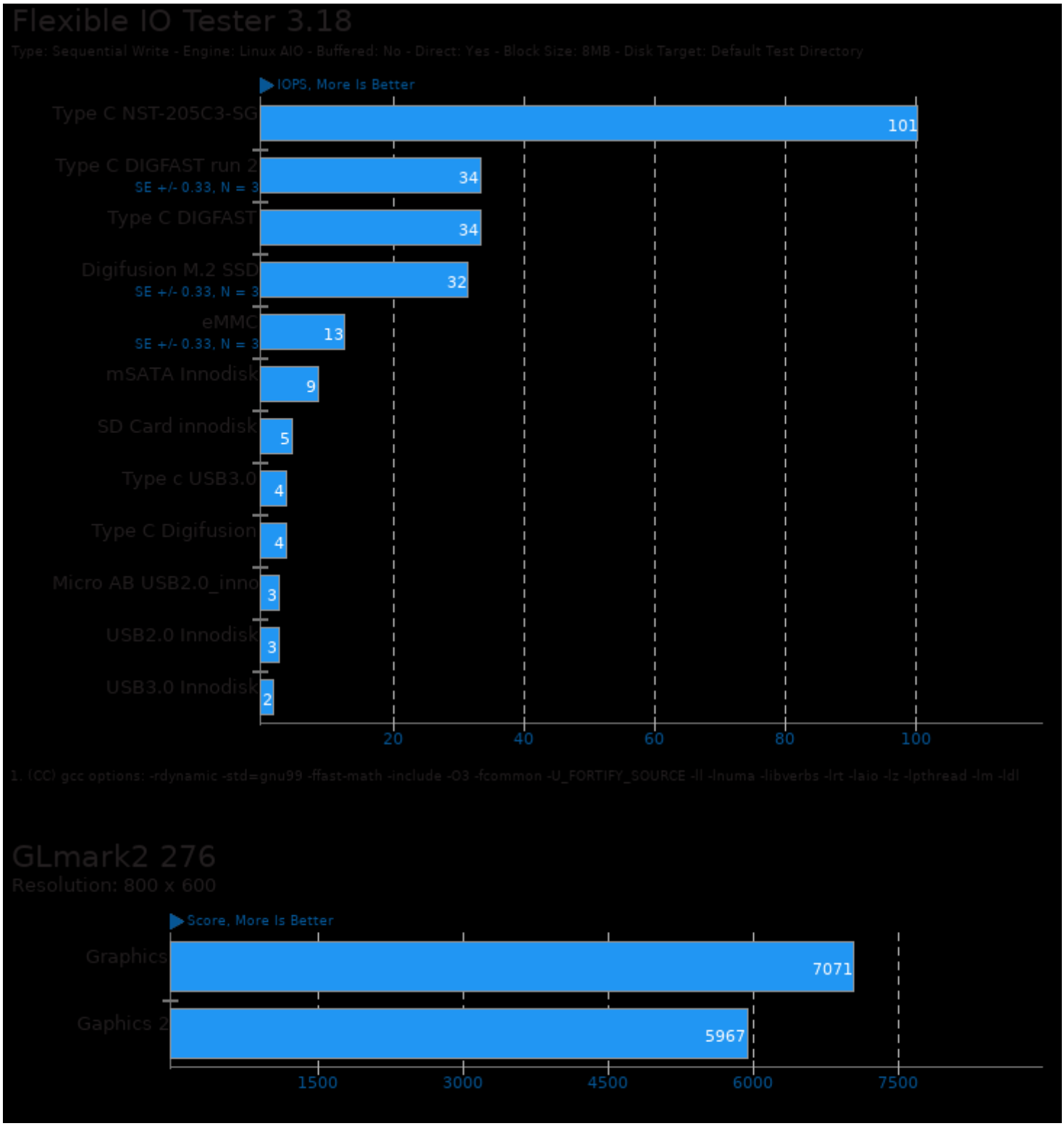

Flexible IO Tester 3.18
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
Digifusion M.2 SSD
SE +/- 7.75, N = 3
1739.0
Type C NST-205C3-SG
SE +/- 0.33, N = 3
827.0
Type C Digifusion run 2
SE +/- 0.58, N = 3
822.0
Type C DIGFAST run 2
SE +/- 0.58, N = 3
818.0
Type C DIGFAST
SE +/- 0.33, N = 3
818.0
mSATA Innodisk
427.0
eMMC
306.0
Type c USB3.0
169.0
USB3.0 Innodisk
121.0
SD Card innodisk
102.0
Type C Digifusion
SE +/- 0.06, N = 3
63.3
USB2.0 Innodisk
SE +/- 0.03, N = 3
53.3
Micro AB USB2.0_inno
SE +/- 0.38, N = 3
52.6
400
800
1200
1600
2000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -ll -lnuma -libverbs -lrt -laio -lz -lpthread -lm -ldl

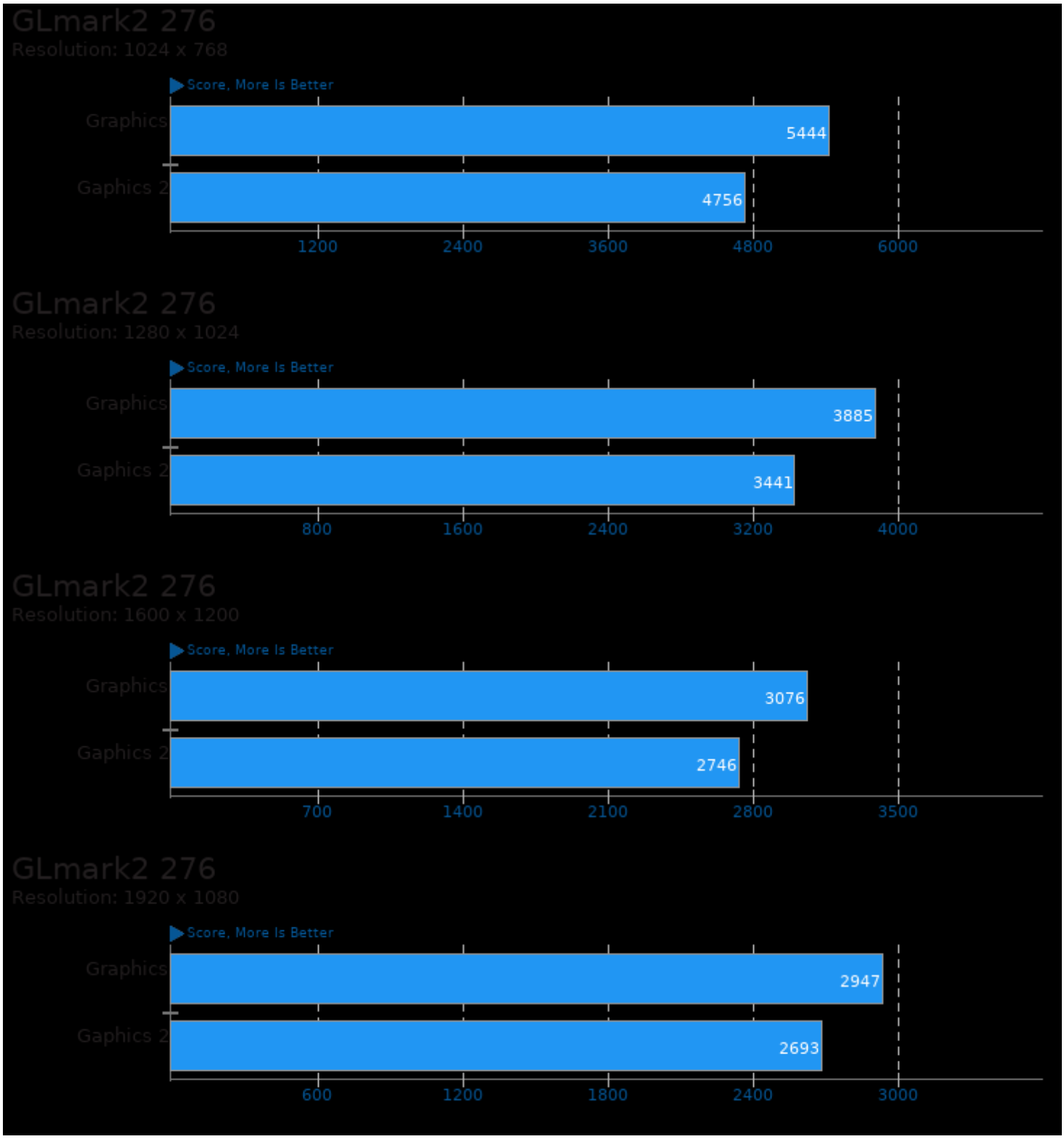

Flexible IO Tester 3.18
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
IOPS, More Is Better
Digifusion M.2 SSD
214
Type C NST-205C3-SG
100
Type C DIGFAST run 2
99
Type C DIGFAST
99
Type C Digifusion run 2
99
mSATA Innodisk
50
eMMC
35
Type c USB3.0
18
USB3.0 Innodisk
12
SD Card innodisk
9
Type C Digifusion
4
Micro AB USB2.0_inno
3
USB2.0 Innodisk
3
50
100
150
200
250
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -ll -lnuma -libverbs -lrt -laio -lz -lpthread -lm -ldl

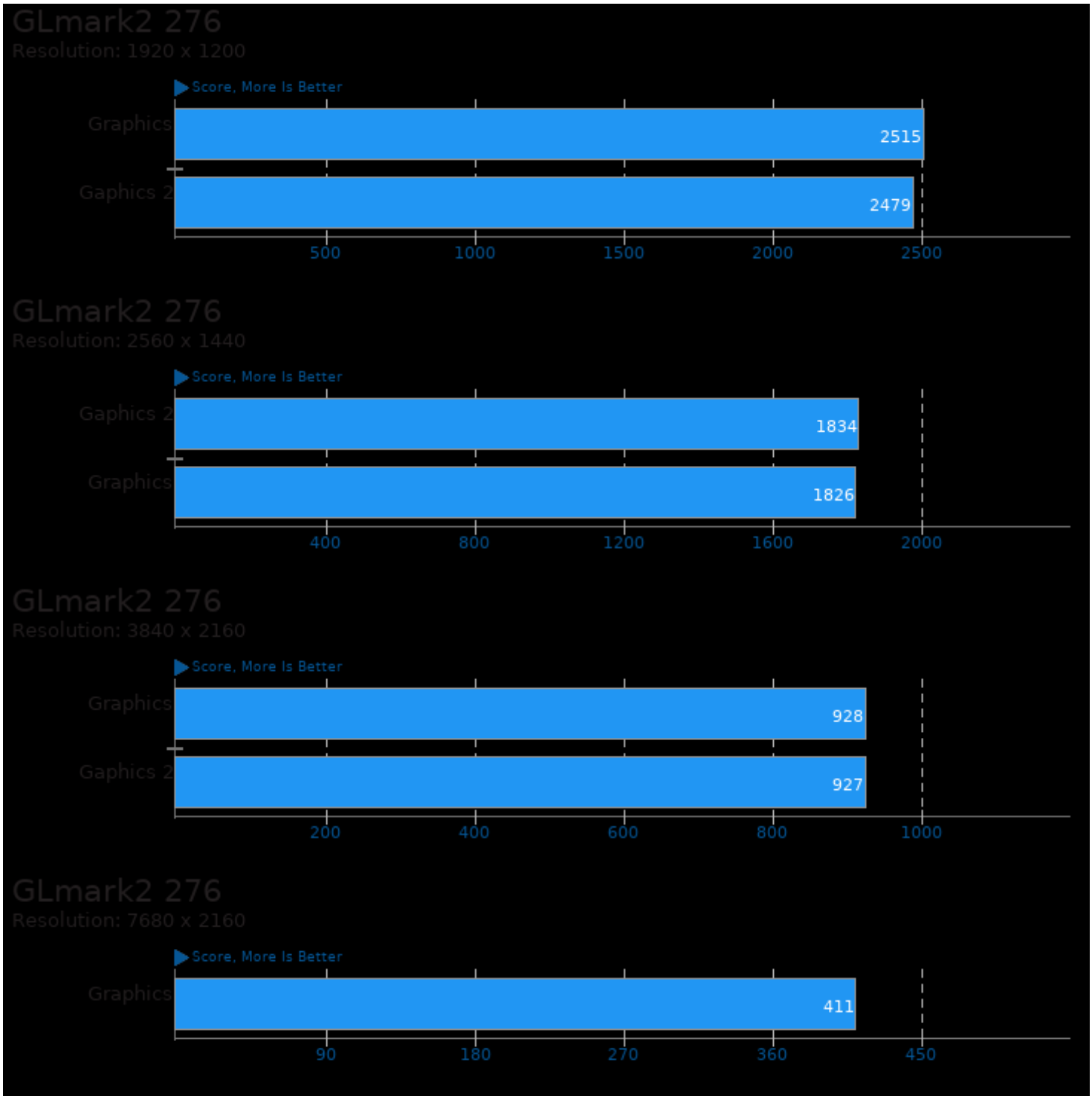

Flexible IO Tester 3.18
Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
Type C NST-205C3-SG
337.000
Type C DIGFAST run 2
281.000
Type C DIGFAST
280.000
Digifusion M.2 SSD
SE +/- 3.283, N = 3
268.000
mSATA Innodisk
SE +/- 0.058, N = 3
85.500
eMMC
SE +/- 0.088, N = 3
81.200
Type C Digifusion
SE +/- 0.033, N = 3
39.000
Micro AB USB2.0_inno
SE +/- 0.167, N = 3
25.100
USB2.0 Innodisk
SE +/- 0.173, N = 3
25.000
USB3.0 Innodisk
SE +/- 0.058, N = 3
24.700
SD Card innodisk
SE +/- 0.167, N = 3
21.900
Type c USB3.0
SE +/- 0.650, N = 15
21.600
Type C Digifusion run 2
SE +/- 0.095, N = 15
0.621
70
140
210
280
350
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -ll -lnuma -libverbs -lrt -laio -lz -lpthread -lm -ldl

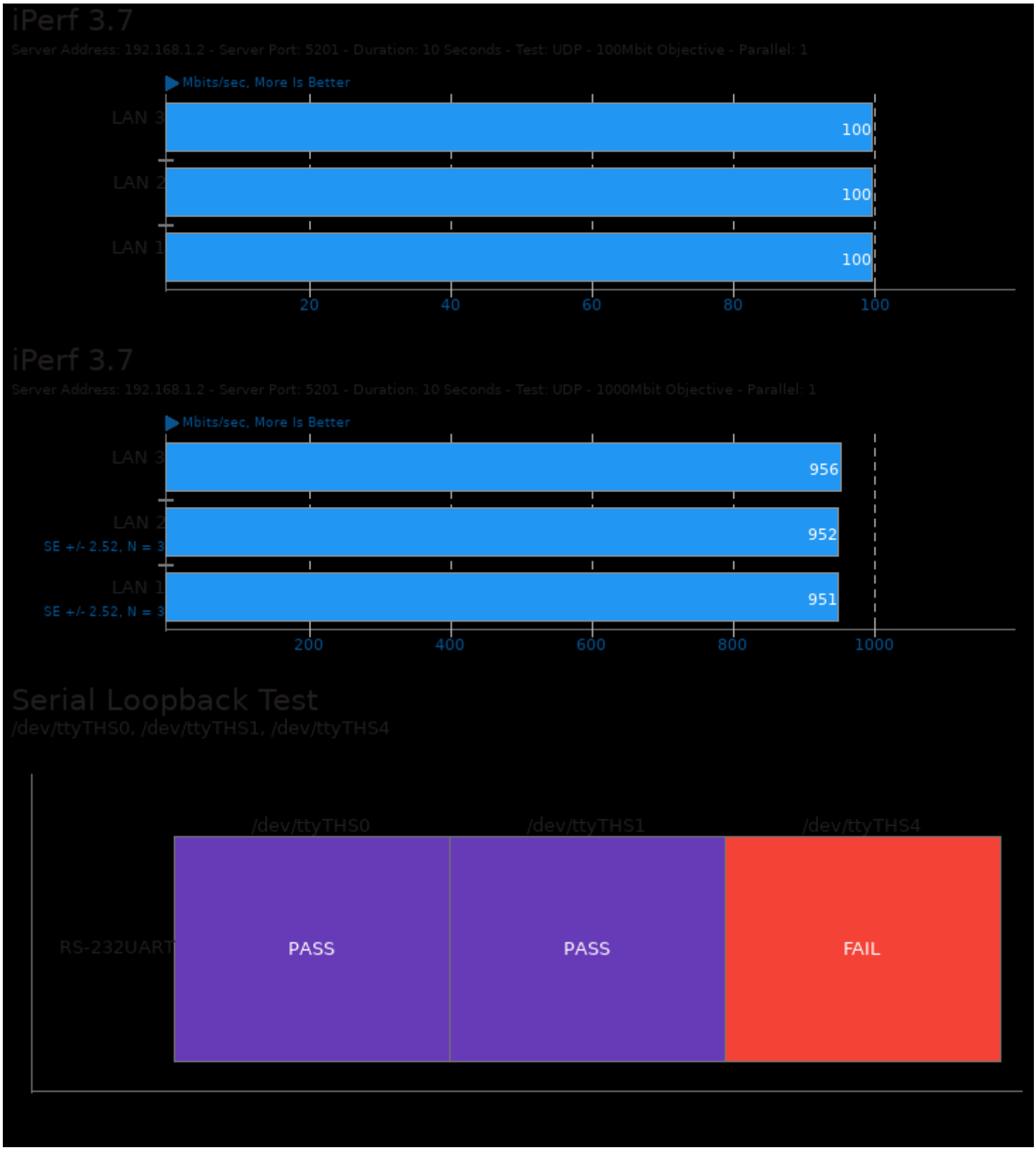

Flexible IO Tester 3.18
Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
Type C NST-205C3-SG
SE +/- 66.67, N = 3
86233
Type C DIGFAST run 2
SE +/- 66.67, N = 3
72067
Type C DIGFAST
SE +/- 57.74, N = 3
71700
Digifusion M.2 SSD
SE +/- 1167.62, N = 3
68300
mSATA Innodisk
SE +/- 33.33, N = 3
21867
eMMC
SE +/- 33.33, N = 3
20767
Type C Digifusion
SE +/- 5.24, N = 3
9990
Micro AB USB2.0_inno
SE +/- 46.23, N = 3
6432
USB2.0 Innodisk
SE +/- 44.19, N = 3
6399
USB3.0 Innodisk
SE +/- 16.07, N = 3
6320
SD Card innodisk
SE +/- 44.85, N = 3
5594
Type c USB3.0
SE +/- 161.95, N = 15
5566
Type C Digifusion run 2
SE +/- 23.79, N = 15
152
20K
40K
60K
80K
100K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -ll -lnuma -libverbs -lrt -laio -lz -lpthread -lm -ldl

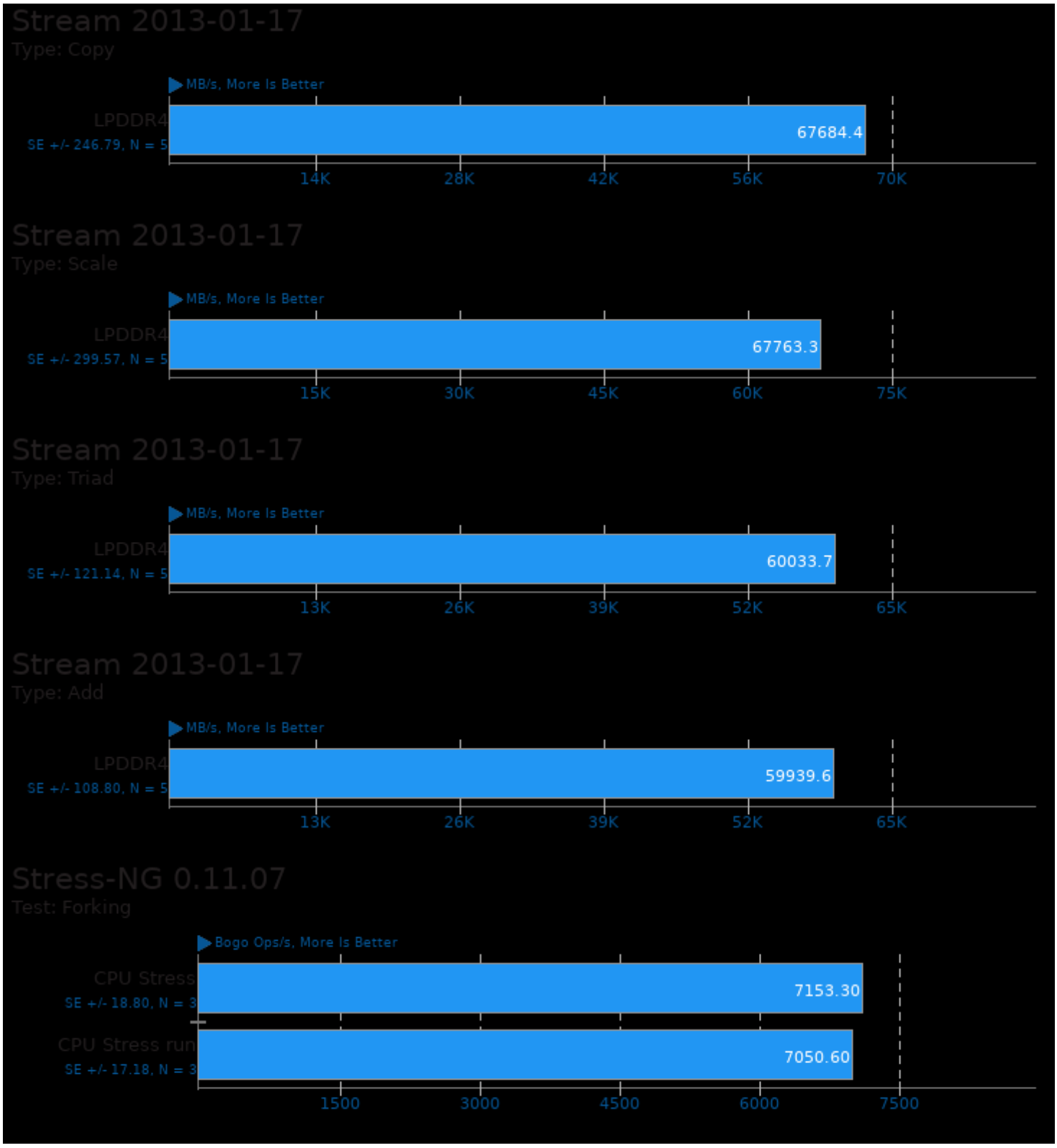

Flexible IO Tester 3.18
Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
Type C NST-205C3-SG
SE +/- 0.882, N = 3
837.000
Type C DIGFAST run 2
SE +/- 2.333, N = 3
301.000
Type C DIGFAST
300.000
Digifusion M.2 SSD
SE +/- 1.155, N = 3
281.000
eMMC
SE +/- 0.667, N = 3
135.000
mSATA Innodisk
103.000
SD Card innodisk
SE +/- 0.033, N = 3
66.300
Type C Digifusion
SE +/- 0.033, N = 3
63.700
Type c USB3.0
SE +/- 0.666, N = 3
56.100
Micro AB USB2.0_inno
SE +/- 0.306, N = 3
49.300
USB2.0 Innodisk
SE +/- 0.203, N = 3
49.300
USB3.0 Innodisk
SE +/- 0.426, N = 3
39.000
Type C Digifusion run 2
SE +/- 0.698, N = 12
8.880
200
400
600
800
1000
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -ll -lnuma -libverbs -lrt -laio -lz -lpthread -lm -ldl

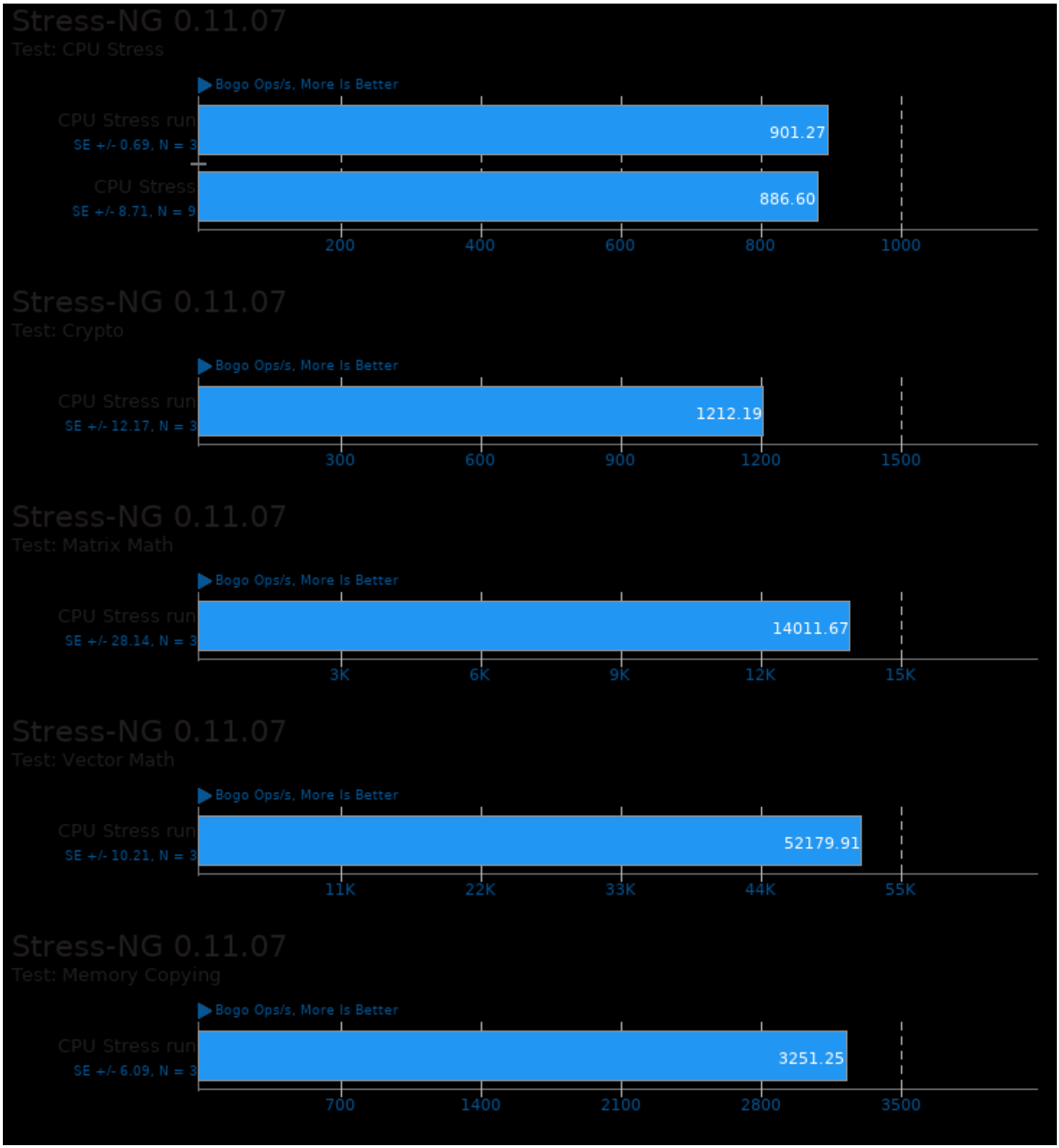

Flexible IO Tester 3.18
Type: Sequential Write - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
IOPS, More Is Better
Type C NST-205C3-SG
101
Type C DIGFAST run 2
SE +/- 0.33, N = 3
34
Type C DIGFAST
34
Digifusion M.2 SSD
SE +/- 0.33, N = 3
32
eMMC
SE +/- 0.33, N = 3
13
mSATA Innodisk
9
SD Card innodisk
5
Type c USB3.0
4
Type C Digifusion
4
Micro AB USB2.0_inno
3
USB2.0 Innodisk
3
USB3.0 Innodisk
2
20
40
60
80
100
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -ll -lnuma -libverbs -lrt -laio -lz -lpthread -lm -ldl
GLmark2 276
Resolution: 800 x 600
Score, More Is Better
Graphics
7071
Gaphics 2
5967
1500
3000
4500
6000
7500

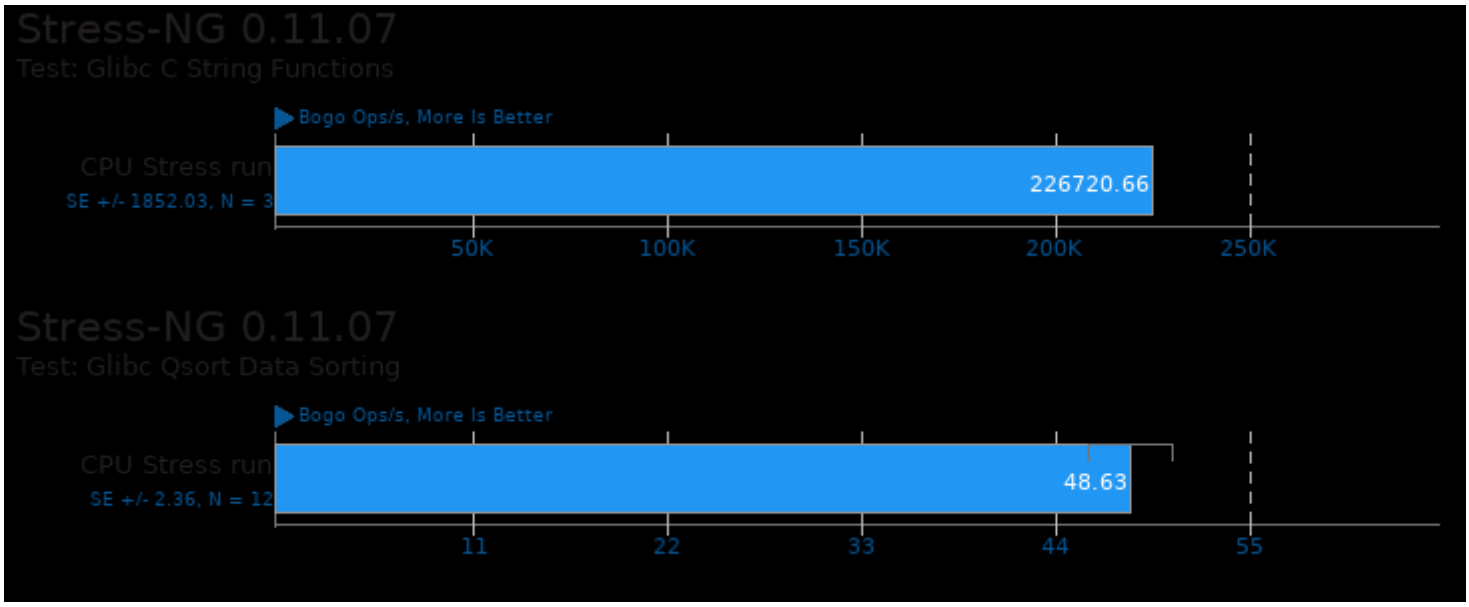

GLmark2 276
Resolution: 1024 x 768
Score, More Is Better
Graphics
5444
Gaphics 2
4756
1200
2400
3600
4800
6000
GLmark2 276
Resolution: 1280 x 1024
Score, More Is Better
Graphics
3885
Gaphics 2
3441
800
1600
2400
3200
4000
GLmark2 276
Resolution: 1600 x 1200
Score, More Is Better
Graphics
3076
Gaphics 2
2746
700
1400
2100
2800
3500
GLmark2 276
Resolution: 1920 x 1080
Score, More Is Better
Graphics
2947
Gaphics 2
2693
600
1200
1800
2400
3000


GLmark2 276
Resolution: 1920 x 1200
Score, More Is Better
Graphics
2515
Gaphics 2
2479
500
1000
1500
2000
2500
GLmark2 276
Resolution: 2560 x 1440
Score, More Is Better
Gaphics 2
1834
Graphics
1826
400
800
1200
1600
2000
GLmark2 276
Resolution: 3840 x 2160
Score, More Is Better
Graphics
928
Gaphics 2
927
200
400
600
800
1000
GLmark2 276
Resolution: 7680 x 2160
Score, More Is Better
Graphics
411
90
180
270
360
450


iPerf 3.7
Server Address: 192.168.1.2 - Server Port: 5201 - Duration: 10 Seconds - Test: UDP - 100Mbit Objective - Parallel: 1
Mbits/sec, More Is Better
LAN 3
LAN 2
LAN 1
100
100
100
20
40
60
80
100
iPerf 3.7
Server Address: 192.168.1.2 - Server Port: 5201 - Duration: 10 Seconds - Test: UDP - 1000Mbit Objective - Parallel: 1
Mbits/sec, More Is Better
LAN 3
LAN 2
SE +/- 2.52, N = 3
LAN 1
SE +/- 2.52, N = 3
956
952
951
200
400
600
800
1000
Serial Loopback Test
/dev/ttyTHS0, /dev/ttyTHS1, /dev/ttyTHS4
/dev/ttyTHS0
/dev/ttyTHS1
/dev/ttyTHS4
RS-232UART
PASS
PASS
FAIL


Stream 2013-01-17
Type: Copy
MB/s, More Is Better
LPDDR4
SE +/- 246.79, N = 5
67684.4
14K
28K
42K
56K
70K
Stream 2013-01-17
Type: Scale
MB/s, More Is Better
LPDDR4
SE +/- 299.57, N = 5
67763.3
15K
30K
45K
60K
75K
Stream 2013-01-17
Type: Triad
MB/s, More Is Better
LPDDR4
SE +/- 121.14, N = 5
60033.7
13K
26K
39K
52K
65K
Stream 2013-01-17
Type: Add
MB/s, More Is Better
LPDDR4
SE +/- 108.80, N = 5
59939.6
13K
26K
39K
52K
65K
Stress-NG 0.11.07
Test: Forking
Bogo Ops/s, More Is Better
CPU Stress
SE +/- 18.80, N = 3
7153.30
CPU Stress run
SE +/- 17.18, N = 3
7050.60
1500
3000
4500
6000
7500


Stress-NG 0.11.07
Test: CPU Stress
Bogo Ops/s, More Is Better
CPU Stress run
SE +/- 0.69, N = 3
901.27
CPU Stress
SE +/- 8.71, N = 9
886.60
200
400
600
800
1000
Stress-NG 0.11.07
Test: Crypto
Bogo Ops/s, More Is Better
CPU Stress run
SE +/- 12.17, N = 3
1212.19
300
600
900
1200
1500
Stress-NG 0.11.07
Test: Matrix Math
Bogo Ops/s, More Is Better
CPU Stress run
SE +/- 28.14, N = 3
14011.67
3K
6K
9K
12K
15K
Stress-NG 0.11.07
Test: Vector Math
Bogo Ops/s, More Is Better
CPU Stress run
SE +/- 10.21, N = 3
52179.91
11K
22K
33K
44K
55K
Stress-NG 0.11.07
Test: Memory Copying
Bogo Ops/s, More Is Better
CPU Stress run
SE +/- 6.09, N = 3
3251.25
700
1400
2100
2800
3500



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 12:55.