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SSD Benchmark

SSD Benchmarks for Nytro 1.92TB

Automated Executive Summary

Seagate Nytro 1351 1.92TB had the most wins, coming in first place for 54% of the tests.

Based on the geometric mean of all complete results, the fastest (Samsung 883 DCT 960GB) was 4.63x the speed of the slowest (Samsung 860 DCT 960GB). Seagate Nytro 1351 1.92TB was 0.996x the speed of Samsung 883 DCT 960GB, Seagate Nytro 1551 480GB was 0.957x the speed of Seagate Nytro 1351 1.92TB, Micron 5200 ECO 3.84TB was 0.972x the speed of Seagate Nytro 1551 480GB, Intel S4610 480GB was 0.961x the speed of Micron 5200 ECO 3.84TB, Samsung 860 DCT 960GB was 0.243x the speed of Intel S4610 480GB.

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

Flexible IO Tester (Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory) at 6.028x
Flexible IO Tester (Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory) at 5.303x
Flexible IO Tester (Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory) at 4.266x
Flexible IO Tester (Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 64KB - Disk

Target: Default Test Directory) at 4.252x
Flexible IO Tester (Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 512KB - Disk Target: Default Test Directory) at 4.218x
Flexible IO Tester (Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory) at 4.179x
Flexible IO Tester (Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory) at 4.169x
Flexible IO Tester (Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory) at 4.144x
Flexible IO Tester (Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 1MB - Disk Target: Default Test Directory) at 4.12x
Flexible IO Tester (Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory) at 4.11x.

Test Systems:

Seagate Nytro 1351 1.92TB

Processor: Intel Core i3-2120T (4 Cores), Motherboard: Intel DH77DF, Chipset: Intel 2nd Generation Core Family DRAM, Memory: 8192MB, Disk: INTEL SSDSC2MH120A2 PPG4 + XA1920LE10063 SF4400YQ + AHCI SGPIO Enclosure 1.00 0001, Audio: Intel Panther Point HDA, Network: Intel PRO/1000 Connection 7.6.1-k

OS: FreeBSD, Kernel: 11.2-RELEASE (x86_64), Compiler: Clang 6.0.0 (SVN 326565), File-System: zfs, Screen Resolution: 1280x1024

Security Notes: KPTI

Micron 5200 ECO 3.84TB

Processor: Intel Core i3-2120T (4 Cores), Motherboard: Intel DH77DF, Chipset: Intel 2nd Generation Core Family DRAM, Memory: 8192MB, Disk: INTEL SSDSC2MH120A2 PPG4 + Micron 5200 MTFDDAK3T8TDC D1MU403 + AHCI SGPIO Enclosure 1.00 0001, Audio: Intel Panther Point HDA, Network: Intel PRO/1000 Connection 7.6.1-k

OS: FreeBSD, Kernel: 11.2-RELEASE (x86_64), Compiler: Clang 6.0.0 (SVN 326565), File-System: zfs, Screen Resolution: 1280x1024

Security Notes: KPTI

Intel S4610 480GB

Processor: Intel Core i3-2120T (4 Cores), Motherboard: Intel DH77DF, Chipset: Intel 2nd Generation Core Family DRAM, Memory: 8192MB, Disk: INTEL SSDSC2MH120A2 PPG4 + INTEL SSDSC2KG480G8 XCV10005 + AHCI SGPIO Enclosure 1.00 0001, Audio: Intel Panther Point HDA, Network: Intel PRO/1000 Connection 7.6.1-k

OS: FreeBSD, Kernel: 11.2-RELEASE (x86_64), Compiler: Clang 6.0.0 (SVN 326565), File-System: zfs, Screen Resolution: 1280x1024

Security Notes: KPTI

Samsung 883 DCT 960GB

Processor: Intel Core i3-2120T (4 Cores), Motherboard: Intel DH77DF, Chipset: Intel 2nd Generation Core Family DRAM, Memory: 8192MB, Disk: INTEL SSDSC2MH120A2 PPG4 + Samsung SSD 883 DCT 960GB HXT7004Q + AHCI SGPIO Enclosure 1.00 0001, Audio: Intel Panther Point HDA, Network: Intel PRO/1000 Connection 7.6.1-k

OS: FreeBSD, Kernel: 11.2-RELEASE (x86_64), Compiler: Clang 6.0.0 (SVN 326565), File-System: zfs, Screen Resolution: 1280x1024

Security Notes: KPTI

Seagate Nytro 1551 480GB

Processor: Intel Core i3-2120T (4 Cores), Motherboard: Intel DH77DF, Chipset: Intel 2nd Generation Core Family DRAM, Memory: 8192MB, Disk: INTEL SSDSC2MH120A2 PPG4 + XA480ME10063 SF4400YQ + AHCI SGPIO Enclosure 1.00 0001, Audio: Intel Panther Point HDA, Network: Intel PRO/1000 Connection 7.6.1-k

OS: FreeBSD, Kernel: 11.2-RELEASE (x86_64), Compiler: Clang 6.0.0 (SVN 326565), File-System: zfs, Screen Resolution: 1280x1024

Security Notes: KPTI

Samsung 860 DCT 960GB

Processor: Intel Core i3-2120T (4 Cores), Motherboard: Intel DH77DF, Chipset: Intel 2nd Generation Core Family DRAM, Memory: 8192MB, Disk: INTEL SSDSC2MH120A2 PPG4 + Samsung SSD 860 DCT 960GB HXT70B6Q + AHCI SGPIO Enclosure 1.00 0001, Audio: Intel Panther Point HDA, Network: Intel PRO/1000 Connection 7.6.1-k

OS: FreeBSD, Kernel: 11.2-RELEASE (x86_64), Compiler: Clang 6.0.0 (SVN 326565), File-System: zfs, Screen Resolution: 1280x1024

Security Notes: KPTI

	Seagate Nytro 1351	Micron 5200 ECO 3.84TB	Intel S4610 480GB	Samsung 883 DCT 960GB	Seagate Nytro 1551	Samsung 860 DCT 960GB
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 1MB (MB/s)	**533**	467	477	**533**	**533**	**138**
Normalized	100%	87.62%	89.49%	100%	100%	25.89%
Standard Deviation	0.2%	0.1%	0.6%	0.1%	0.2%	0.8%
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 2MB (MB/s)	**537**	471	480	536	**537**	**142**
Normalized	100%	87.71%	89.39%	99.81%	100%	26.44%
Standard Deviation			0.6%			

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Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 4KB (MB/s)	64.60	61.90	58.87	**64.73**	64.67	**16.60**
Normalized	99.8%	95.63%	90.95%	100%	99.91%	25.64%
Standard Deviation	0%	0%	0.7%	0.1%	0.1%	0%
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 4KB (IOPS)	16500	15800	**14733**	**16600**	16500	
Normalized	99.4%	95.18%	88.75%	100%	99.4%	
Standard Deviation			4.4%	0.3%		
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 4MB (MB/s)	543	480	491	543	**544**	**148**
Normalized	99.82%	88.24%	90.26%	99.82%	100%	27.21%
Standard Deviation		0.1%	0.5%			
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 8KB (MB/s)	**129**	124	118	**129**	**129**	**33.20**
Normalized	100%	96.12%	91.47%	100%	100%	25.74%
Standard Deviation			1.8%			0%
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 8KB (IOPS)	16500	15800	**15167**	**16600**	16500	
Normalized	99.4%	95.18%	91.37%	100%	99.4%	
Standard Deviation			1.7%			
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 8MB (MB/s)	**556**	492	518	555	**556**	**158**
Normalized	100%	88.49%	93.17%	99.82%	100%	28.42%
Standard Deviation			0.3%			
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 16KB (MB/s)	258	247	240	**259**	258	**66.30**
Normalized	99.61%	95.37%	92.66%	100%	99.61%	25.6%
Standard Deviation			0.2%			0%
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 16KB (IOPS)	16500	15800	**15367**	**16600**	16500	
Normalized	99.4%	95.18%	92.57%	100%	99.4%	
Standard Deviation			0.4%			
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 16MB (MB/s)	578	514	498	577	**579**	**181**
Normalized	99.83%	88.77%	86.01%	99.65%	100%	31.26%
Standard Deviation		0.2%	3.1%			
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 32KB (MB/s)	517	494	482	**518**	517	**133**
Normalized	99.81%	95.37%	93.05%	100%	99.81%	25.68%
Standard Deviation			0.2%	0.1%		

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Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 32KB (IOPS)	16500	15800	15400	16600	16500	
Normalized	99.4%	95.18%	92.77%	100%	99.4%	
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 32MB (MB/s)	619	559	485	617	618	203
Normalized	100%	90.31%	78.35%	99.68%	99.84%	32.79%
Standard Deviation			3.2%			
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 64KB (MB/s)	522	481	448	520	523	135
Normalized	99.81%	91.97%	85.66%	99.43%	100%	25.81%
Standard Deviation	0.2%		0.6%	0.4%		
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 64MB (MB/s)	709	622	606	705	705	271
Normalized	100%	87.73%	85.47%	99.44%	99.44%	38.22%
Standard Deviation	0.2%	0.6%	4%	0.1%	0.8%	0.4%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 1MB (MB/s)	748	742	717	742	592	192
Normalized	100%	99.2%	95.86%	99.2%	79.14%	25.67%
Standard Deviation	0.4%	0.3%	0.2%	0.5%	0.5%	0.9%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 2MB (MB/s)	764	755	734	759	615	199
Normalized	100%	98.82%	96.07%	99.35%	80.5%	26.05%
Standard Deviation	0.3%	0.1%	0.2%	0.3%	2%	0.9%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 4KB (MB/s)	10.53	8.92	6.95	16.33	9.90	6.14
Normalized	64.48%	54.62%	42.56%	100%	60.62%	37.6%
Standard Deviation	3.4%	1.7%	1.6%	1.4%	3.4%	0.2%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 4MB (MB/s)	774	763	745	765	626	201
Normalized	100%	98.58%	96.25%	98.84%	80.88%	25.97%
Standard Deviation	0.6%	0.4%	0.3%	0.5%	1.1%	0.6%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 8KB (MB/s)	22.33	18.57	14.83	34.10	20.97	13.58
Normalized	65.48%	54.46%	43.49%	100%	61.5%	39.82%
Standard Deviation	1.3%	0.3%	1.6%	0%	2.8%	4.6%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 8MB (MB/s)	772	760	736	764	612	205
Normalized	100%	98.45%	95.34%	98.96%	79.27%	26.55%
Standard Deviation	0.5%	0.5%	0.7%	1.5%	13.8%	0.7%

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Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 128KB (MB/s)	**531**	465	484	529	**531**	**137**
Normalized	100%	87.57%	91.15%	99.62%	100%	25.8%
Standard Deviation			0.2%			
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 256KB (MB/s)	**532**	467	480	530	**532**	**137**
Normalized	100%	87.78%	90.23%	99.62%	100%	25.75%
Standard Deviation			0.3%			
Flexible IO Tester - Rand Read - POSIX AIO - No - Yes - 512KB (MB/s)	**533**	467	484	531	532	**138**
Normalized	100%	87.62%	90.81%	99.62%	99.81%	25.89%
Standard Deviation			0.8%			
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 16KB (MB/s)	47.27	38.87	31.80	**74.17**	43.07	**28.50**
Normalized	63.73%	52.41%	42.87%	100%	58.07%	38.43%
Standard Deviation	0.9%	0.6%	0.5%	0.2%	1.3%	1.5%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 16MB (MB/s)	780	772	752	**785**	665	**212**
Normalized	99.36%	98.34%	95.8%	100%	84.71%	27.01%
Standard Deviation	0.7%	0.4%	0.8%	0.9%	2.4%	3.9%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 32KB (MB/s)	**722**	717	699	509	625	**179**
Normalized	100%	99.31%	96.81%	70.5%	86.57%	24.79%
Standard Deviation	1.2%		0.3%	4.1%	1.8%	
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 32KB (IOPS)	**23133**	22900	22333	**16192**	20000	
Normalized	100%	98.99%	96.54%	70%	86.46%	
Standard Deviation	1.2%		0.3%	4.6%	1.8%	
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 32MB (MB/s)	**779**	757	756	763	691	**243**
Normalized	100%	97.18%	97.05%	97.95%	88.7%	31.19%
Standard Deviation	0.9%	0.4%	3.4%	1.2%	1.5%	0.9%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 64KB (MB/s)	**721**	712	688	467	624	**169**
Normalized	100%	98.75%	95.42%	64.77%	86.55%	23.44%
Standard Deviation	0.7%	0.2%	0.2%	0.2%	2.8%	1%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 64KB (IOPS)	**11533**	11400	10667		**10150**	
Normalized	100%	98.85%	92.49%		88.01%	
Standard Deviation	0.5%		5.4%		0.7%	

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Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 64MB (MB/s)	754	750	**766**	756	737	**293**
Normalized	98.43%	97.91%	100%	98.69%	96.21%	38.25%
Standard Deviation		1.2%	8.9%	0.9%	8.3%	6.8%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 128KB (MB/s)	**721**	714	686	558	627	**174**
Normalized	100%	99.03%	95.15%	77.39%	86.96%	24.13%
Standard Deviation	0.7%	0.2%	0.7%	3.3%	0.9%	1.3%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 256KB (MB/s)	**723**	710	688	714	604	**173**
Normalized	100%	98.2%	95.16%	98.76%	83.54%	23.93%
Standard Deviation	0.8%	0.9%	0.6%	1.1%	2.9%	1.2%
Flexible IO Tester - Rand Write - POSIX AIO - No - Yes - 512KB (MB/s)	**717**	706	686	710	614	**175**
Normalized	100%	98.47%	95.68%	99.02%	85.63%	24.41%
Standard Deviation	0.4%	0.9%	0.4%	0.9%	0.9%	1.2%
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 1MB (MB/s)	**533**	471	485	531	**533**	**141**
Normalized	100%	88.37%	90.99%	99.62%	100%	26.45%
Standard Deviation	0.2%			0.1%		0.4%
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 2MB (MB/s)	533	472	485	**535**	**535**	**145**
Normalized	99.63%	88.22%	90.65%	100%	100%	27.1%
Standard Deviation		0.2%	0.5%		0.3%	
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 4KB (MB/s)	60.87	44.63	40.27	**64.70**	60.13	**16.60**
Normalized	94.08%	68.98%	62.24%	100%	92.94%	25.66%
Standard Deviation	0.3%	0.3%	0.1%	0%	0.1%	0%
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 4KB (IOPS)	15567	11433	**10300**	**16600**	15400	
Normalized	93.78%	68.87%	62.05%	100%	92.77%	
Standard Deviation	0.4%	0.5%				
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 4MB (MB/s)	**543**	479	493	542	**543**	**153**
Normalized	100%	88.21%	90.79%	99.82%	100%	28.18%
Standard Deviation		1%	0.4%	0.1%		
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 8KB (MB/s)	**129**	113	86.90	**129**	**129**	**33.20**
Normalized	100%	87.6%	67.36%	100%	100%	25.74%
Standard Deviation			0.6%			0%

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Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 8KB (IOPS)	16500	14500	11133	16600	16500	
Normalized	99.4%	87.35%	67.07%	100%	99.4%	
Standard Deviation			0.5%			
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 8MB (MB/s)	555	494	510	554	555	165
Normalized	100%	89.01%	91.89%	99.82%	100%	29.73%
Standard Deviation			0.1%			
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 16KB (MB/s)	258	246	237	259	258	66.30
Normalized	99.61%	94.98%	91.51%	100%	99.61%	25.6%
Standard Deviation						0%
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 16KB (IOPS)	16500	15767	15133	16600	16500	
Normalized	99.4%	94.98%	91.16%	100%	99.4%	
Standard Deviation		0.4%	0.4%			
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 16MB (MB/s)	578	516	538	577	578	186
Normalized	100%	89.27%	93.08%	99.83%	100%	32.18%
Standard Deviation			0.2%			
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 32KB (MB/s)	517	495	513	518	516	133
Normalized	99.81%	95.56%	99.03%	100%	99.61%	25.68%
Standard Deviation	0.2%			0.1%	0.1%	
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 32KB (IOPS)	16567	15833	16400	16600	16500	
Normalized	99.8%	95.38%	98.8%	100%	99.4%	
Standard Deviation	0.3%	0.4%		0.3%		
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 32MB (MB/s)	588	532	574	606	607	204
Normalized	96.87%	87.64%	94.56%	99.84%	100%	33.61%
Standard Deviation	0.4%	3.3%	3.3%	2.9%	3.3%	
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 64KB (MB/s)	521	497	517	519	519	135
Normalized	100%	95.39%	99.23%	99.62%	99.62%	25.91%
Standard Deviation	0.6%	0.1%			0.3%	0.4%
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 64MB (MB/s)	688	622	663	699	698	272
Normalized	98.43%	88.98%	94.85%	100%	99.86%	38.91%
Standard Deviation	2.1%	0.3%	0.7%	1.2%	1.2%	0.4%

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Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 1MB (MB/s)	**758**	750	718	750	661	**184**
Normalized	100%	98.94%	94.72%	98.94%	87.2%	24.27%
Standard Deviation	0.5%	0.6%	1.1%	0.5%	0.9%	1.1%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 2MB (MB/s)	**759**	753	722	758	664	**188**
Normalized	100%	99.21%	95.13%	99.87%	87.48%	24.77%
Standard Deviation				0.2%	0.9%	
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 4KB (MB/s)	9.25	5.43	**3.60**	**21.70**	9.87	8.10
Normalized	42.63%	25.02%	16.59%	100%	45.48%	37.33%
Standard Deviation	0.3%	3.5%	1.2%	0%	1.1%	0.2%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 4MB (MB/s)	776	763	748	**780**	672	**201**
Normalized	99.49%	97.82%	95.9%	100%	86.15%	25.77%
Standard Deviation	0.8%	0.5%	0.3%	0.1%	2.1%	1.2%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 8KB (MB/s)	25.17	13.83	**8.51**	**44.90**	25.07	16.47
Normalized	55.77%	30.64%	18.86%	99.49%	55.55%	36.49%
Standard Deviation	1.2%	3.7%	1.5%	0.4%	2%	0.4%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 8MB (MB/s)	**770**	755	743	**770**	684	**196**
Normalized	100%	98.05%	96.49%	100%	88.83%	25.45%
Standard Deviation	1.2%	0.7%	0.3%	1%		0.9%
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 128KB (MB/s)	531	513	**533**	530	531	**137**
Normalized	99.62%	96.25%	100%	99.44%	99.62%	25.7%
Standard Deviation		0.2%				
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 256KB (MB/s)	**531**	501	513	530	**531**	**137**
Normalized	100%	94.35%	96.61%	99.81%	100%	25.8%
Standard Deviation		0.4%	0.5%			
Flexible IO Tester - Seq Read - POSIX AIO - No - Yes - 512KB (MB/s)	**532**	439	504	530	**532**	**139**
Normalized	100%	82.52%	94.74%	99.62%	100%	26.13%
Standard Deviation	0.1%	2%		0.1%		0.4%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 16KB (MB/s)	58.03	39.57	**28.40**	**96.57**	56.03	34.33
Normalized	60.09%	40.98%	29.41%	100%	58.02%	35.55%
Standard Deviation	0.4%	2.8%	0.4%	1.4%	2.8%	0.3%

SSD Benchmark

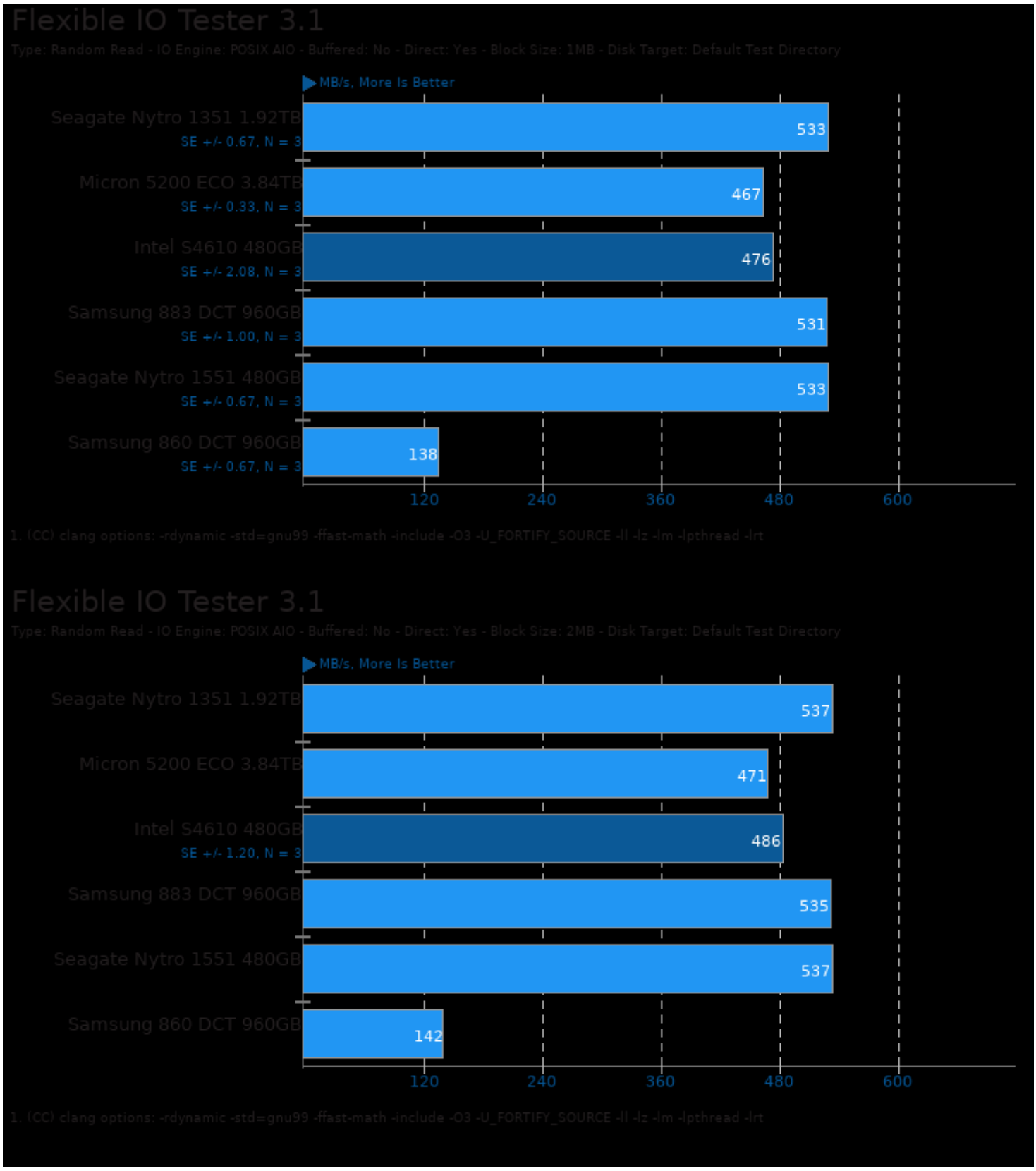
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 16MB (MB/s)	786	765	751	770	682	205
Normalized	100%	97.33%	95.55%	97.96%	86.77%	26.08%
Standard Deviation	1%	0.2%	1.2%	0.3%	1%	
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 32KB (MB/s)	589	578	561	386	508	154
Normalized	100%	98.13%	95.25%	65.53%	86.25%	26.15%
Standard Deviation	0.2%	0.5%	0.4%	4.2%	0.2%	2.1%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 32KB (IOPS)	18867	18467	17933	12183	16233	
Normalized	100%	97.88%	95.05%	64.57%	86.04%	
Standard Deviation	0.3%	0.6%	0.3%	5%	0.4%	
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 32MB (MB/s)	763	774	734	777	708	250
Normalized	98.2%	99.61%	94.47%	100%	91.12%	32.18%
Standard Deviation	2.3%	3.4%	1.9%	0.9%	4.2%	4%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 64KB (MB/s)	608	600	557	323	504	143
Normalized	100%	98.68%	91.61%	53.13%	82.89%	23.52%
Standard Deviation	2.9%	1.3%		5%	1.8%	4.5%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 64MB (MB/s)	788	747	786	784	729	289
Normalized	100%	94.8%	99.75%	99.49%	92.51%	36.68%
Standard Deviation	8.6%	1.5%	8.2%	7.8%	8.1%	2.4%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 128KB (MB/s)	595	596	567	367	504	145
Normalized	99.83%	100%	95.13%	61.58%	84.56%	24.33%
Standard Deviation	0.7%	2.5%	2.3%	5.9%	2.4%	4.4%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 256KB (MB/s)	636	627	607	642	552	154
Normalized	99.07%	97.66%	94.55%	100%	85.98%	23.99%
Standard Deviation	1.4%	0.9%	2.4%	0.2%	0.6%	0.8%
Flexible IO Tester - Seq Write - POSIX AIO - No - Yes - 512KB (MB/s)	717	701	665	708	627	170
Normalized	100%	97.77%	92.75%	98.74%	87.45%	23.71%
Standard Deviation	1.6%	1.4%	1.5%	1.1%	1.9%	
IOzone - 4Kb - 2GB - Read Performance (MB/s)	2227	2195	2186	2297	2229	2220
Normalized	96.95%	95.58%	95.18%	100%	97.04%	96.68%
Standard Deviation	2.1%	0.5%	1.3%	0.4%	1%	1.7%
IOzone - 4Kb - 4GB - Read Performance (MB/s)	2233	2232	2210	2259	2249	2228
Normalized	98.82%	98.77%	97.83%	100%	99.52%	98.63%

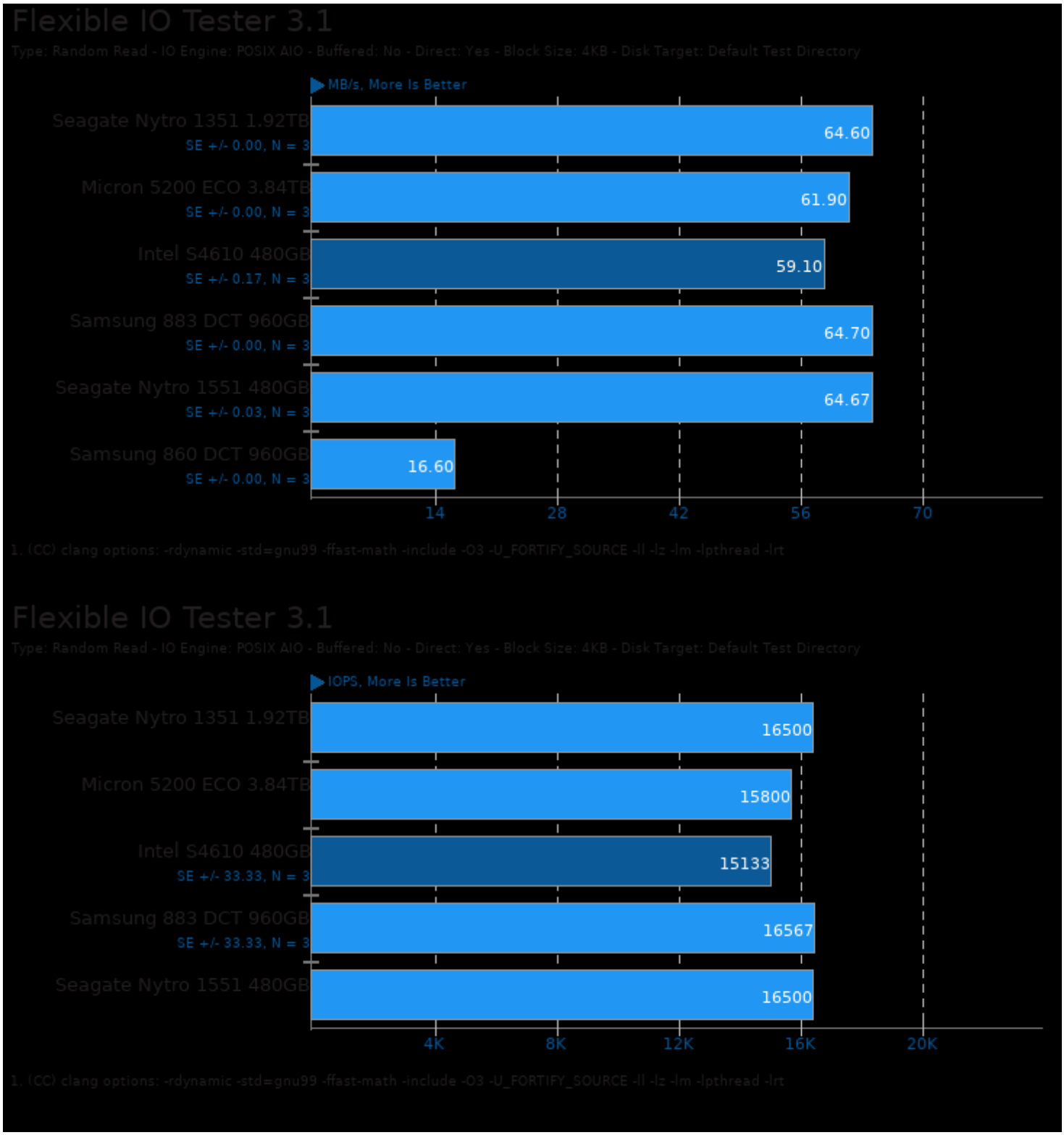
SSD Benchmark

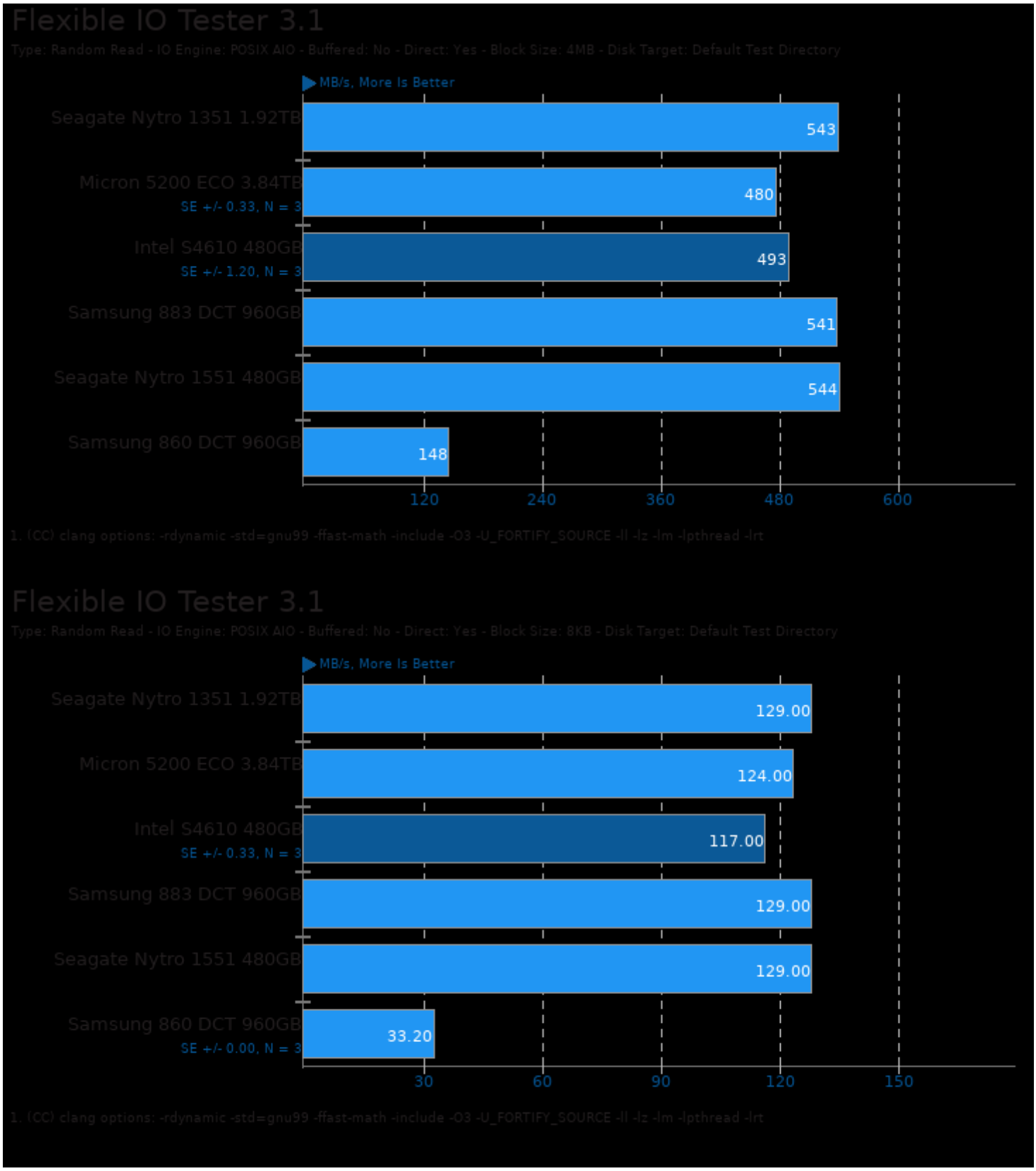
Standard Deviation	0.8%	0.5%	1.1%	0.6%	0.5%	0.9%
IOzone - 4Kb - 8GB - Read Performance (MB/s)	**531.05**	512.76	528.17	529.65	531.00	**136.11**
Normalized	100%	96.56%	99.46%	99.74%	99.99%	25.63%
Standard Deviation	0%	0%	0.2%	0%	0%	0%
IOzone - 1MB - 2GB - Write Performance (MB/s)	**514.91**	509.93	490.82	511.10	514.76	**130.72**
Normalized	100%	99.03%	95.32%	99.26%	99.97%	25.39%
Standard Deviation	0%	0.4%	0%	0%	0%	0%
IOzone - 4Kb - 2GB - Write Performance (MB/s)	**514.85**	509.23	490.95	511.10	514.78	**130.71**
Normalized	100%	98.91%	95.36%	99.27%	99.99%	25.39%
Standard Deviation	0%	0.4%	0%	0%	0%	0%
IOzone - 4Kb - 4GB - Write Performance (MB/s)	**514.98**	509.49	490.84	511.13	514.82	**130.68**
Normalized	100%	98.93%	95.31%	99.25%	99.97%	25.38%
Standard Deviation	0%	0.2%	0.1%	0%	0%	0%
IOzone - 4Kb - 8GB - Write Performance (MB/s)	**514.78**	509.00	490.15	511.07	514.59	**130.66**
Normalized	100%	98.88%	95.22%	99.28%	99.96%	25.38%
Standard Deviation	0%	0.1%	0%	0%	0%	0%
IOzone - 64Kb - 2GB - Read Performance (MB/s)	5039	5061	**5003**	**5480**	5166	5129
Normalized	91.94%	92.35%	91.29%	100%	94.26%	93.59%
Standard Deviation	0.1%	1.2%	0.5%	0.5%	0.3%	0.3%
IOzone - 64Kb - 4GB - Read Performance (MB/s)	5248	5239	**5205**	**5515**	5276	5301
Normalized	95.16%	95%	94.38%	100%	95.66%	96.13%
Standard Deviation	0.6%	0.1%	0.5%	0.3%	1.3%	0.2%
IOzone - 64Kb - 8GB - Read Performance (MB/s)	531.08	513.34	531.31	530.49	**531.35**	**136.12**
Normalized	99.95%	96.61%	99.99%	99.84%	100%	25.62%
Standard Deviation	0%	0%	0.1%	0%	0%	0%
IOzone - 1MB - 512MB - Read Performance (MB/s)	6018	6027	**5919**	**6747**	6164	6131
Normalized	89.2%	89.34%	87.73%	100%	91.36%	90.88%
Standard Deviation	0.3%	0.1%	1.4%	0.9%	1.2%	0.1%
IOzone - 4Kb - 512MB - Read Performance (MB/s)	2394	2390	2369	**2507**	2381	**2368**
Normalized	95.46%	95.31%	94.49%	100%	94.94%	94.45%
Standard Deviation	0.7%	1.6%	0.5%	1%	2.5%	1.6%
IOzone - 64Kb - 2GB - Write Performance (MB/s)	**514.89**	509.52	490.76	511.08	514.74	**130.72**
Normalized	100%	98.96%	95.31%	99.26%	99.97%	25.39%
Standard Deviation	0%	0.4%	0%	0%	0%	0%
IOzone - 64Kb - 4GB - Write Performance (MB/s)	**514.93**	510.12	490.59	511.11	514.75	**130.69**
Normalized	100%	99.07%	95.27%	99.26%	99.97%	25.38%
Standard Deviation	0%	0.1%	0.1%	0%	0%	0%
IOzone - 64Kb - 8GB - Write Performance (MB/s)	**514.83**	508.90	490.37	510.96	514.63	**130.67**
Normalized	100%	98.85%	95.25%	99.25%	99.96%	25.38%
Standard Deviation	0%	0.1%	0%	0%	0%	0%

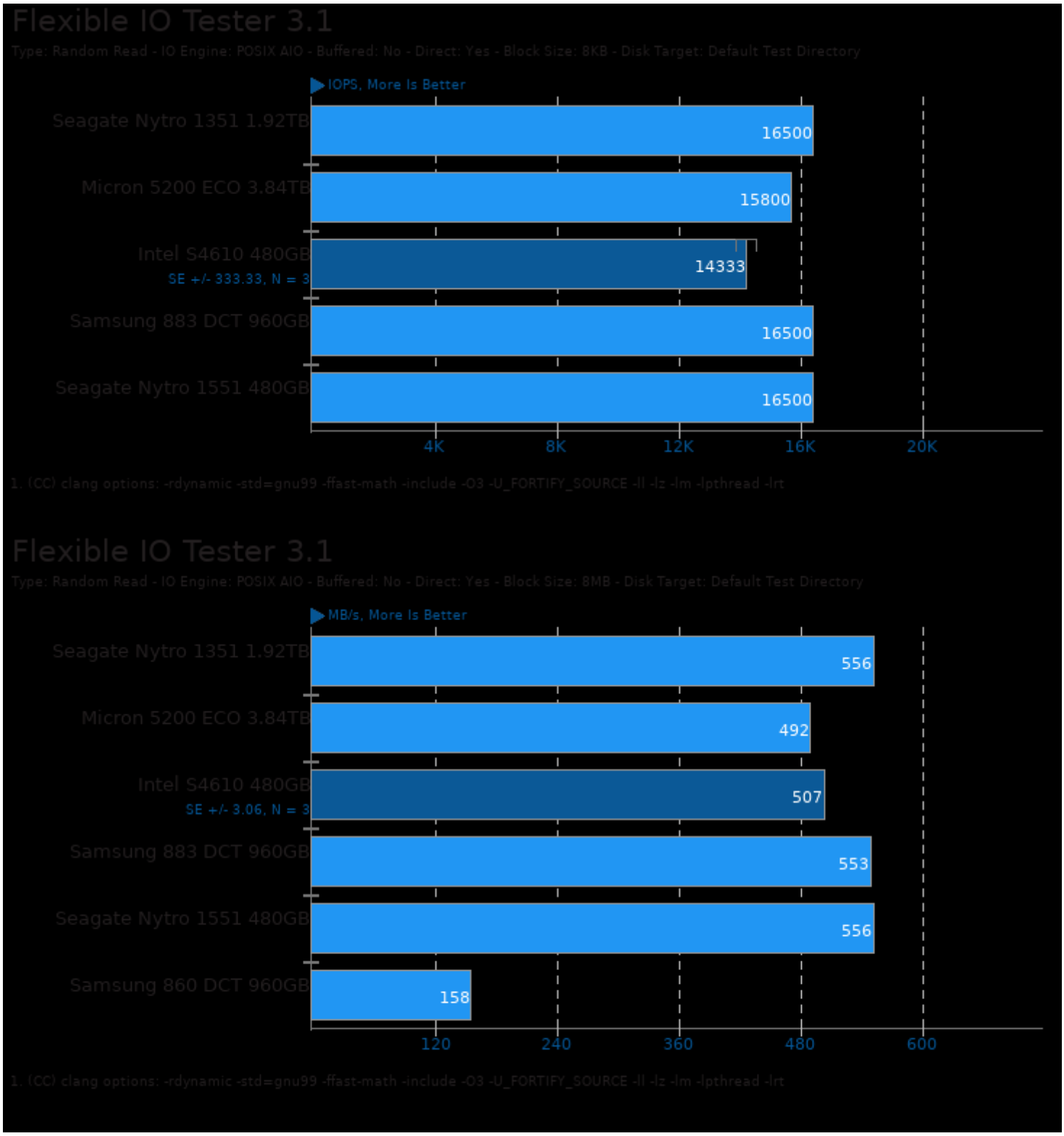
SSD Benchmark

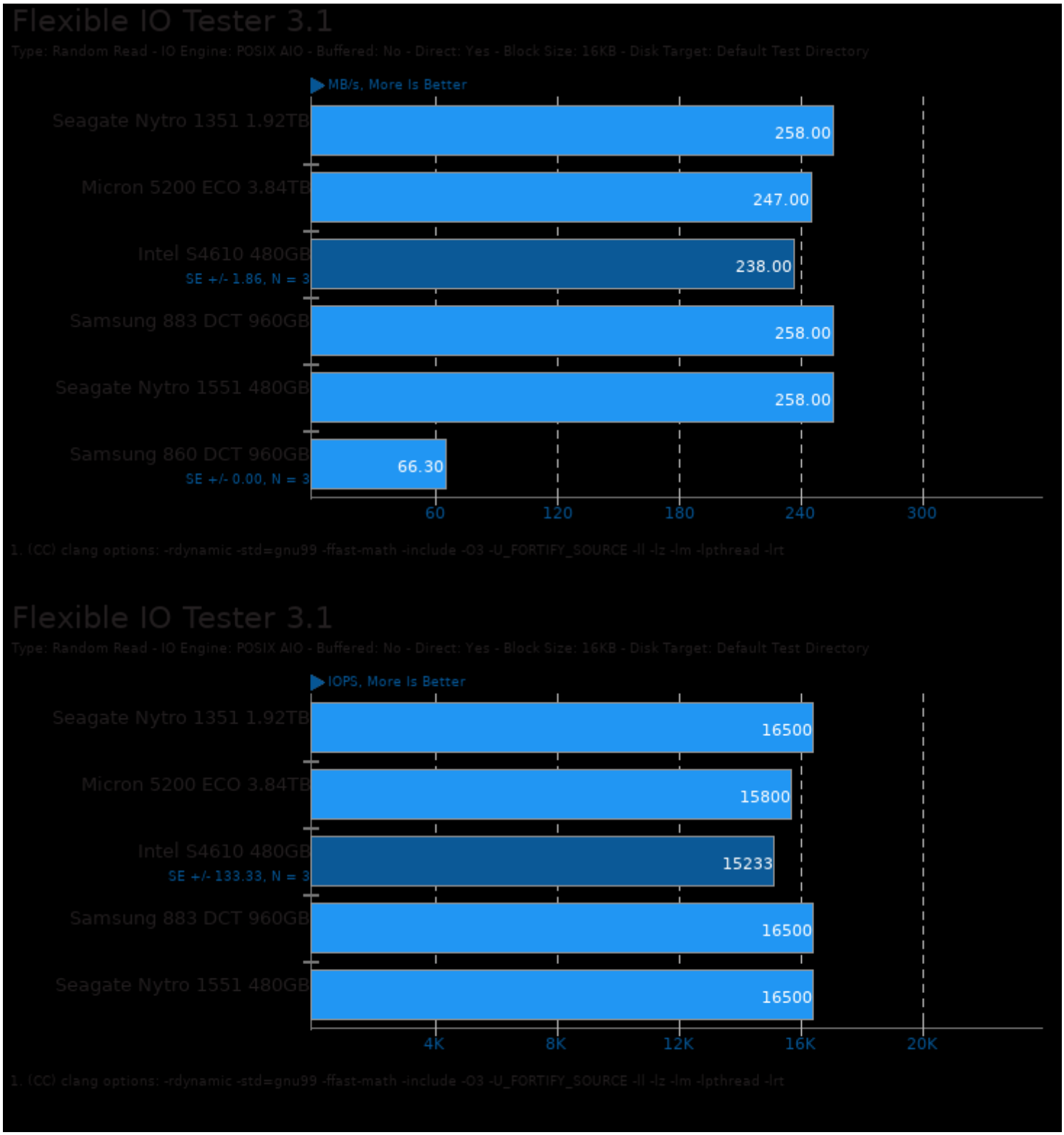
IOzone - 1MB - 512MB - Write Performance (MB/s)	**514.73**	510.46	490.61	510.98	514.57	**130.70**
Normalized	100%	99.17%	95.31%	99.27%	99.97%	25.39%
Standard Deviation	0%	0.4%	0.1%	0%	0%	0%
IOzone - 4Kb - 512MB - Write Performance (MB/s)	**514.74**	508.09	490.58	510.91	514.52	**130.68**
Normalized	100%	98.71%	95.31%	99.26%	99.96%	25.39%
Standard Deviation	0%	0.7%	0.2%	0%	0%	0%
IOzone - 64Kb - 512MB - Read Performance (MB/s)	6122	6110	**6064**	**6847**	6291	6139
Normalized	89.4%	89.23%	88.56%	100%	91.87%	89.65%
Standard Deviation	0.4%	0.6%	1.4%	0%	0.1%	1.2%
IOzone - 64Kb - 512MB - Write Performance (MB/s)	**514.75**	510.01	489.98	510.91	514.59	**130.70**
Normalized	100%	99.08%	95.19%	99.25%	99.97%	25.39%
Standard Deviation	0%	0.4%	0.4%	0%	0%	0%

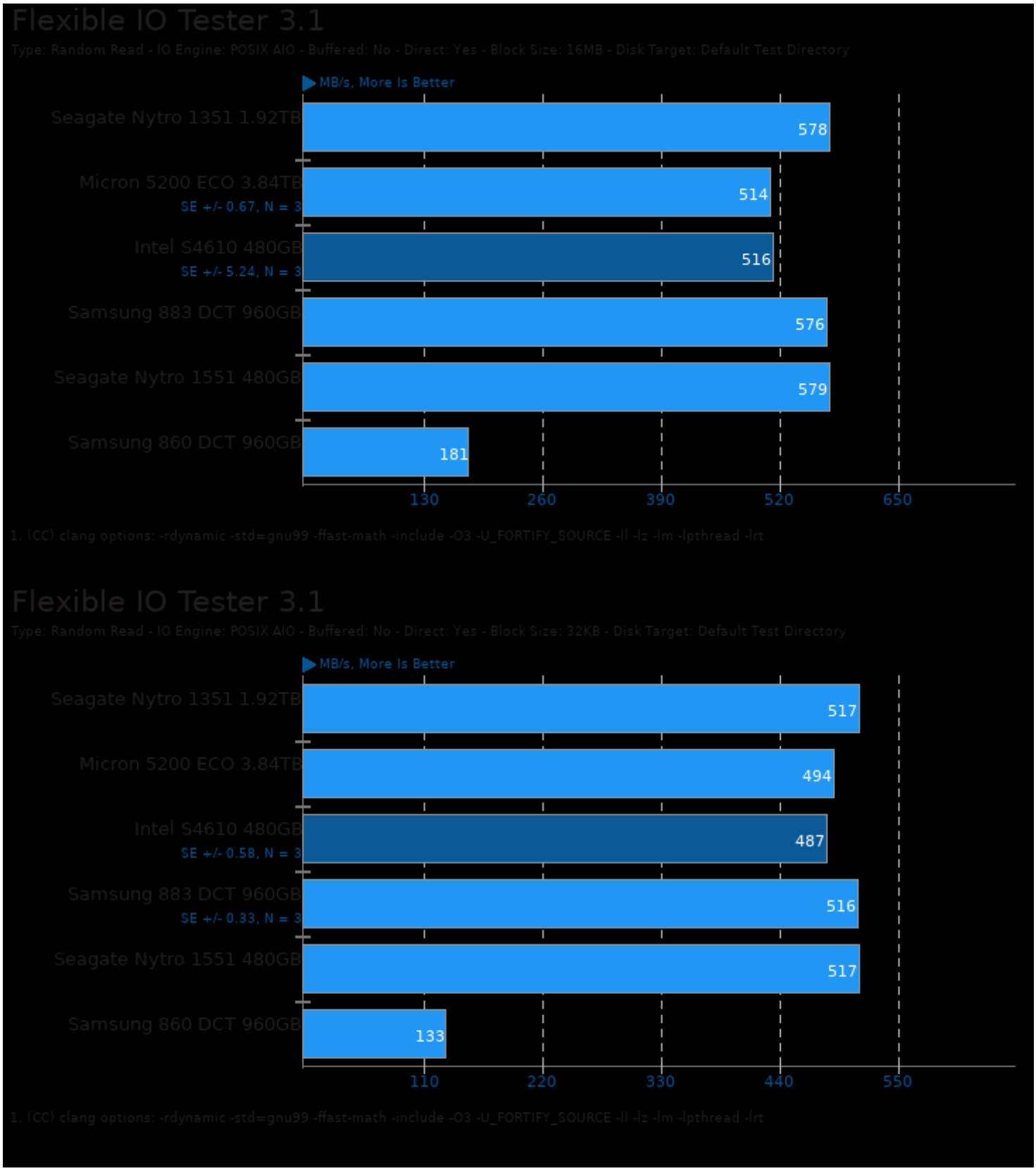

Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 1MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.67, N = 3
533
Micron 5200 ECO 3.84TB
SE +/- 0.33, N = 3
467
Intel S4610 480GB
SE +/- 2.08, N = 3
476
Samsung 883 DCT 960GB
SE +/- 1.00, N = 3
531
Seagate Nytro 1551 480GB
SE +/- 0.67, N = 3
533
Samsung 860 DCT 960GB
SE +/- 0.67, N = 3
138
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 2MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
537
Micron 5200 ECO 3.84TB
471
Intel S4610 480GB
SE +/- 1.20, N = 3
486
Samsung 883 DCT 960GB
535
Seagate Nytro 1551 480GB
537
Samsung 860 DCT 960GB
142
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

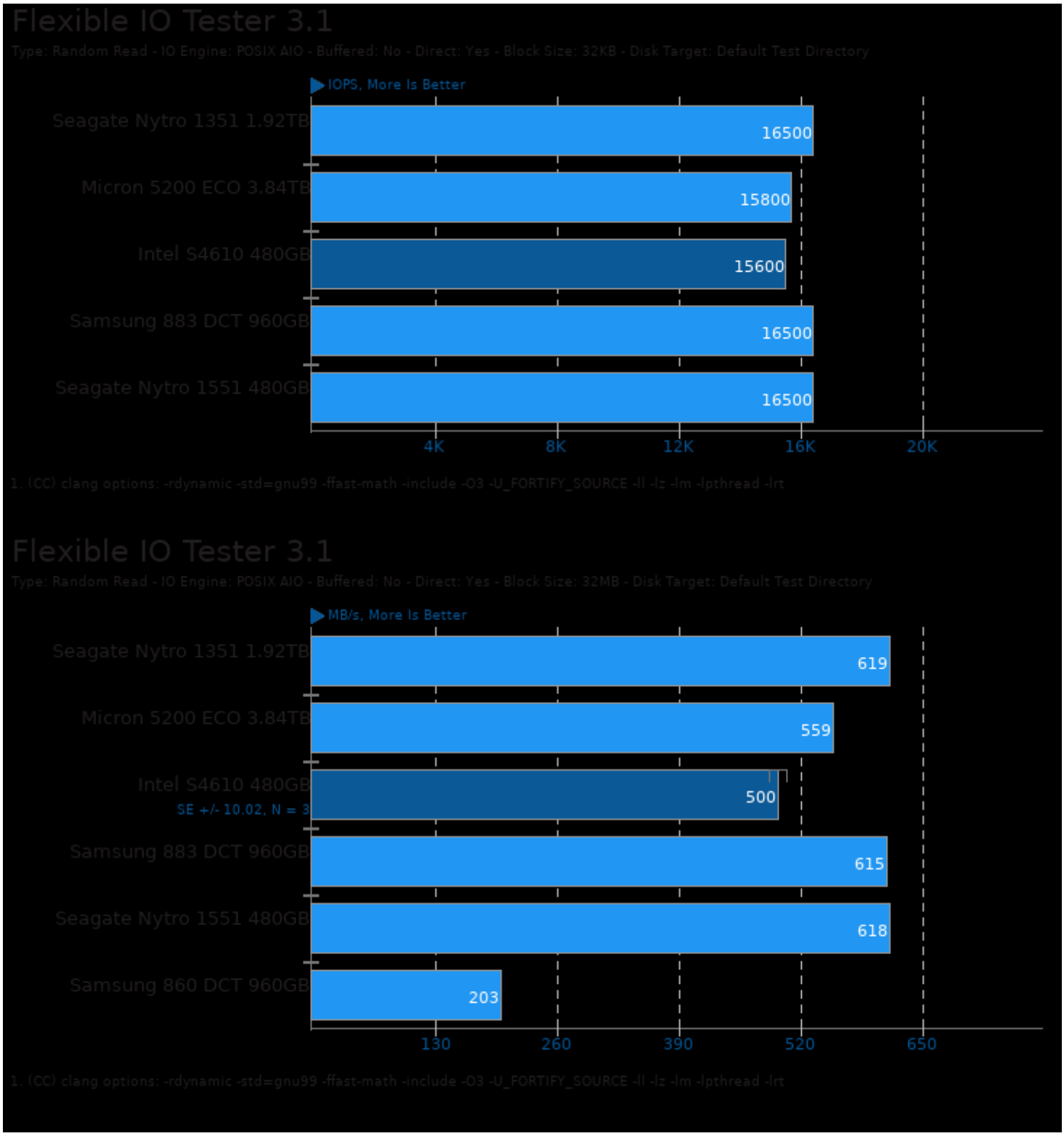

Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.00, N = 3
64.60
Micron 5200 ECO 3.84TB
SE +/- 0.00, N = 3
61.90
Intel S4610 480GB
SE +/- 0.17, N = 3
59.10
Samsung 883 DCT 960GB
SE +/- 0.00, N = 3
64.70
Seagate Nytro 1551 480GB
SE +/- 0.03, N = 3
64.67
Samsung 860 DCT 960GB
SE +/- 0.00, N = 3
16.60
14
28
42
56
70
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
16500
Micron 5200 ECO 3.84TB
15800
Intel S4610 480GB
SE +/- 33.33, N = 3
15133
Samsung 883 DCT 960GB
SE +/- 33.33, N = 3
16567
Seagate Nytro 1551 480GB
16500
4K
8K
12K
16K
20K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt


Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
543
Micron 5200 ECO 3.84TB
480
SE +/- 0.33, N = 3
Intel S4610 480GB
493
SE +/- 1.20, N = 3
Samsung 883 DCT 960GB
541
Seagate Nytro 1551 480GB
544
Samsung 860 DCT 960GB
148
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
129.00
Micron 5200 ECO 3.84TB
124.00
Intel S4610 480GB
117.00
SE +/- 0.33, N = 3
Samsung 883 DCT 960GB
129.00
Seagate Nytro 1551 480GB
129.00
Samsung 860 DCT 960GB
33.20
SE +/- 0.00, N = 3
30
60
90
120
150
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

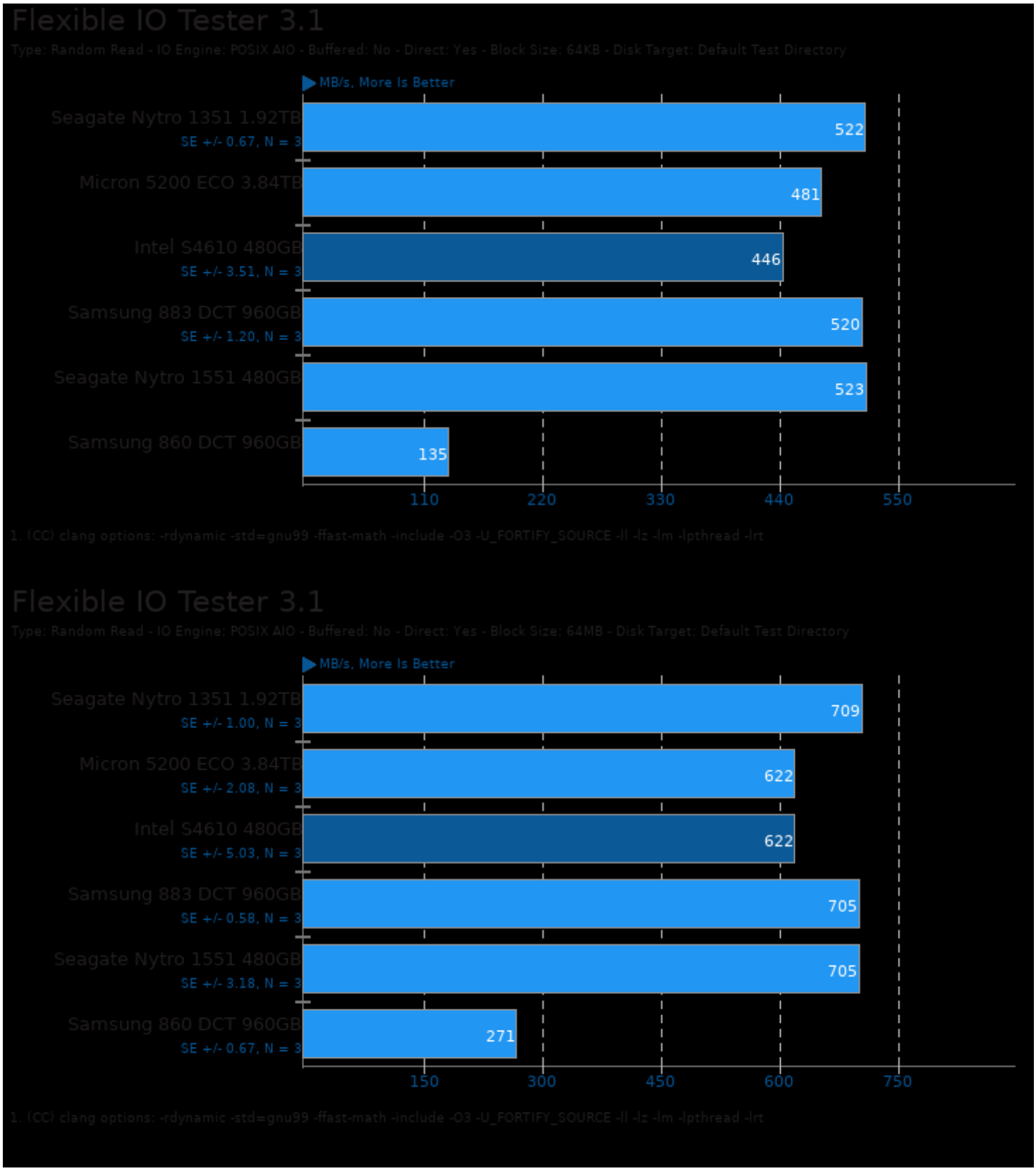

Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
16500
Micron 5200 ECO 3.84TB
15800
Intel S4610 480GB
SE +/- 333.33, N = 3
14333
Samsung 883 DCT 960GB
16500
Seagate Nytro 1551 480GB
16500
4K
8K
12K
16K
20K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
556
Micron 5200 ECO 3.84TB
492
Intel S4610 480GB
SE +/- 3.06, N = 3
507
Samsung 883 DCT 960GB
553
Seagate Nytro 1551 480GB
556
Samsung 860 DCT 960GB
158
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

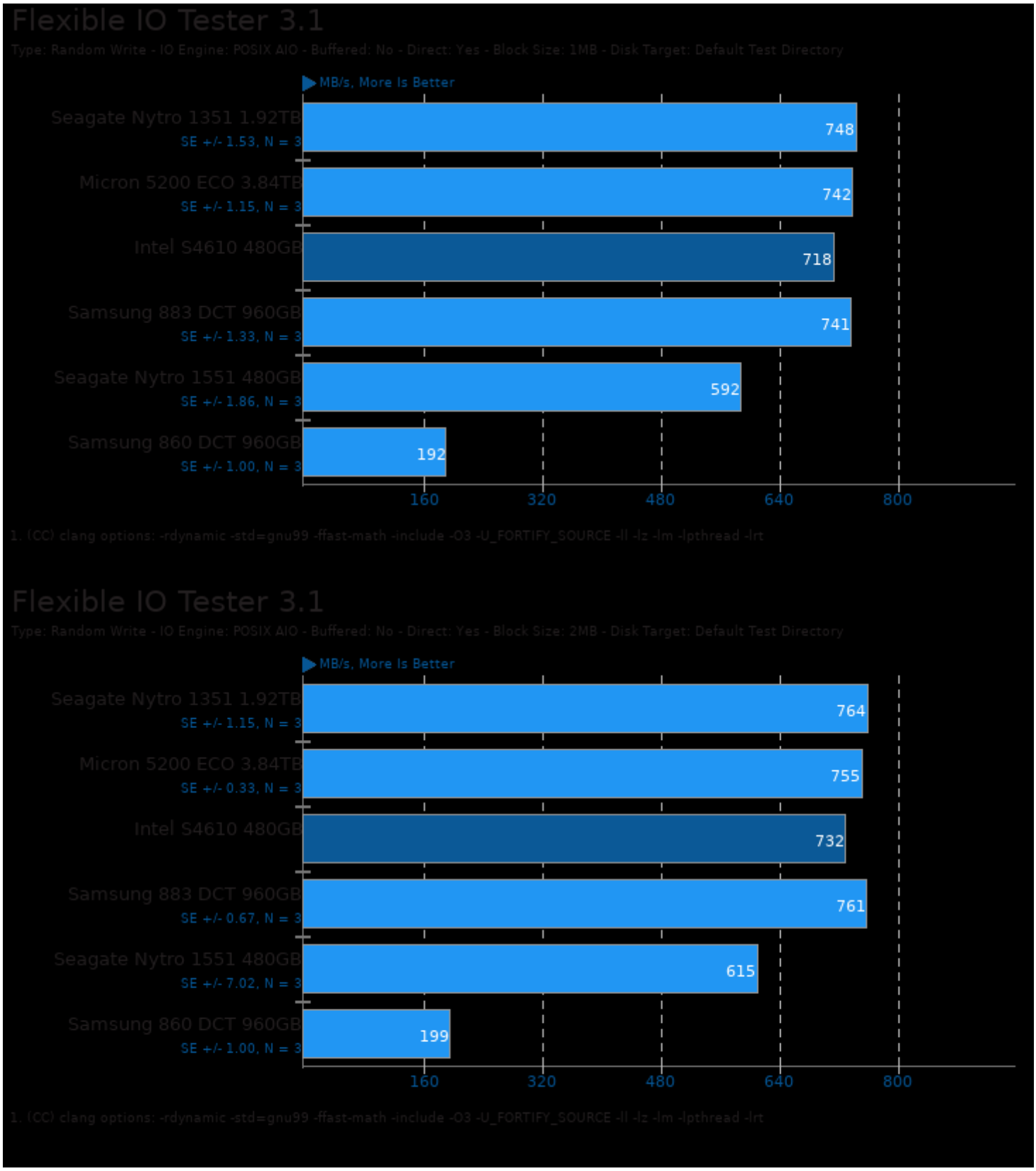

Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
258.00
Micron 5200 ECO 3.84TB
247.00
Intel S4610 480GB
SE +/- 1.86, N = 3
238.00
Samsung 883 DCT 960GB
258.00
Seagate Nytro 1551 480GB
258.00
Samsung 860 DCT 960GB
SE +/- 0.00, N = 3
66.30
60
120
180
240
300
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
16500
Micron 5200 ECO 3.84TB
15800
Intel S4610 480GB
SE +/- 133.33, N = 3
15233
Samsung 883 DCT 960GB
16500
Seagate Nytro 1551 480GB
16500
4K
8K
12K
16K
20K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

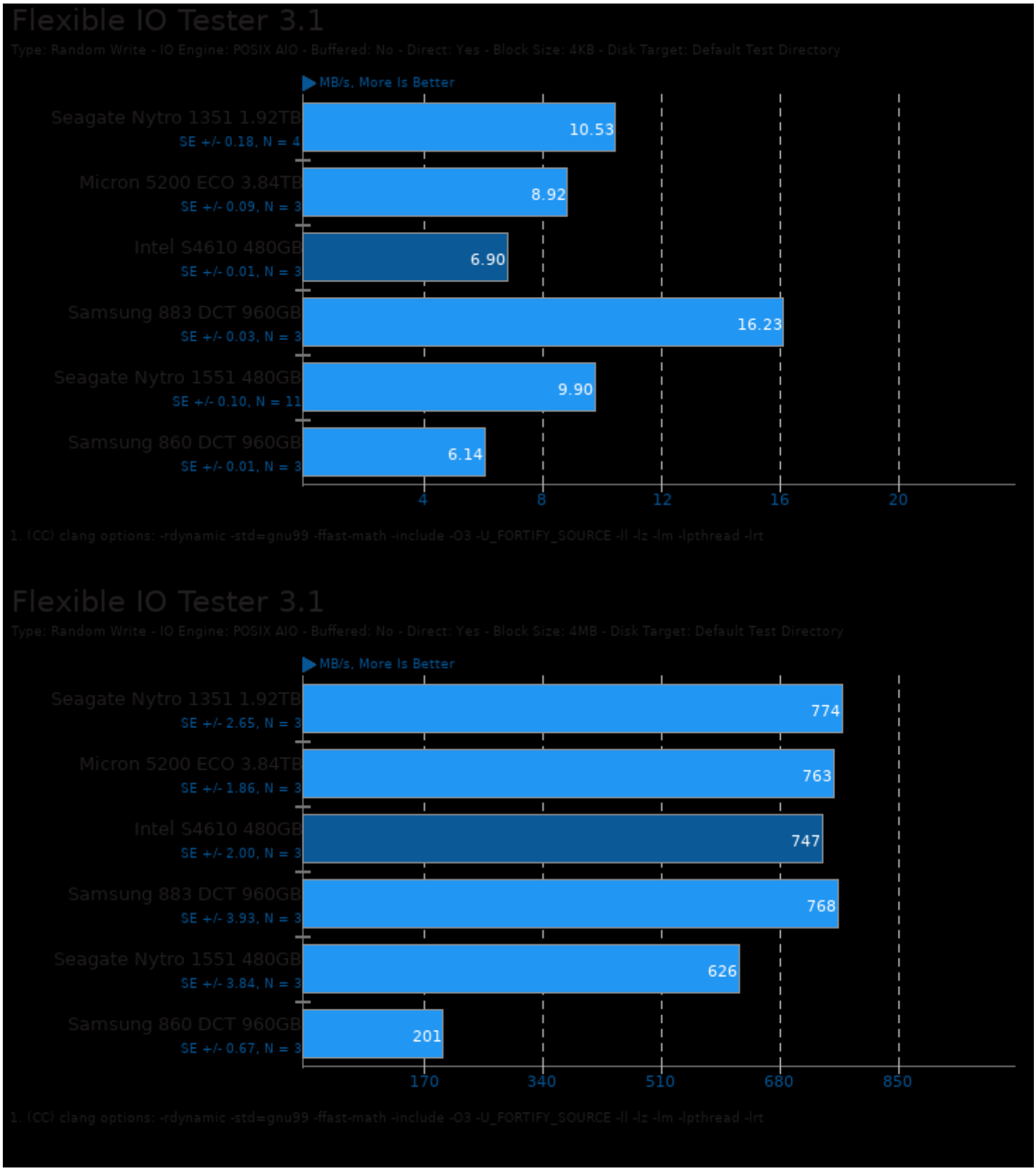

Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
578
Micron 5200 ECO 3.84TB
SE +/- 0.67, N = 3
514
Intel S4610 480GB
SE +/- 5.24, N = 3
516
Samsung 883 DCT 960GB
576
Seagate Nytro 1551 480GB
579
Samsung 860 DCT 960GB
181
130
260
390
520
650
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
517
Micron 5200 ECO 3.84TB
494
Intel S4610 480GB
SE +/- 0.58, N = 3
487
Samsung 883 DCT 960GB
SE +/- 0.33, N = 3
516
Seagate Nytro 1551 480GB
517
Samsung 860 DCT 960GB
133
110
220
330
440
550
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

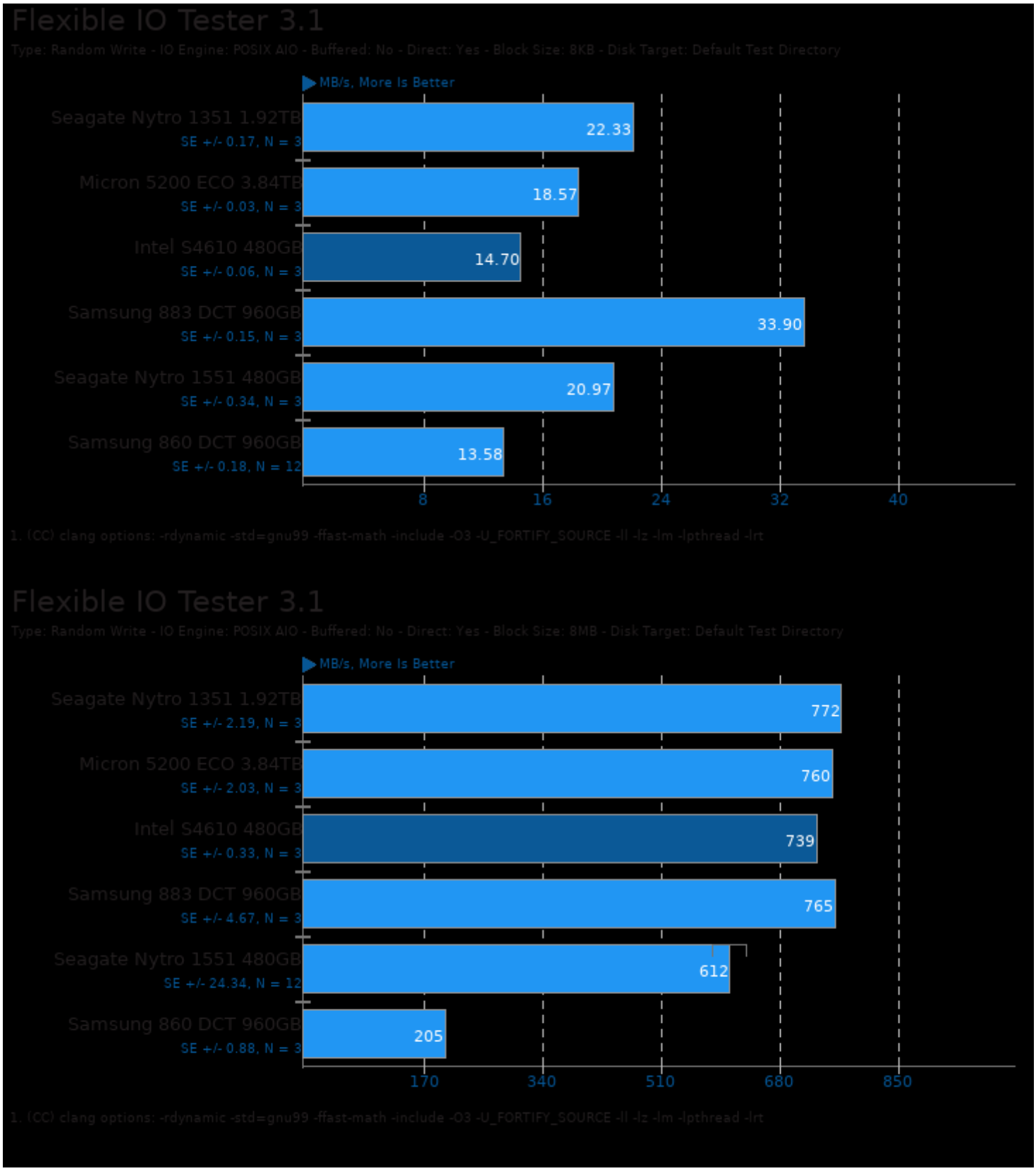

Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
16500
Micron 5200 ECO 3.84TB
15800
Intel S4610 480GB
15600
Samsung 883 DCT 960GB
16500
Seagate Nytro 1551 480GB
16500
4K
8K
12K
16K
20K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
619
Micron 5200 ECO 3.84TB
559
Intel S4610 480GB
SE +/- 10.02, N = 3
500
Samsung 883 DCT 960GB
615
Seagate Nytro 1551 480GB
618
Samsung 860 DCT 960GB
203
130
260
390
520
650
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

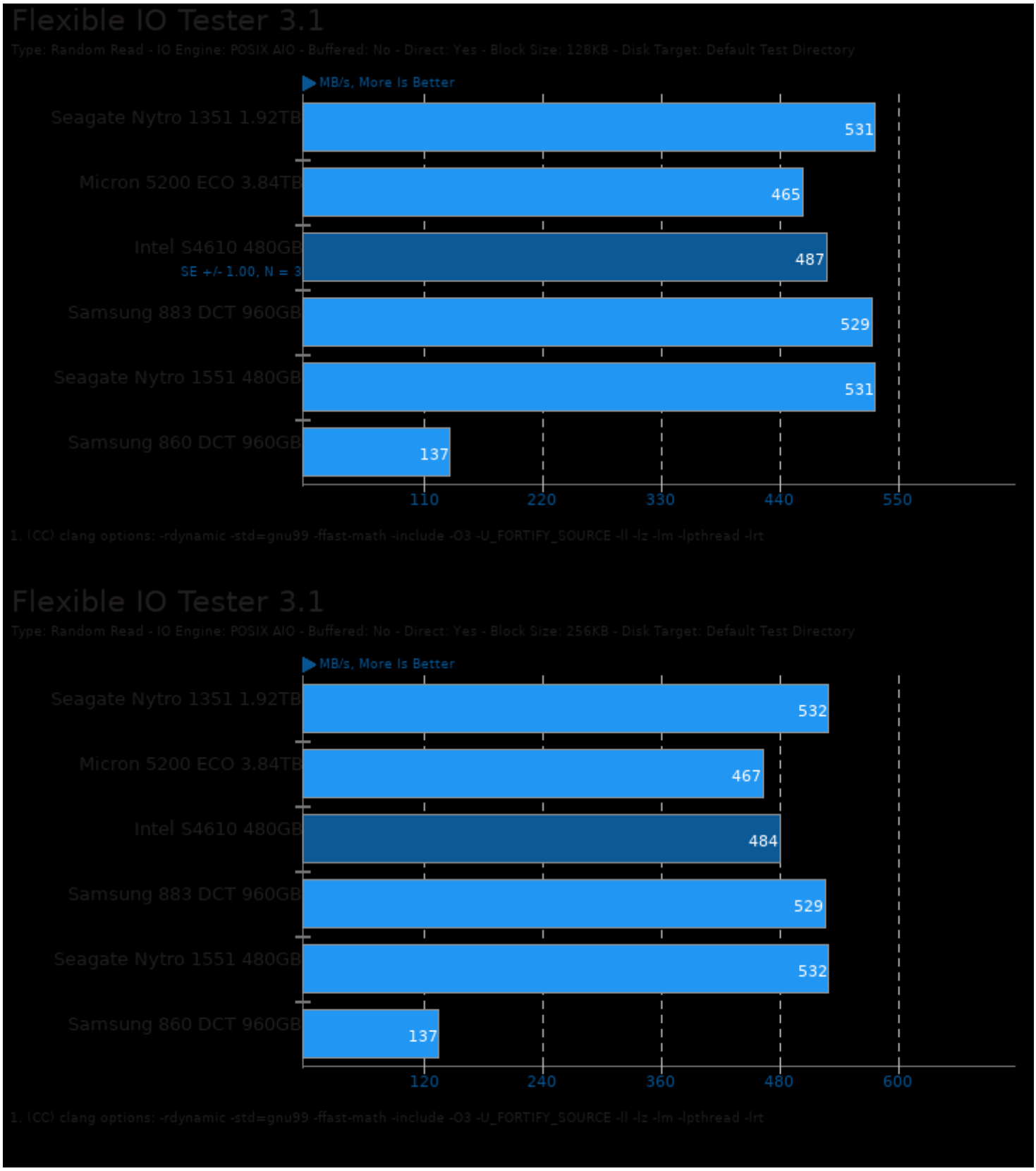
SSD Benchmark

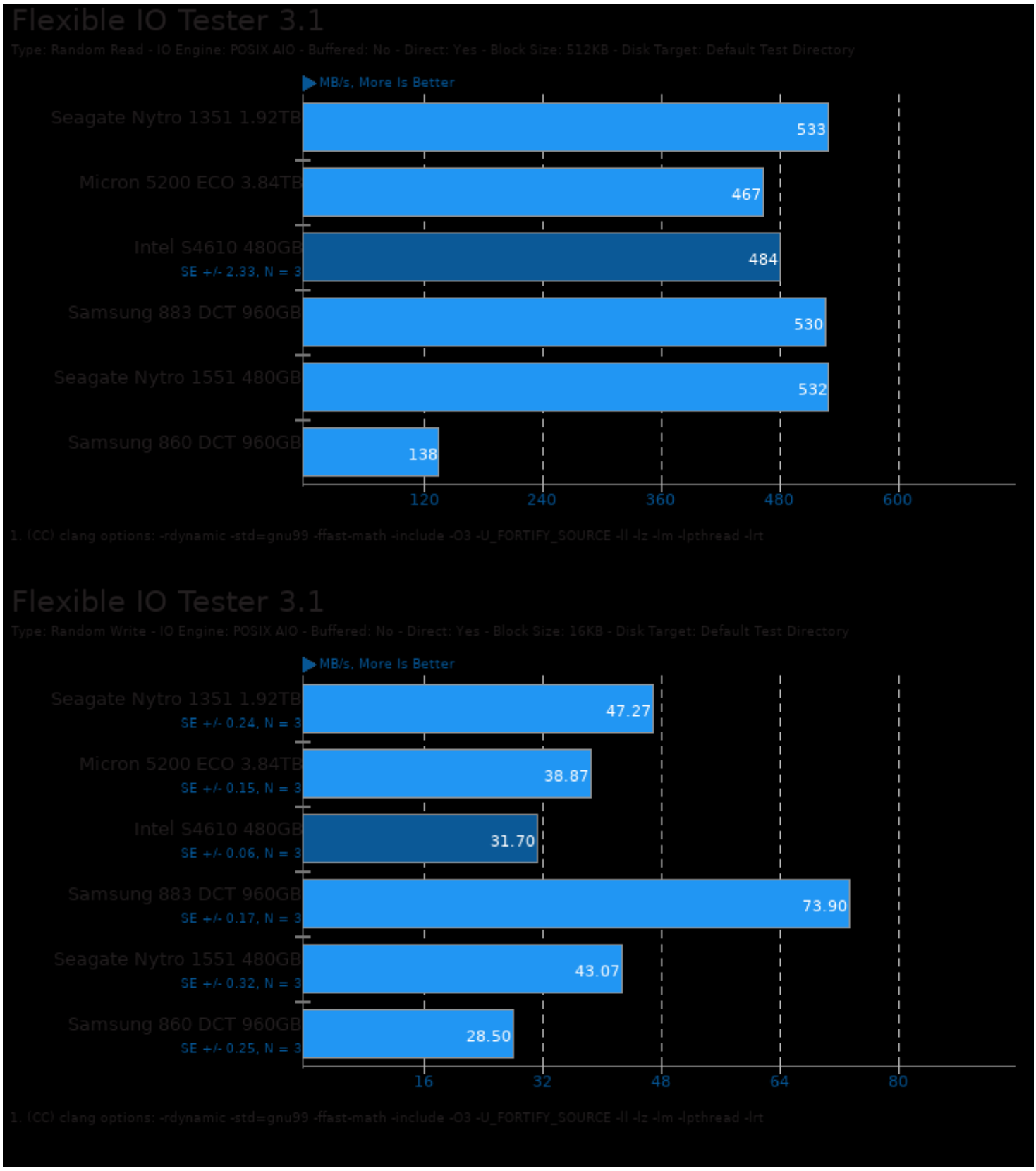


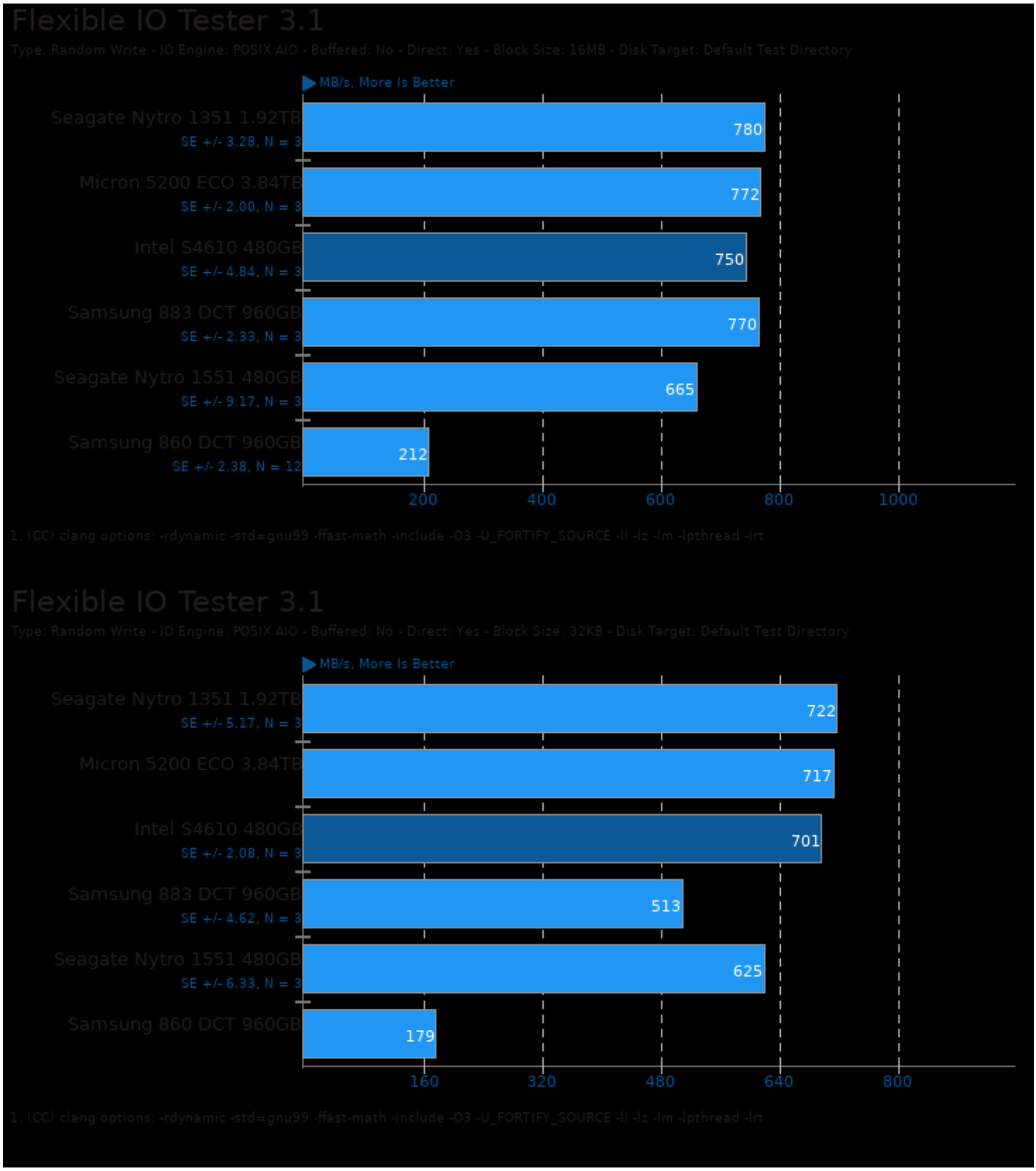

Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 1MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 1.53, N = 3
748
Micron 5200 ECO 3.84TB
SE +/- 1.15, N = 3
742
Intel S4610 480GB
718
Samsung 883 DCT 960GB
SE +/- 1.33, N = 3
741
Seagate Nytro 1551 480GB
SE +/- 1.86, N = 3
592
Samsung 860 DCT 960GB
SE +/- 1.00, N = 3
192
160
320
480
640
800
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 2MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 1.15, N = 3
764
Micron 5200 ECO 3.84TB
SE +/- 0.33, N = 3
755
Intel S4610 480GB
732
Samsung 883 DCT 960GB
SE +/- 0.67, N = 3
761
Seagate Nytro 1551 480GB
SE +/- 7.02, N = 3
615
Samsung 860 DCT 960GB
SE +/- 1.00, N = 3
199
160
320
480
640
800
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

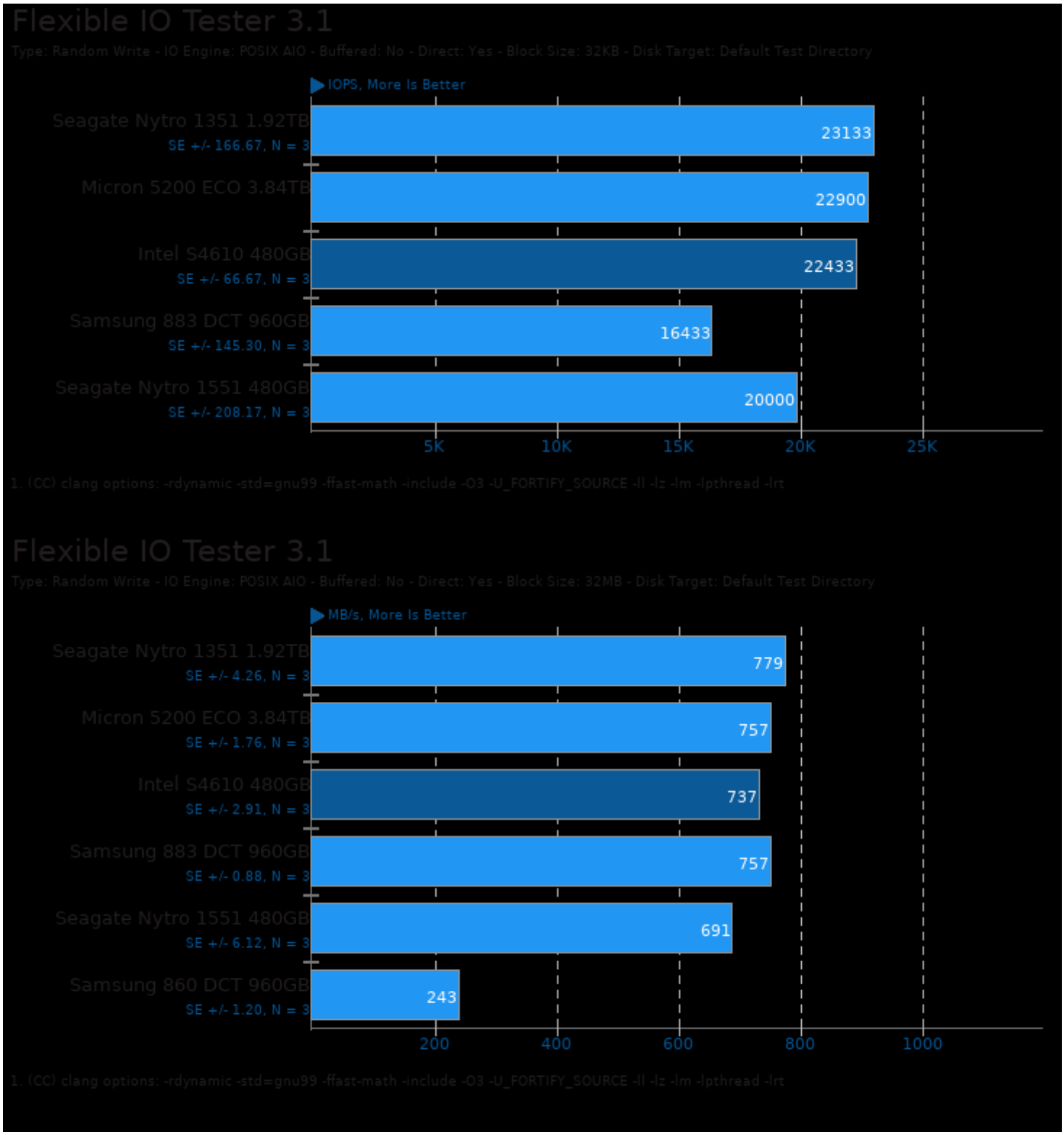

Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.18, N = 4
10.53
Micron 5200 ECO 3.84TB
SE +/- 0.09, N = 3
8.92
Intel S4610 480GB
SE +/- 0.01, N = 3
6.90
Samsung 883 DCT 960GB
SE +/- 0.03, N = 3
16.23
Seagate Nytro 1551 480GB
SE +/- 0.10, N = 11
9.90
Samsung 860 DCT 960GB
SE +/- 0.01, N = 3
6.14
4
8
12
16
20
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 2.65, N = 3
774
Micron 5200 ECO 3.84TB
SE +/- 1.86, N = 3
763
Intel S4610 480GB
SE +/- 2.00, N = 3
747
Samsung 883 DCT 960GB
SE +/- 3.93, N = 3
768
Seagate Nytro 1551 480GB
SE +/- 3.84, N = 3
626
Samsung 860 DCT 960GB
SE +/- 0.67, N = 3
201
170
340
510
680
850
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

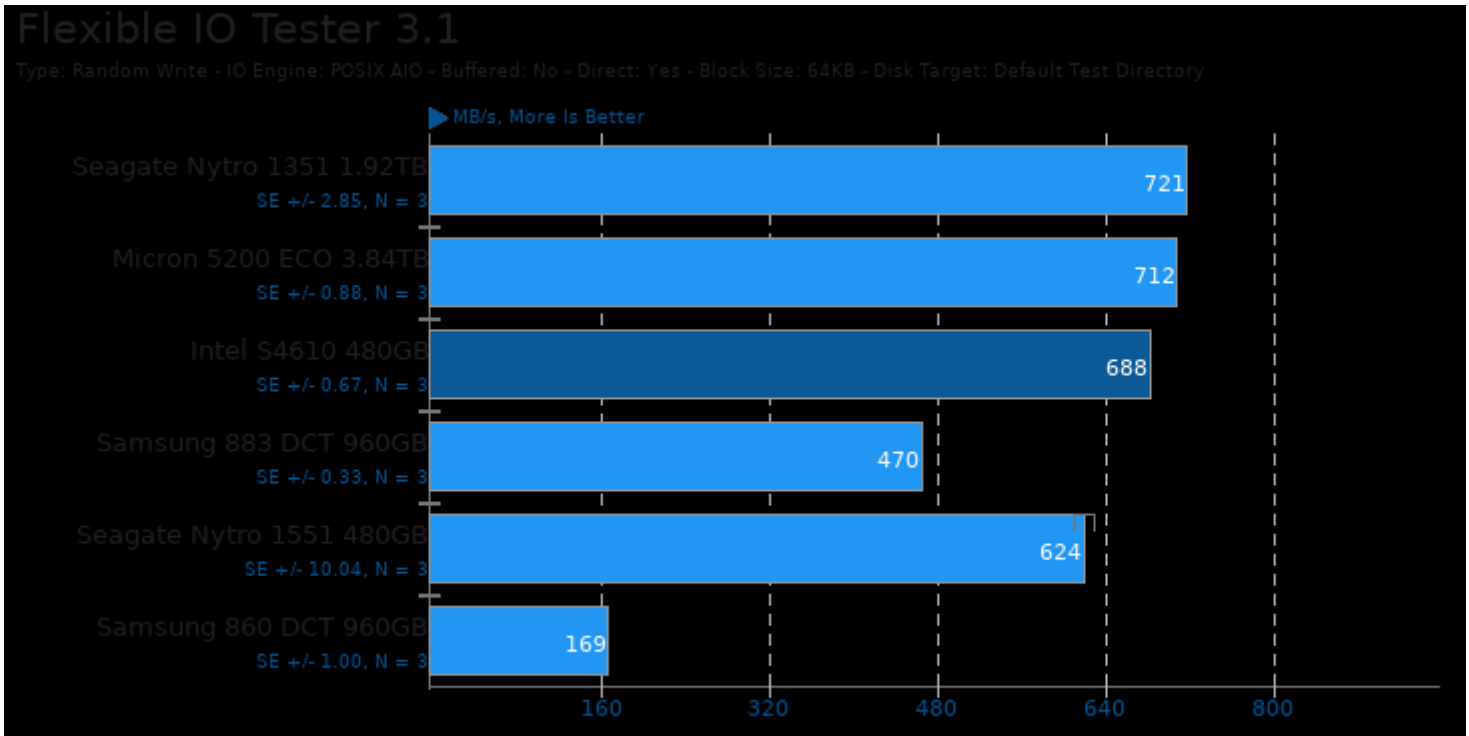

Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.17, N = 3
22.33
Micron 5200 ECO 3.84TB
SE +/- 0.03, N = 3
18.57
Intel S4610 480GB
SE +/- 0.06, N = 3
14.70
Samsung 883 DCT 960GB
SE +/- 0.15, N = 3
33.90
Seagate Nytro 1551 480GB
SE +/- 0.34, N = 3
20.97
Samsung 860 DCT 960GB
SE +/- 0.18, N = 12
13.58
8
16
24
32
40
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 2.19, N = 3
772
Micron 5200 ECO 3.84TB
SE +/- 2.03, N = 3
760
Intel S4610 480GB
SE +/- 0.33, N = 3
739
Samsung 883 DCT 960GB
SE +/- 4.67, N = 3
765
Seagate Nytro 1551 480GB
SE +/- 24.34, N = 12
612
Samsung 860 DCT 960GB
SE +/- 0.88, N = 3
205
170
340
510
680
850
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

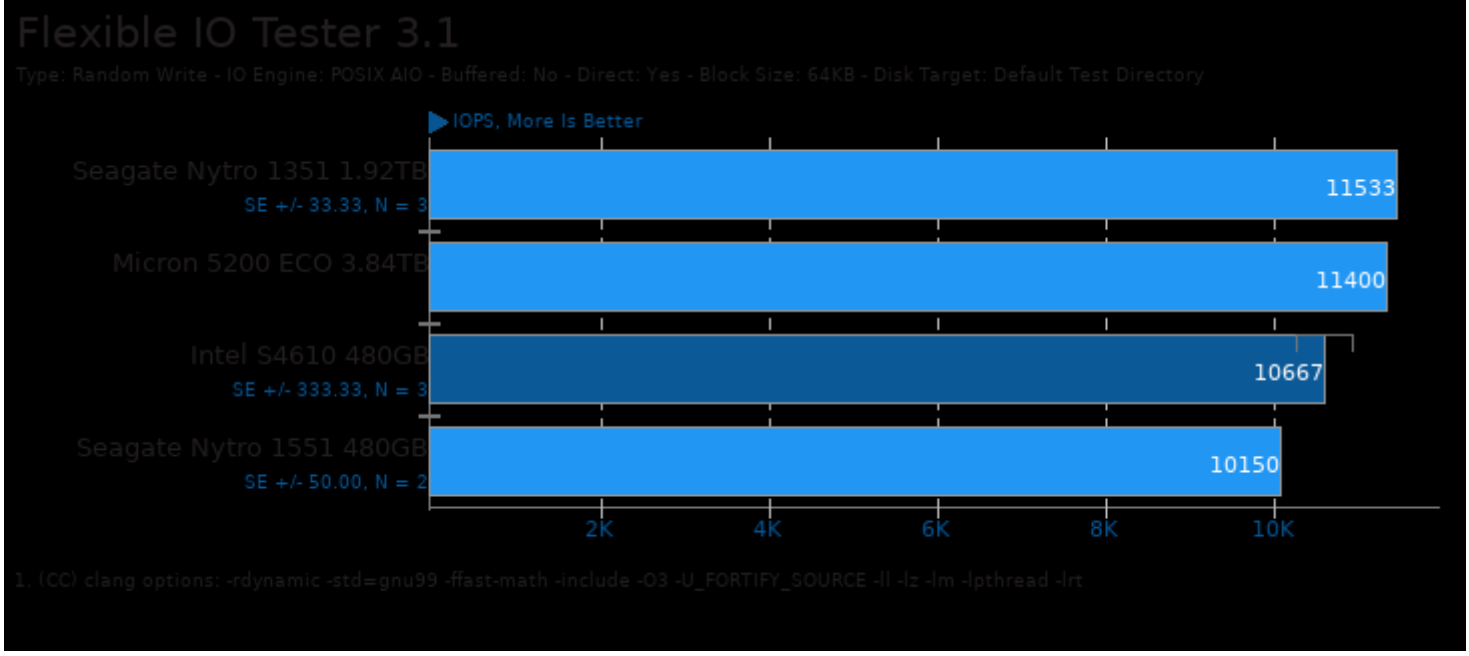

Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
531
Micron 5200 ECO 3.84TB
465
Intel S4610 480GB
SE +/- 1.00, N = 3
487
Samsung 883 DCT 960GB
529
Seagate Nytro 1551 480GB
531
Samsung 860 DCT 960GB
137
110
220
330
440
550
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
532
Micron 5200 ECO 3.84TB
467
Intel S4610 480GB
484
Samsung 883 DCT 960GB
529
Seagate Nytro 1551 480GB
532
Samsung 860 DCT 960GB
137
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

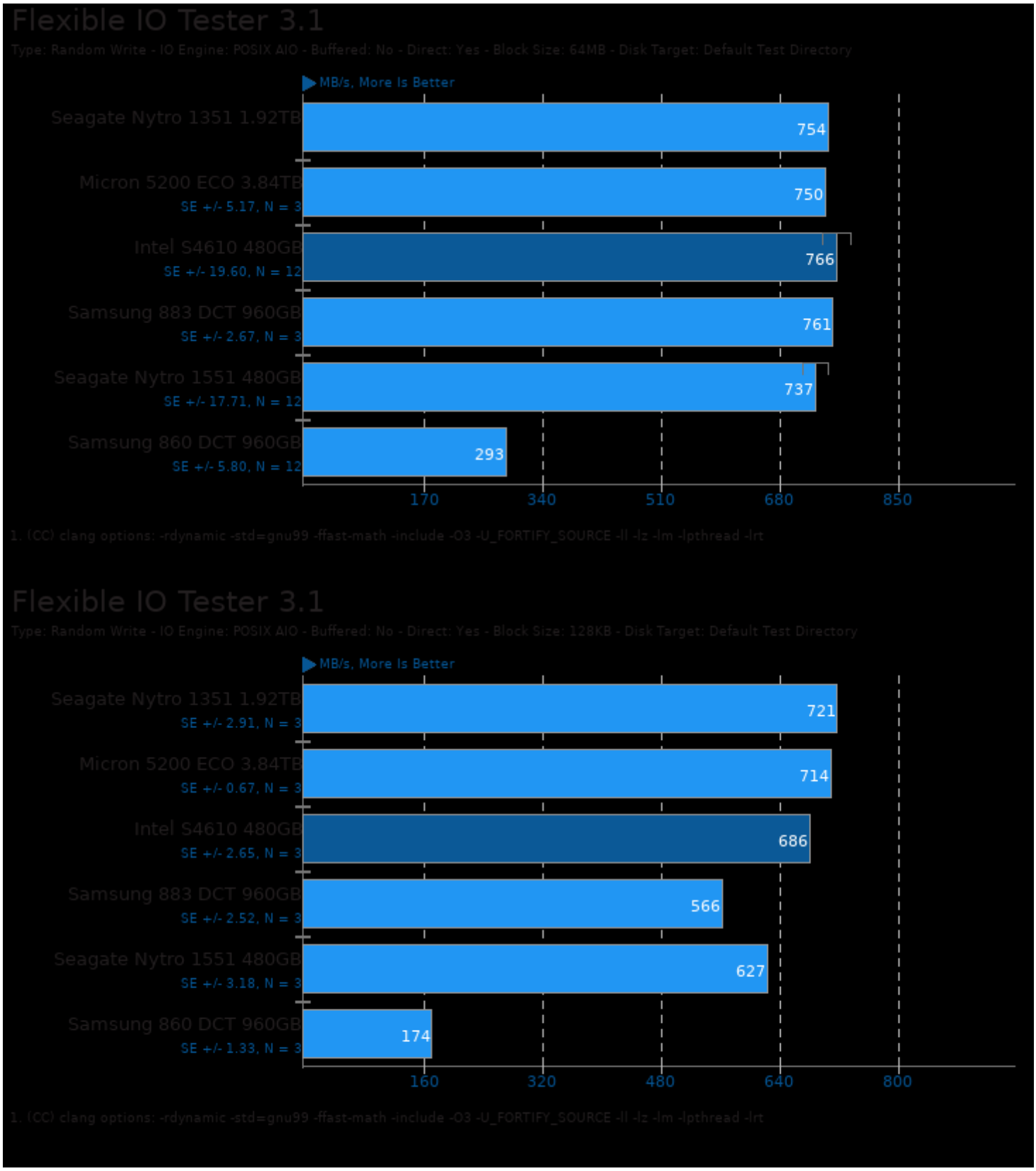

Flexible IO Tester 3.1
Type: Random Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 512KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
533
Micron 5200 ECO 3.84TB
467
Intel S4610 480GB
SE +/- 2.33, N = 3
484
Samsung 883 DCT 960GB
530
Seagate Nytro 1551 480GB
532
Samsung 860 DCT 960GB
138
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.24, N = 3
47.27
Micron 5200 ECO 3.84TB
SE +/- 0.15, N = 3
38.87
Intel S4610 480GB
SE +/- 0.06, N = 3
31.70
Samsung 883 DCT 960GB
SE +/- 0.17, N = 3
73.90
Seagate Nytro 1551 480GB
SE +/- 0.32, N = 3
43.07
Samsung 860 DCT 960GB
SE +/- 0.25, N = 3
28.50
16
32
48
64
80
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

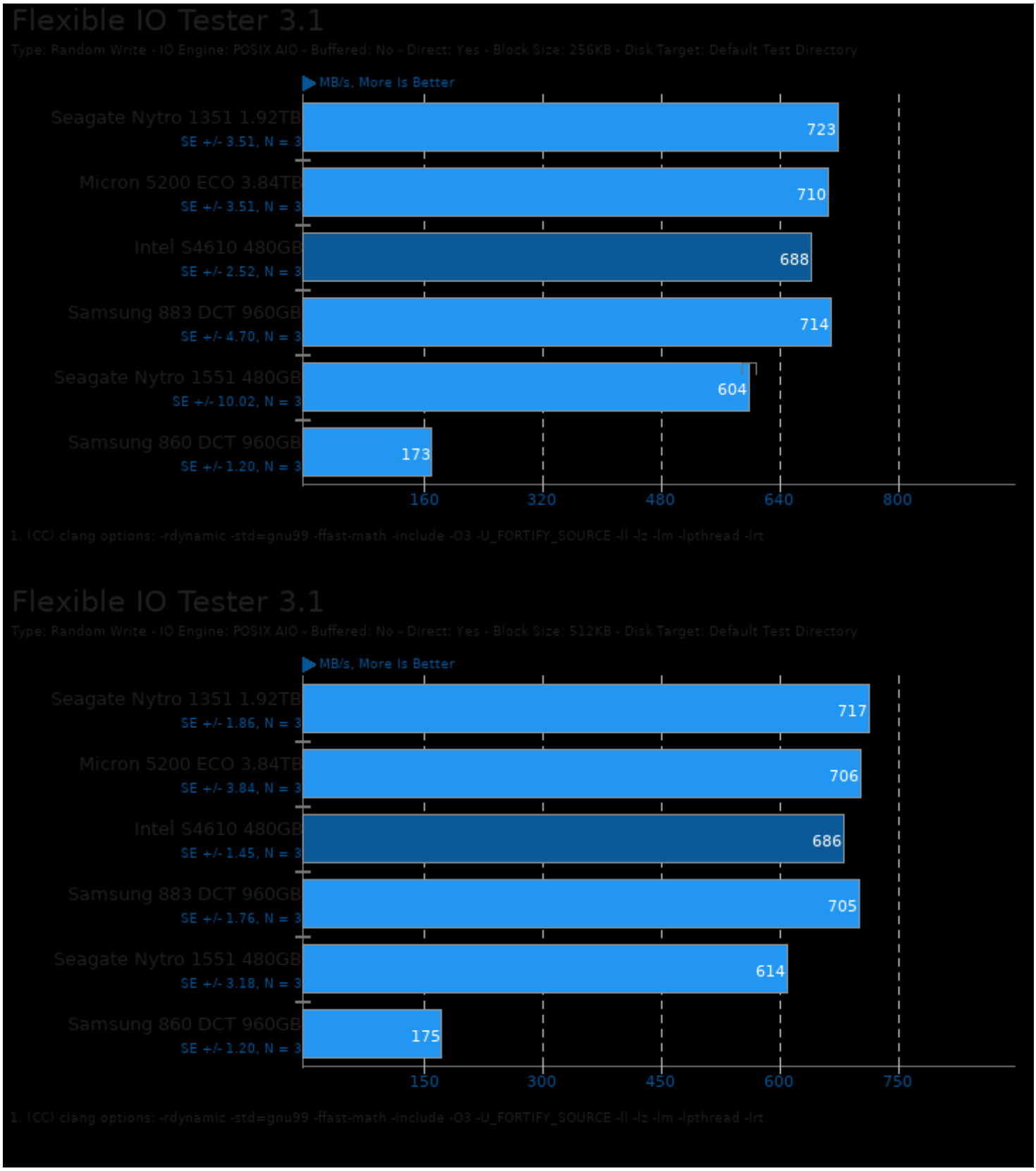

Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 3.28, N = 3
780
Micron 5200 ECO 3.84TB
SE +/- 2.00, N = 3
772
Intel S4610 480GB
SE +/- 4.84, N = 3
750
Samsung 883 DCT 960GB
SE +/- 2.33, N = 3
770
Seagate Nytro 1551 480GB
SE +/- 9.17, N = 3
665
Samsung 860 DCT 960GB
SE +/- 2.38, N = 12
212
200
400
600
800
1000
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 5.17, N = 3
722
Micron 5200 ECO 3.84TB
717
Intel S4610 480GB
SE +/- 2.08, N = 3
701
Samsung 883 DCT 960GB
SE +/- 4.62, N = 3
513
Seagate Nytro 1551 480GB
SE +/- 6.33, N = 3
625
Samsung 860 DCT 960GB
179
160
320
480
640
800
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

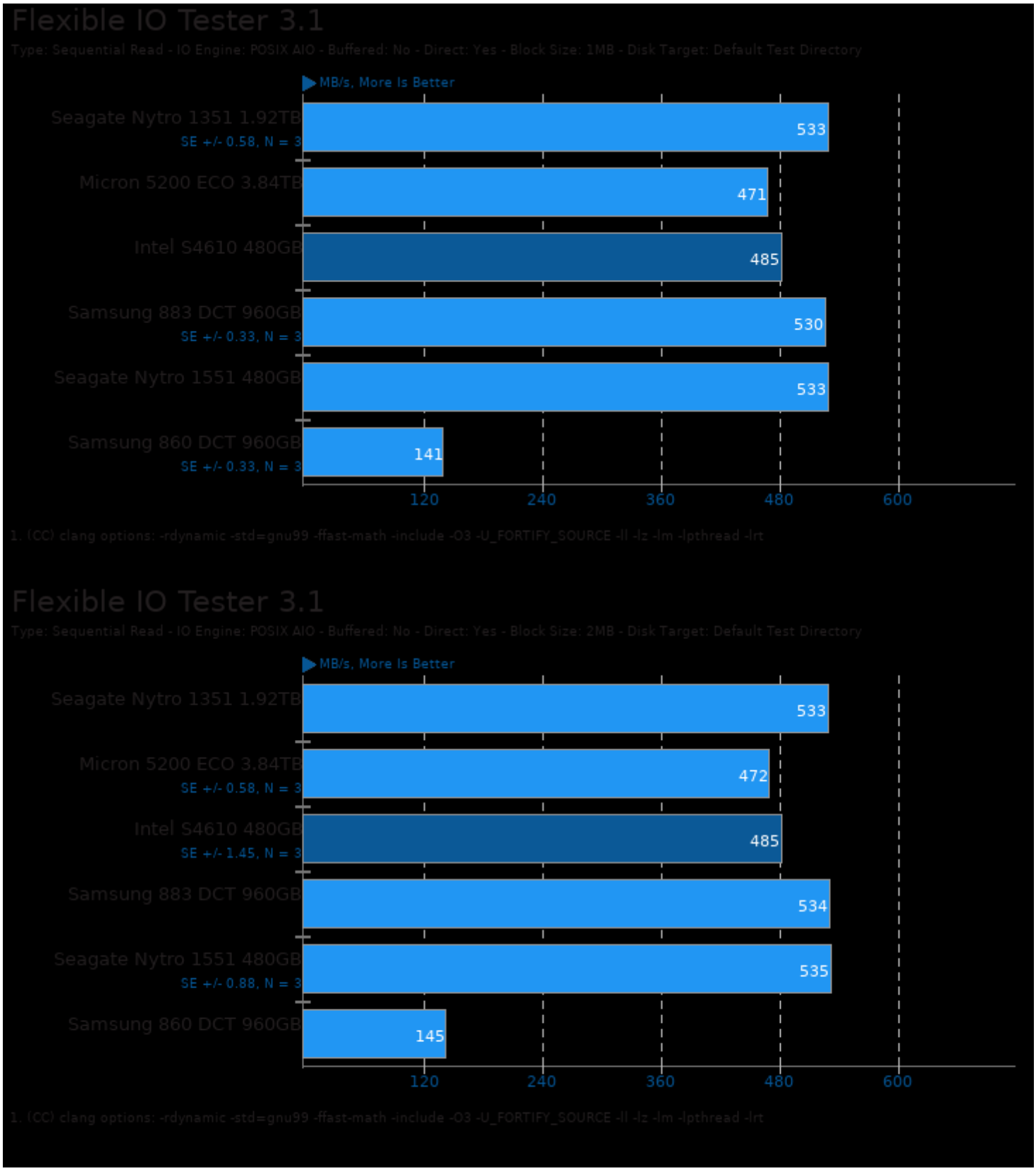

Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 166.67, N = 3
23133
Micron 5200 ECO 3.84TB
22900
Intel S4610 480GB
SE +/- 66.67, N = 3
22433
Samsung 883 DCT 960GB
SE +/- 145.30, N = 3
16433
Seagate Nytro 1551 480GB
SE +/- 208.17, N = 3
20000
5K
10K
15K
20K
25K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 4.26, N = 3
779
Micron 5200 ECO 3.84TB
SE +/- 1.76, N = 3
757
Intel S4610 480GB
SE +/- 2.91, N = 3
737
Samsung 883 DCT 960GB
SE +/- 0.88, N = 3
757
Seagate Nytro 1551 480GB
SE +/- 6.12, N = 3
691
Samsung 860 DCT 960GB
SE +/- 1.20, N = 3
243
200
400
600
800
1000
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

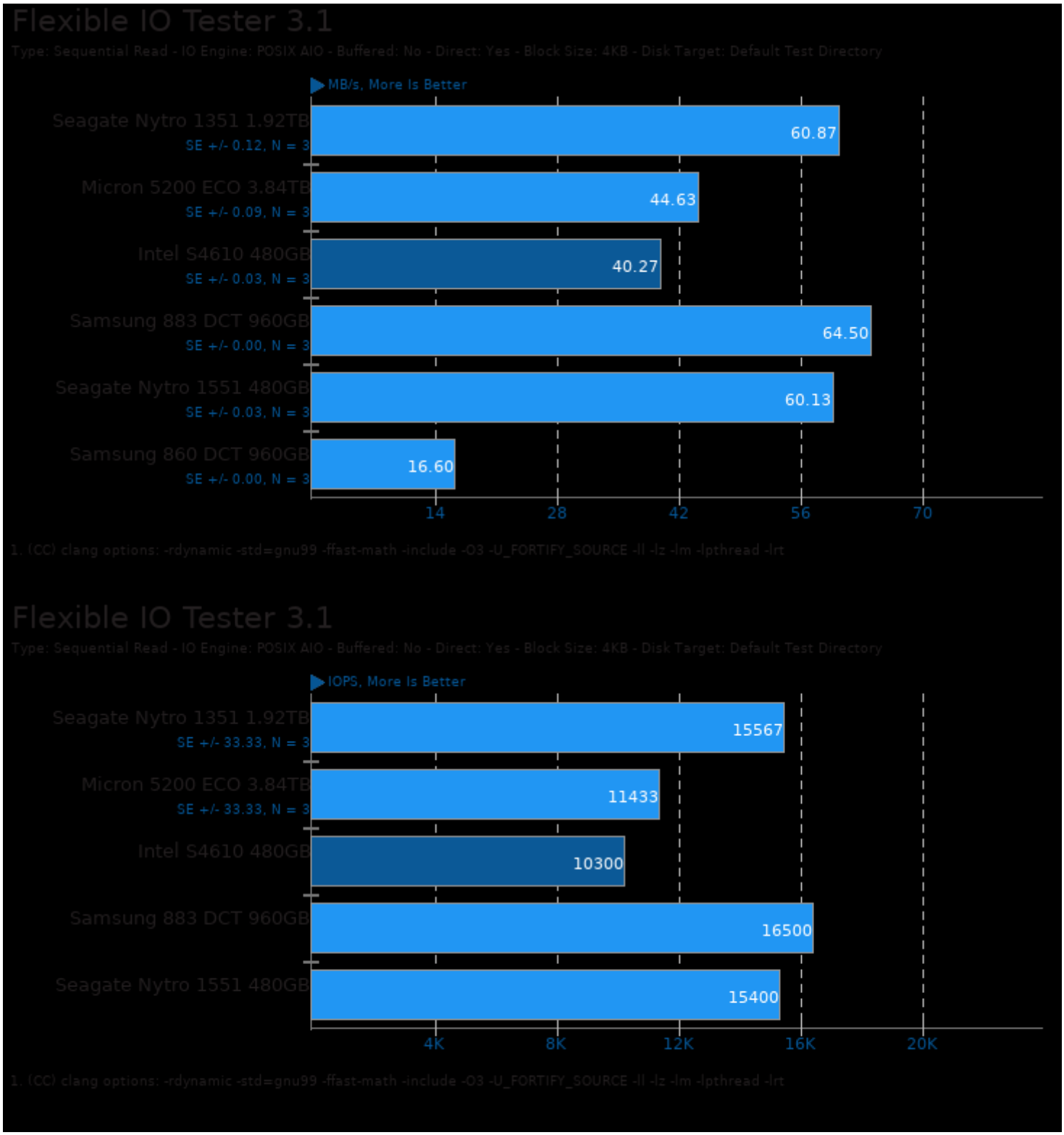

Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 2.85, N = 3
721
Micron 5200 ECO 3.84TB
SE +/- 0.88, N = 3
712
Intel S4610 480GB
SE +/- 0.67, N = 3
688
Samsung 883 DCT 960GB
SE +/- 0.33, N = 3
470
Seagate Nytro 1551 480GB
SE +/- 10.04, N = 3
624
Samsung 860 DCT 960GB
SE +/- 1.00, N = 3
169
160
320
480
640
800
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

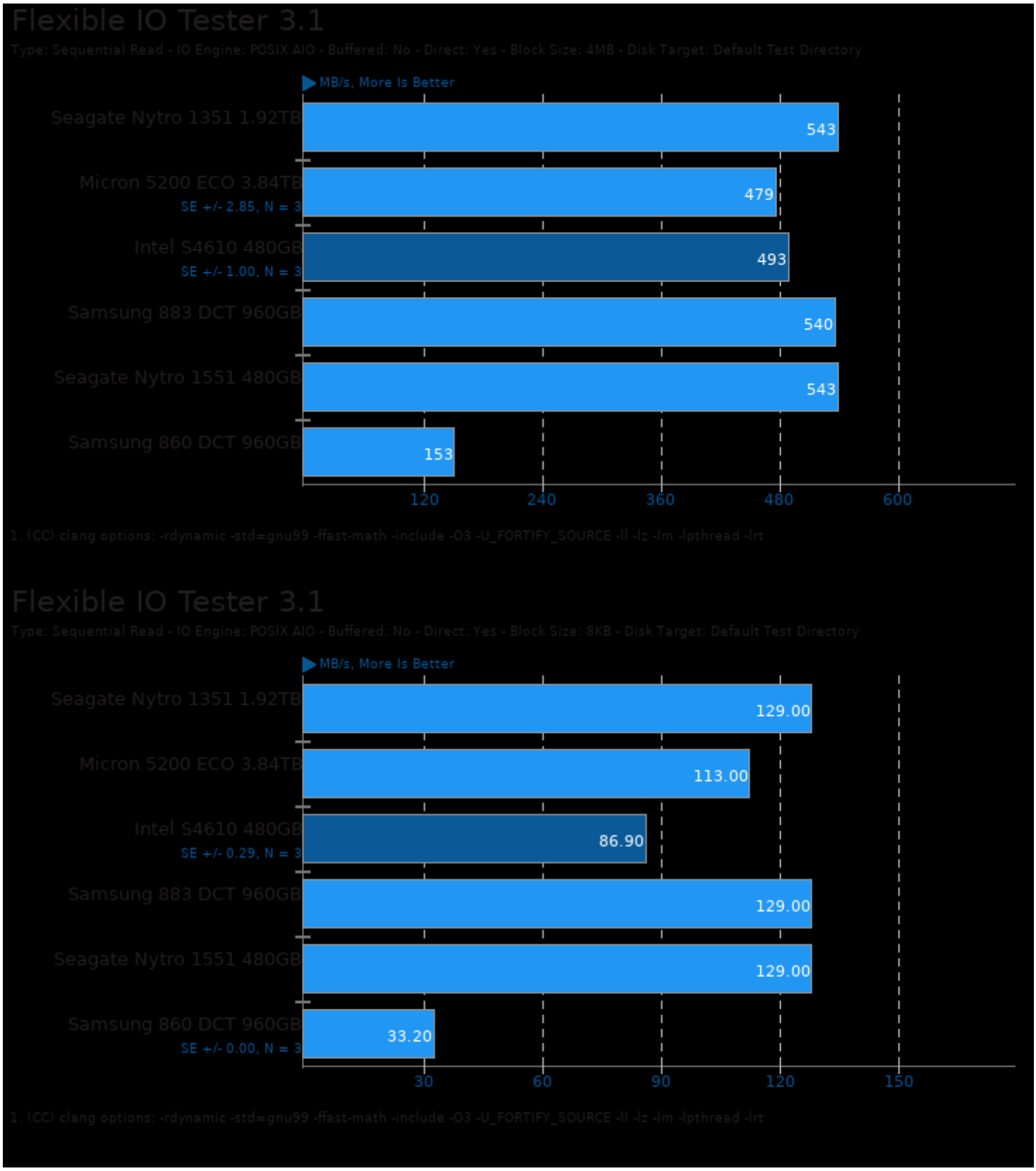

Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 33.33, N = 3
11533
Micron 5200 ECO 3.84TB
11400
Intel S4610 480GB
SE +/- 333.33, N = 3
10667
Seagate Nytro 1551 480GB
SE +/- 50.00, N = 2
10150
2K
4K
6K
8K
10K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

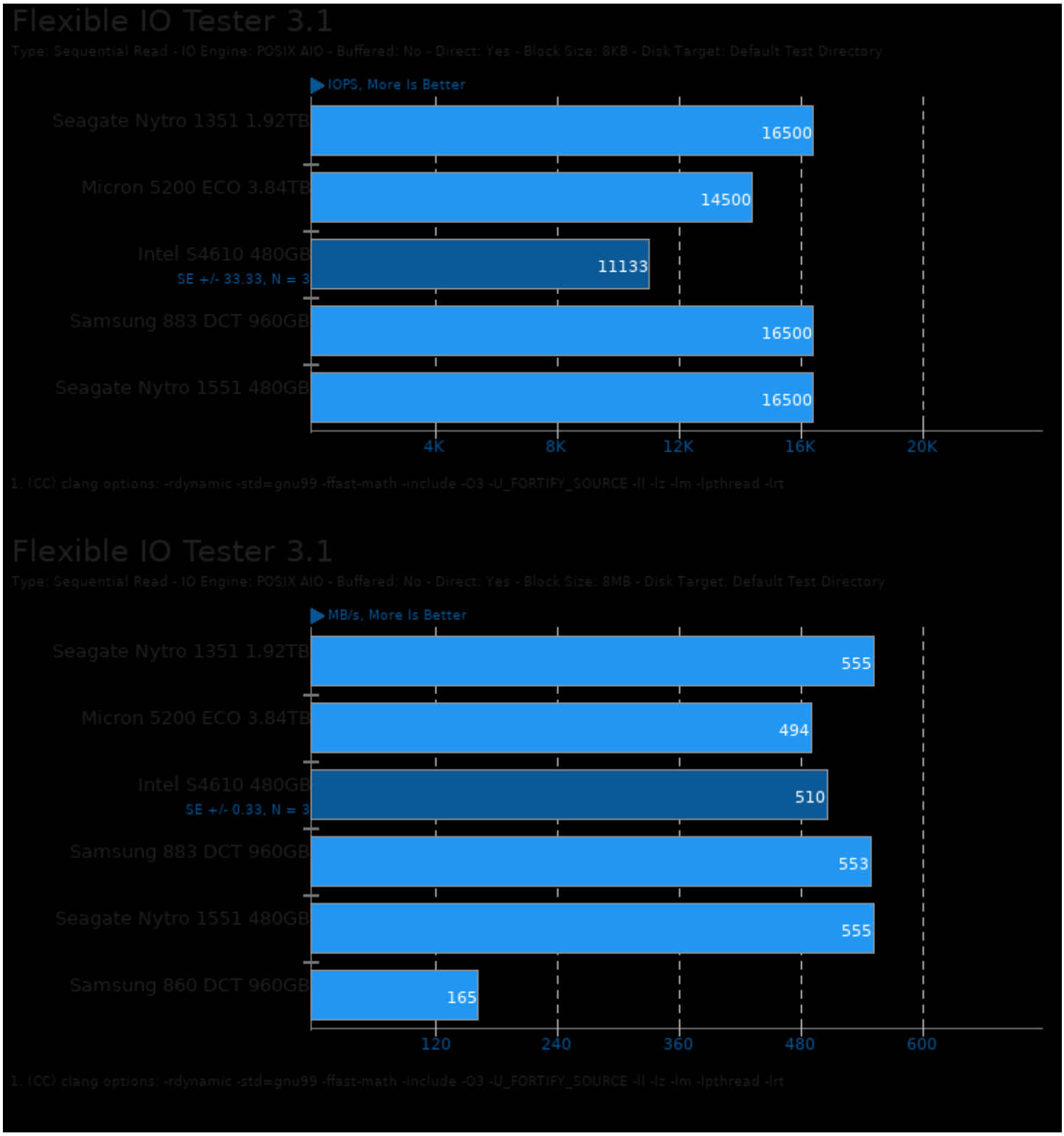

Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 64MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
754
Micron 5200 ECO 3.84TB
SE +/- 5.17, N = 3
750
Intel S4610 480GB
SE +/- 19.60, N = 12
766
Samsung 883 DCT 960GB
SE +/- 2.67, N = 3
761
Seagate Nytro 1551 480GB
SE +/- 17.71, N = 12
737
Samsung 860 DCT 960GB
SE +/- 5.80, N = 12
293
170
340
510
680
850
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 2.91, N = 3
721
Micron 5200 ECO 3.84TB
SE +/- 0.67, N = 3
714
Intel S4610 480GB
SE +/- 2.65, N = 3
686
Samsung 883 DCT 960GB
SE +/- 2.52, N = 3
566
Seagate Nytro 1551 480GB
SE +/- 3.18, N = 3
627
Samsung 860 DCT 960GB
SE +/- 1.33, N = 3
174
160
320
480
640
800
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

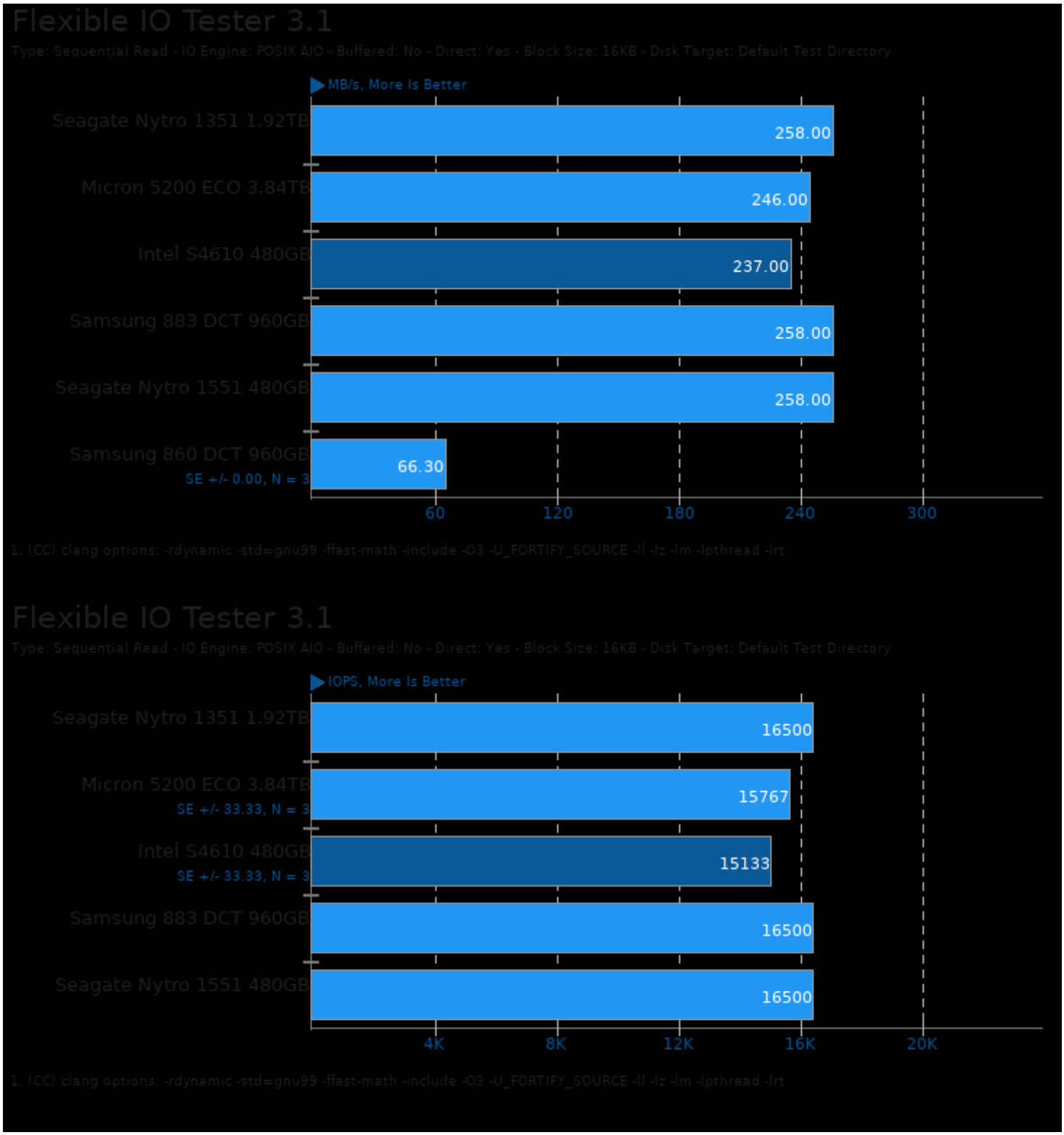

Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 3.51, N = 3
723
Micron 5200 ECO 3.84TB
SE +/- 3.51, N = 3
710
Intel S4610 480GB
SE +/- 2.52, N = 3
688
Samsung 883 DCT 960GB
SE +/- 4.70, N = 3
714
Seagate Nytro 1551 480GB
SE +/- 10.02, N = 3
604
Samsung 860 DCT 960GB
SE +/- 1.20, N = 3
173
160
320
480
640
800
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Random Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 512KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 1.86, N = 3
717
Micron 5200 ECO 3.84TB
SE +/- 3.84, N = 3
706
Intel S4610 480GB
SE +/- 1.45, N = 3
686
Samsung 883 DCT 960GB
SE +/- 1.76, N = 3
705
Seagate Nytro 1551 480GB
SE +/- 3.18, N = 3
614
Samsung 860 DCT 960GB
SE +/- 1.20, N = 3
175
150
300
450
600
750
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

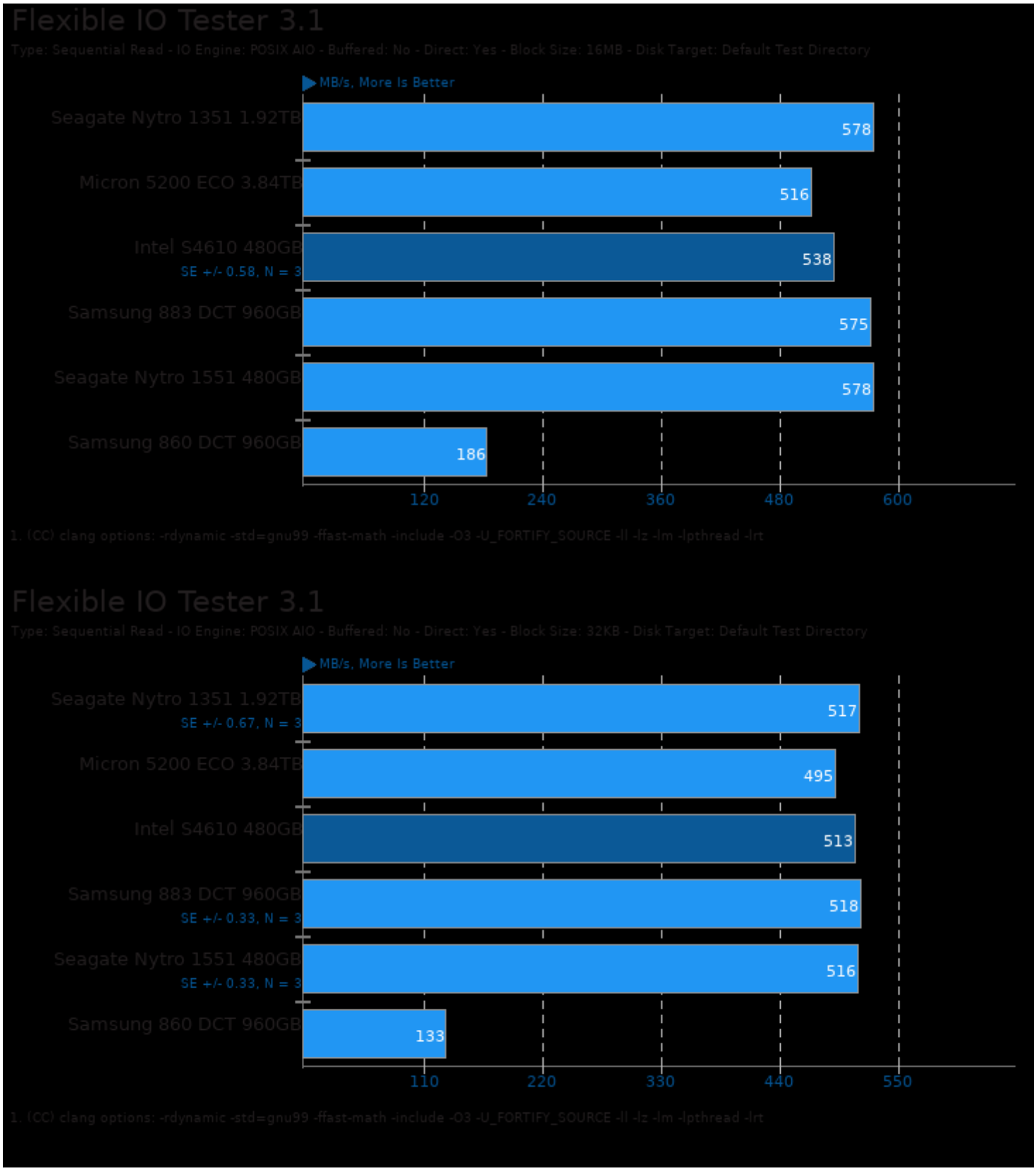

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 1MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.58, N = 3
533
Micron 5200 ECO 3.84TB
471
Intel S4610 480GB
485
Samsung 883 DCT 960GB
SE +/- 0.33, N = 3
530
Seagate Nytro 1551 480GB
533
Samsung 860 DCT 960GB
SE +/- 0.33, N = 3
141
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 2MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
533
Micron 5200 ECO 3.84TB
SE +/- 0.58, N = 3
472
Intel S4610 480GB
SE +/- 1.45, N = 3
485
Samsung 883 DCT 960GB
534
Seagate Nytro 1551 480GB
SE +/- 0.88, N = 3
535
Samsung 860 DCT 960GB
145
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

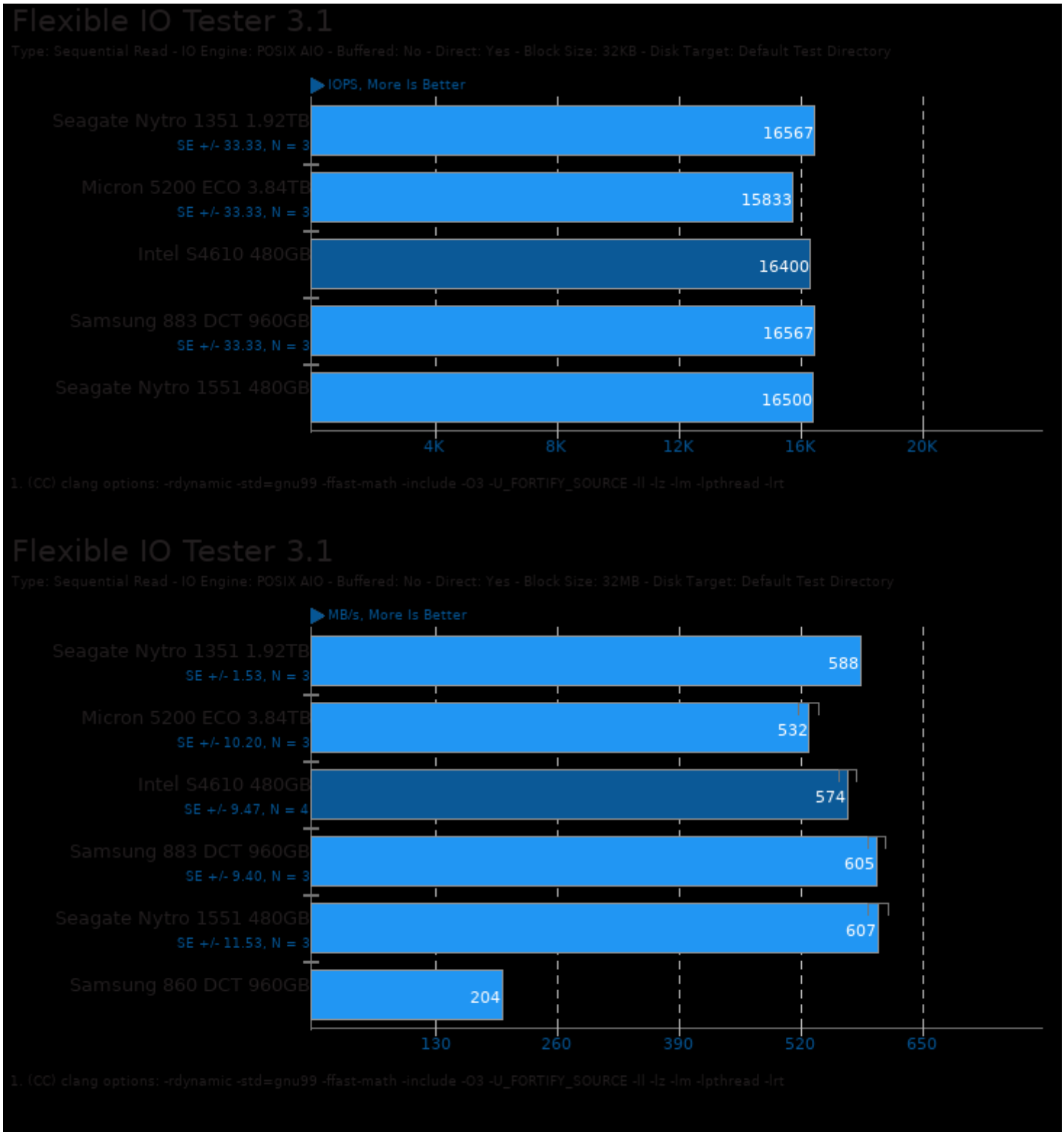

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.12, N = 3
60.87
Micron 5200 ECO 3.84TB
SE +/- 0.09, N = 3
44.63
Intel S4610 480GB
SE +/- 0.03, N = 3
40.27
Samsung 883 DCT 960GB
SE +/- 0.00, N = 3
64.50
Seagate Nytro 1551 480GB
SE +/- 0.03, N = 3
60.13
Samsung 860 DCT 960GB
SE +/- 0.00, N = 3
16.60
14
28
42
56
70
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 33.33, N = 3
15567
Micron 5200 ECO 3.84TB
SE +/- 33.33, N = 3
11433
Intel S4610 480GB
10300
Samsung 883 DCT 960GB
16500
Seagate Nytro 1551 480GB
15400
4K
8K
12K
16K
20K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

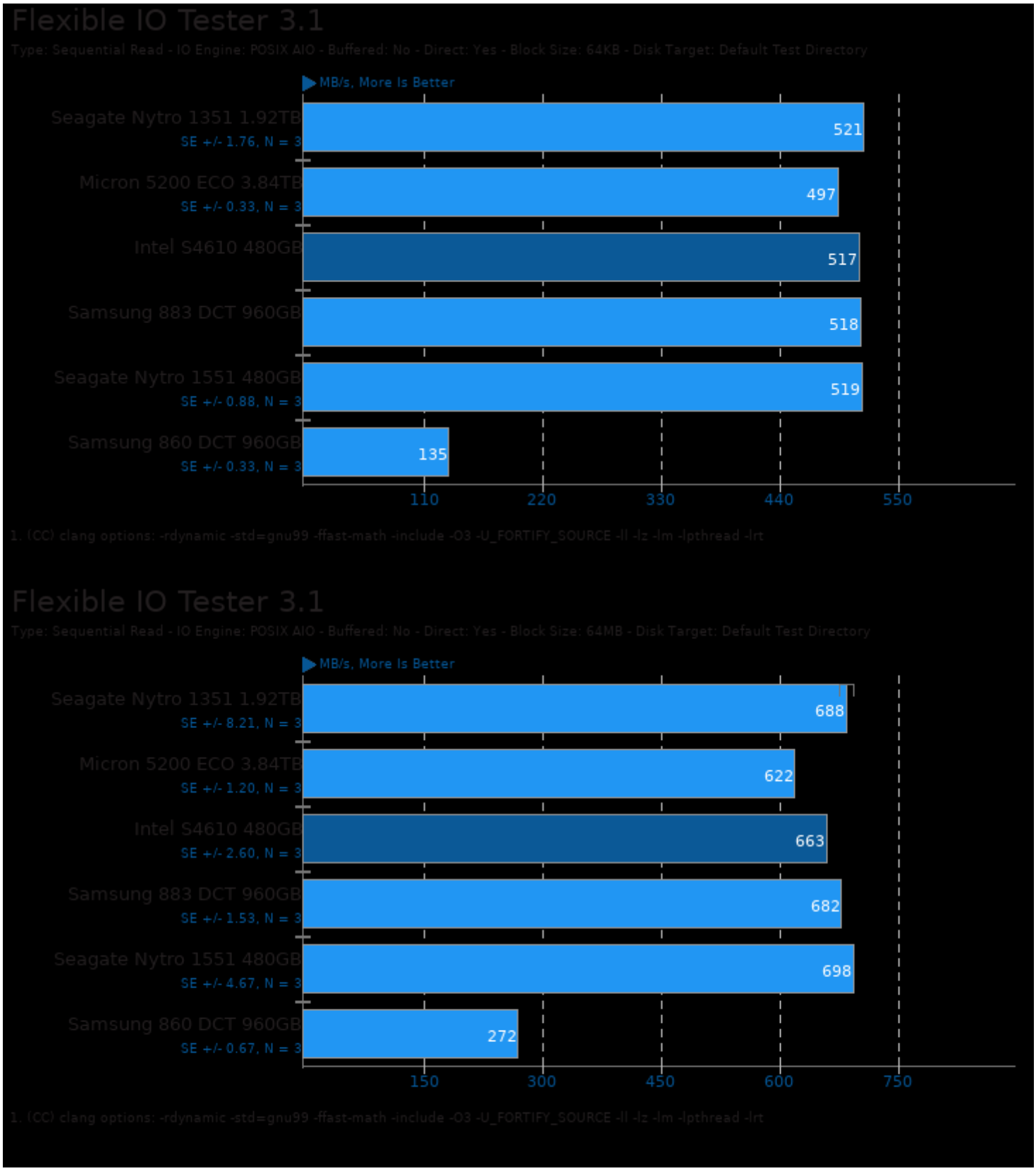

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
543
Micron 5200 ECO 3.84TB
SE +/- 2.85, N = 3
479
Intel S4610 480GB
SE +/- 1.00, N = 3
493
Samsung 883 DCT 960GB
540
Seagate Nytro 1551 480GB
543
Samsung 860 DCT 960GB
153
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
129.00
Micron 5200 ECO 3.84TB
113.00
Intel S4610 480GB
SE +/- 0.29, N = 3
86.90
Samsung 883 DCT 960GB
129.00
Seagate Nytro 1551 480GB
129.00
Samsung 860 DCT 960GB
SE +/- 0.00, N = 3
33.20
30
60
90
120
150
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

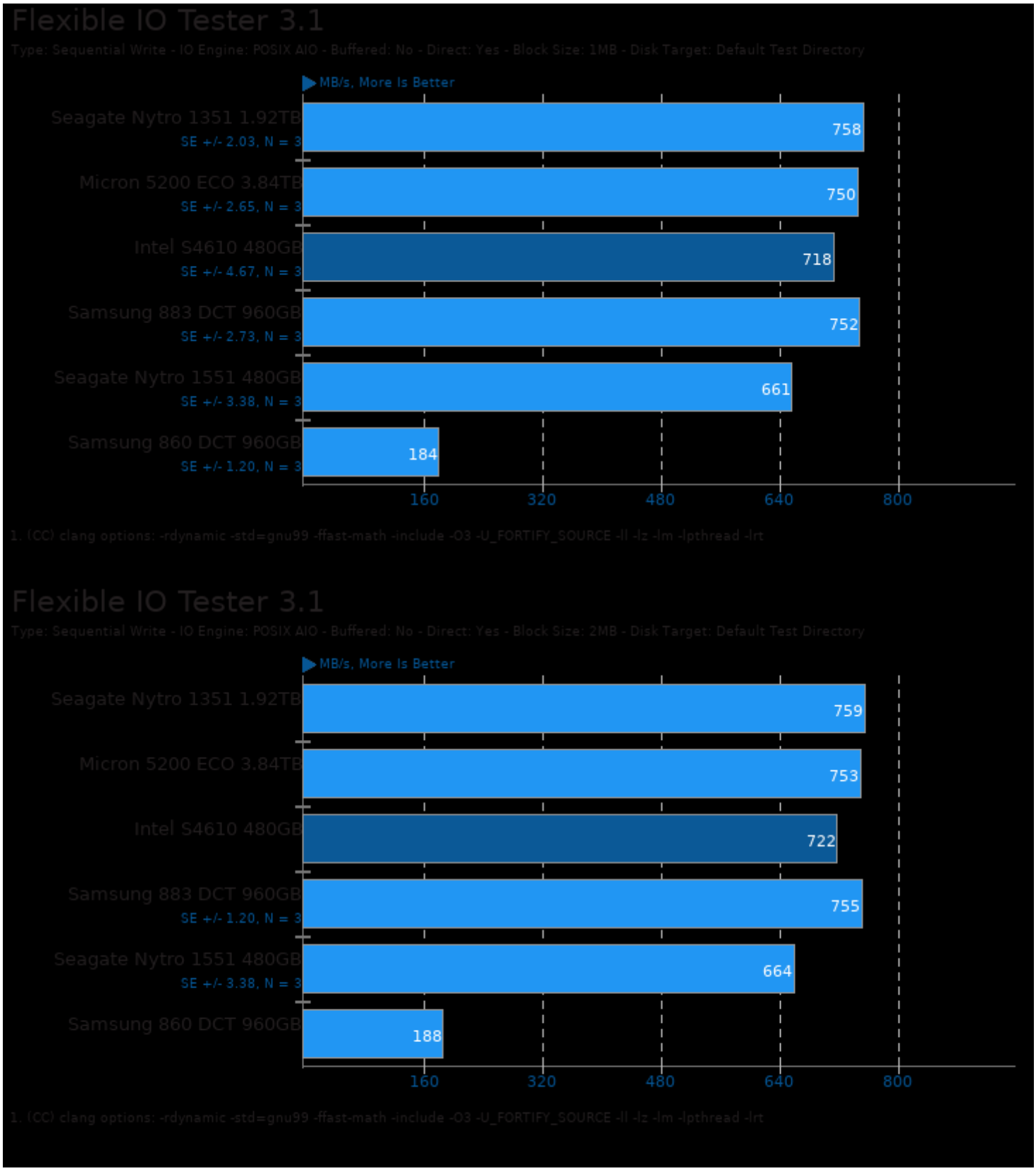

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
16500
Micron 5200 ECO 3.84TB
14500
Intel S4610 480GB
SE +/- 33.33, N = 3
11133
Samsung 883 DCT 960GB
16500
Seagate Nytro 1551 480GB
16500
4K
8K
12K
16K
20K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
555
Micron 5200 ECO 3.84TB
494
Intel S4610 480GB
SE +/- 0.33, N = 3
510
Samsung 883 DCT 960GB
553
Seagate Nytro 1551 480GB
555
Samsung 860 DCT 960GB
165
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

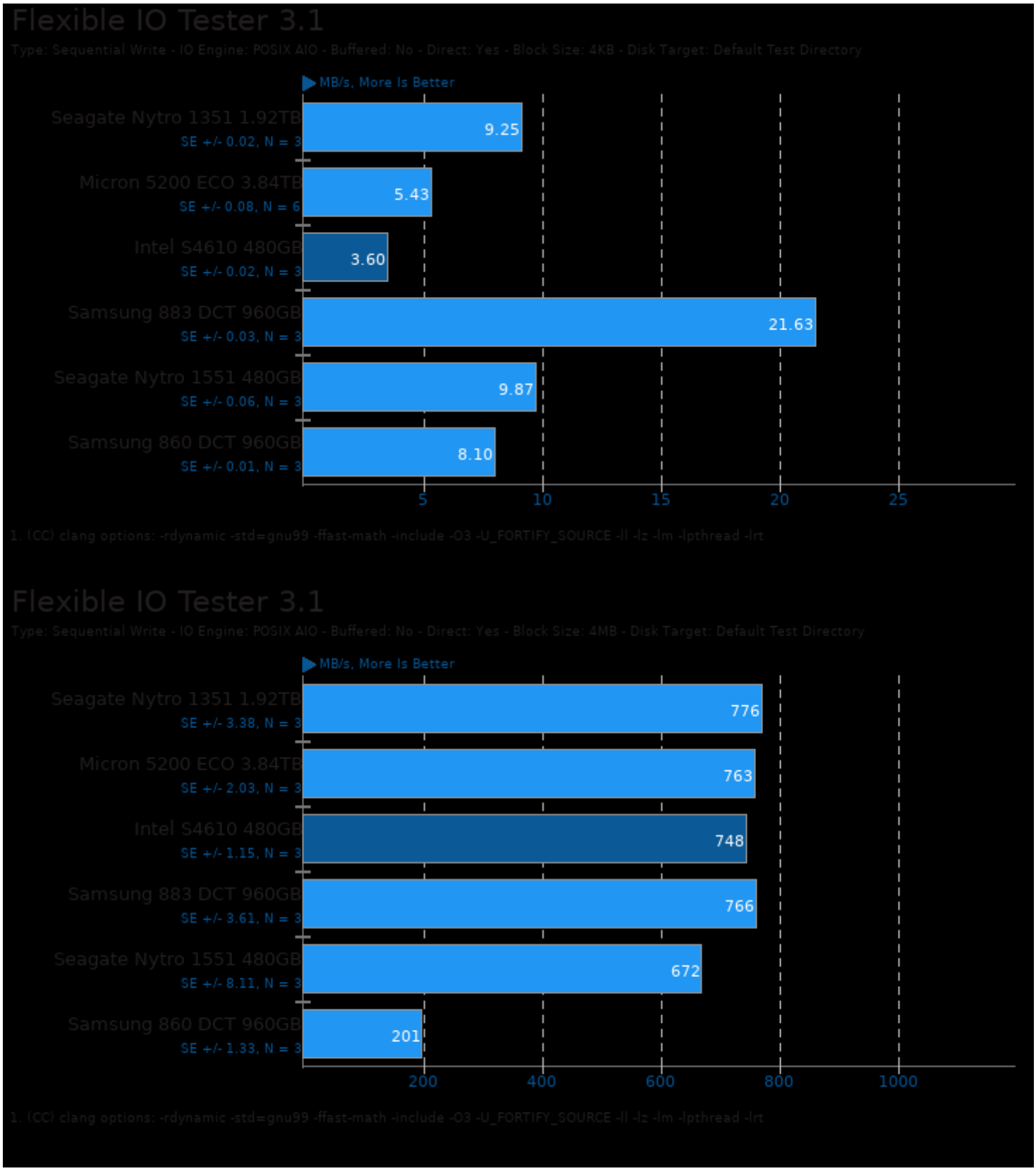

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
258.00
Micron 5200 ECO 3.84TB
246.00
Intel S4610 480GB
237.00
Samsung 883 DCT 960GB
258.00
Seagate Nytro 1551 480GB
258.00
Samsung 860 DCT 960GB
66.30
SE +/- 0.00, N = 3
60
120
180
240
300
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
16500
Micron 5200 ECO 3.84TB
15767
SE +/- 33.33, N = 3
Intel S4610 480GB
15133
SE +/- 33.33, N = 3
Samsung 883 DCT 960GB
16500
Seagate Nytro 1551 480GB
16500
4K
8K
12K
16K
20K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

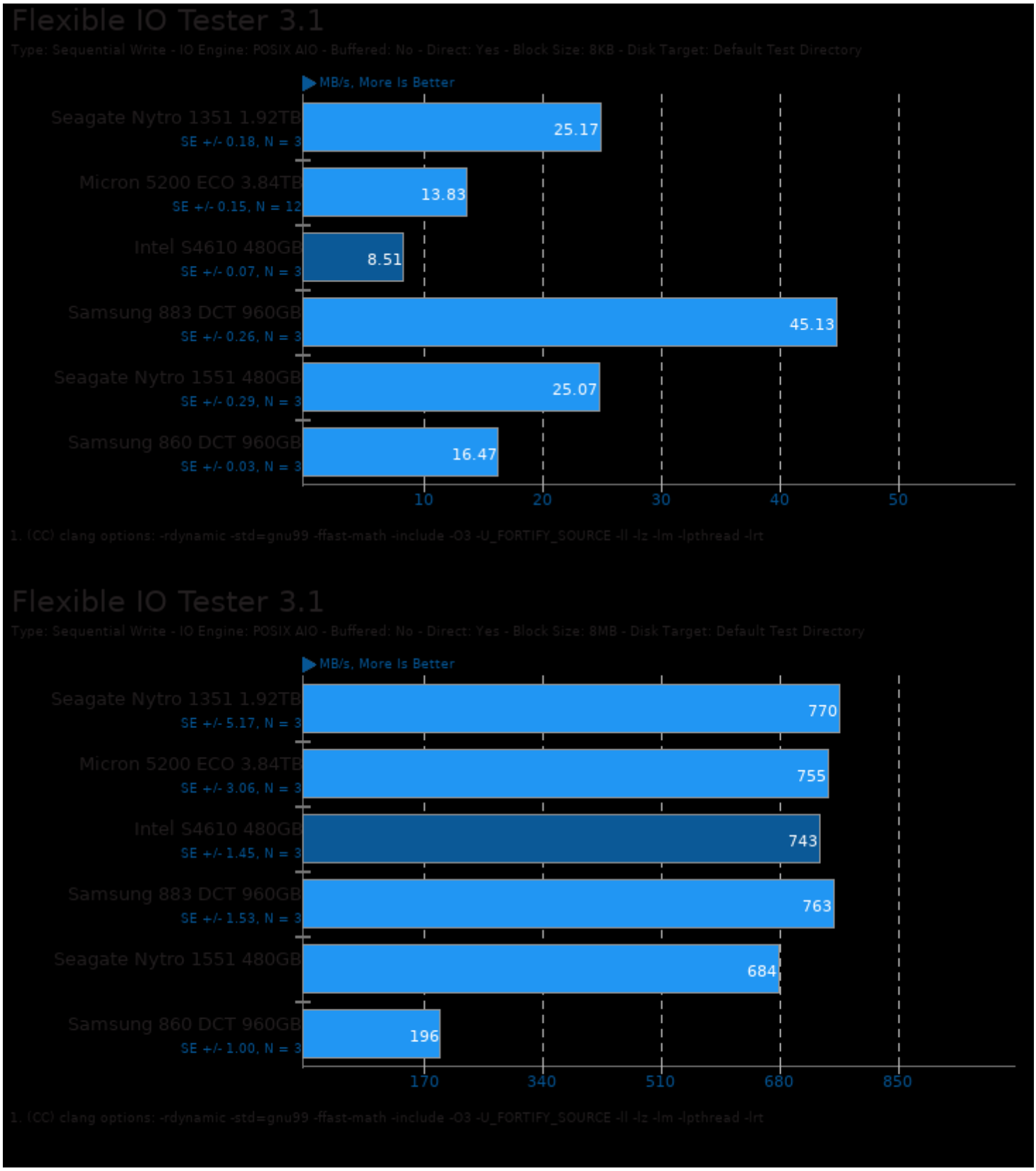

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
578
Micron 5200 ECO 3.84TB
516
Intel S4610 480GB
SE +/- 0.58, N = 3
538
Samsung 883 DCT 960GB
575
Seagate Nytro 1551 480GB
578
Samsung 860 DCT 960GB
186
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.67, N = 3
517
Micron 5200 ECO 3.84TB
495
Intel S4610 480GB
513
Samsung 883 DCT 960GB
SE +/- 0.33, N = 3
518
Seagate Nytro 1551 480GB
SE +/- 0.33, N = 3
516
Samsung 860 DCT 960GB
133
110
220
330
440
550
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

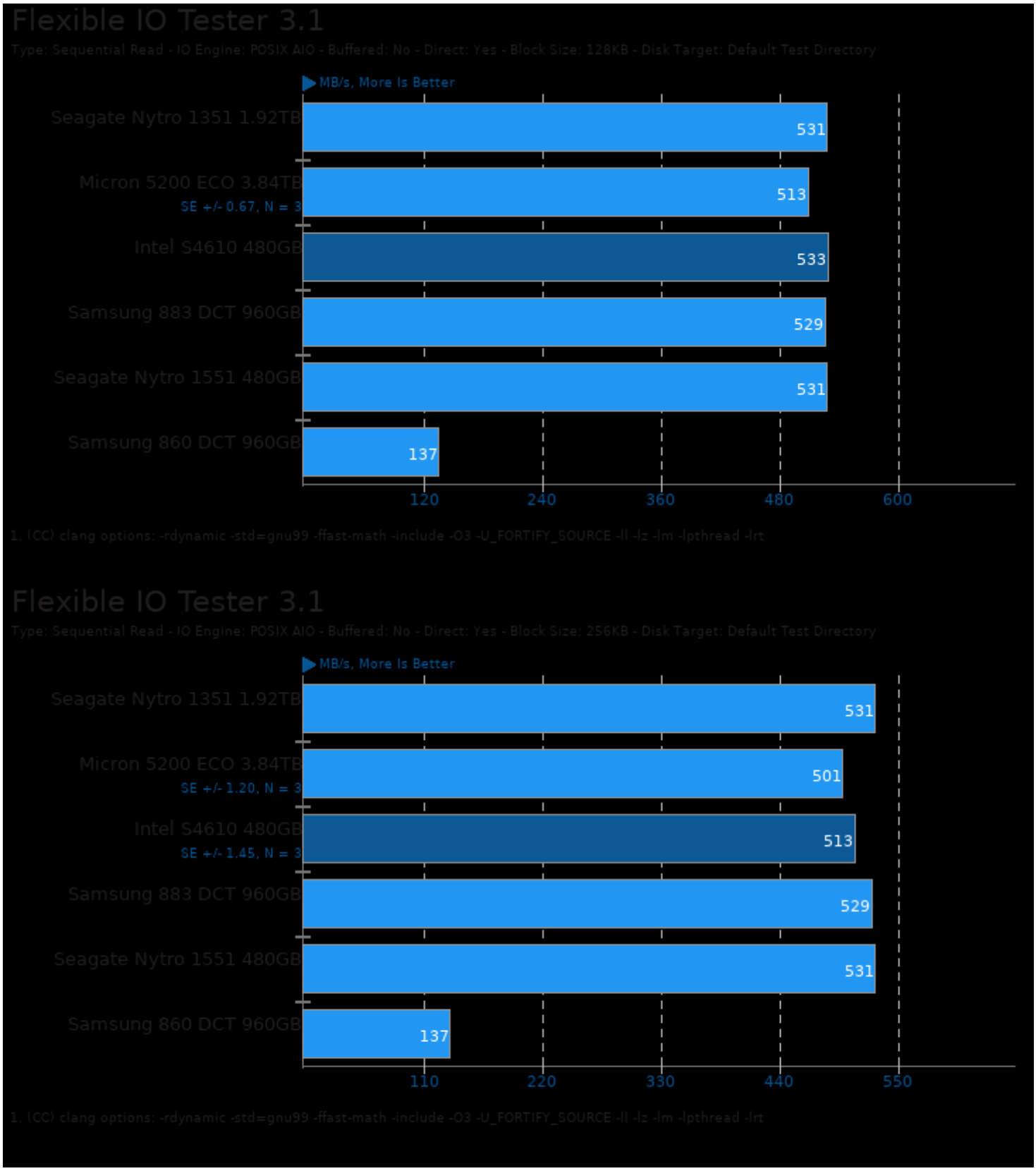

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 33.33, N = 3
16567
Micron 5200 ECO 3.84TB
SE +/- 33.33, N = 3
15833
Intel S4610 480GB
16400
Samsung 883 DCT 960GB
SE +/- 33.33, N = 3
16567
Seagate Nytro 1551 480GB
16500
4K
8K
12K
16K
20K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 1.53, N = 3
588
Micron 5200 ECO 3.84TB
SE +/- 10.20, N = 3
532
Intel S4610 480GB
SE +/- 9.47, N = 4
574
Samsung 883 DCT 960GB
SE +/- 9.40, N = 3
605
Seagate Nytro 1551 480GB
SE +/- 11.53, N = 3
607
Samsung 860 DCT 960GB
204
130
260
390
520
650
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

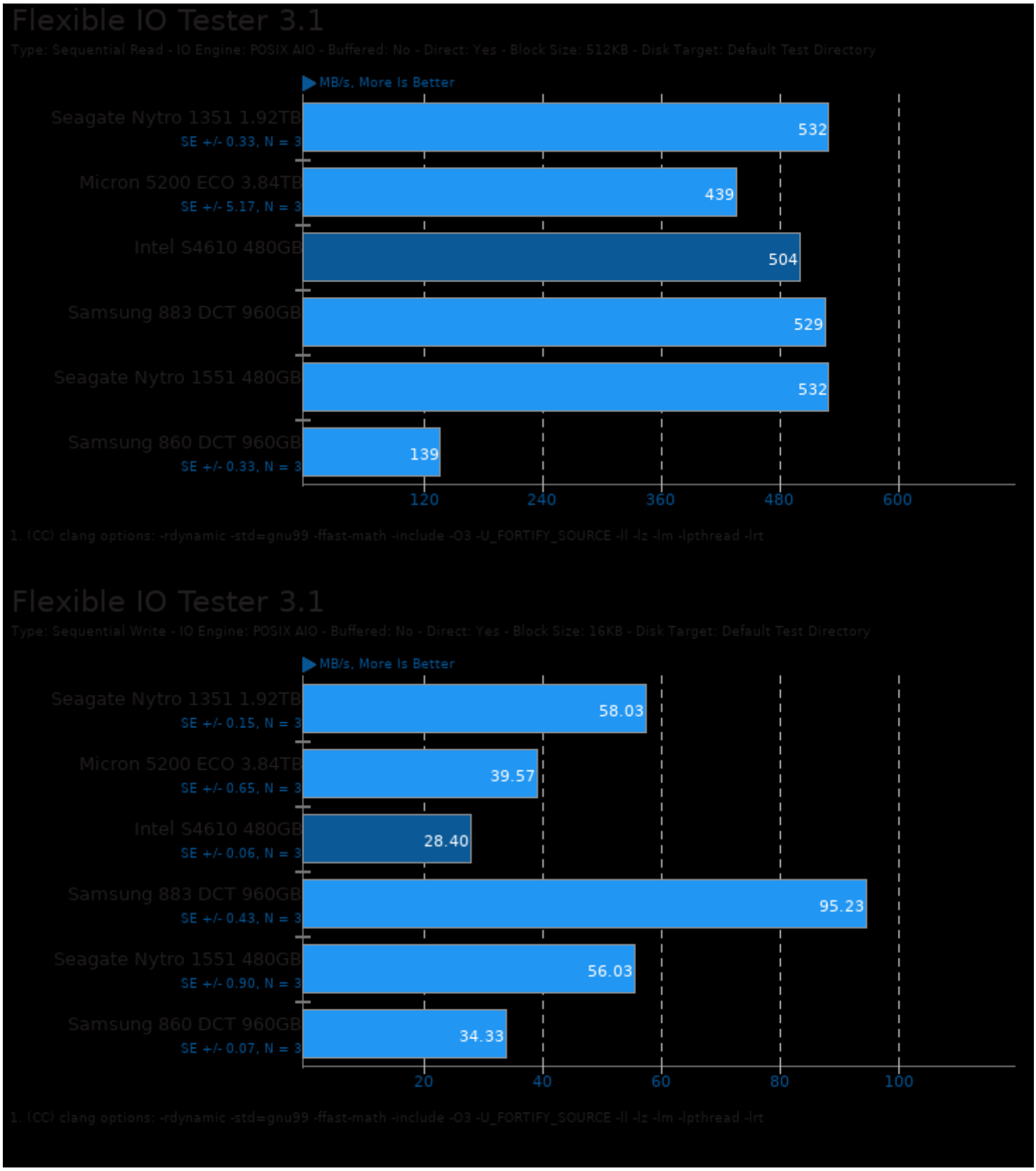

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 1.76, N = 3
521
Micron 5200 ECO 3.84TB
SE +/- 0.33, N = 3
497
Intel S4610 480GB
517
Samsung 883 DCT 960GB
518
Seagate Nytro 1551 480GB
SE +/- 0.88, N = 3
519
Samsung 860 DCT 960GB
SE +/- 0.33, N = 3
135
110
220
330
440
550
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 64MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 8.21, N = 3
688
Micron 5200 ECO 3.84TB
SE +/- 1.20, N = 3
622
Intel S4610 480GB
SE +/- 2.60, N = 3
663
Samsung 883 DCT 960GB
SE +/- 1.53, N = 3
682
Seagate Nytro 1551 480GB
SE +/- 4.67, N = 3
698
Samsung 860 DCT 960GB
SE +/- 0.67, N = 3
272
150
300
450
600
750
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

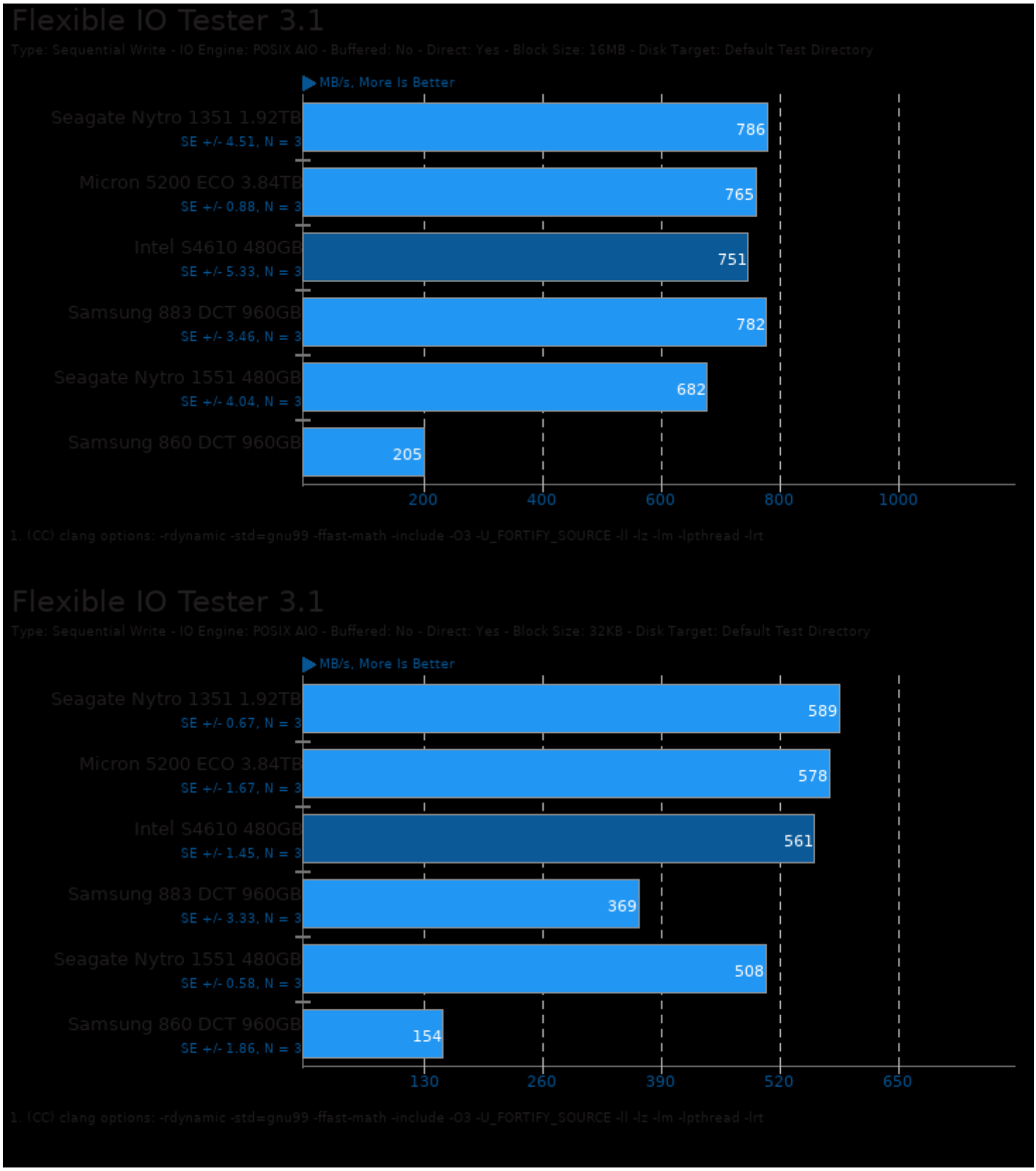

Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 1MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 2.03, N = 3
758
Micron 5200 ECO 3.84TB
SE +/- 2.65, N = 3
750
Intel S4610 480GB
SE +/- 4.67, N = 3
718
Samsung 883 DCT 960GB
SE +/- 2.73, N = 3
752
Seagate Nytro 1551 480GB
SE +/- 3.38, N = 3
661
Samsung 860 DCT 960GB
SE +/- 1.20, N = 3
184
160
320
480
640
800
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 2MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
759
Micron 5200 ECO 3.84TB
753
Intel S4610 480GB
722
Samsung 883 DCT 960GB
SE +/- 1.20, N = 3
755
Seagate Nytro 1551 480GB
SE +/- 3.38, N = 3
664
Samsung 860 DCT 960GB
188
160
320
480
640
800
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

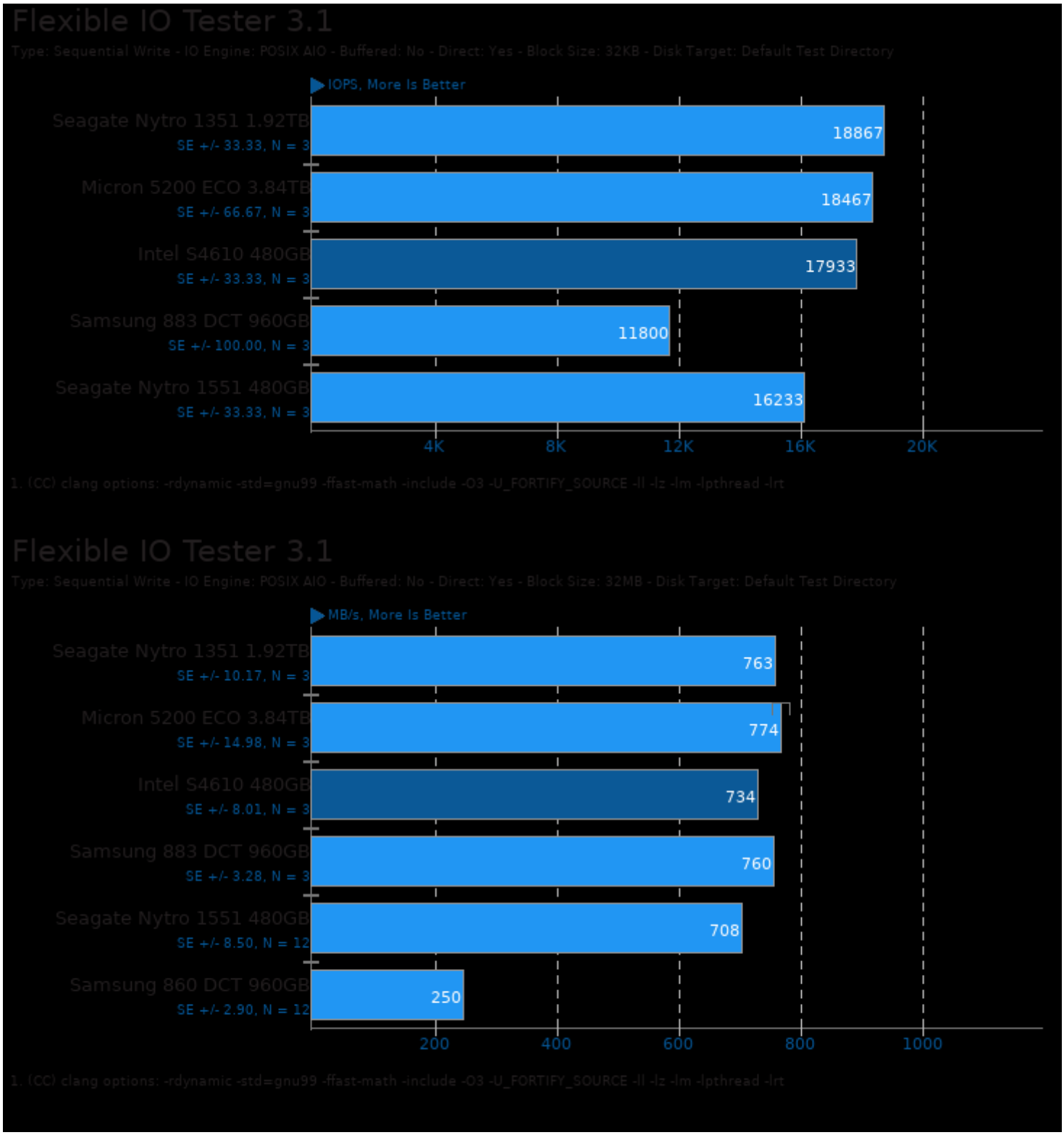

Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.02, N = 3
9.25
Micron 5200 ECO 3.84TB
SE +/- 0.08, N = 6
5.43
Intel S4610 480GB
SE +/- 0.02, N = 3
3.60
Samsung 883 DCT 960GB
SE +/- 0.03, N = 3
21.63
Seagate Nytro 1551 480GB
SE +/- 0.06, N = 3
9.87
Samsung 860 DCT 960GB
SE +/- 0.01, N = 3
8.10
5
10
15
20
25
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 4MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 3.38, N = 3
776
Micron 5200 ECO 3.84TB
SE +/- 2.03, N = 3
763
Intel S4610 480GB
SE +/- 1.15, N = 3
748
Samsung 883 DCT 960GB
SE +/- 3.61, N = 3
766
Seagate Nytro 1551 480GB
SE +/- 8.11, N = 3
672
Samsung 860 DCT 960GB
SE +/- 1.33, N = 3
201
200
400
600
800
1000
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

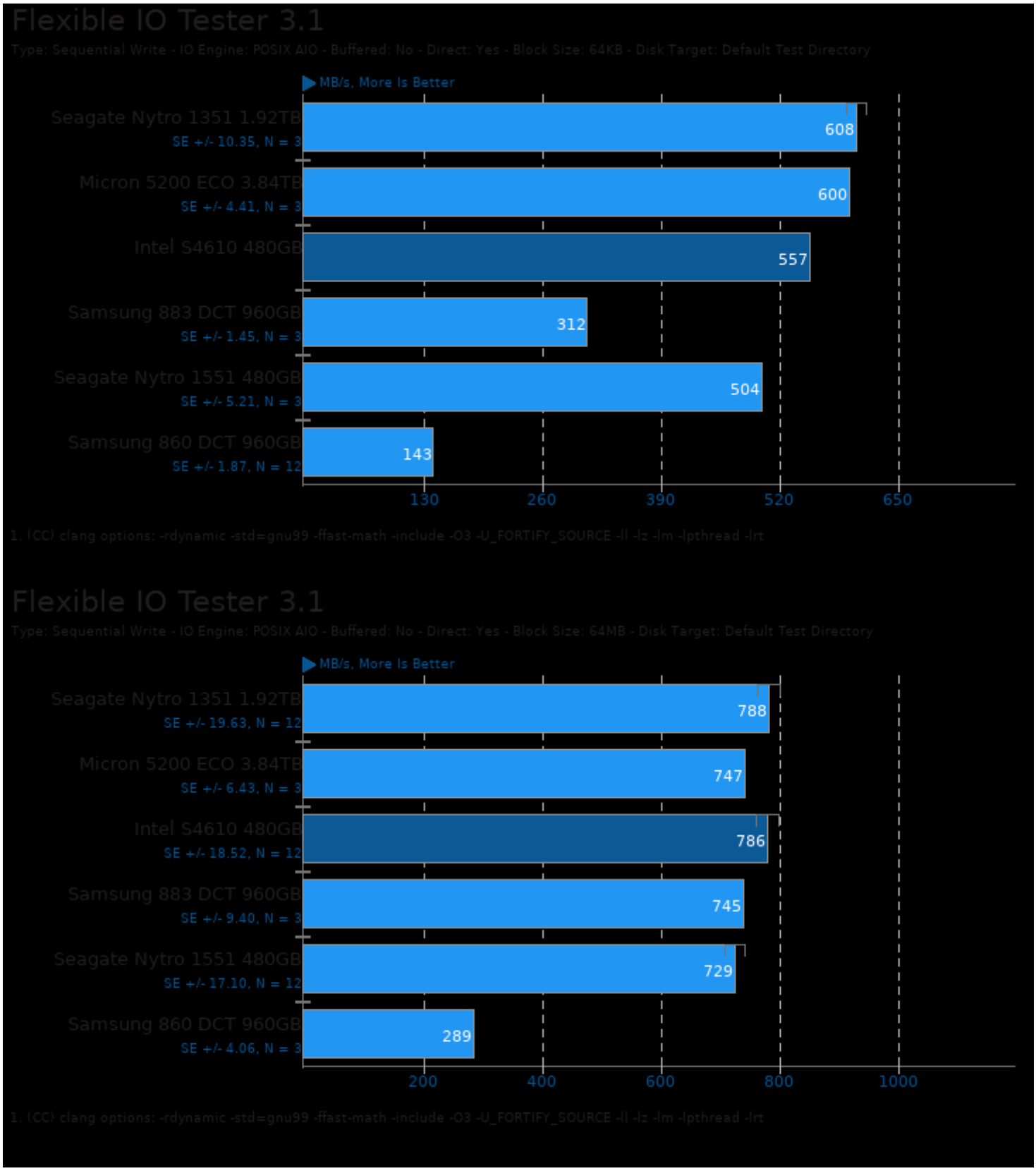

Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.18, N = 3
25.17
Micron 5200 ECO 3.84TB
SE +/- 0.15, N = 12
13.83
Intel S4610 480GB
SE +/- 0.07, N = 3
8.51
Samsung 883 DCT 960GB
SE +/- 0.26, N = 3
45.13
Seagate Nytro 1551 480GB
SE +/- 0.29, N = 3
25.07
Samsung 860 DCT 960GB
SE +/- 0.03, N = 3
16.47
10
20
30
40
50
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 5.17, N = 3
770
Micron 5200 ECO 3.84TB
SE +/- 3.06, N = 3
755
Intel S4610 480GB
SE +/- 1.45, N = 3
743
Samsung 883 DCT 960GB
SE +/- 1.53, N = 3
763
Seagate Nytro 1551 480GB
684
Samsung 860 DCT 960GB
SE +/- 1.00, N = 3
196
170
340
510
680
850
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

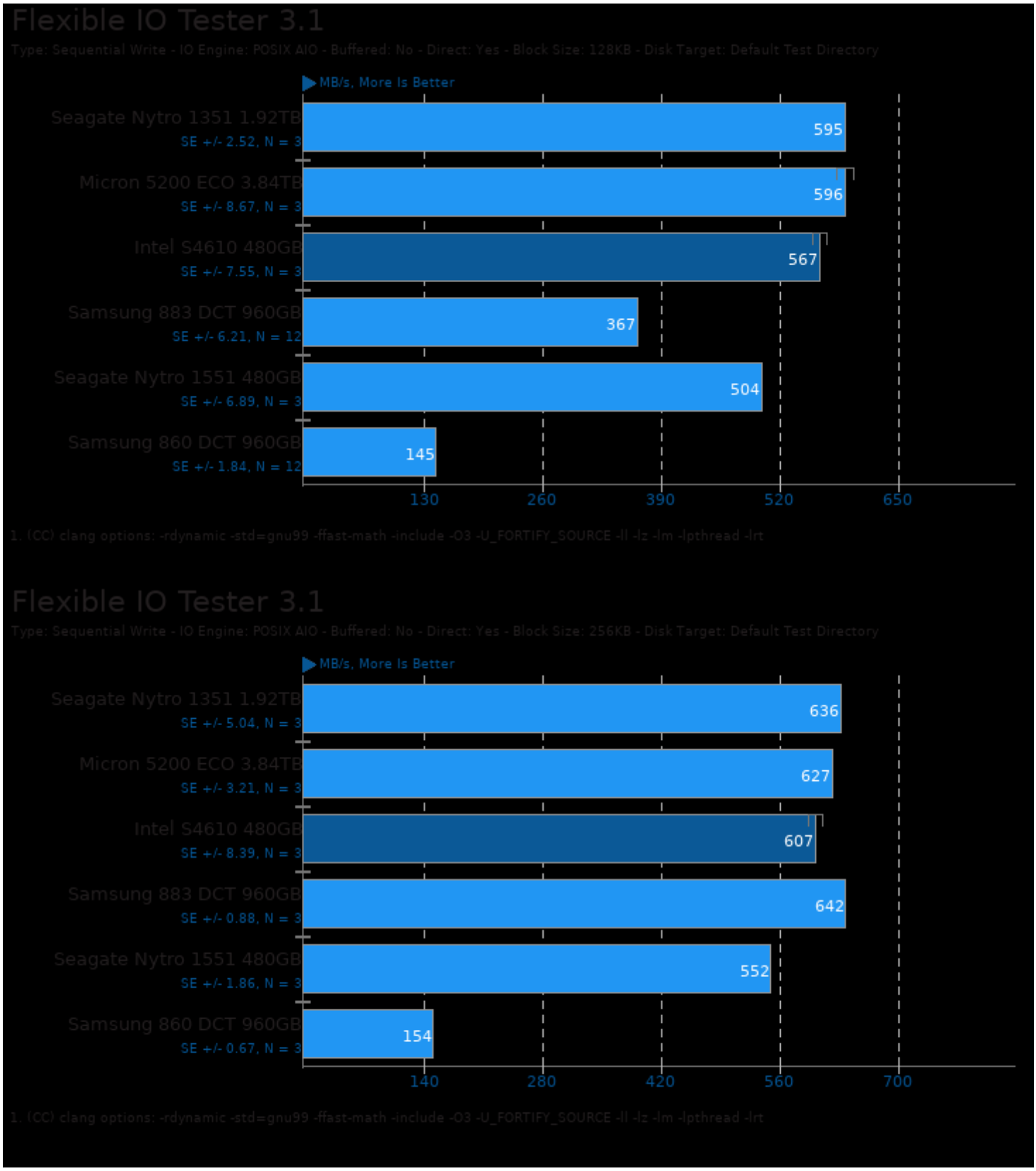

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
531
Micron 5200 ECO 3.84TB
SE +/- 0.67, N = 3
513
Intel S4610 480GB
533
Samsung 883 DCT 960GB
529
Seagate Nytro 1551 480GB
531
Samsung 860 DCT 960GB
137
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
531
Micron 5200 ECO 3.84TB
SE +/- 1.20, N = 3
501
Intel S4610 480GB
SE +/- 1.45, N = 3
513
Samsung 883 DCT 960GB
529
Seagate Nytro 1551 480GB
531
Samsung 860 DCT 960GB
137
110
220
330
440
550
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

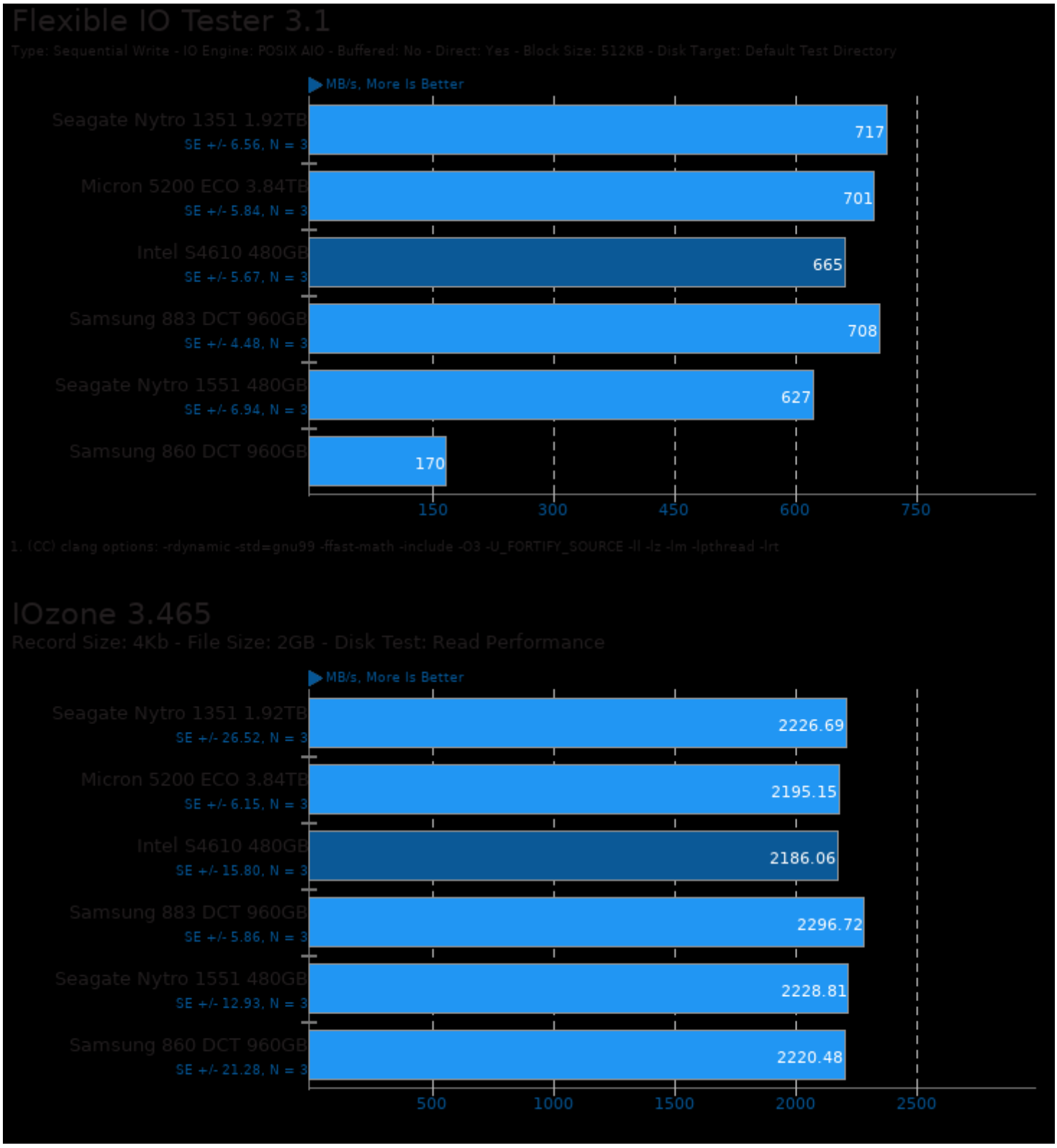

Flexible IO Tester 3.1
Type: Sequential Read - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 512KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.33, N = 3
532
Micron 5200 ECO 3.84TB
SE +/- 5.17, N = 3
439
Intel S4610 480GB
504
Samsung 883 DCT 960GB
529
Seagate Nytro 1551 480GB
532
Samsung 860 DCT 960GB
SE +/- 0.33, N = 3
139
120
240
360
480
600
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.15, N = 3
58.03
Micron 5200 ECO 3.84TB
SE +/- 0.65, N = 3
39.57
Intel S4610 480GB
SE +/- 0.06, N = 3
28.40
Samsung 883 DCT 960GB
SE +/- 0.43, N = 3
95.23
Seagate Nytro 1551 480GB
SE +/- 0.90, N = 3
56.03
Samsung 860 DCT 960GB
SE +/- 0.07, N = 3
34.33
20
40
60
80
100
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt


Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 16MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 4.51, N = 3
786
Micron 5200 ECO 3.84TB
SE +/- 0.88, N = 3
765
Intel S4610 480GB
SE +/- 5.33, N = 3
751
Samsung 883 DCT 960GB
SE +/- 3.46, N = 3
782
Seagate Nytro 1551 480GB
SE +/- 4.04, N = 3
682
Samsung 860 DCT 960GB
205
200
400
600
800
1000
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.67, N = 3
589
Micron 5200 ECO 3.84TB
SE +/- 1.67, N = 3
578
Intel S4610 480GB
SE +/- 1.45, N = 3
561
Samsung 883 DCT 960GB
SE +/- 3.33, N = 3
369
Seagate Nytro 1551 480GB
SE +/- 0.58, N = 3
508
Samsung 860 DCT 960GB
SE +/- 1.86, N = 3
154
130
260
390
520
650
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

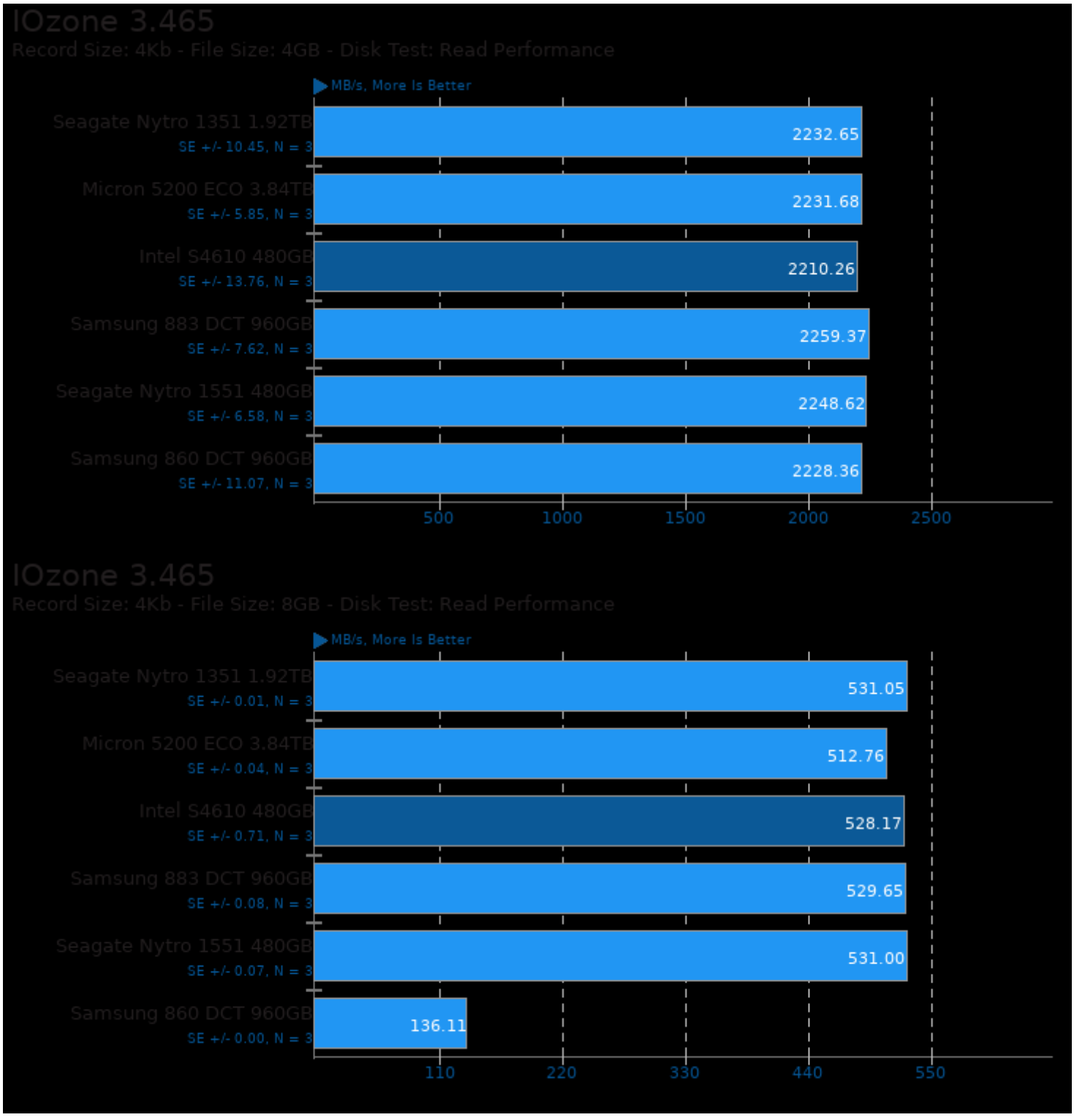

Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32KB - Disk Target: Default Test Directory
IOPS, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 33.33, N = 3
18867
Micron 5200 ECO 3.84TB
SE +/- 66.67, N = 3
18467
Intel S4610 480GB
SE +/- 33.33, N = 3
17933
Samsung 883 DCT 960GB
SE +/- 100.00, N = 3
11800
Seagate Nytro 1551 480GB
SE +/- 33.33, N = 3
16233
4K
8K
12K
16K
20K
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 32MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 10.17, N = 3
763
Micron 5200 ECO 3.84TB
SE +/- 14.98, N = 3
774
Intel S4610 480GB
SE +/- 8.01, N = 3
734
Samsung 883 DCT 960GB
SE +/- 3.28, N = 3
760
Seagate Nytro 1551 480GB
SE +/- 8.50, N = 12
708
Samsung 860 DCT 960GB
SE +/- 2.90, N = 12
250
200
400
600
800
1000
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt


Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 64KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 10.35, N = 3
608
Micron 5200 ECO 3.84TB
SE +/- 4.41, N = 3
600
Intel S4610 480GB
557
Samsung 883 DCT 960GB
SE +/- 1.45, N = 3
312
Seagate Nytro 1551 480GB
SE +/- 5.21, N = 3
504
Samsung 860 DCT 960GB
SE +/- 1.87, N = 12
143
130
260
390
520
650
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 64MB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 19.63, N = 12
788
Micron 5200 ECO 3.84TB
SE +/- 6.43, N = 3
747
Intel S4610 480GB
SE +/- 18.52, N = 12
786
Samsung 883 DCT 960GB
SE +/- 9.40, N = 3
745
Seagate Nytro 1551 480GB
SE +/- 17.10, N = 12
729
Samsung 860 DCT 960GB
SE +/- 4.06, N = 3
289
200
400
600
800
1000
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

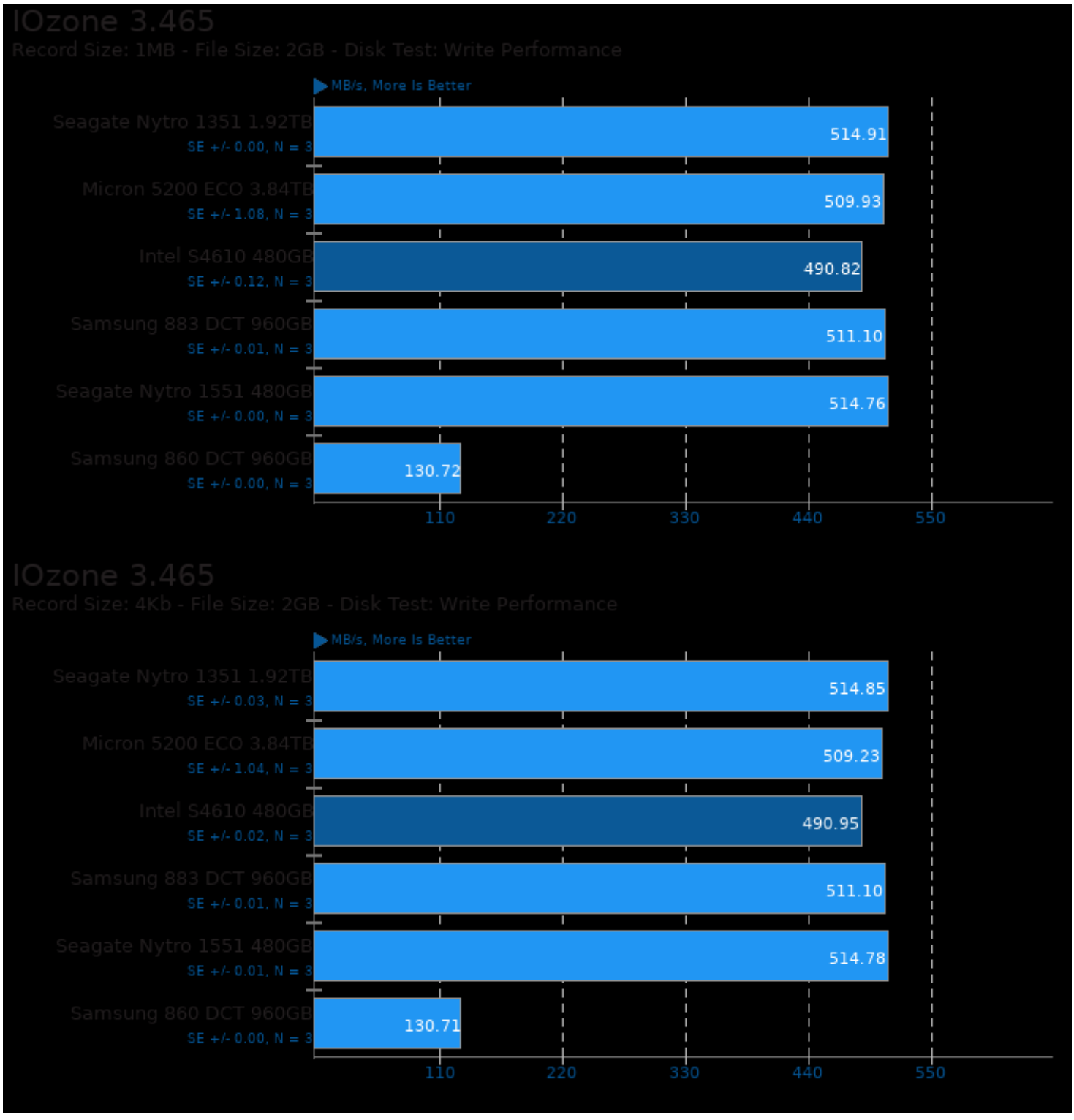

Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 128KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 2.52, N = 3
595
Micron 5200 ECO 3.84TB
SE +/- 8.67, N = 3
596
Intel S4610 480GB
SE +/- 7.55, N = 3
567
Samsung 883 DCT 960GB
SE +/- 6.21, N = 12
367
Seagate Nytro 1551 480GB
SE +/- 6.89, N = 3
504
Samsung 860 DCT 960GB
SE +/- 1.84, N = 12
145
130
260
390
520
650
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 256KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 5.04, N = 3
636
Micron 5200 ECO 3.84TB
SE +/- 3.21, N = 3
627
Intel S4610 480GB
SE +/- 8.39, N = 3
607
Samsung 883 DCT 960GB
SE +/- 0.88, N = 3
642
Seagate Nytro 1551 480GB
SE +/- 1.86, N = 3
552
Samsung 860 DCT 960GB
SE +/- 0.67, N = 3
154
140
280
420
560
700
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt

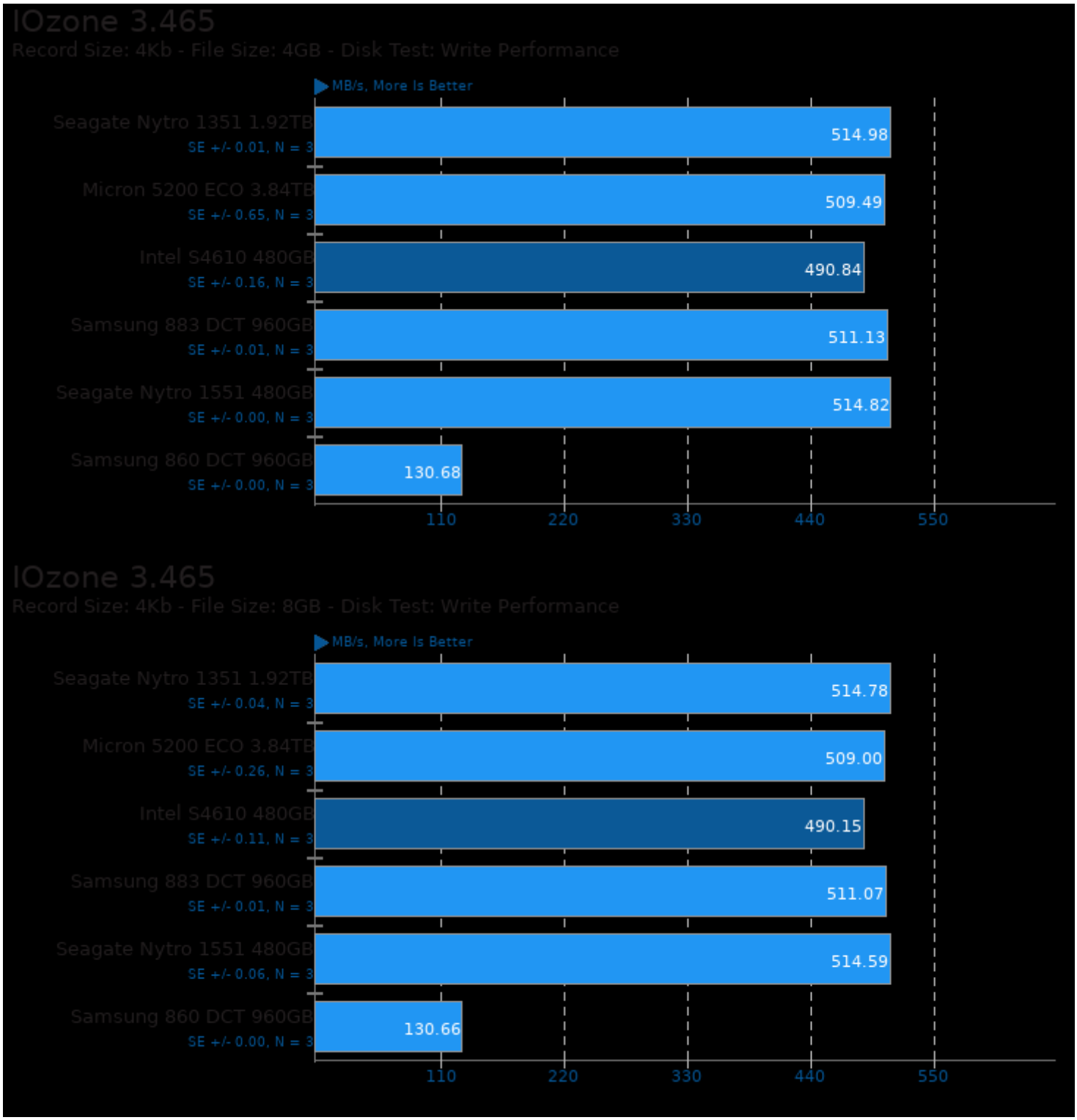

Flexible IO Tester 3.1
Type: Sequential Write - IO Engine: POSIX AIO - Buffered: No - Direct: Yes - Block Size: 512KB - Disk Target: Default Test Directory
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 6.56, N = 3
717
Micron 5200 ECO 3.84TB
SE +/- 5.84, N = 3
701
Intel S4610 480GB
SE +/- 5.67, N = 3
665
Samsung 883 DCT 960GB
SE +/- 4.48, N = 3
708
Seagate Nytro 1551 480GB
SE +/- 6.94, N = 3
627
Samsung 860 DCT 960GB
170
150
300
450
600
750
1. (CC) clang options: -rdynamic -std=gnu99 -ffast-math -include -O3 -U_FORTIFY_SOURCE -ll -lz -lm -lpthread -lrt
IOzone 3.465
Record Size: 4Kb - File Size: 2GB - Disk Test: Read Performance
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 26.52, N = 3
2226.69
Micron 5200 ECO 3.84TB
SE +/- 6.15, N = 3
2195.15
Intel S4610 480GB
SE +/- 15.80, N = 3
2186.06
Samsung 883 DCT 960GB
SE +/- 5.86, N = 3
2296.72
Seagate Nytro 1551 480GB
SE +/- 12.93, N = 3
2228.81
Samsung 860 DCT 960GB
SE +/- 21.28, N = 3
2220.48
500
1000
1500
2000
2500

SSD Benchmark

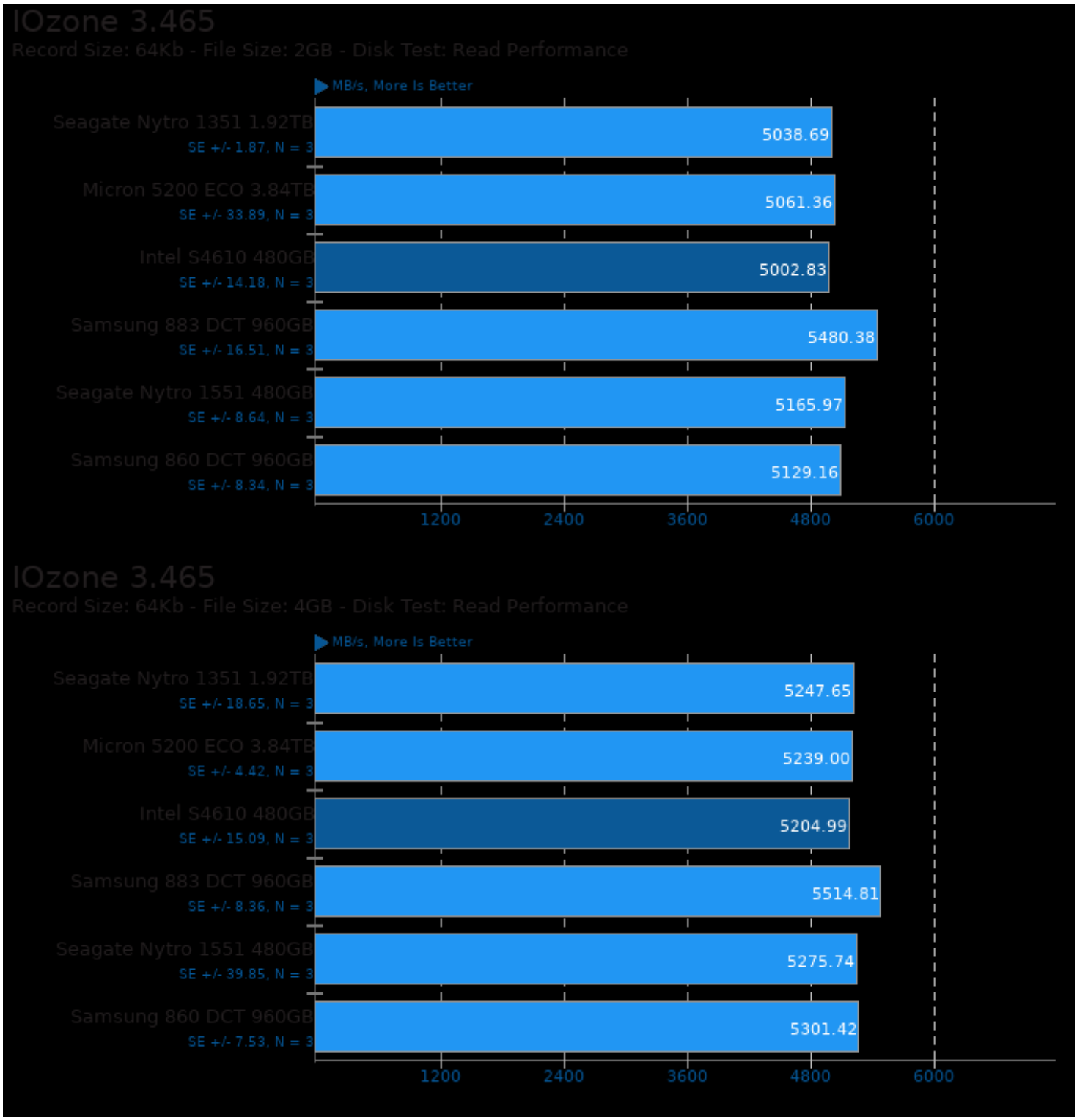


SSD Benchmark

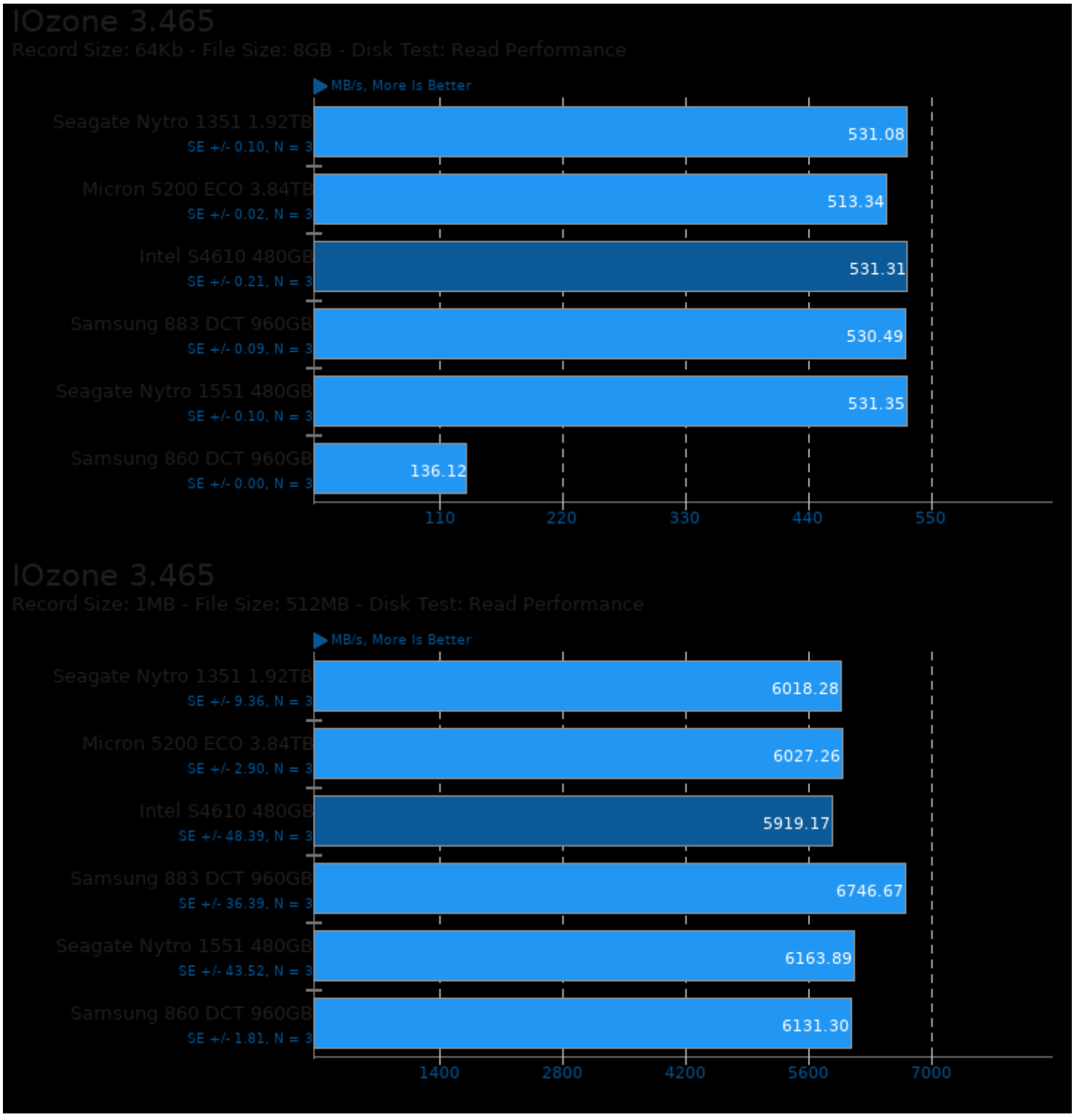



IOzone 3.465
Record Size: 4Kb - File Size: 4GB - Disk Test: Write Performance
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.01, N = 3
514.98
Micron 5200 ECO 3.84TB
SE +/- 0.65, N = 3
509.49
Intel S4610 480GB
SE +/- 0.16, N = 3
490.84
Samsung 883 DCT 960GB
SE +/- 0.01, N = 3
511.13
Seagate Nytro 1551 480GB
SE +/- 0.00, N = 3
514.82
Samsung 860 DCT 960GB
SE +/- 0.00, N = 3
130.68
110
220
330
440
550
IOzone 3.465
Record Size: 4Kb - File Size: 8GB - Disk Test: Write Performance
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.04, N = 3
514.78
Micron 5200 ECO 3.84TB
SE +/- 0.26, N = 3
509.00
Intel S4610 480GB
SE +/- 0.11, N = 3
490.15
Samsung 883 DCT 960GB
SE +/- 0.01, N = 3
511.07
Seagate Nytro 1551 480GB
SE +/- 0.06, N = 3
514.59
Samsung 860 DCT 960GB
SE +/- 0.00, N = 3
130.66
110
220
330
440
550

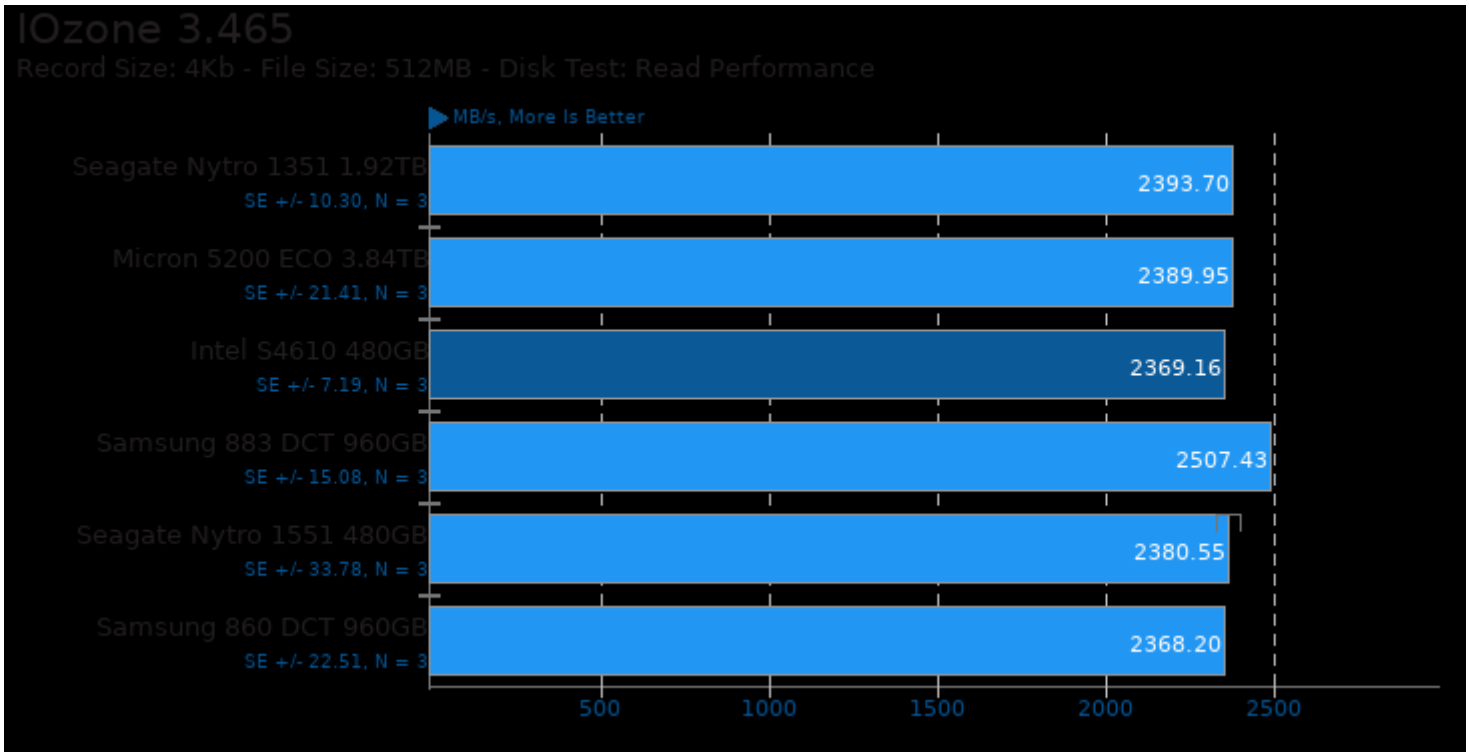
SSD Benchmark

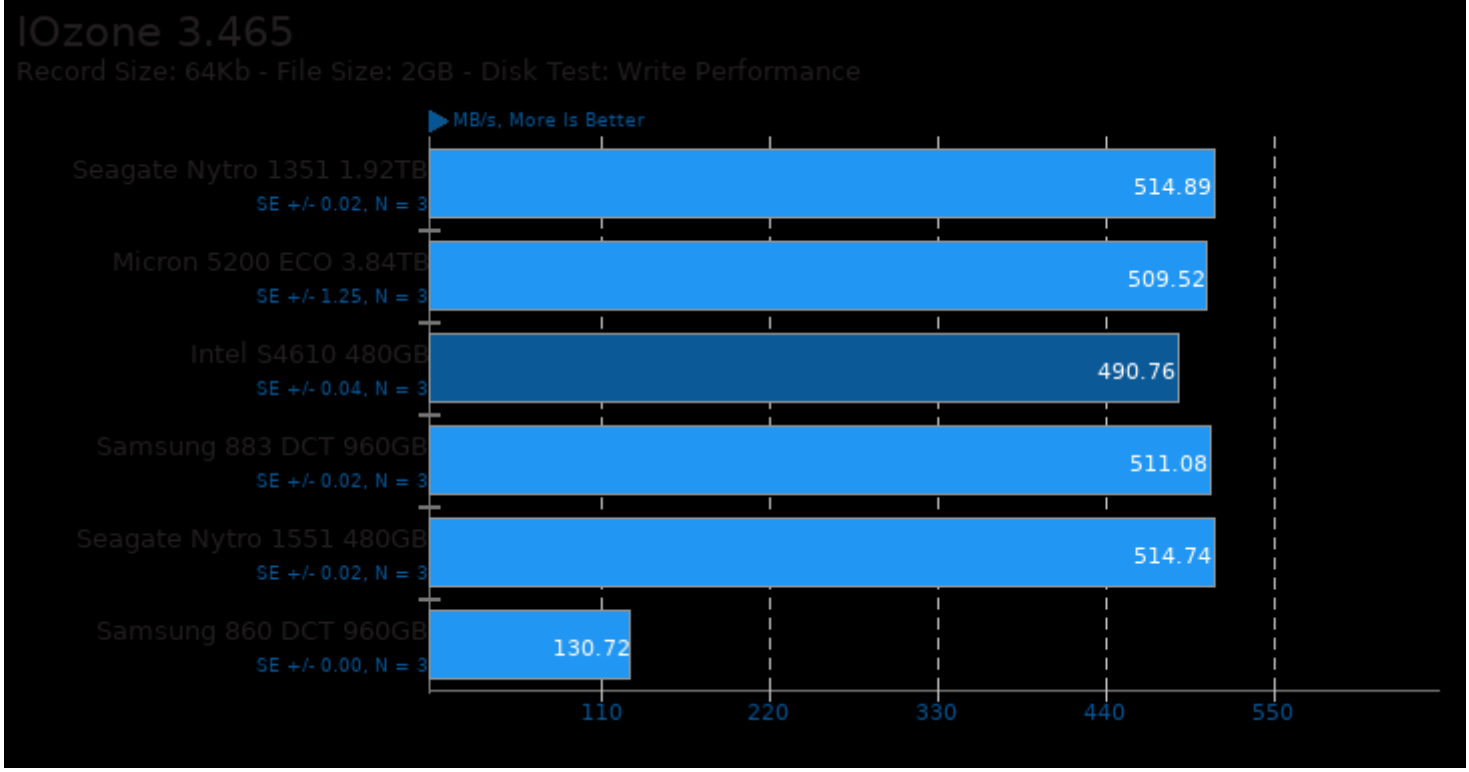


SSD Benchmark

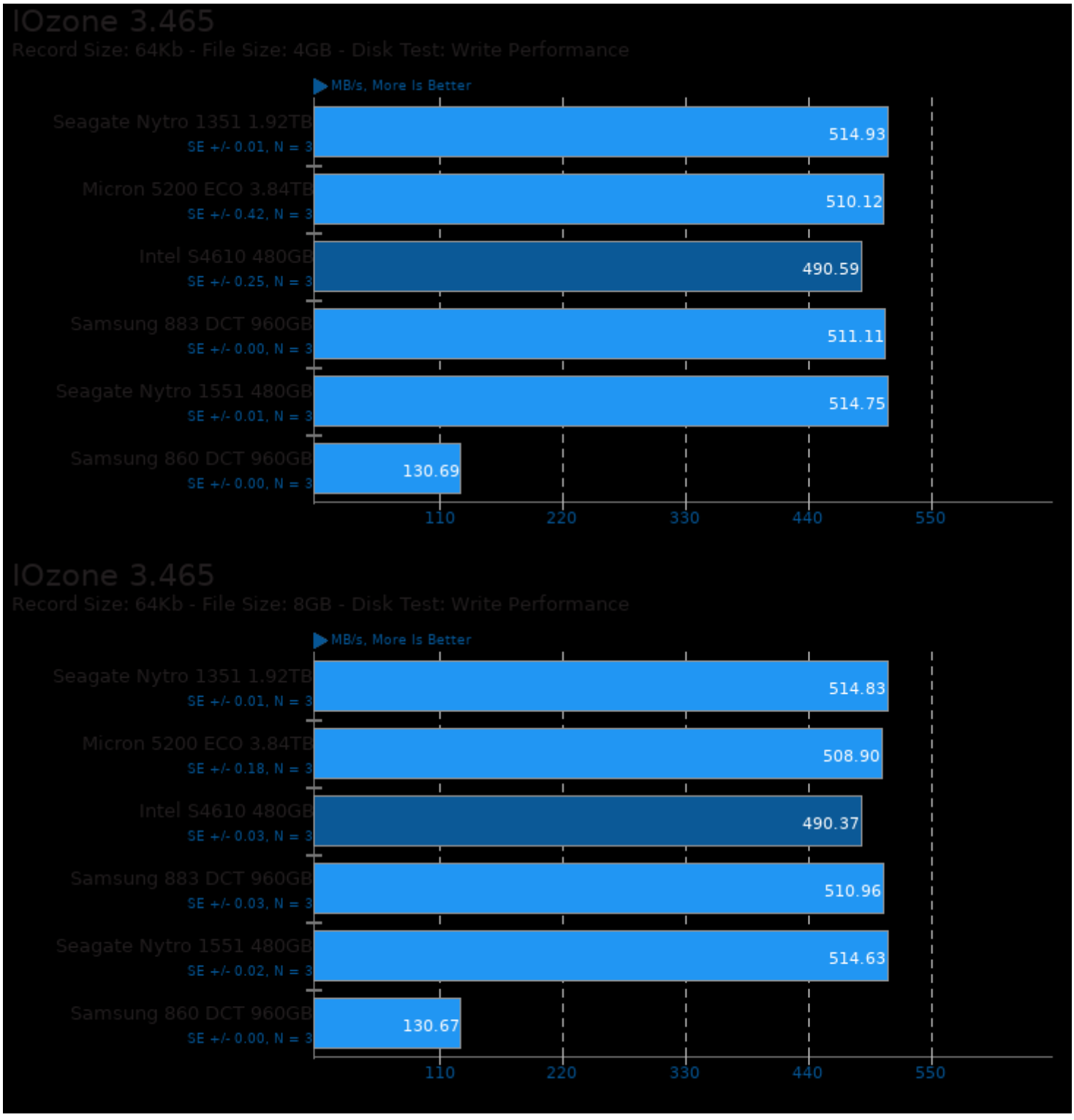


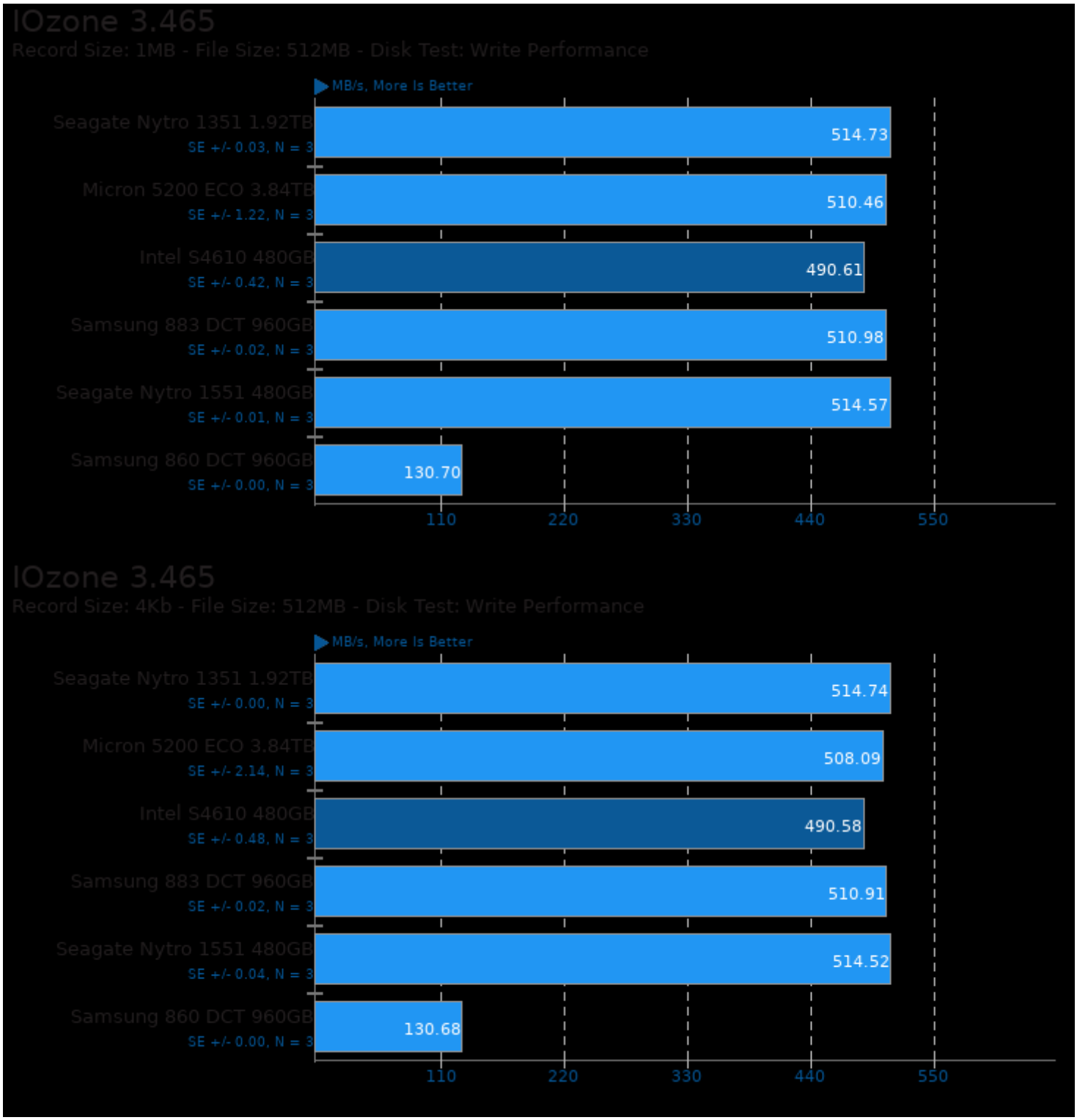
SSD Benchmark



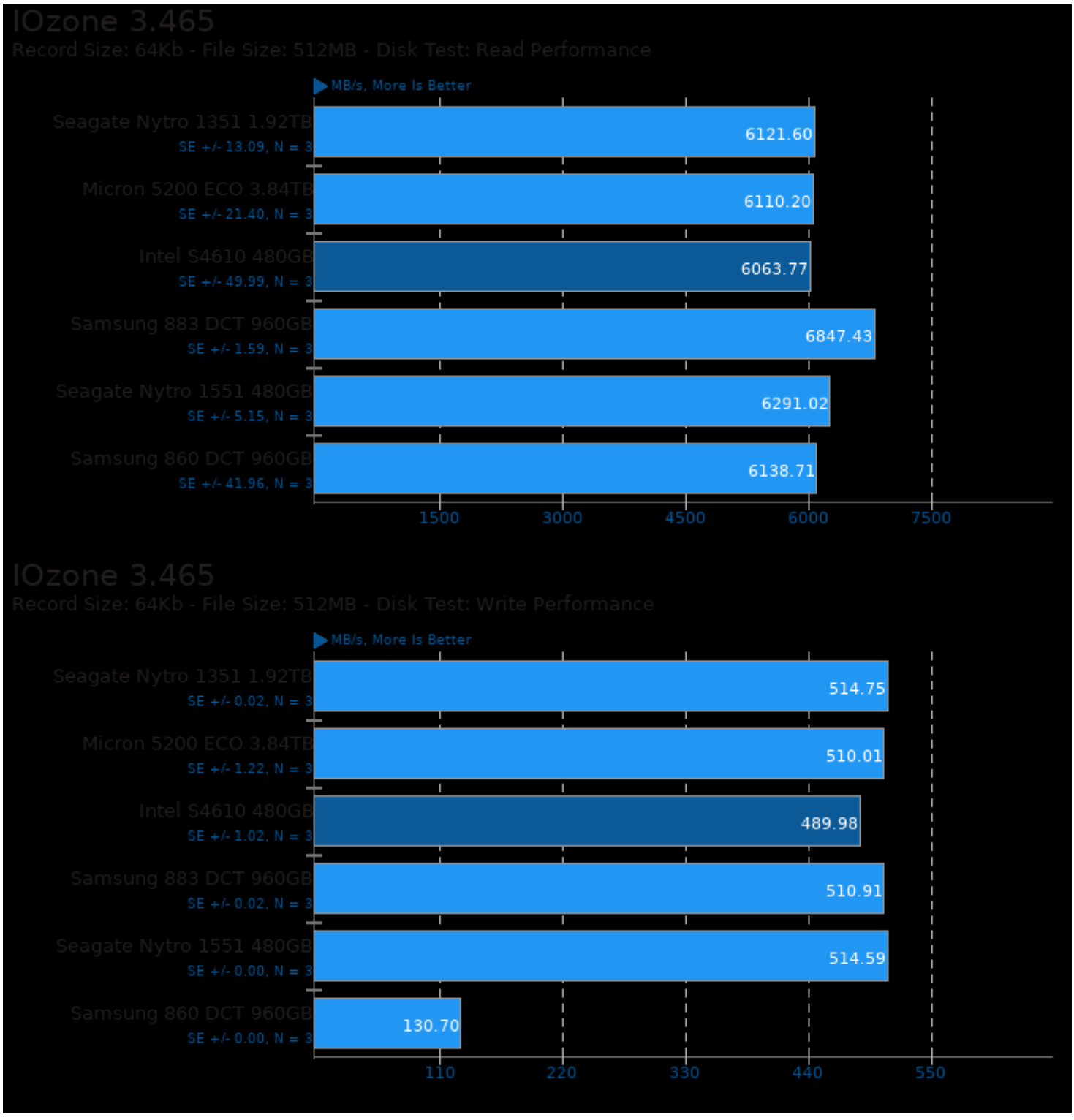


SSD Benchmark

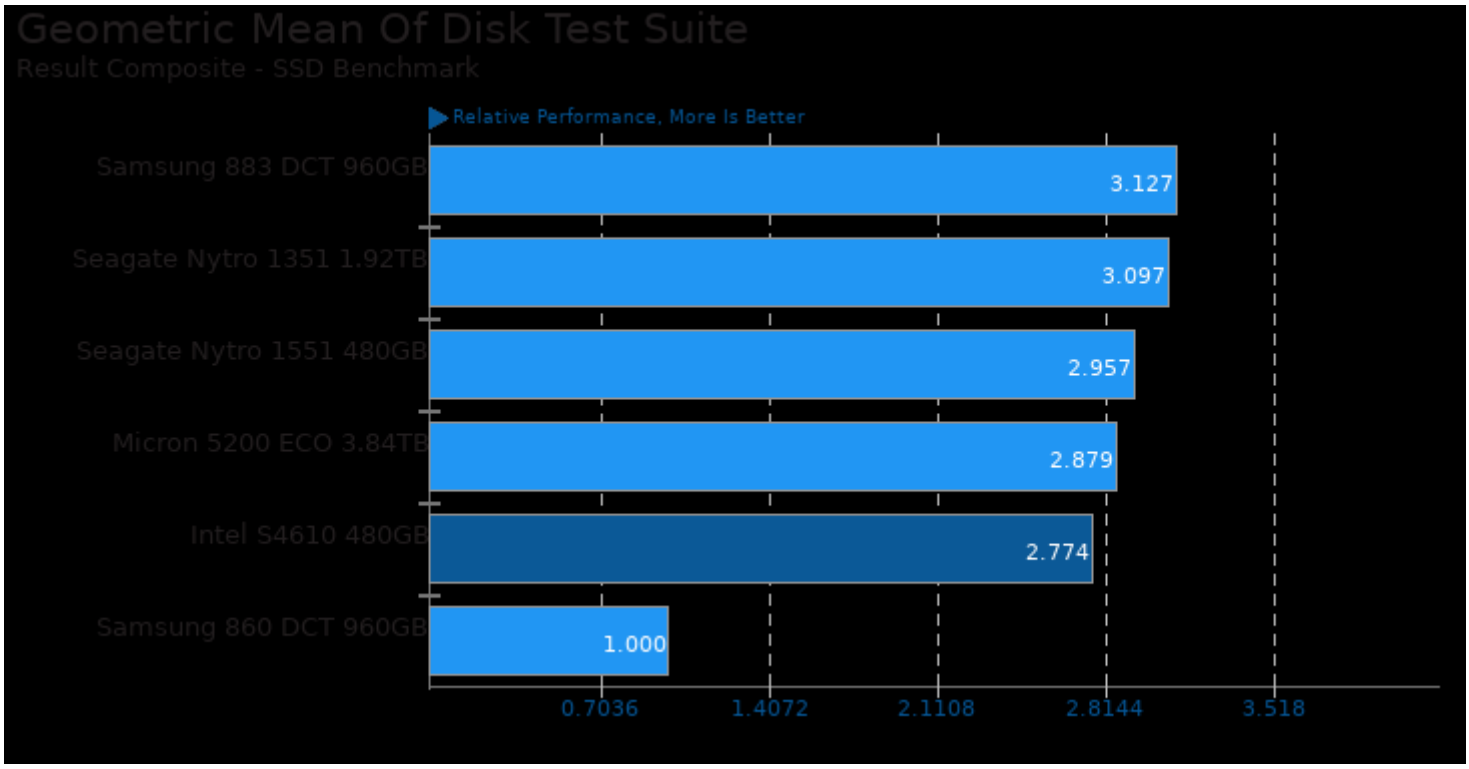



IOzone 3.465
Record Size: 1MB - File Size: 512MB - Disk Test: Write Performance
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.03, N = 3
514.73
Micron 5200 ECO 3.84TB
SE +/- 1.22, N = 3
510.46
Intel S4610 480GB
SE +/- 0.42, N = 3
490.61
Samsung 883 DCT 960GB
SE +/- 0.02, N = 3
510.98
Seagate Nytro 1551 480GB
SE +/- 0.01, N = 3
514.57
Samsung 860 DCT 960GB
SE +/- 0.00, N = 3
130.70
110
220
330
440
550
IOzone 3.465
Record Size: 4Kb - File Size: 512MB - Disk Test: Write Performance
MB/s, More Is Better
Seagate Nytro 1351 1.92TB
SE +/- 0.00, N = 3
514.74
Micron 5200 ECO 3.84TB
SE +/- 2.14, N = 3
508.09
Intel S4610 480GB
SE +/- 0.48, N = 3
490.58
Samsung 883 DCT 960GB
SE +/- 0.02, N = 3
510.91
Seagate Nytro 1551 480GB
SE +/- 0.04, N = 3
514.52
Samsung 860 DCT 960GB
SE +/- 0.00, N = 3
130.68
110
220
330
440
550

SSD Benchmark



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



Geometric mean based upon tests: pts/iozone and pts/fio

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 15:17.