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EGX_Edge_RTX2080

Intel Core i3-9100E testing with a GIGABYTE MH310AP-SI (F1 BIOS) and Gigabyte Intel UHD 630 8GB on Ubuntu 18.04 via the Phoronix Test Suite.

Automated Executive Summary

USB2.0 Port4 had the most wins, coming in first place for 50% of the tests.

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

GLmark2 (Resolution: 3840 x 2160) at 58.778x
GLmark2 (Resolution: 2560 x 1440) at 41.984x
GLmark2 (Resolution: 1920 x 1200) at 33.995x
GLmark2 (Resolution: 1920 x 1080) at 31.648x
GLmark2 (Resolution: 1600 x 1200) at 30.395x
GLmark2 (Resolution: 1280 x 1024) at 22.591x
Flexible IO Tester (Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory) at 21x
GLmark2 (Resolution: 1024 x 768) at 12.528x
Flexible IO Tester (Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory) at 11.989x
Flexible IO Tester (Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk

Target: Default Test Directory) at 11.962x.

Test Systems:

M.2_mSATA ATA_128GB

USB3.0

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash + 62GB Ultra USB 3.0, Graphics: NVIDIA GeForce RTX 2080 8GB (1515/7000MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6.0, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

USB3.0 run2

USB2.0

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash + 16GB USB Drive 3ME, Graphics: NVIDIA GeForce RTX 2080 8GB (1515/7000MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6.0, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

USB2.0 run2

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash + 16GB USB Drive 3ME, Graphics: NVIDIA GeForce RTX 2080 8GB (420/405MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6.0, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Graphics Test

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash, Graphics: Gigabyte Intel UHD 630 8GB (1515/7000MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6 Mesa 20.0.8, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 3840x2160

Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Graphics Notes: SNA
Python Notes: Python 2.7.17 + Python 3.6.9
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

Gigabyte NVIDIA GeForce RTX 2080

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash, Graphics: Gigabyte NVIDIA GeForce RTX 2080 8GB (1515/7000MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6.0, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 3840x2160

Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Python Notes: Python 2.7.17 + Python 3.6.9
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

CPU stress

CPU stress 1

DRAM Test

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash, Graphics: Gigabyte NVIDIA GeForce RTX 2080 8GB (1515/7000MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6.0, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

USB3.0 Port1

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash + 16GB USB Drive 3ME, Graphics: Gigabyte Intel UHD 630 8GB (1515/7000MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6 Mesa 20.0.8, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

USB3.0 port2

USB3.0 Port3

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash + 16GB USB Drive 3ME, Graphics: Gigabyte Intel UHD 630 8GB (435/405MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8,

Display Driver: NVIDIA 450.66, OpenGL: 4.6 Mesa 20.0.8, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

USB3.0 Port4

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash + 16GB USB Drive 3ME, Graphics: Gigabyte Intel UHD 630 8GB (1515/7000MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6 Mesa 20.0.8, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

USB2.0 Port1

USB2.0 port 1

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash + 16GB USB Drive 3ME, Graphics: Gigabyte Intel UHD 630 8GB (435/405MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6 Mesa 20.0.8, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

USB2.0 Port2

USB2.0 Port3

USB2.0 Port4

Processor: Intel Core i3-9100E @ 3.10GHz (4 Cores), Motherboard: GIGABYTE MH310AP-SI (F1 BIOS), Chipset: Intel Cannon Lake PCH, Memory: 1 x 8192 MB DDR4-2400MT/s GSLG42F-18----------, Disk: 128GB SATA Flash + 16GB USB Drive 3ME, Graphics: Gigabyte Intel UHD 630 8GB (1515/7000MHz), Audio: Realtek ALC887-VD, Monitor: Acer KG281K, Network: Intel I219-V + 3 x Intel I211

OS: Ubuntu 18.04, Kernel: 5.4.0-51-generic (x86_64), Desktop: GNOME Shell 3.28.4, Display Server: X Server 1.20.8, Display Driver: NVIDIA 450.66, OpenGL: 4.6 Mesa 20.0.8, Compiler: GCC 7.5.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib --with-tune=generic --without-cuda-driver -v
Disk Notes: MQ-DEADLINE / errors=remount-ro,relatime,rw
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xd6
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT disabled + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: disabled RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

	M.2_mSATA ATA_128GB	USB 3.0	USB 3.0 run2	USB 2.0	USB 2.0 run2	Graphics Test	Gigabyte NVIDIA GeForce RTX 208	CPU stress	CPU stress 1	DRAM Test	USB 3.0 Port 1	USB 3.0 port 2	USB 3.0 Port 3	USB 3.0 Port 4	USB 2.0 Port 1	USB 2.0 port 1	USB 2.0 Port 2	USB 2.0 Port 3	USB 2.0 Port 4
Stress-NG - Crypto (Bogo Ops/s)									663.16										
Standard Deviation									2.2%										
Stress-NG - Forking (Bogo Ops/s)									214 68										
Standard Deviation									0.8%										

Stress-NG	127
- CPU Stress (Bogo Ops/s)	2
Standard Deviation	0.2%
Stress-NG - Matrix Math (Bogo Ops/s)	114
	69
Standard Deviation	1.2%
Stress-NG - Vector Math (Bogo Ops/s)	145
	52
Standard Deviation	0.1%
Stress-NG - Memory Copying (Bogo Ops/s)	751.
	45
Standard Deviation	0.2%
Stress-NG - G.C.S.F (Bogo Ops/s)	331
	121
Standard Deviation	1%
Stress-NG - G.Q.D.S (Bogo Ops/s)	41.4
	7
Standard Deviation	0.5%

EGX_Edge_RTX2080

Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 4KB (IOPS)	802 00	221 67	**677 0**	717 2	231 00	224 00	226 00	226 00	721 1	721 7	721 8	**811 67**
Normalized	98.81%	27.31%	8.34%	8.84%	28.46%	27.6%	27.84%	27.84%	8.88%	8.89%	8.89%	100%
Standard Deviation		0.7%	1.6%			3.1%	2.3%	2.3%	0.1%	0.2%	0.2%	0.1%
Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 8MB (IOPS)	61	12	**3**	**3**	12	12	12	12	**3**	**3**	**3**	**63**
Normalized	96.83%	19.05%	4.76%	4.76%	19.05%	19.05%	19.05%	19.05%	4.76%	4.76%	4.76%	100%
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 4KB (IOPS)	**578 33**	637 0	647 4	634 6	635 7	**620 4**	636 3	634 2	648 4	633 4	647 6	577 33
Normalized	100%	11.01%	11.19%	10.97%	10.99%	10.73%	11%	10.97%	11.21%	10.95%	11.2%	99.83%
Standard Deviation	0.2%	0.7%	1.6%	0.2%	0.1%	9%	0.4%	0.5%	1%	0.2%	1.7%	0.1%
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 8MB (IOPS)	**28**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**28**
Normalized	100%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	10.71%	100%
Standard Deviation								9.9%				

EGX_Edge_RTX2080

Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 4KB (MB/s)	313	86.4	**26.5**	28	90.2	90.1	89.5	89.5	28.2	28.2	28.2	**317**
Normalized	98.74%	27.26%	8.36%	8.83%	28.45%	28.42%	28.23%	28.23%	8.9%	8.9%	8.9%	100%
Standard Deviation		1.4%	1.7%		0.5%	0.6%	0.2%	0.2%	0%	0.4%	0%	
Flexible IO Tester - Seq Read - Linux AIO - No - Yes - 8MB (MB/s)	514	128	**53.3**	53.4	128	128	128	128	53.5	53.4	53.7	**536**
Normalized	95.9%	23.88%	9.94%	9.96%	23.88%	23.88%	23.88%	23.88%	9.98%	9.96%	10.02%	100%
Standard Deviation			0.5%	0.2%					0.1%	0.3%	0.1%	
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 4KB (MB/s)	**226**	24.6	25.3	24.8	24.8	**24.0**	24.9	24.8	25.1	24.7	25.3	**226**
Normalized	100%	10.88%	11.19%	10.97%	10.97%	10.62%	11.02%	10.97%	11.11%	10.93%	11.19%	100%
Standard Deviation		2.1%	1.7%	0.2%	0.2%	9%	0.2%	0.5%	2.9%	0.2%	1.7%	
Flexible IO Tester - Seq Write - Linux AIO - No - Yes - 8MB (MB/s)	**251**	49.8	50.5	50.0	**49.3**	49.9	50.0	**49.3**	50.5	50.8	50.7	250
Normalized	100%	19.84%	20.12%	19.92%	19.64%	19.88%	19.92%	19.64%	20.12%	20.24%	20.2%	99.6%
Standard Deviation		0.8%	0.6%	0.8%	2.3%	0.1%	0.2%	3.4%	0.7%	0.3%	0.4%	

Stream - Copy (MB/s)	135 95
Standard Deviation	0%

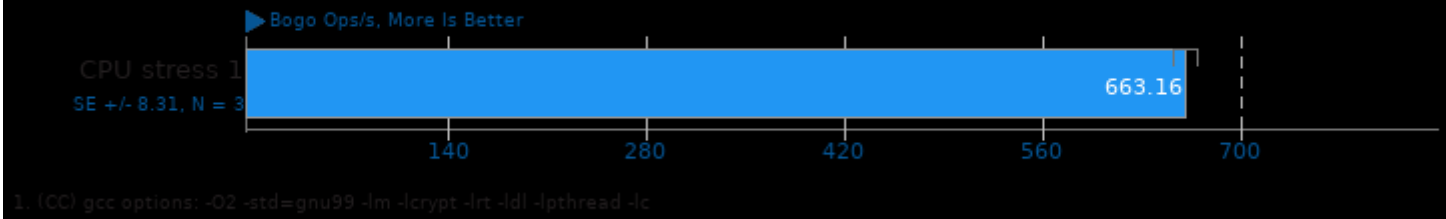
Stream - Scale (MB/s)		100 27
Standard Deviation		0%
Stream - Triad (MB/s)		115 39
Standard Deviation		0%
Stream - Add		115 30
Standard Deviation		0%
GLmark2 - 800 x 600 (Score)	1694	9236
Normalized	18.34%	100%
GLmark2 - 1024 x 768 (Score)	678	8494
Normalized	7.98%	100%
GLmark2 - 1280 x 1024 (Score)	337	7613
Normalized	4.43%	100%
GLmark2 - 1600 x 1200 (Score)	223	6778
Normalized	3.29%	100%
GLmark2 - 1920 x 1080 (Score)	213	6741
Normalized	3.16%	100%
GLmark2 - 1920 x 1200 (Score)	189	6425
Normalized	2.94%	100%

EGX_Edge_RTX2080

GLmark2 - 2560 x 1440 (Score)	**125**	**5248**
Normalized	2.38%	100%
GLmark2 - 3840 x 2160 (Score)	**54**	**3174**
Normalized	1.7%	100%

Stress-NG 0.11.07

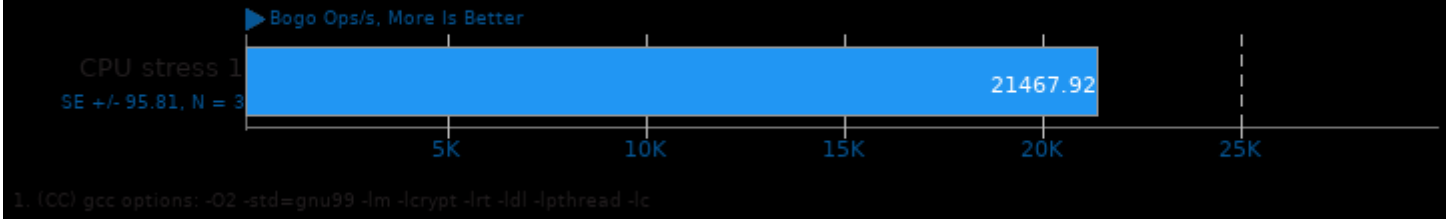
Test: Crypto



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -ldl -lpthread -lc

Stress-NG 0.11.07

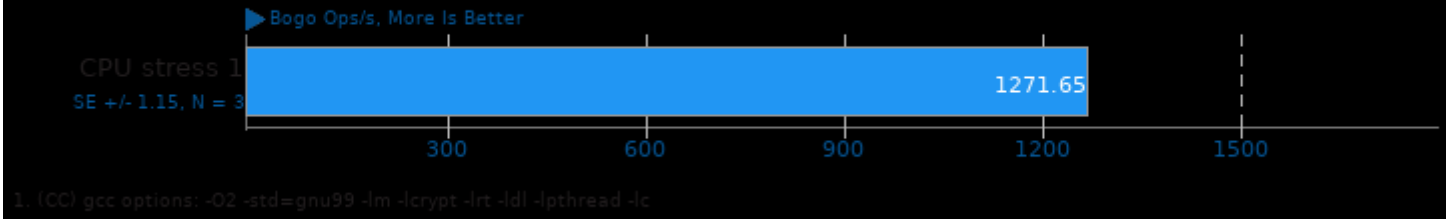
Test: Forking



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -ldl -lpthread -lc

Stress-NG 0.11.07

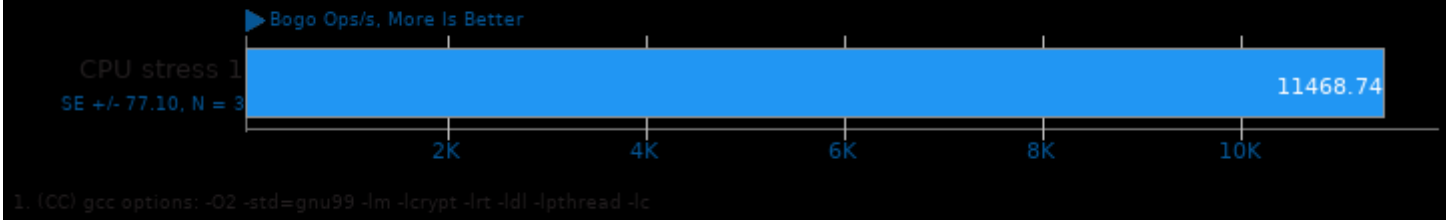
Test: CPU Stress



1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -ldl -lpthread -lc

Stress-NG 0.11.07

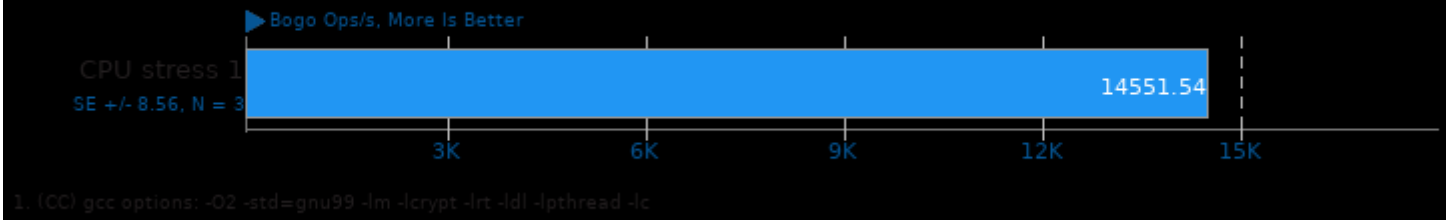
Test: Matrix Math



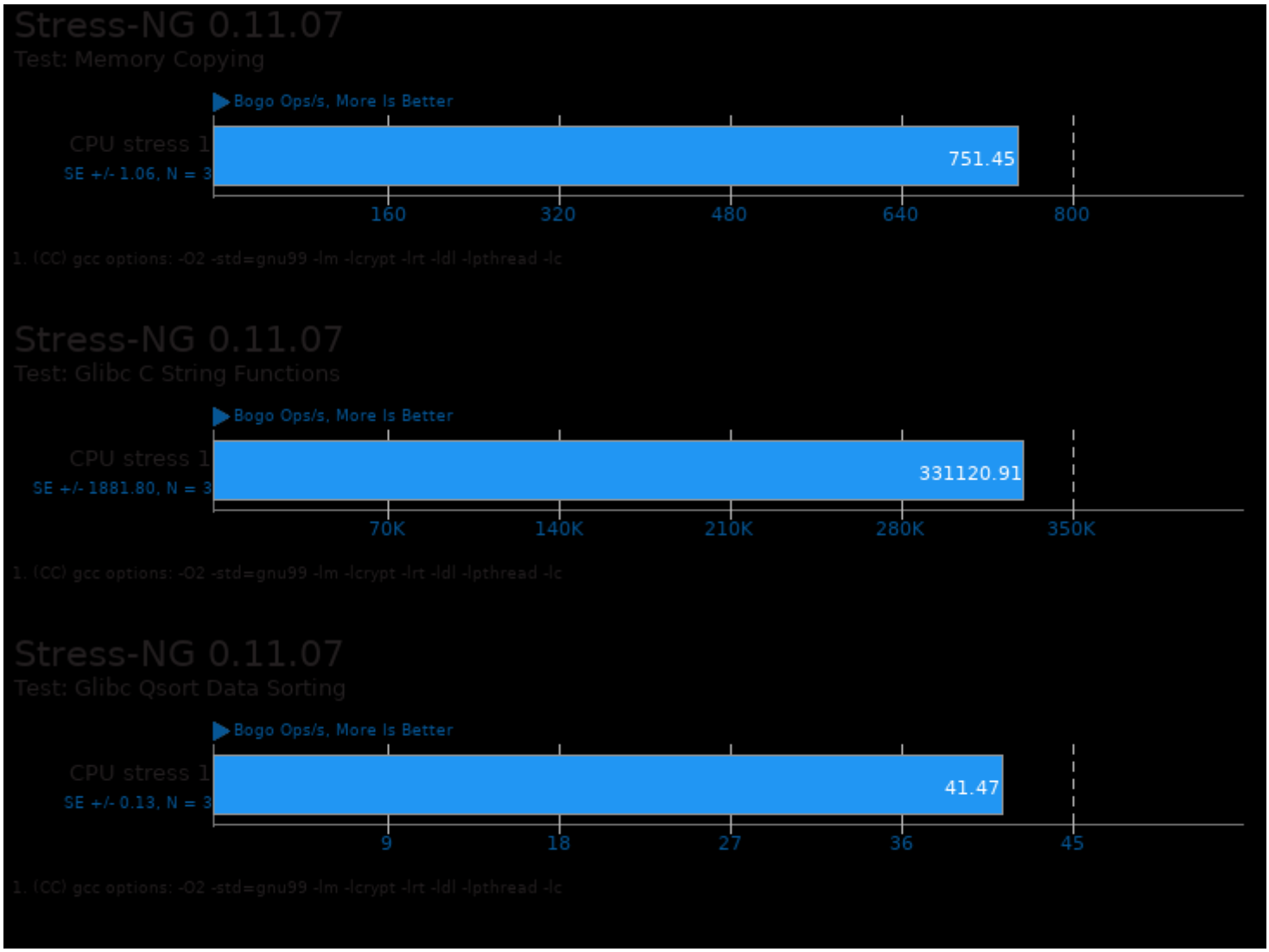
1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -ldl -lpthread -lc

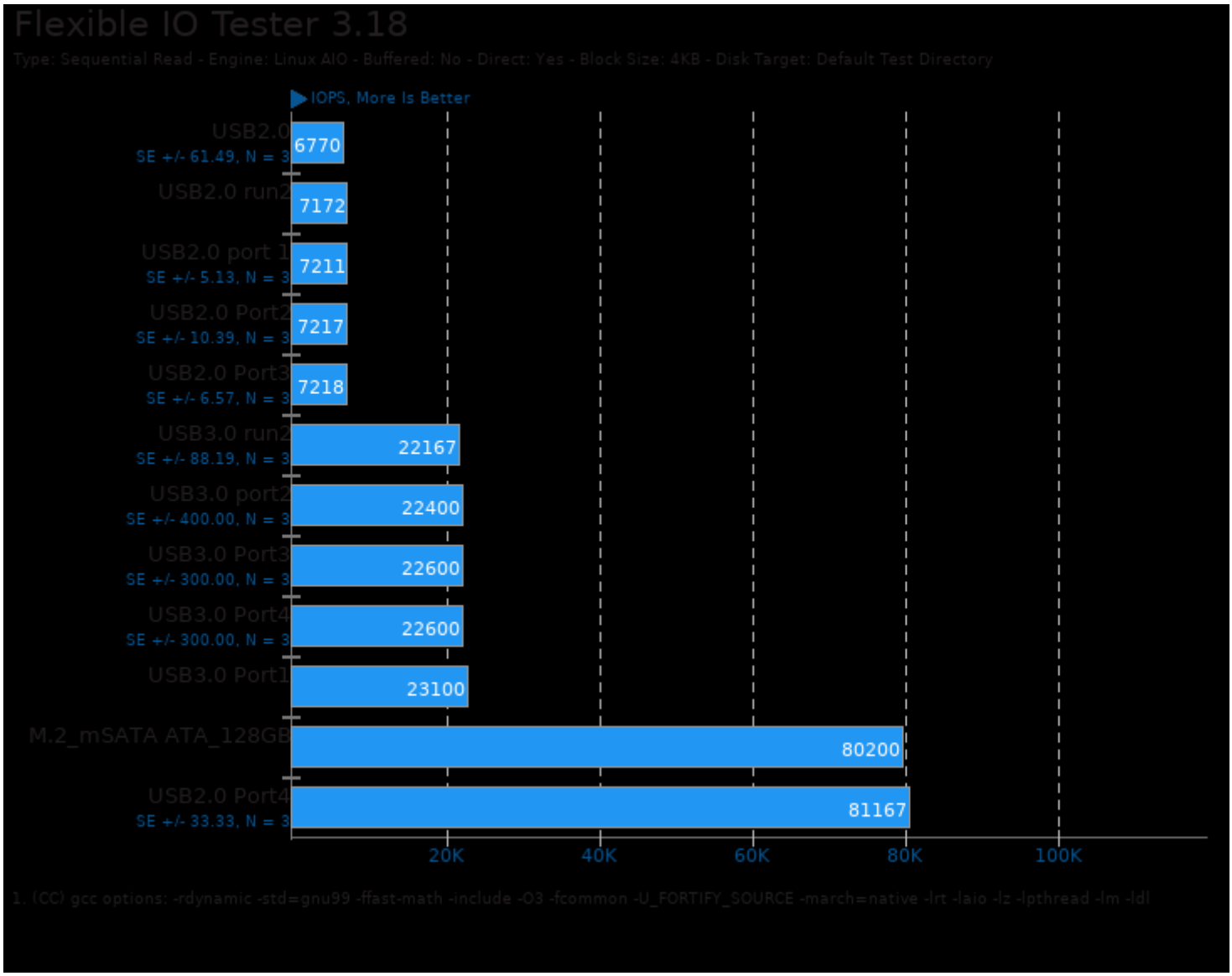
Stress-NG 0.11.07

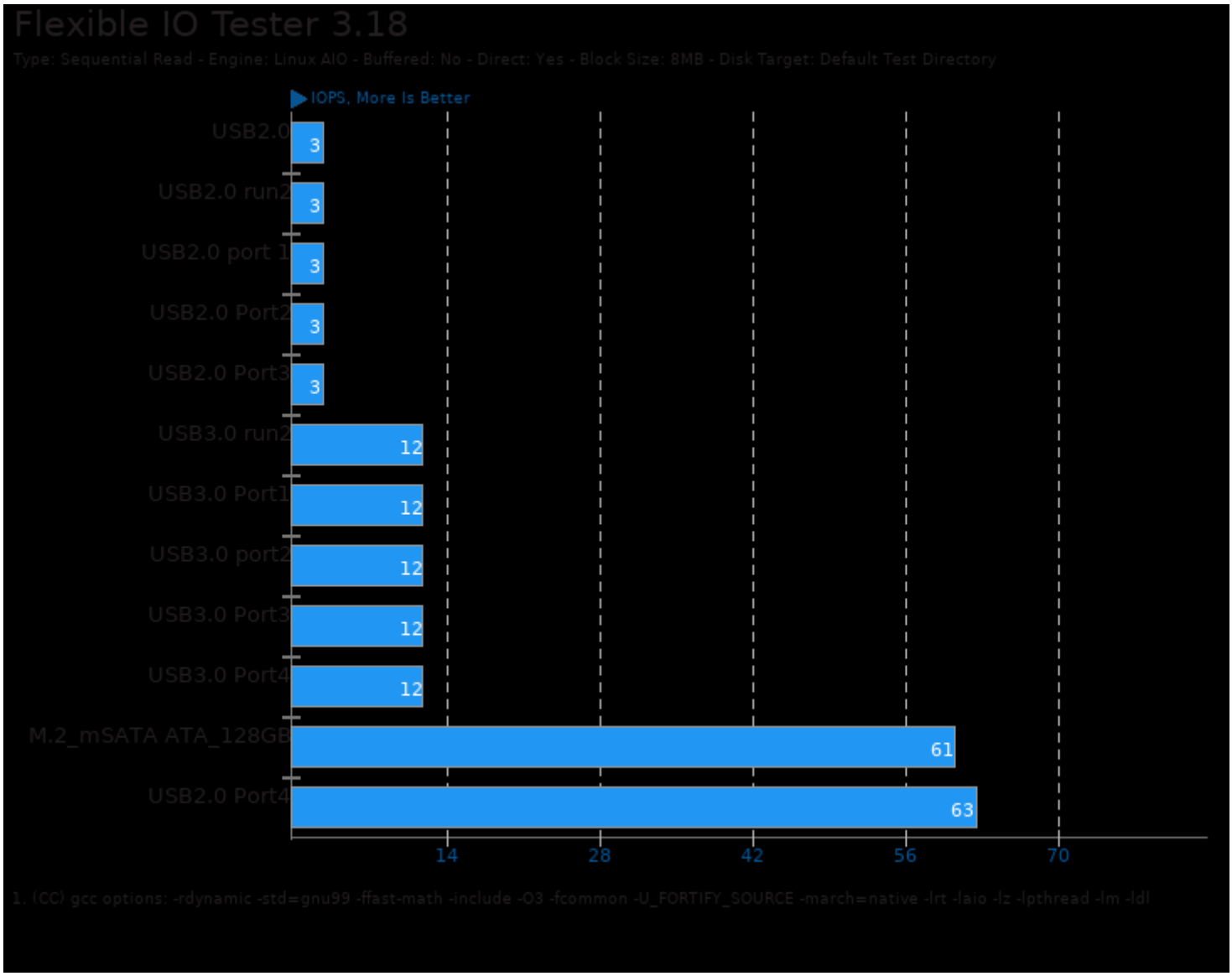
Test: Vector Math

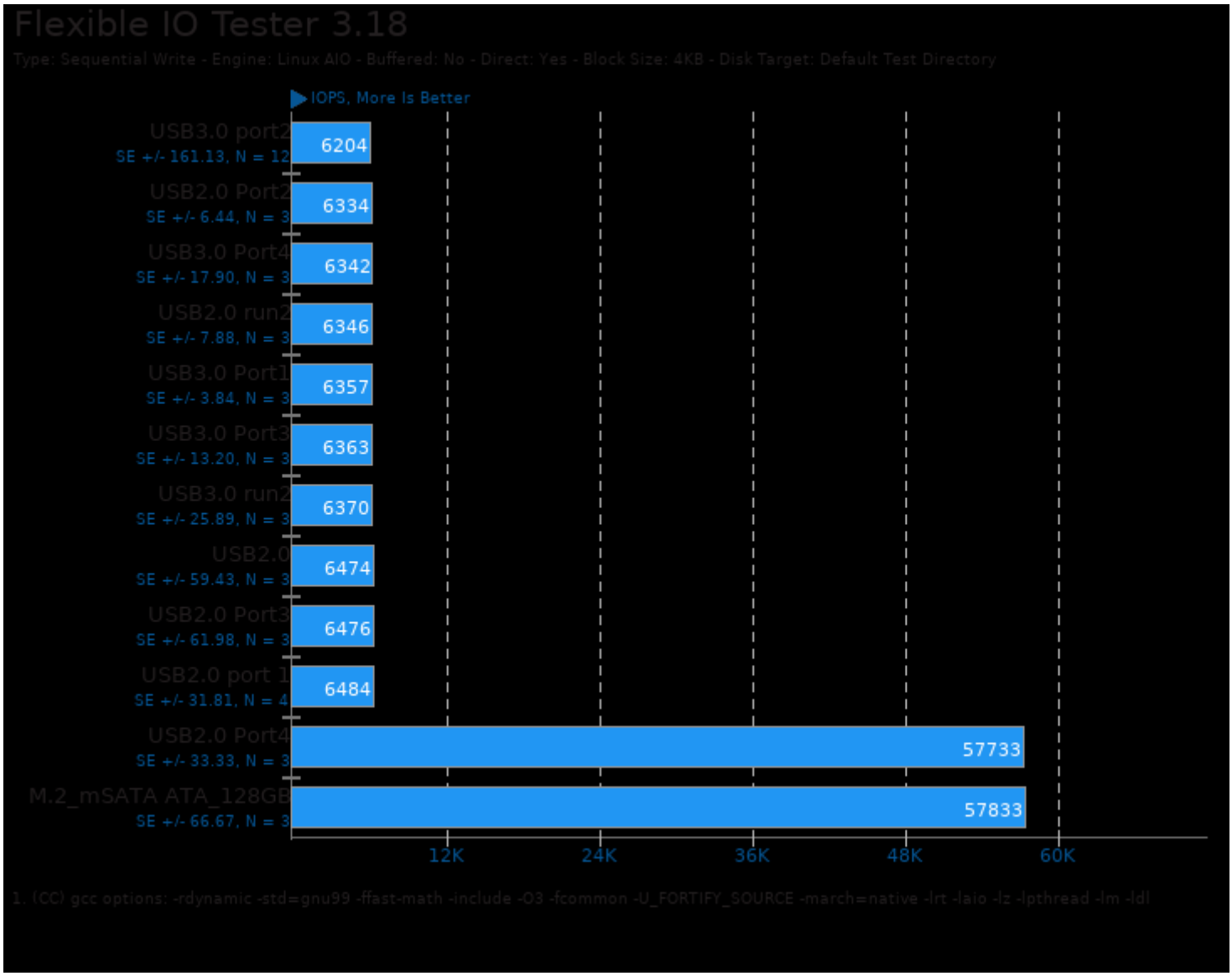


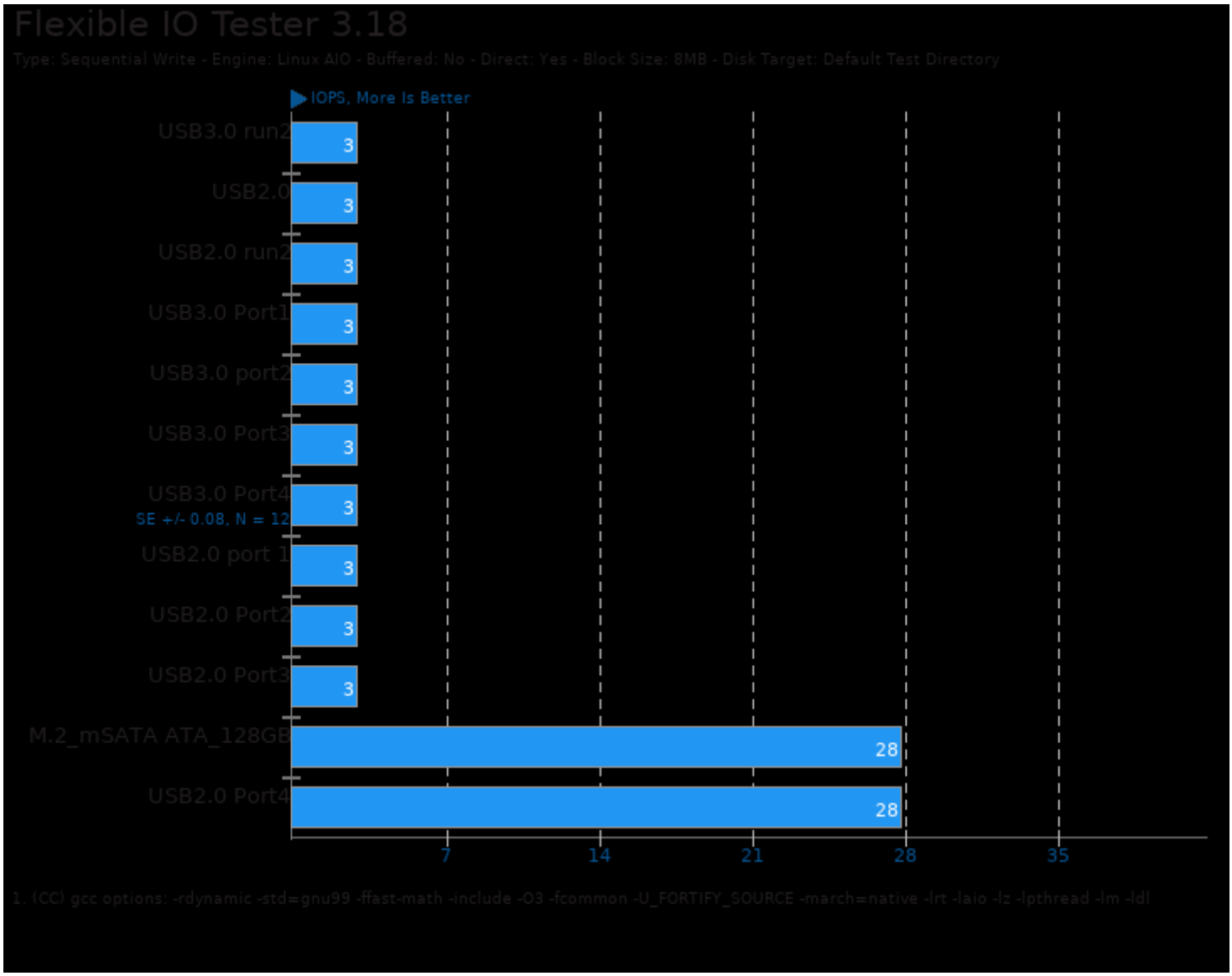
1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -ldl -lpthread -lc

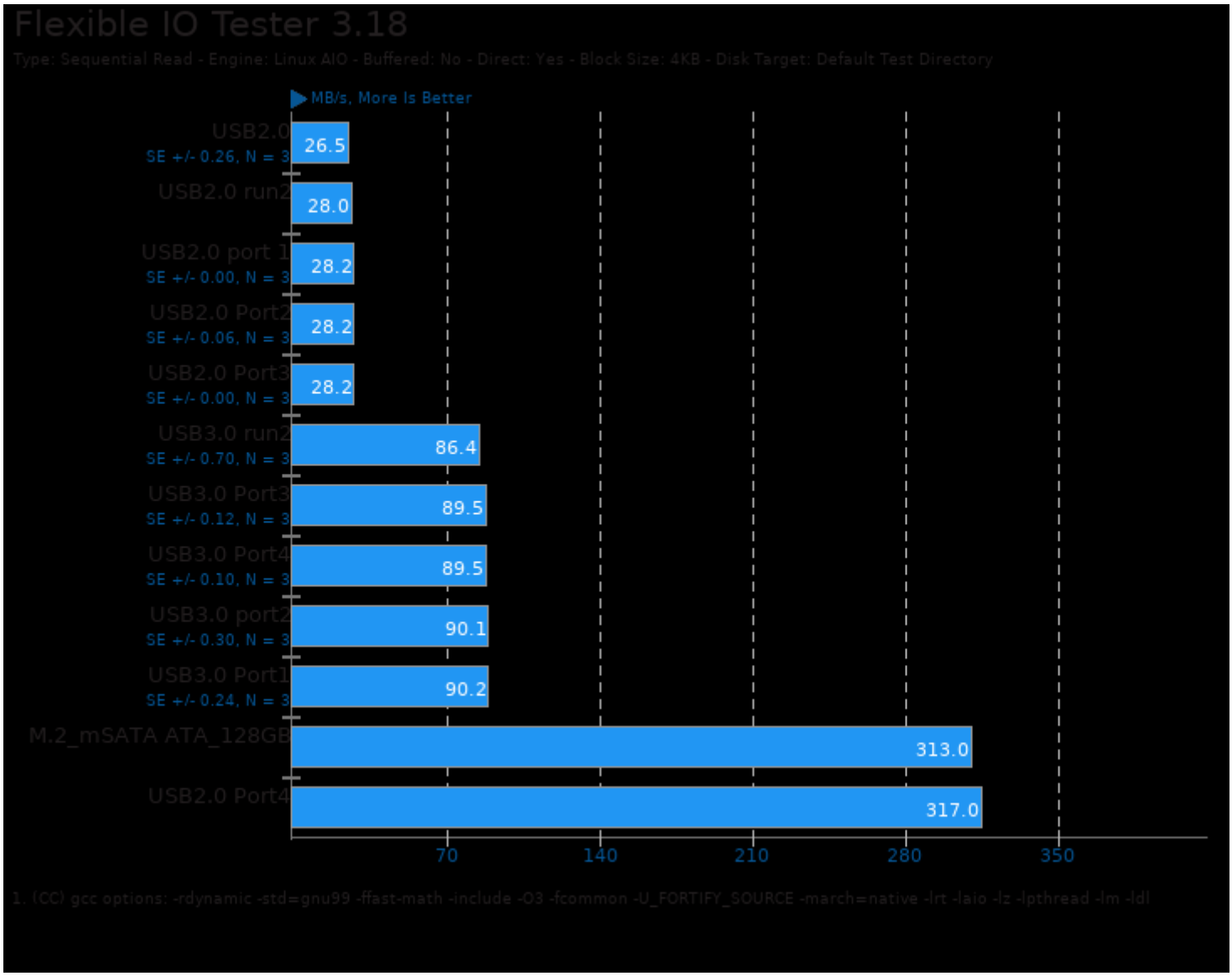

Stress-NG 0.11.07
Test: Memory Copying
Bogo Ops/s, More Is Better
CPU stress 1
SE +/- 1.06, N = 3
751.45
160
320
480
640
800
1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -ldl -lpthread -lc
Stress-NG 0.11.07
Test: Glibc C String Functions
Bogo Ops/s, More Is Better
CPU stress 1
SE +/- 1881.80, N = 3
331120.91
70K
140K
210K
280K
350K
1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -ldl -lpthread -lc
Stress-NG 0.11.07
Test: Glibc Qsort Data Sorting
Bogo Ops/s, More Is Better
CPU stress 1
SE +/- 0.13, N = 3
41.47
9
18
27
36
45
1. (CC) gcc options: -O2 -std=gnu99 -lm -lcrypt -lrt -ldl -lpthread -lc

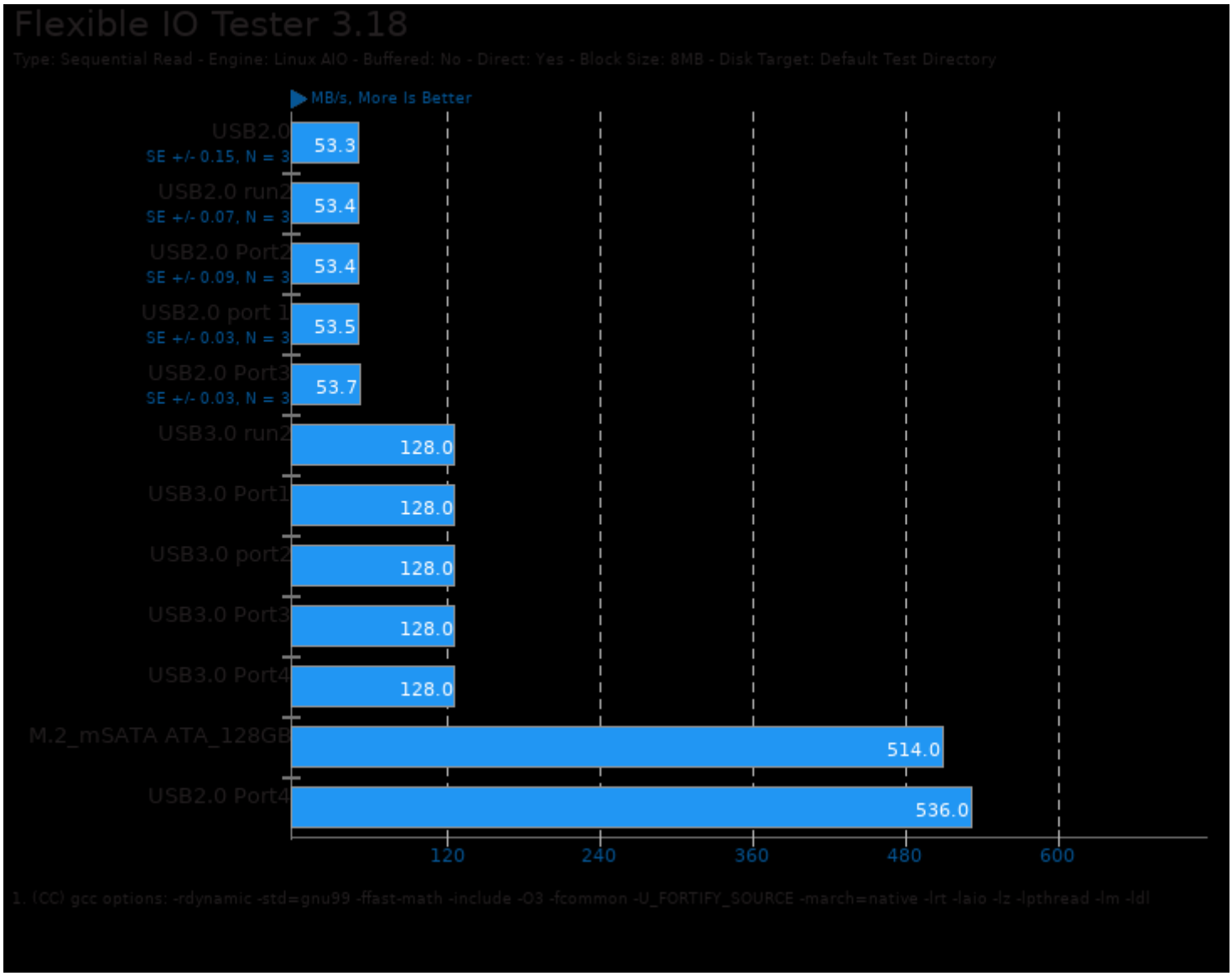

Flexible IO Tester 3.18
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
IOPS, More Is Better
USB2.0
SE +/- 61.49, N = 3
6770
USB2.0 run2
7172
USB2.0 port 1
SE +/- 5.13, N = 3
7211
USB2.0 Port2
SE +/- 10.39, N = 3
7217
USB2.0 Port3
SE +/- 6.57, N = 3
7218
USB3.0 run2
SE +/- 88.19, N = 3
22167
USB3.0 port2
SE +/- 400.00, N = 3
22400
USB3.0 Port3
SE +/- 300.00, N = 3
22600
USB3.0 Port4
SE +/- 300.00, N = 3
22600
USB3.0 Port1
23100
M.2_mSATA ATA_128GB
80200
USB2.0 Port4
SE +/- 33.33, N = 3
81167
20K
40K
60K
80K
100K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

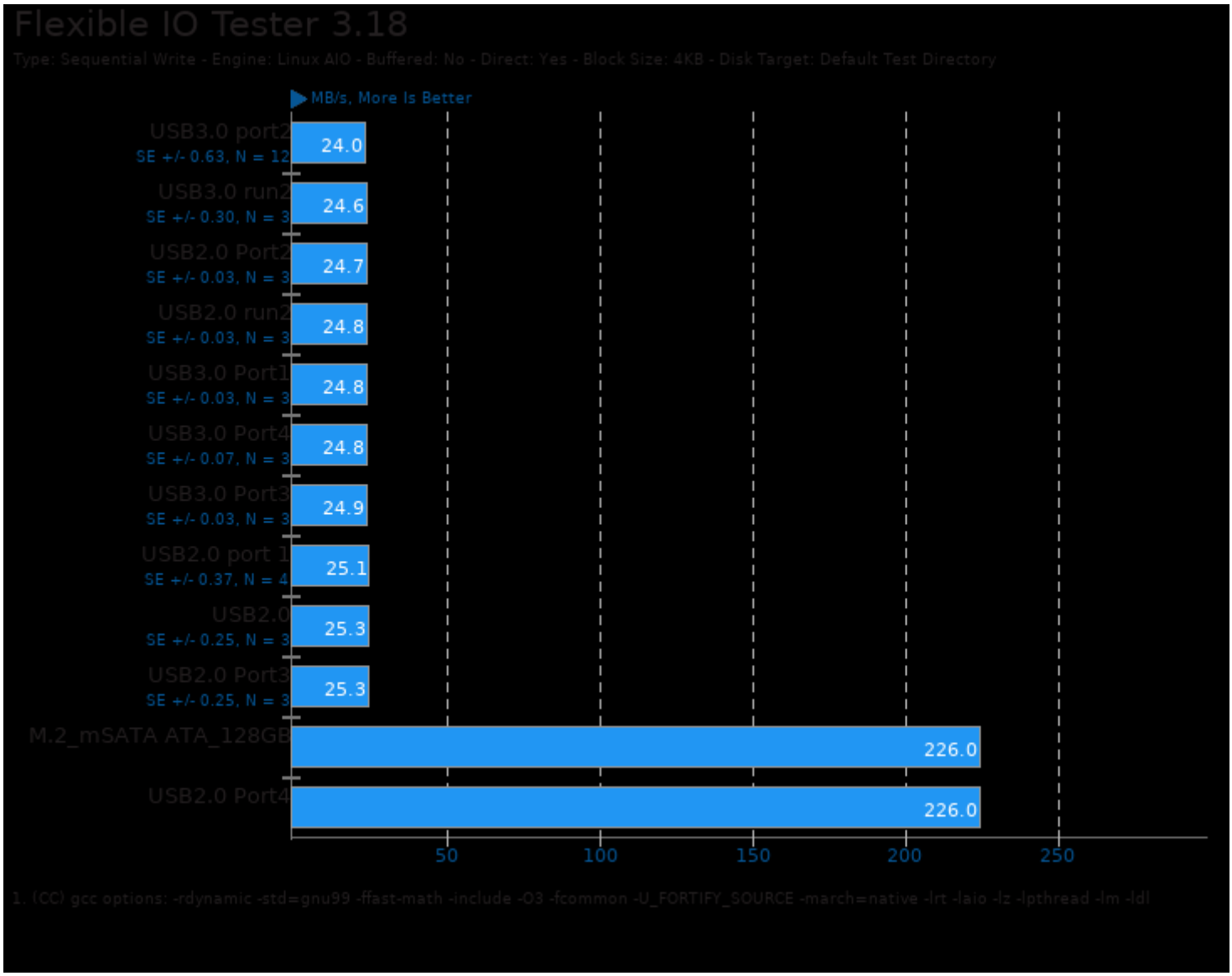

Flexible IO Tester 3.18
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 8MB - Disk Target: Default Test Directory
IOPS, More Is Better
USB2.0
USB2.0 run2
USB2.0 port 1
USB2.0 Port2
USB2.0 Port3
USB3.0 run2
USB3.0 Port1
USB3.0 port2
USB3.0 Port3
USB3.0 Port4
M.2_mSATA ATA_128GB
USB2.0 Port4
3
3
3
3
3
12
12
12
12
12
61
63
14
28
42
56
70
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -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
USB3.0 port2
SE +/- 161.13, N = 12
6204
USB2.0 Port2
SE +/- 6.44, N = 3
6334
USB3.0 Port4
SE +/- 17.90, N = 3
6342
USB2.0 run2
SE +/- 7.88, N = 3
6346
USB3.0 Port1
SE +/- 3.84, N = 3
6357
USB3.0 Port3
SE +/- 13.20, N = 3
6363
USB3.0 run2
SE +/- 25.89, N = 3
6370
USB2.0
SE +/- 59.43, N = 3
6474
USB2.0 Port3
SE +/- 61.98, N = 3
6476
USB2.0 port 1
SE +/- 31.81, N = 4
6484
USB2.0 Port4
SE +/- 33.33, N = 3
57733
M.2_mSATA ATA_128GB
SE +/- 66.67, N = 3
57833
12K
24K
36K
48K
60K
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -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
USB3.0 run2
USB2.0
USB2.0 run2
USB3.0 Port1
USB3.0 port2
USB3.0 Port3
USB3.0 Port4
SE +/- 0.08, N = 12
USB2.0 port 1
USB2.0 Port2
USB2.0 Port3
M.2_mSATA ATA_128GB
USB2.0 Port4
3
3
3
3
3
3
3
3
3
3
28
28
7
14
21
28
35
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

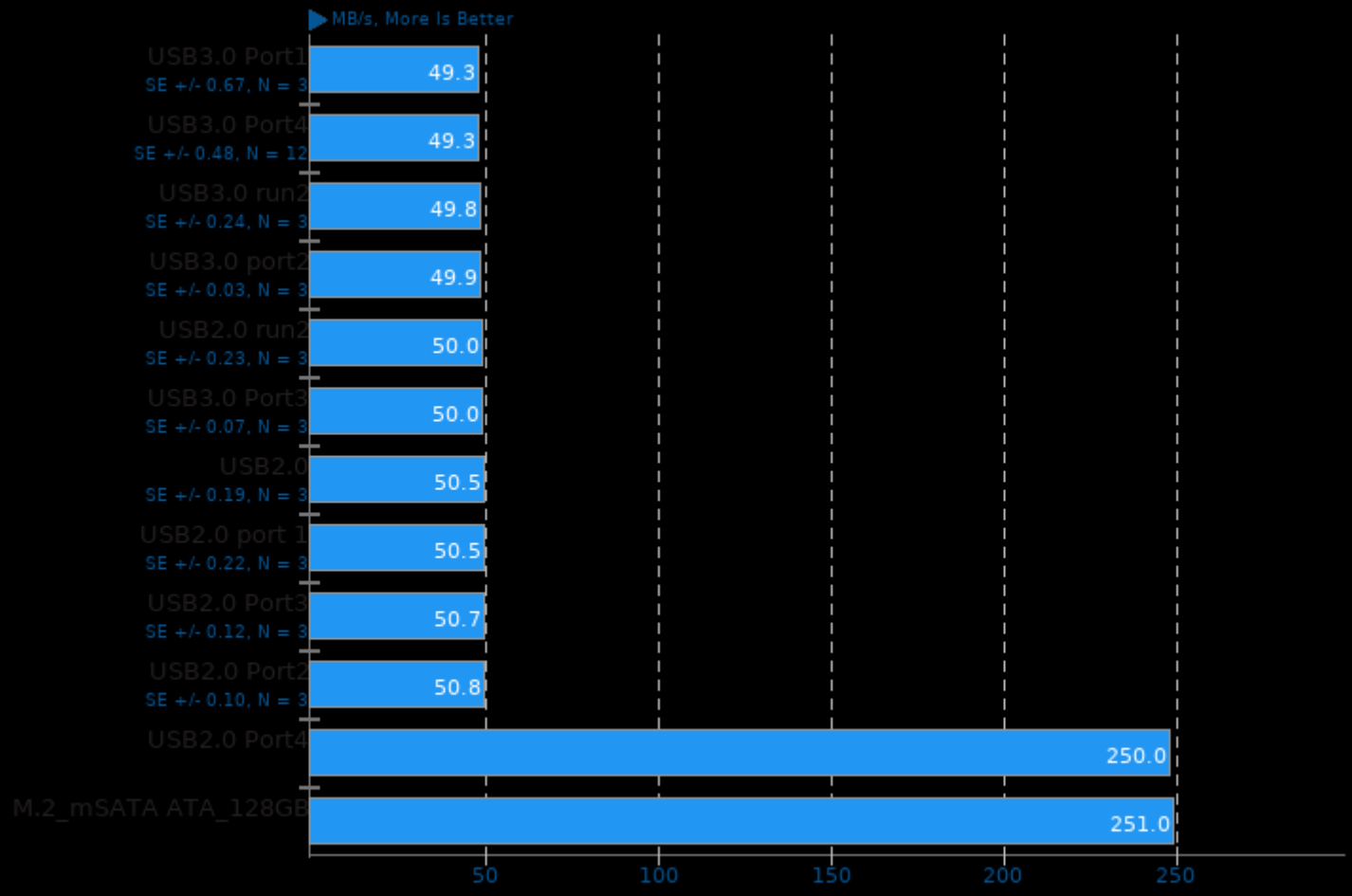

Flexible IO Tester 3.18
Type: Sequential Read - Engine: Linux AIO - Buffered: No - Direct: Yes - Block Size: 4KB - Disk Target: Default Test Directory
MB/s, More Is Better
USB2.0
SE +/- 0.26, N = 3
26.5
USB2.0 run2
28.0
USB2.0 port 1
SE +/- 0.00, N = 3
28.2
USB2.0 Port2
SE +/- 0.06, N = 3
28.2
USB2.0 Port3
SE +/- 0.00, N = 3
28.2
USB3.0 run2
SE +/- 0.70, N = 3
86.4
USB3.0 Port3
SE +/- 0.12, N = 3
89.5
USB3.0 Port4
SE +/- 0.10, N = 3
89.5
USB3.0 port2
SE +/- 0.30, N = 3
90.1
USB3.0 Port1
SE +/- 0.24, N = 3
90.2
M.2_mSATA ATA_128GB
313.0
USB2.0 Port4
317.0
70
140
210
280
350
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -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
USB2.0
SE +/- 0.15, N = 3
53.3
USB2.0 run2
SE +/- 0.07, N = 3
53.4
USB2.0 Port2
SE +/- 0.09, N = 3
53.4
USB2.0 port 1
SE +/- 0.03, N = 3
53.5
USB2.0 Port3
SE +/- 0.03, N = 3
53.7
USB3.0 run2
128.0
USB3.0 Port1
128.0
USB3.0 port2
128.0
USB3.0 Port3
128.0
USB3.0 Port4
128.0
M.2_mSATA ATA_128GB
514.0
USB2.0 Port4
536.0
120
240
360
480
600
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -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
USB3.0 port2
SE +/- 0.63, N = 12
24.0
USB3.0 run2
SE +/- 0.30, N = 3
24.6
USB2.0 Port2
SE +/- 0.03, N = 3
24.7
USB2.0 run2
SE +/- 0.03, N = 3
24.8
USB3.0 Port1
SE +/- 0.03, N = 3
24.8
USB3.0 Port4
SE +/- 0.07, N = 3
24.8
USB3.0 Port3
SE +/- 0.03, N = 3
24.9
USB2.0 port 1
SE +/- 0.37, N = 4
25.1
USB2.0
SE +/- 0.25, N = 3
25.3
USB2.0 Port3
SE +/- 0.25, N = 3
25.3
M.2_mSATA ATA_128GB
226.0
USB2.0 Port4
226.0
50
100
150
200
250
1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -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



1. (CC) gcc options: -rdynamic -std=gnu99 -ffast-math -include -O3 -fcommon -U_FORTIFY_SOURCE -march=native -lrt -laio -lz -lpthread -lm -ldl

Stream 2013-01-17

Type: Copy

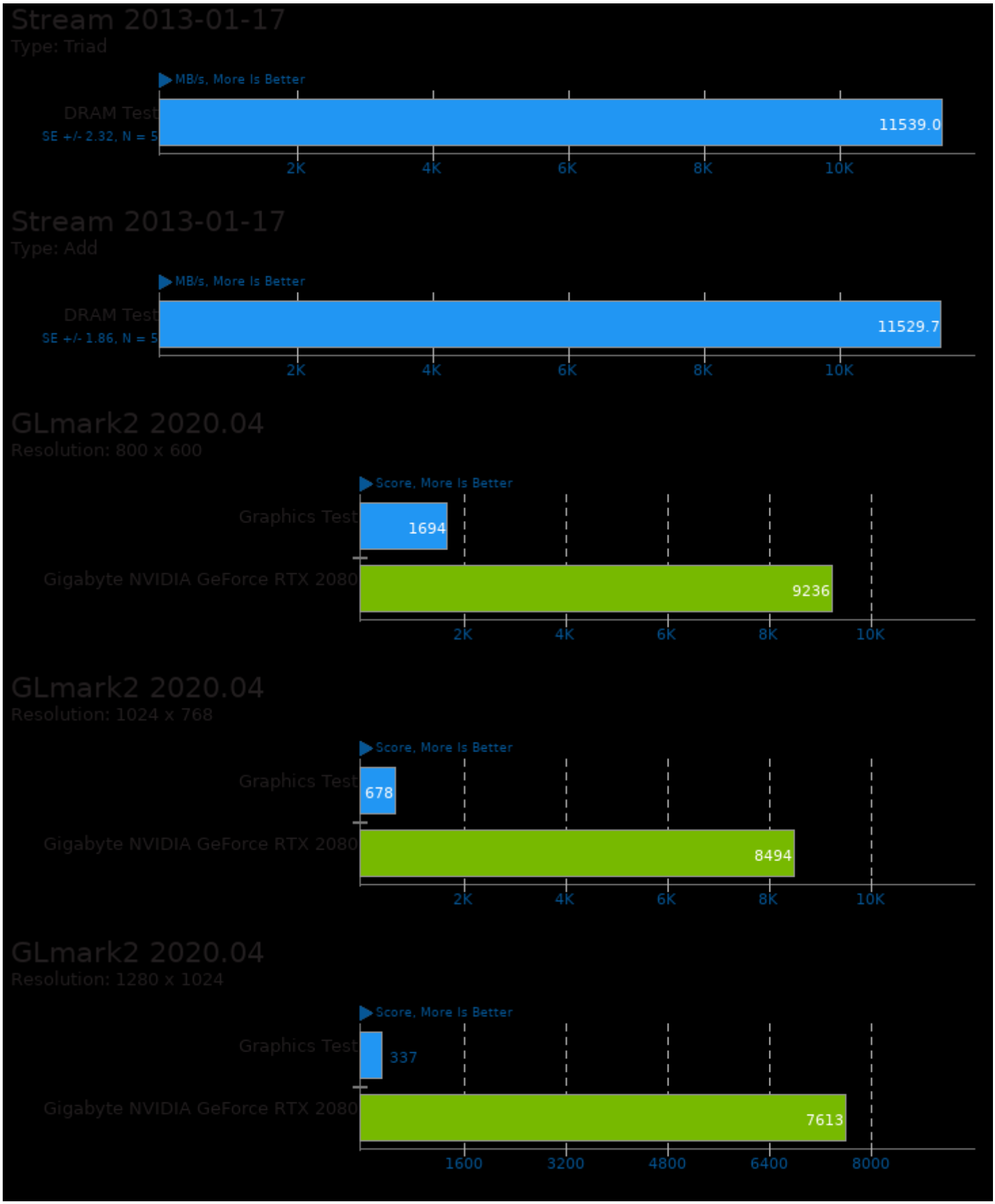


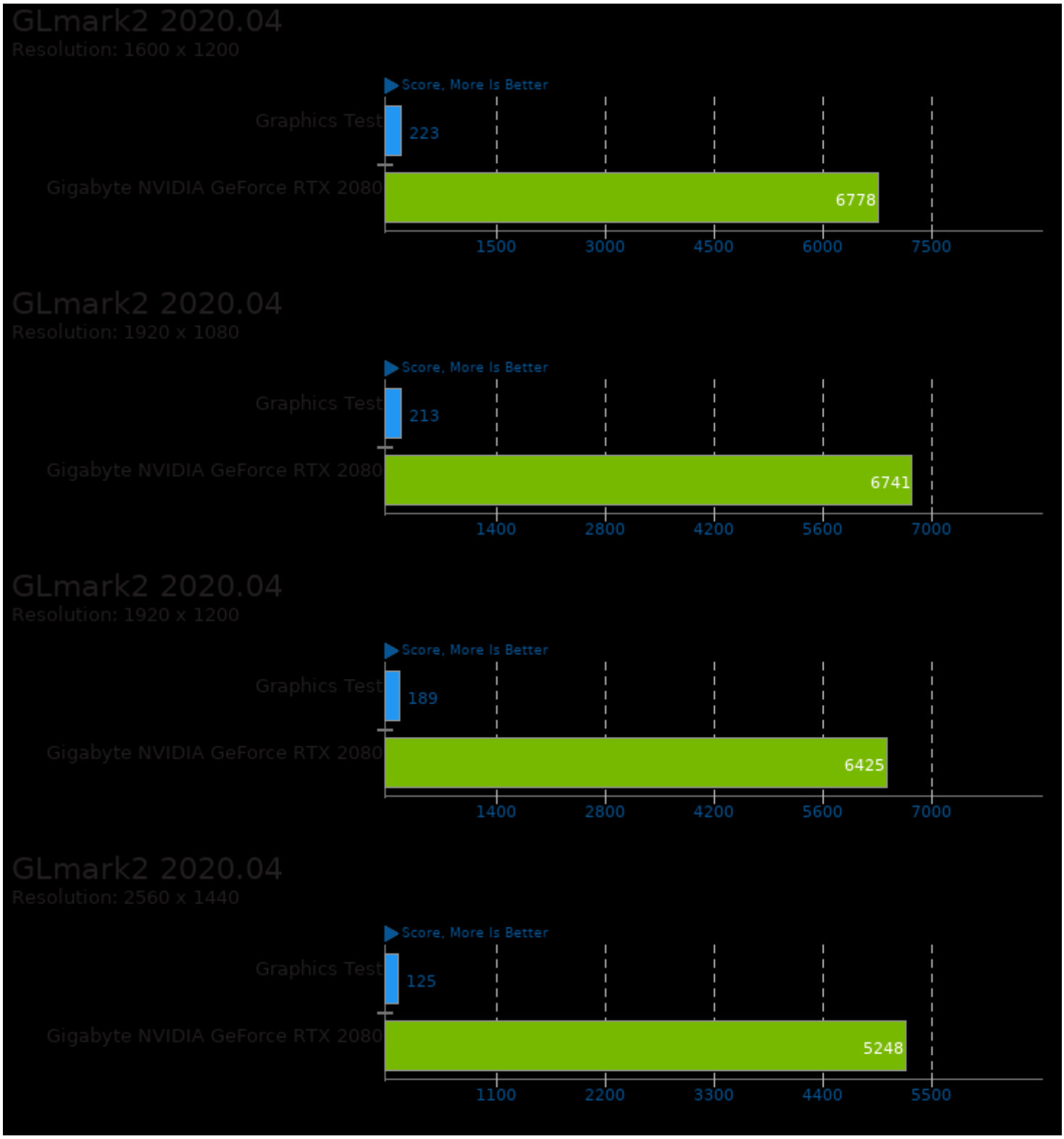
Stream 2013-01-17

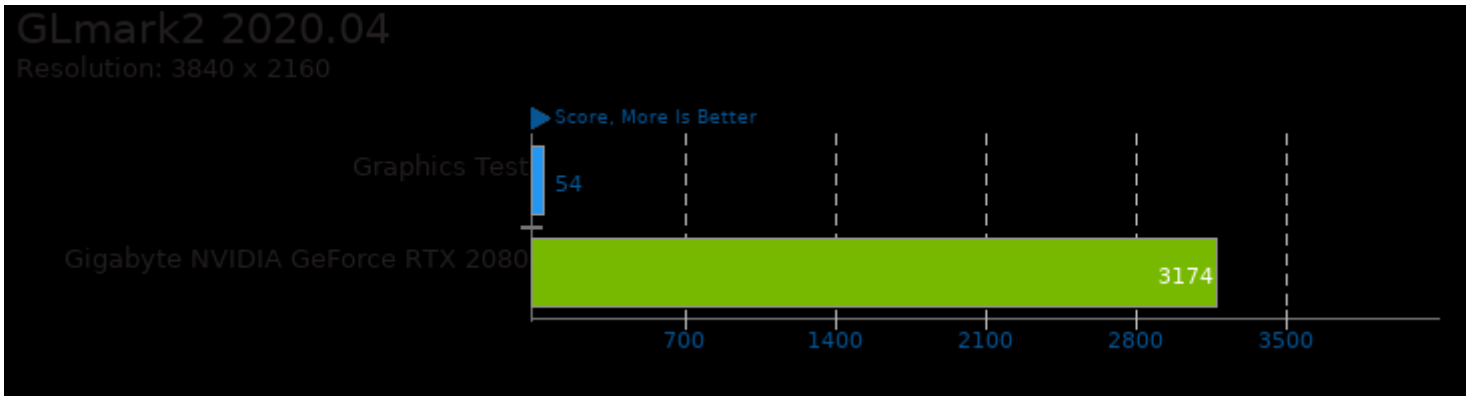
Type: Scale



EGX_Edge_RTX2080




GLmark2 2020.04
Resolution: 1600 x 1200
Score, More Is Better
Graphics Test
223
Gigabyte NVIDIA GeForce RTX 2080
6778
1500
3000
4500
6000
7500
GLmark2 2020.04
Resolution: 1920 x 1080
Score, More Is Better
Graphics Test
213
Gigabyte NVIDIA GeForce RTX 2080
6741
1400
2800
4200
5600
7000
GLmark2 2020.04
Resolution: 1920 x 1200
Score, More Is Better
Graphics Test
189
Gigabyte NVIDIA GeForce RTX 2080
6425
1400
2800
4200
5600
7000
GLmark2 2020.04
Resolution: 2560 x 1440
Score, More Is Better
Graphics Test
125
Gigabyte NVIDIA GeForce RTX 2080
5248
1100
2200
3300
4400
5500



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 10:46.