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dell-inspiron-5301

Intel Core i7-1165G7 testing with a Dell 0FW9PR (1.5.1 BIOS) and Intel UHD 3GB on Ubuntu 20.10 via the Phoronix Test Suite.

Test Systems:

lz4_1

Intel Core i7-1165G7

Intel Core i7-1165G7 - Intel UHD - Dell 0FW9PR (1.3.3

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2, Graphics: Intel UHD (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.0-051100-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen

Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 i915.disable_power_well=0 - Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x6e - Thermald 2.3
Python Notes: Python 3.8.6
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Intel Core i7-1165G7 - Intel UHD 3GB - Dell 0FW9PR

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.8.0-44-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 i915.disable_power_well=0 - Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x6e
Python Notes: Python 3.8.6
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

Intel UHD - Intel Core i7-1165G7

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2, Graphics: Intel UHD 3GB (500MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.8.0-44-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 i915.disable_power_well=0 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --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=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x6e
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

no_thermald default kernel

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.8.0-44-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 i915.disable_power_well=0 - Transparent Huge Pages: madvise

Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --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=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x6e
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

no_thermald kernel 5.11

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.0-051100-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 i915.disable_power_well=0 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --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=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x6e
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

pstate

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2 + 32GB SD/MMC/MS PRO, Graphics: Intel UHD 3GB (500MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.3-051103-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 i915.disable_power_well=0 - Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x6e
Python Notes: Python 3.8.6
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

repaste_1

repaste_1_1

repaste_1_heatsink_mod_1

repaste_1_heatsink_mod_1_thremald_2.3

intel-rapl60w

intel-rapl_12w

Intel UHD

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2 + 32GB SD/MMC/MS PRO, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.4-051104-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 21.1.0-devel (git-98a5b9b 2021-03-08 groovy-oibaf-ppa), Vulkan: 1.2.168, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 - Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x6e - Thermald 2.4.3
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

new

random

randon1

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2 + 32GB SD/MMC/MS PRO, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.7-051107-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 21.0.0 kisak-mesa PPA, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --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=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x6e
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

bios_1.4

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.4.0 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2 + 32GB SD/MMC/MS PRO, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.7-051107-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 21.0.0 kisak-mesa PPA, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto

--enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --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=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x6e
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

1.4_downgrade

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2 + 32GB SD/MMC/MS PRO, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.7-051107-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 21.0.0 kisak-mesa PPA, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --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=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x6e
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

bios_1.51

bios_1.51_1

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.5.1 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.10-051110-generic (x86_64), Desktop: GNOME Shell 3.38.2, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 21.0.1 kisak-mesa PPA, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --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=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x78
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

mitigations_off

new_heatsink_1

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.5.1 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2, Graphics: Intel UHD 3GB (1300MHz), Audio:

Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.10-051110-generic (x86_64), Desktop: GNOME Shell 3.38.3, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 21.0.1 kisak-mesa PPA, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --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=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x78
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Vulnerable + spectre_v1: Vulnerable: __user pointer sanitization and usercopy barriers only; no swapgs barriers + spectre_v2: Vulnerable IBPB: disabled STIBP: disabled + srbds: Not affected + tsx_async_abort: Not affected

new_heatsink_2

new_heatsink_3

new_heatsink_3_i8k

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.3.3 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.10-051110-generic (x86_64), Desktop: GNOME Shell 3.38.3, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 21.0.1 kisak-mesa PPA, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --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=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x6e
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Vulnerable + spectre_v1: Vulnerable: __user pointer sanitization and usercopy barriers only; no swapgs barriers + spectre_v2: Vulnerable IBPB: disabled STIBP: disabled + srbds: Not affected + tsx_async_abort: Not affected

new_heatsink_3_i8k_1.51

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: Dell 0FW9PR (1.5.1 BIOS), Chipset: Intel Tiger Lake-LP, Memory: 8GB, Disk: 1000GB SHGP31-1000GM-2, Graphics: Intel UHD 3GB (1300MHz), Audio: Realtek ALC3204, Monitor: BenQ 241W, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.10, Kernel: 5.11.10-051110-generic (x86_64), Desktop: GNOME Shell 3.38.3, Display Server: X Server 1.20.9 + Wayland, OpenGL: 4.6 Mesa 21.0.1 kisak-mesa PPA, Vulkan: 1.2.145, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 2692x2280

Kernel Notes: i915.fastboot=1 i915.enable_fbc=1 i915.enable_dc=4 - Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x78
Python Notes: Python 3.8.6
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Vulnerable + spectre_v1: Vulnerable: __user pointer sanitization and usercopy barriers only; no swapgs barriers + spectre_v2: Vulnerable IBPB: disabled STIBP: disabled + srbds: Not affected +

tsx_async_abort: Not affected

	lz4_1	Intel Core i7-1165G7	Intel Core i7-1165G7 - Intel UHD - Dell 0FW9PR (1.3.3	Intel Core i7-1165G7 - Intel UHD 3GB - Dell 0FW9PR	Intel UHD - Intel Core i7-1165G7	no_thermald_default_kernel	no_thermald_kernel 5.11	pstate	repaste_1	repaste_1_1	repaste_1_heatsink_mod_1	repaste_1_heatsink_mod_1_thermald_2.3	intel-rapl60w	intel-rapl_12w	Intel UHD	new	randomrandom1	bios_1.4_downgrade	bios_1.51	bios_1.51_1	mitigations_off	newhaeatsinknk_1	newhaeatsinknk_2	newhaeatsinknk_3	newhaeatsinknk_3_i8k	newhaeatsinknk_3_i8k_1.51
7-Zip Compression - C.S.T (MIPS)																								21511		
Standard Deviation																								9.1%		
Tesseract - 1920 x 1200 (FPS)															139.7425											
Standard Deviation															3.7%											

Zstd Compression - 19, Long Mode - D.S (MB/s)		26				
Standard Deviation		2.5 %				
Zstd Compression - 19, Long Mode - Compression		8.63				
Standard Deviation		1%				
Coremark - CoreMark Size 666 - I.P.S (Iterations/Sec)	12 06 15	15 25 39		12 17 81	12 07 76	12 09 20
Normalized	79.07 %	10 0%		79.84 %	79.18 %	79.27 %
Standard Deviation	7.1 %	2.2 %		5.9 %	7.4 %	9.1 %

Zstd Compression - 19 - D.S (MB/s)						27	39					
Standard Deviation						1.6 %						
Zstd Compression - 19 - Compression						10 .2 3						
Standard Deviation						0.4 %						
BYTE Unix Benchmark - Dhrystone 2 (LPS)	**50 95 83 75**			**55 46 48 84**	54 96 99 65	52 40 43 45						
Normalized	91. 88 %			10 0%	99. 11 %	94. 48 %						
Standard Deviation	0.2 %			1.1 %	1.3 %	0.3 %						
LZ4 Compression - 9 - D.S (MB/s)	**97 72**			**10 04 5**	10 02 5					98 08		
Normalized	97. 28 %			10 0%	99. 8%					97. 64 %		
Standard Deviation	0.2 %			0.6 %	0.3 %					0.2 %		

dell-inspiron-5301

LZ4 Compression - 9 - Compression Speed	41.66						53.46						50.77					
Normalized	77.93%						100.00%						94.97%					
Standard Deviation	0.6%						8.1%						1.3%					
PyBench - T.F.A.T.T (Milliseconds)		1406	856		870		1266	1303									1231	
Normalized		60.88%	100.00%		98.39%		67.61%	65.69%									69.54%	
Standard Deviation		11.3%	2.3%		2.1%		9.2%	5%									15.5%	
Himeno Benchmark - P.P.S (MFLOPS)	4774			4814	4746	5206			5185	7152.5020		4899	4866	4612	4587	4790	4929	4765
Normalized	91.7%			92.46	91.17	100.00%			99.59	13.78		94.1%	93.47	88.59	88.1%	92.01	94.68	91.53
Standard Deviation	1.8%			1.9%	1.9%	1.1%			1.4%	0.4%		1.3%	2.2%	2.2%	2.5%	1.7%	2.4%	2.5%

LZ4 Compression - 3 - D.S (MB/s)	**97 47**			99 97		**10 00 8**			97 87		
Normalized	97.4%			99.89%		100%			97.79%		
Standard Deviation	0.1%			0.3%		0.3%			0.5%		
LZ4 Compression - 3 - Compression Speed	**42 .9 4**			49 .5 7		47 .0 3			**52 .9 1**		
Normalized	81.16%			93.69%		88.89%			100%		
Standard Deviation	0.7%			1.4%		0.3%			1.2%		
Zstd Compression - 8 - D.S (MB/s)							30 99				
Standard Deviation							0.6%				

Zstd Compression - 8 - Compression Speed	14 9. 3
Standard Deviation	0.3 %
Zstd Compression - 8, Long Mode - D.S (MB/s)	32 67
Standard Deviation	0.8 %
Zstd Compression - 8, Long Mode - Compression	15 6. 1
Standard Deviation	0.6 %

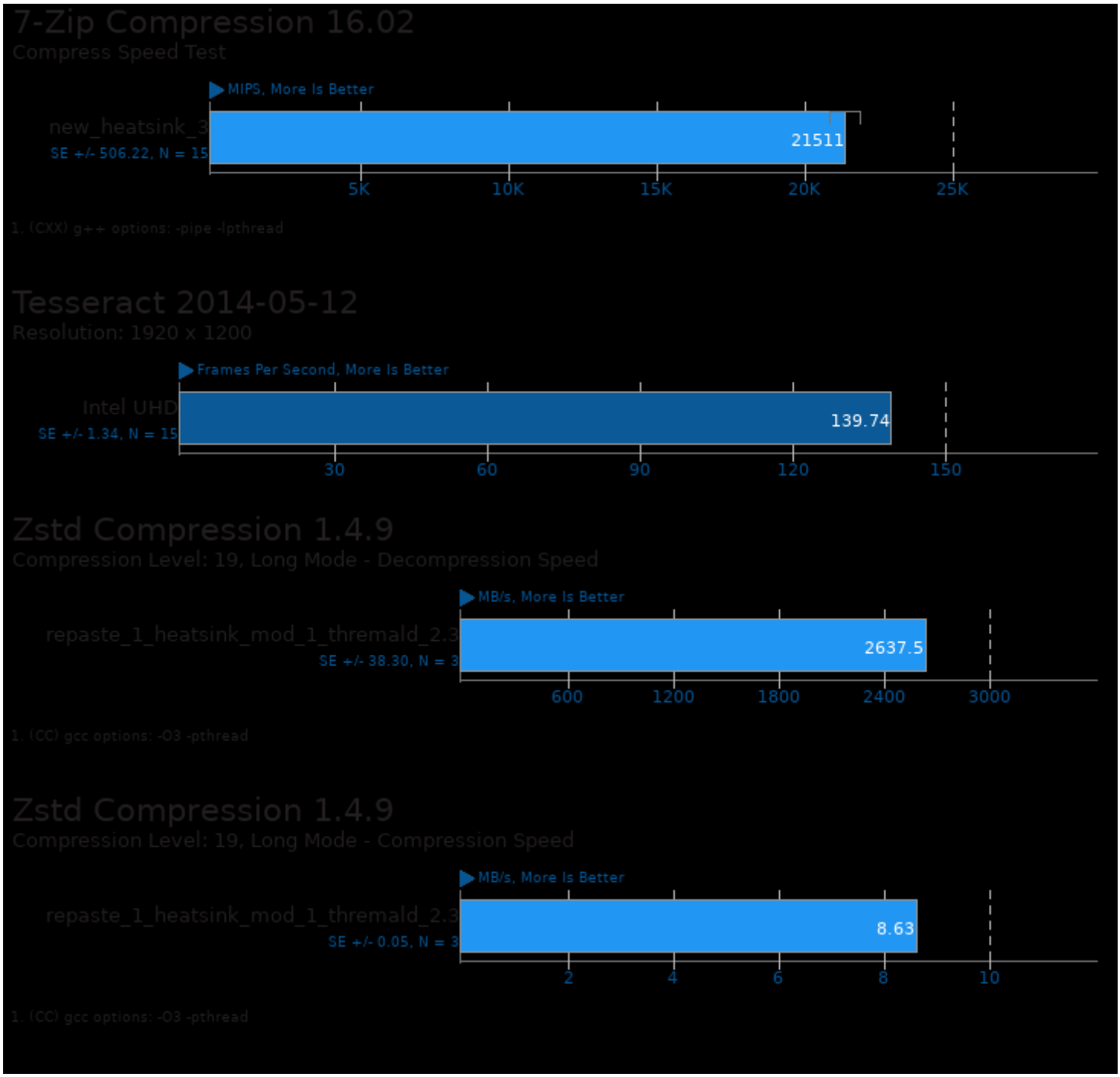
Zstd Compression - 3, Long Mode - D.S (MB/s)	32 10
Standard Deviation	0.8 %
Zstd Compression - 3, Long Mode - Compression	51 4. 5
Standard Deviation	0.6 %
Zstd Compression - 3 - D.S (MB/s)	29 66
Standard Deviation	1.5 %

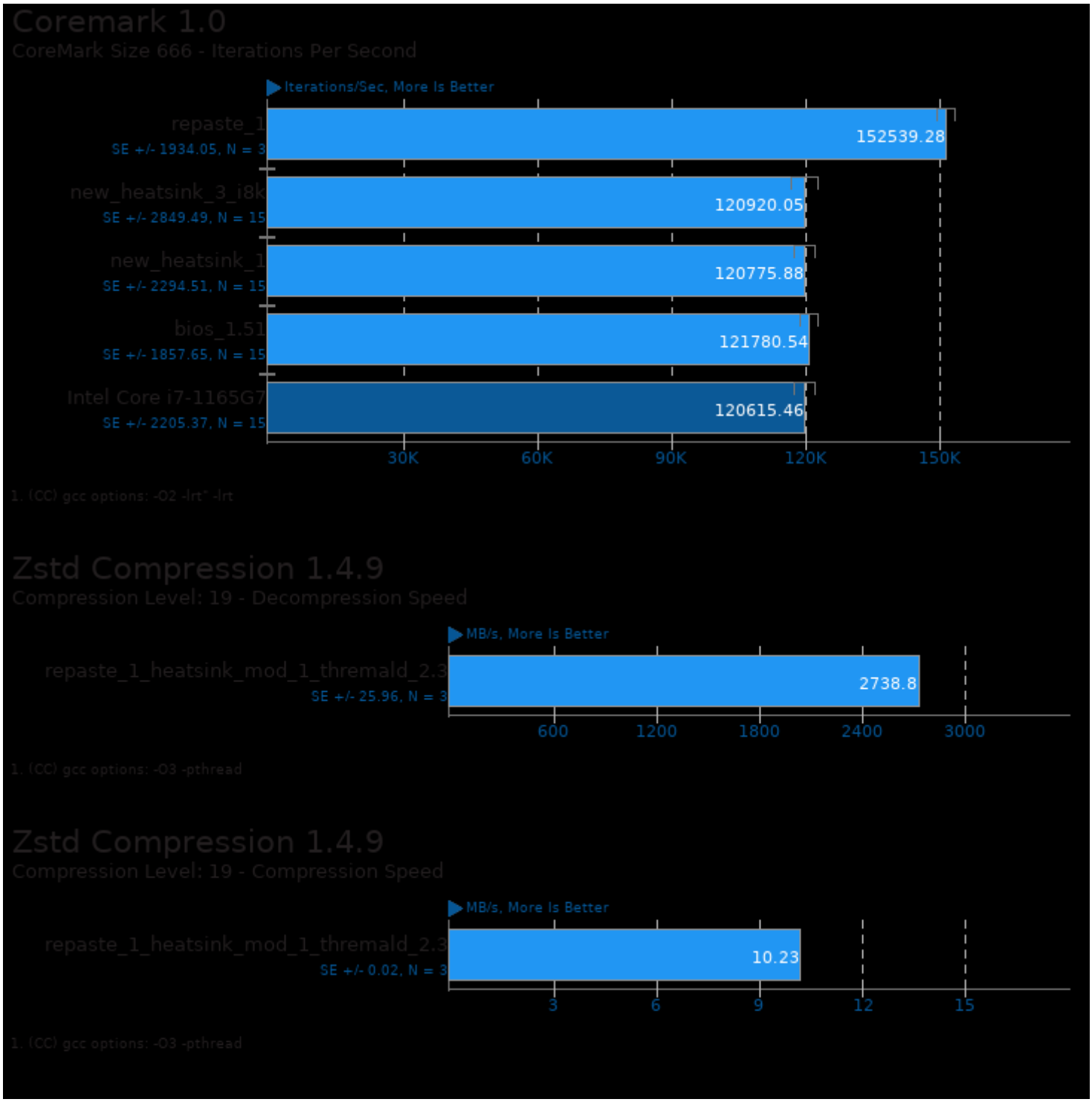
Zstd Compression - 3 - Compression Speed					77 1. 7			
Standard Deviation					2.1 %			
LZ4 Compression - 1 - D.S (MB/s)	10 33 3	10 33 6	**10 26 3**	10 39 4	**10 41 8**		10 30 6	10 28 4
Normalized	99. 19 %	99. 22 %	98. 51 %	99. 77 %	10 0%		98. 93 %	98. 72 %
Standard Deviation	0.6 %	0.4 %	0.5 %	0.2 %	0%		0.7 %	0.8 %
LZ4 Compression - 1 - Compression Speed	**93 45**	94 22	93 64	94 82	**95 27**		93 55	93 76
Normalized	98. 09 %	98. 89 %	98. 29 %	99. 52 %	10 0%		98. 19 %	98. 41 %
Standard Deviation	1.1 %	0.4 %	0.9 %	0.4 %	0.3 %		1.3 %	0.9 %
Etcpak - ETC2 (Mpx/s)				19 9. 33 5				
Standard Deviation				1.1 %				

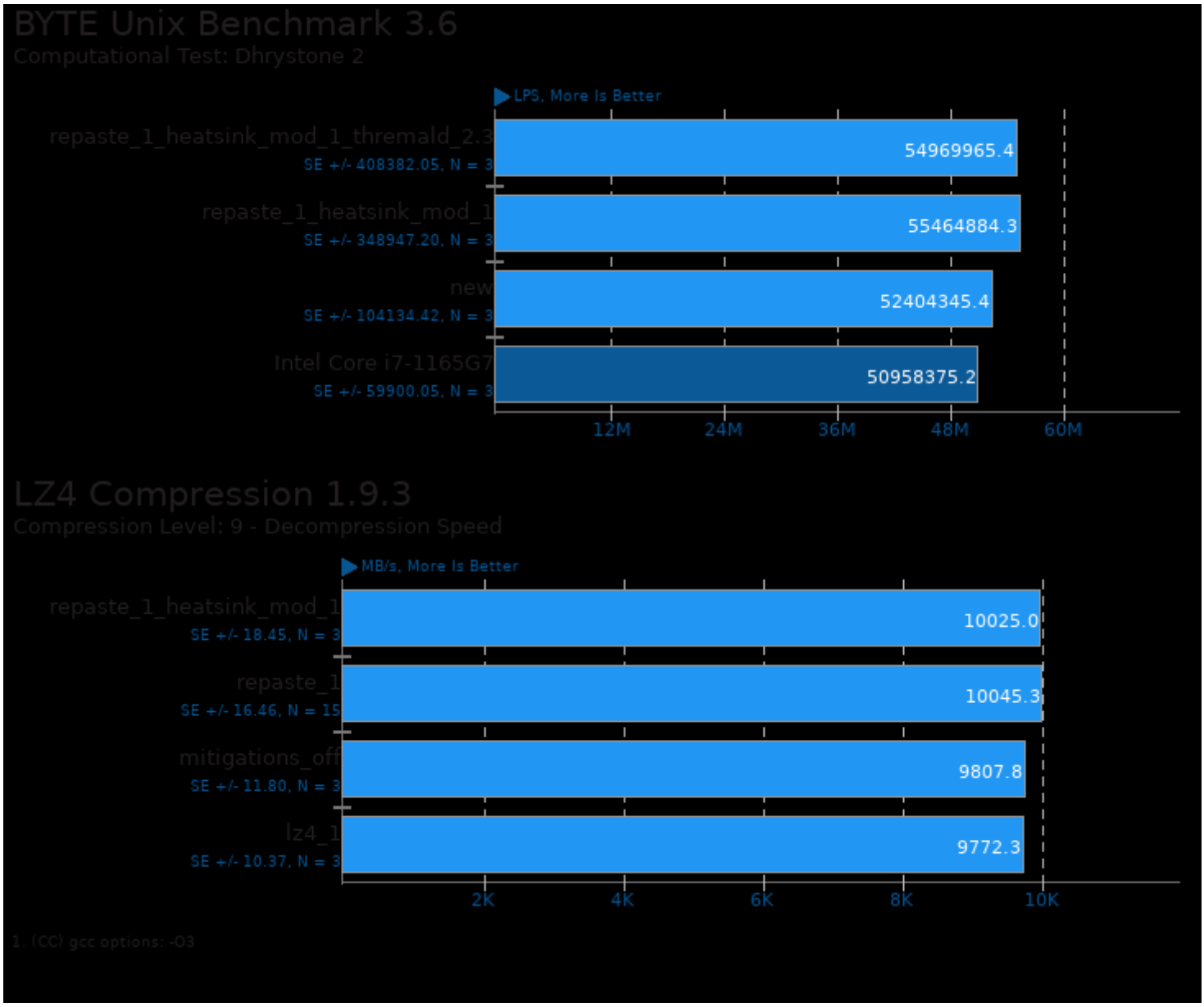
WebP Image Encode - Q.1.L (Encode Time - sec)	17.437			
Standard Deviation	1.1%			
Etcpak - ETC1 + Dithering (Mpx/s)		330.095		
Standard Deviation		0.5%		
Etcpak - ETC1 (Mpx/s)		349.471		
Standard Deviation		1.7%		
GLmark2 - 1920 x 1080 (Score)			1057	
SQLite - 1 (sec)	11.784			
Standard Deviation	0.4%			

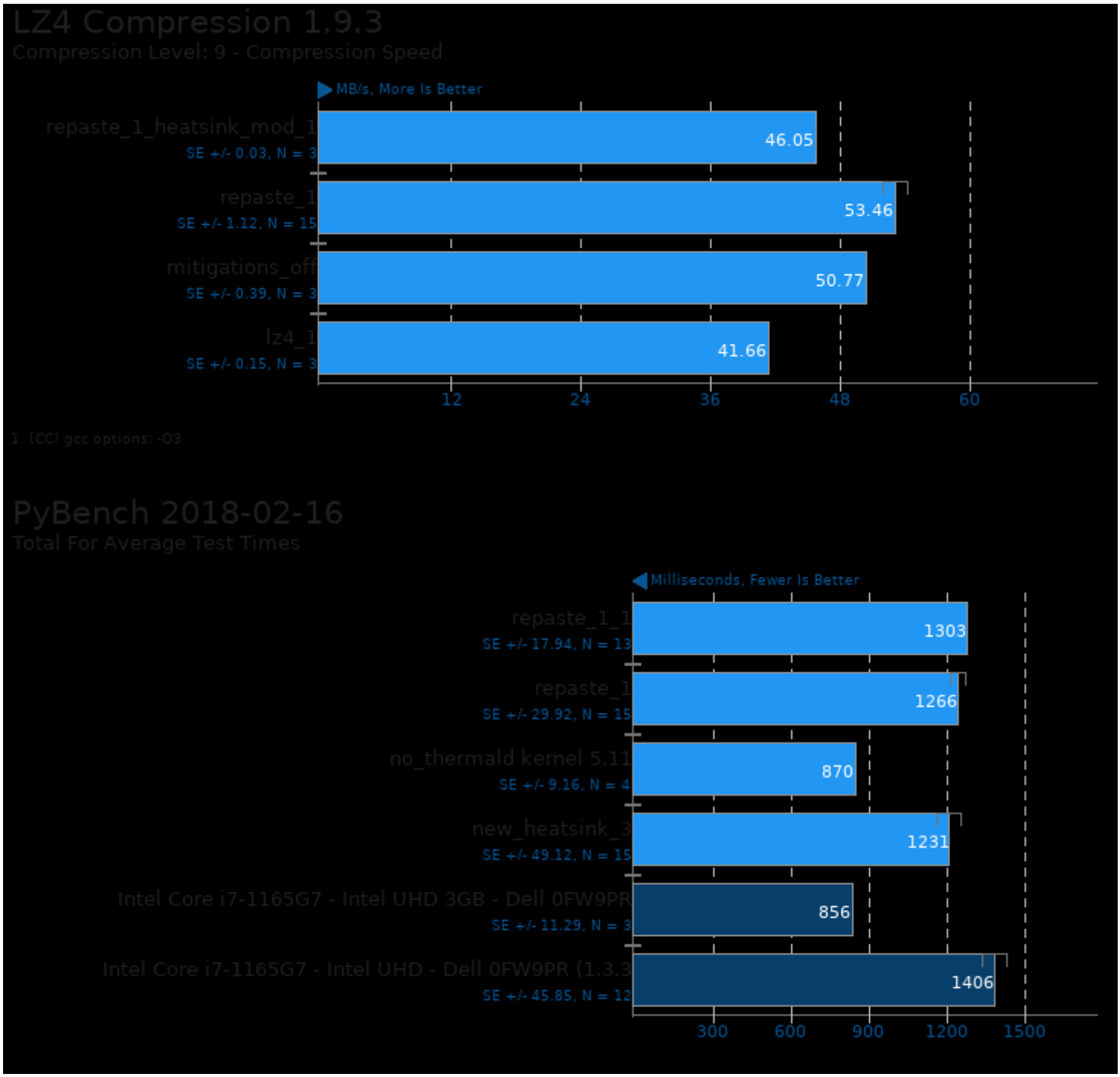
WebP Image Encode - Q.1.HC (Encode Time - sec)	7.13 5	
Standard Deviation	1.9 %	
Etcpak - DXT1 (Mpx/s)		15 13
Standard Deviation		0%
WebP Image Encode - Quality 100 (Encode Time - sec)	2.16 8	
Standard Deviation	2.1 %	

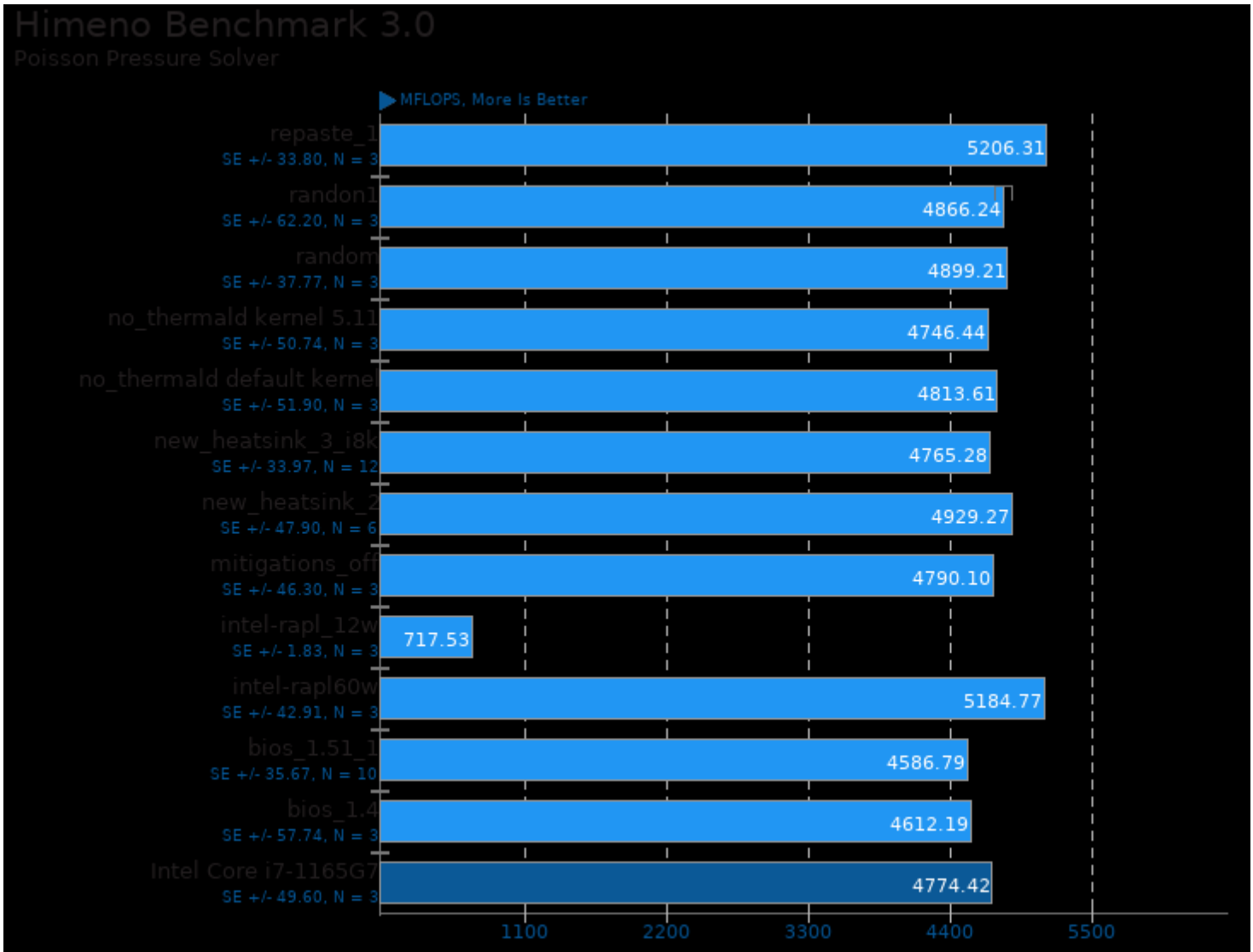
WebP Image Encode - Default (Encode Time - sec)	1.40 3
Standard Deviation	0.5 %

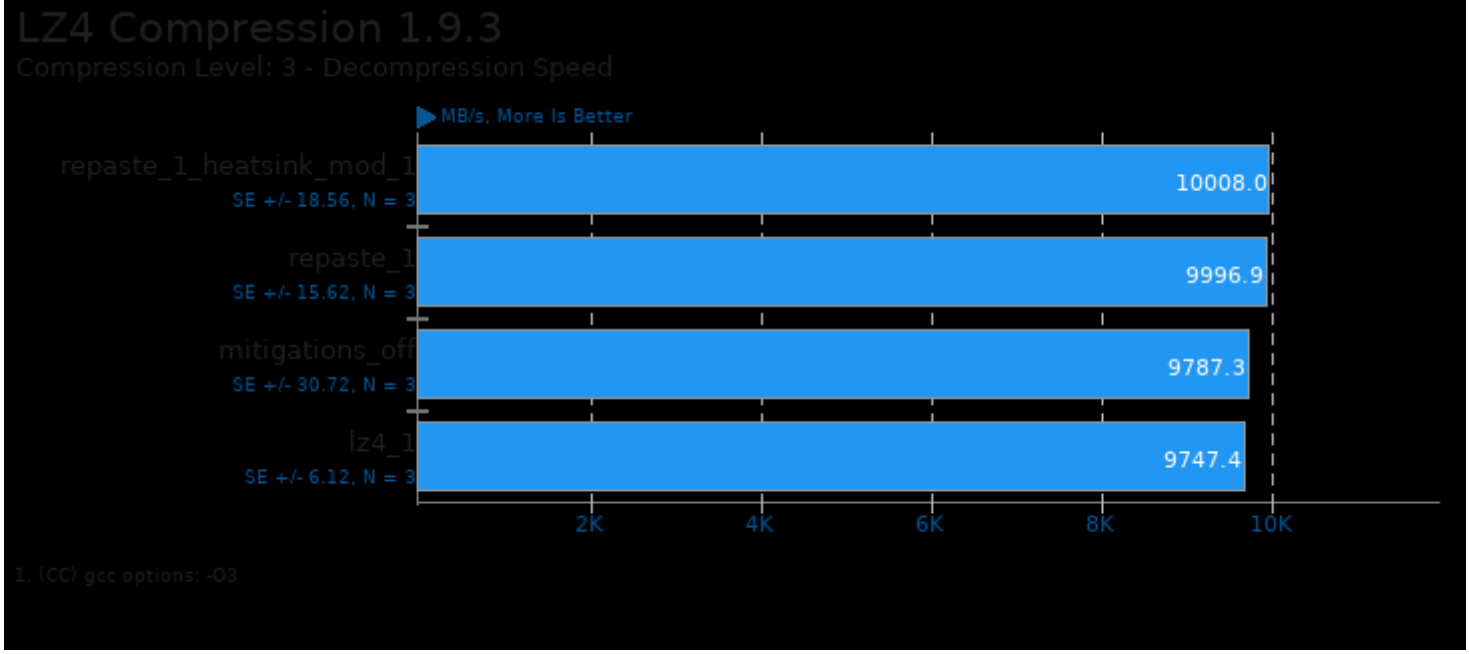

7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
new_heatsink_3
SE +/- 506.22, N = 15
21511
5K
10K
15K
20K
25K
1. (CXX) g++ options: -pipe -lpthread
Tesseract 2014-05-12
Resolution: 1920 x 1200
Frames Per Second, More Is Better
Intel UHD
SE +/- 1.34, N = 15
139.74
30
60
90
120
150
Zstd Compression 1.4.9
Compression Level: 19, Long Mode - Decompression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1_thremald_2.3
SE +/- 38.30, N = 3
2637.5
600
1200
1800
2400
3000
1. (CC) gcc options: -O3 -pthread
Zstd Compression 1.4.9
Compression Level: 19, Long Mode - Compression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1_thremald_2.3
SE +/- 0.05, N = 3
8.63
2
4
6
8
10
1. (CC) gcc options: -O3 -pthread

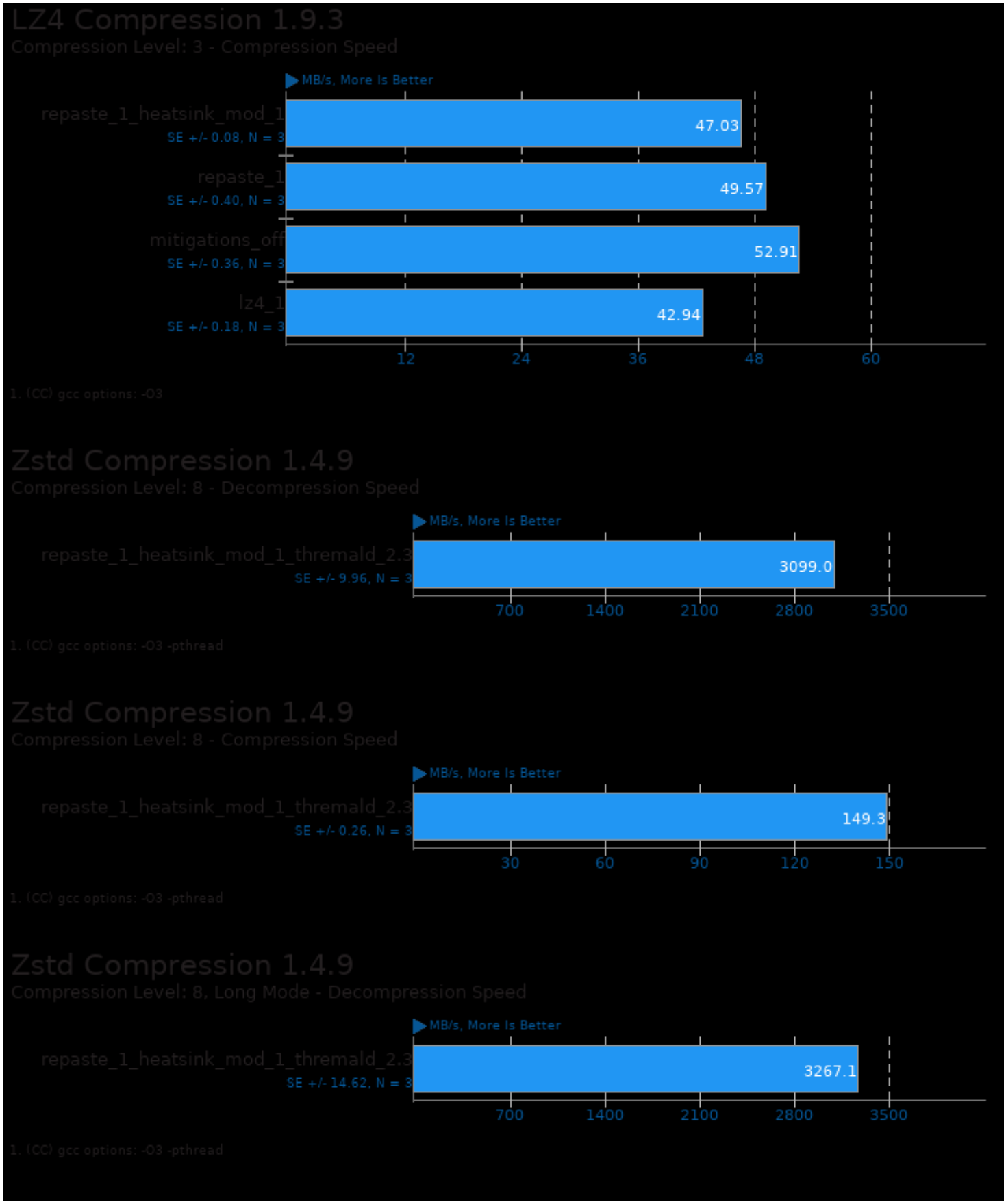

Coremark 1.0
CoreMark Size 666 - Iterations Per Second
Iterations/Sec, More Is Better
repaste_1
SE +/- 1934.05, N = 3
152539.28
new_heatsink_3_i8k
SE +/- 2849.49, N = 15
120920.05
new_heatsink_1
SE +/- 2294.51, N = 15
120775.88
bios_1.51
SE +/- 1857.65, N = 15
121780.54
Intel Core i7-1165G7
SE +/- 2205.37, N = 15
120615.46
30K
60K
90K
120K
150K
1. (CC) gcc options: -O2 -lrt -lrt
Zstd Compression 1.4.9
Compression Level: 19 - Decompression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1_thremald_2.3
SE +/- 25.96, N = 3
2738.8
600
1200
1800
2400
3000
1. (CC) gcc options: -O3 -pthread
Zstd Compression 1.4.9
Compression Level: 19 - Compression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1_thremald_2.3
SE +/- 0.02, N = 3
10.23
3
6
9
12
15
1. (CC) gcc options: -O3 -pthread


BYTE Unix Benchmark 3.6
Computational Test: Dhrystone 2
LPS, More Is Better
repaste_1_heatsink_mod_1_thremald_2.3
SE +/- 408382.05, N = 3
54969965.4
repaste_1_heatsink_mod_1
SE +/- 348947.20, N = 3
55464884.3
new
SE +/- 104134.42, N = 3
52404345.4
Intel Core i7-1165G7
SE +/- 59900.05, N = 3
50958375.2
12M
24M
36M
48M
60M
LZ4 Compression 1.9.3
Compression Level: 9 - Decompression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1
SE +/- 18.45, N = 3
10025.0
repaste_1
SE +/- 16.46, N = 15
10045.3
mitigations_off
SE +/- 11.80, N = 3
9807.8
lz4_1
SE +/- 10.37, N = 3
9772.3
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3


LZ4 Compression 1.9.3
Compression Level: 9 - Compression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1
SE +/- 0.03, N = 3
46.05
repaste_1
SE +/- 1.12, N = 15
53.46
mitigations_off
SE +/- 0.39, N = 3
50.77
lz4_1
SE +/- 0.15, N = 3
41.66
12
24
36
48
60
1. (CC) gcc options: -O3
PyBench 2018-02-16
Total For Average Test Times
Milliseconds, Fewer Is Better
repaste_1_1
SE +/- 17.94, N = 13
1303
repaste_1
SE +/- 29.92, N = 15
1266
no_thermald kernel 5.11
SE +/- 9.16, N = 4
870
new_heatsink_3
SE +/- 49.12, N = 15
1231
Intel Core i7-1165G7 - Intel UHD 3GB - Dell 0FW9PR
SE +/- 11.29, N = 3
856
Intel Core i7-1165G7 - Intel UHD - Dell 0FW9PR (1.3.3
SE +/- 45.85, N = 12
1406
300
600
900
1200
1500

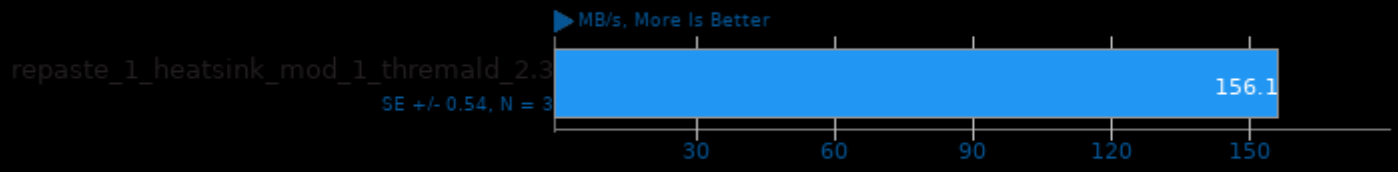

Himeno Benchmark 3.0
Poisson Pressure Solver
MFLOPS, More Is Better
repaste_1
SE +/- 33.80, N = 3
5206.31
randon1
SE +/- 62.20, N = 3
4866.24
random
SE +/- 37.77, N = 3
4899.21
no_thermald kernel 5.11
SE +/- 50.74, N = 3
4746.44
no_thermald default kernel
SE +/- 51.90, N = 3
4813.61
new_heatsink_3_i8k
SE +/- 33.97, N = 12
4765.28
new_heatsink_2
SE +/- 47.90, N = 6
4929.27
mitigations_off
SE +/- 46.30, N = 3
4790.10
intel-rapl_12w
SE +/- 1.83, N = 3
717.53
intel-rapl60w
SE +/- 42.91, N = 3
5184.77
bios_1.51_1
SE +/- 35.67, N = 10
4586.79
bios_1.4
SE +/- 57.74, N = 3
4612.19
Intel Core i7-1165G7
SE +/- 49.60, N = 3
4774.42
1100
2200
3300
4400
5500
1. (CC) gcc options: -O3 -mavx2


LZ4 Compression 1.9.3
Compression Level: 3 - Decompression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1
SE +/- 18.56, N = 3
10008.0
repaste_1
SE +/- 15.62, N = 3
9996.9
mitigations_off
SE +/- 30.72, N = 3
9787.3
lz4_1
SE +/- 6.12, N = 3
9747.4
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3


LZ4 Compression 1.9.3
Compression Level: 3 - Compression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1
SE +/- 0.08, N = 3
47.03
repaste_1
SE +/- 0.40, N = 3
49.57
mitigations_off
SE +/- 0.36, N = 3
52.91
lz4_1
SE +/- 0.18, N = 3
42.94
12
24
36
48
60
1. (CC) gcc options: -O3
Zstd Compression 1.4.9
Compression Level: 8 - Decompression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1_thremald_2.3
SE +/- 9.96, N = 3
3099.0
700
1400
2100
2800
3500
1. (CC) gcc options: -O3 -pthread
Zstd Compression 1.4.9
Compression Level: 8 - Compression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1_thremald_2.3
SE +/- 0.26, N = 3
149.3
30
60
90
120
150
1. (CC) gcc options: -O3 -pthread
Zstd Compression 1.4.9
Compression Level: 8, Long Mode - Decompression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1_thremald_2.3
SE +/- 14.62, N = 3
3267.1
700
1400
2100
2800
3500
1. (CC) gcc options: -O3 -pthread

Zstd Compression 1.4.9

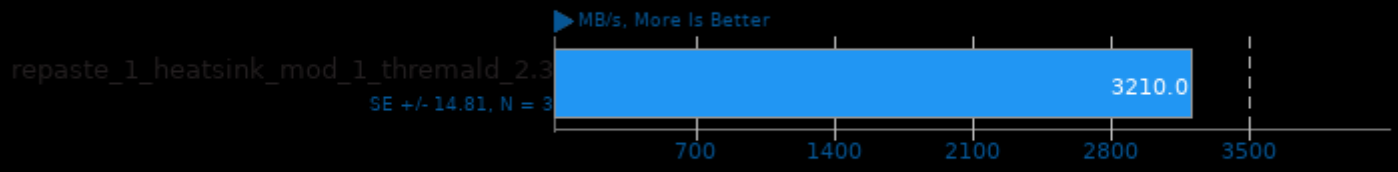
Compression Level: 8, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pthread

Zstd Compression 1.4.9

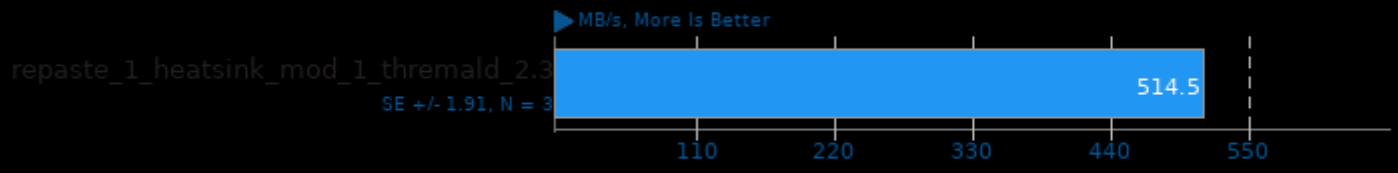
Compression Level: 3, Long Mode - Decompression Speed



1. (CC) gcc options: -O3 -pthread

Zstd Compression 1.4.9

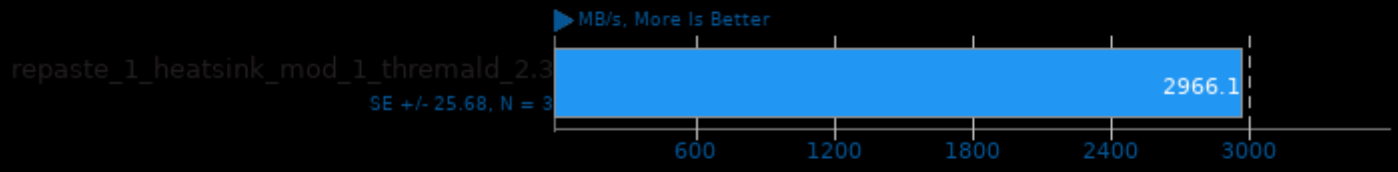
Compression Level: 3, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pthread

Zstd Compression 1.4.9

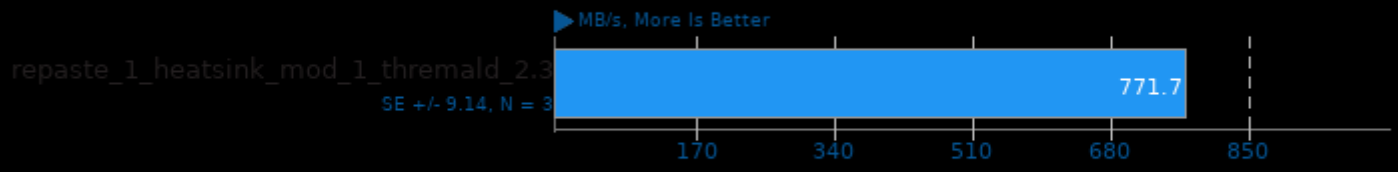
Compression Level: 3 - Decompression Speed



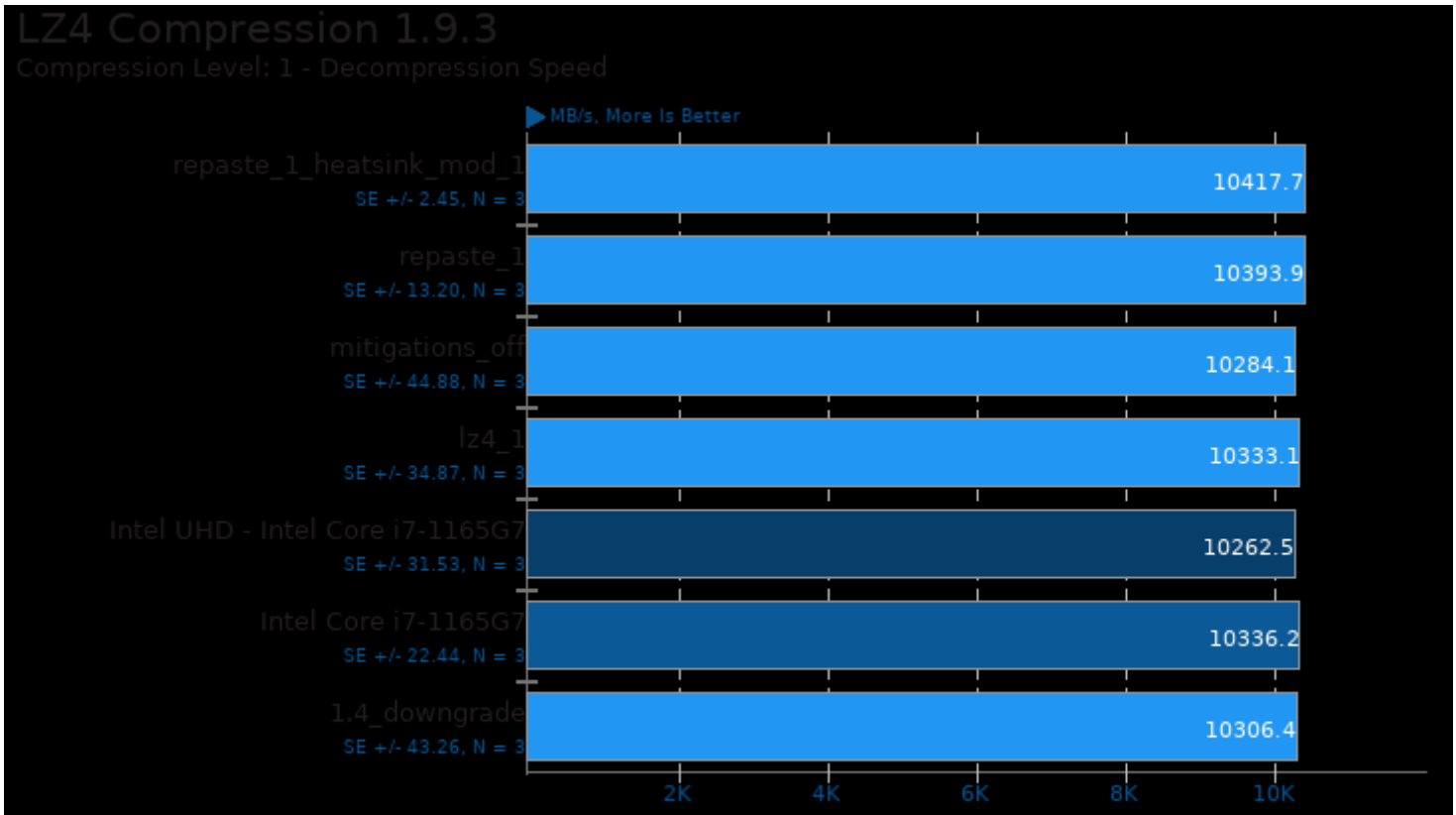
1. (CC) gcc options: -O3 -pthread

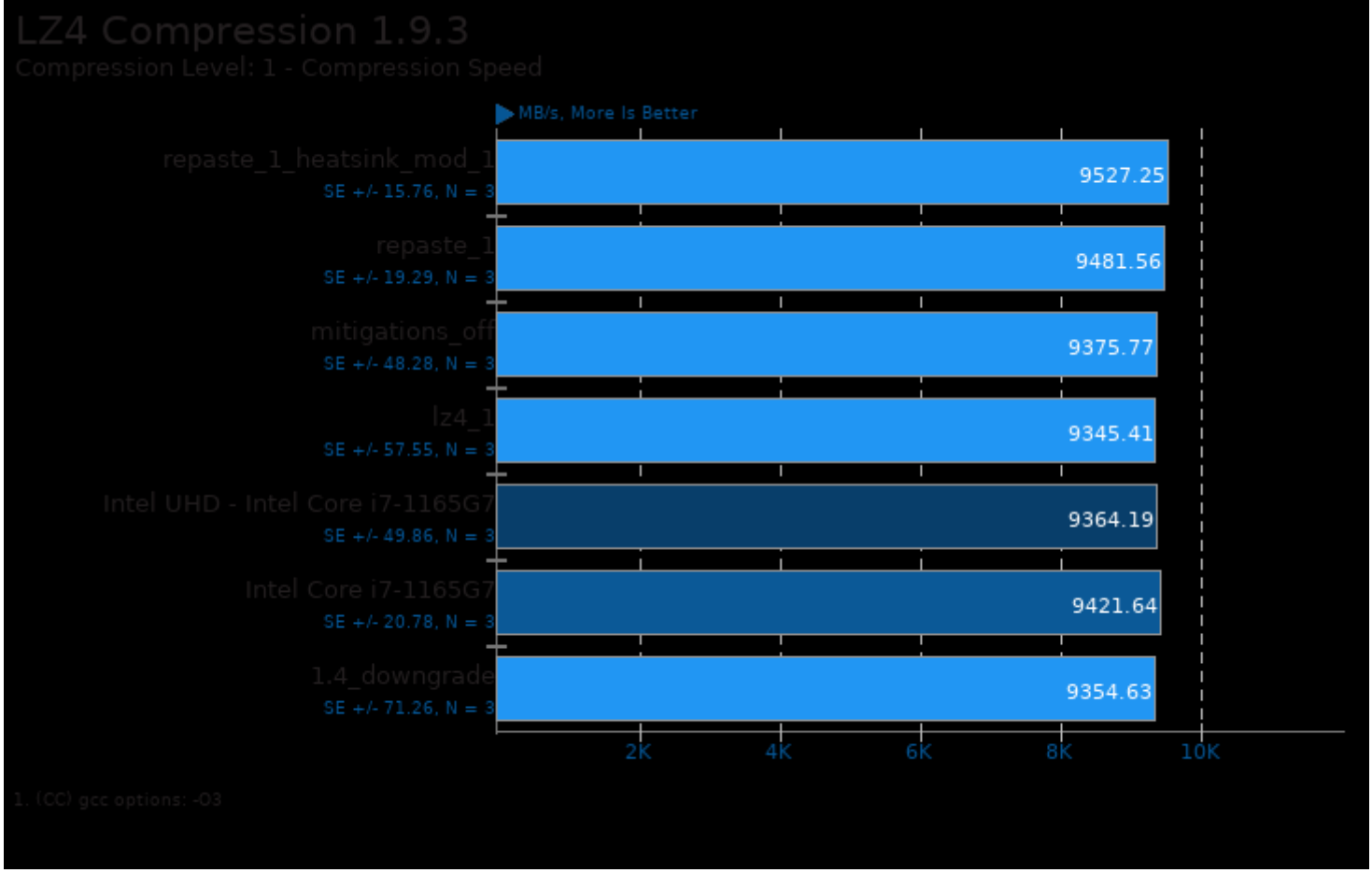
Zstd Compression 1.4.9

Compression Level: 3 - Compression Speed



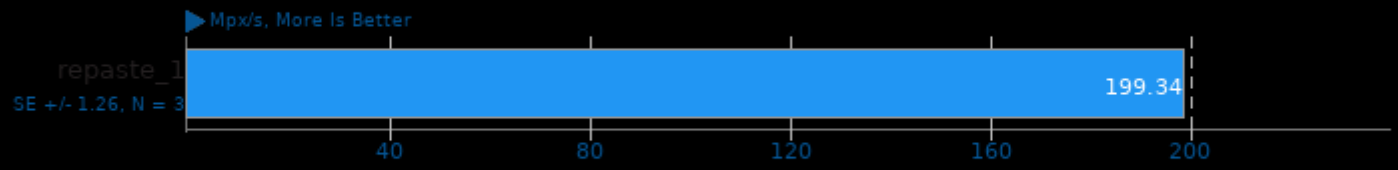
1. (CC) gcc options: -O3 -pthread


LZ4 Compression 1.9.3
Compression Level: 1 - Decompression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1
SE +/- 2.45, N = 3
10417.7
repaste_1
SE +/- 13.20, N = 3
10393.9
mitigations_off
SE +/- 44.88, N = 3
10284.1
lz4_1
SE +/- 34.87, N = 3
10333.1
Intel UHD - Intel Core i7-1165G7
SE +/- 31.53, N = 3
10262.5
Intel Core i7-1165G7
SE +/- 22.44, N = 3
10336.2
1.4_downgrade
SE +/- 43.26, N = 3
10306.4
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3


LZ4 Compression 1.9.3
Compression Level: 1 - Compression Speed
MB/s, More Is Better
repaste_1_heatsink_mod_1
SE +/- 15.76, N = 3
9527.25
repaste_1
SE +/- 19.29, N = 3
9481.56
mitigations_off
SE +/- 48.28, N = 3
9375.77
lz4_1
SE +/- 57.55, N = 3
9345.41
Intel UHD - Intel Core i7-1165G7
SE +/- 49.86, N = 3
9364.19
Intel Core i7-1165G7
SE +/- 20.78, N = 3
9421.64
1.4_downgrade
SE +/- 71.26, N = 3
9354.63
2K
4K
6K
8K
10K
1. (CC) gcc options: -O3

Etcpak 0.7

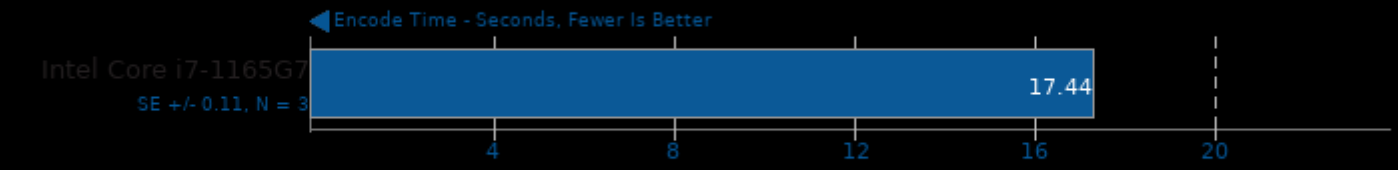
Configuration: ETC2



1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

WebP Image Encode 1.1

Encode Settings: Quality 100, Lossless



1. (CC) gcc options: -fvisibility=hidden -O2 -pthread -lm -ljpeg -lpng16 -ltiff

Etcpak 0.7

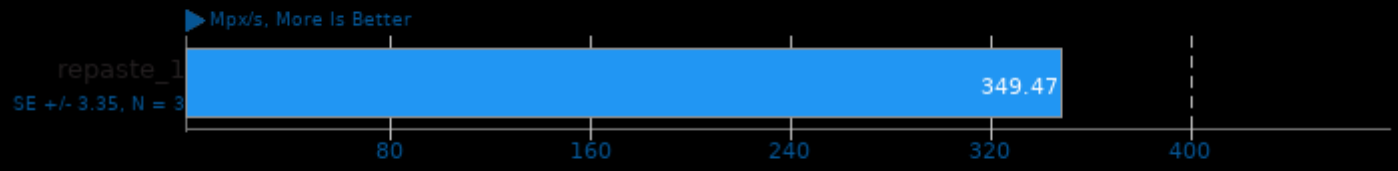
Configuration: ETC1 + Dithering



1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

Etcpak 0.7

Configuration: ETC1

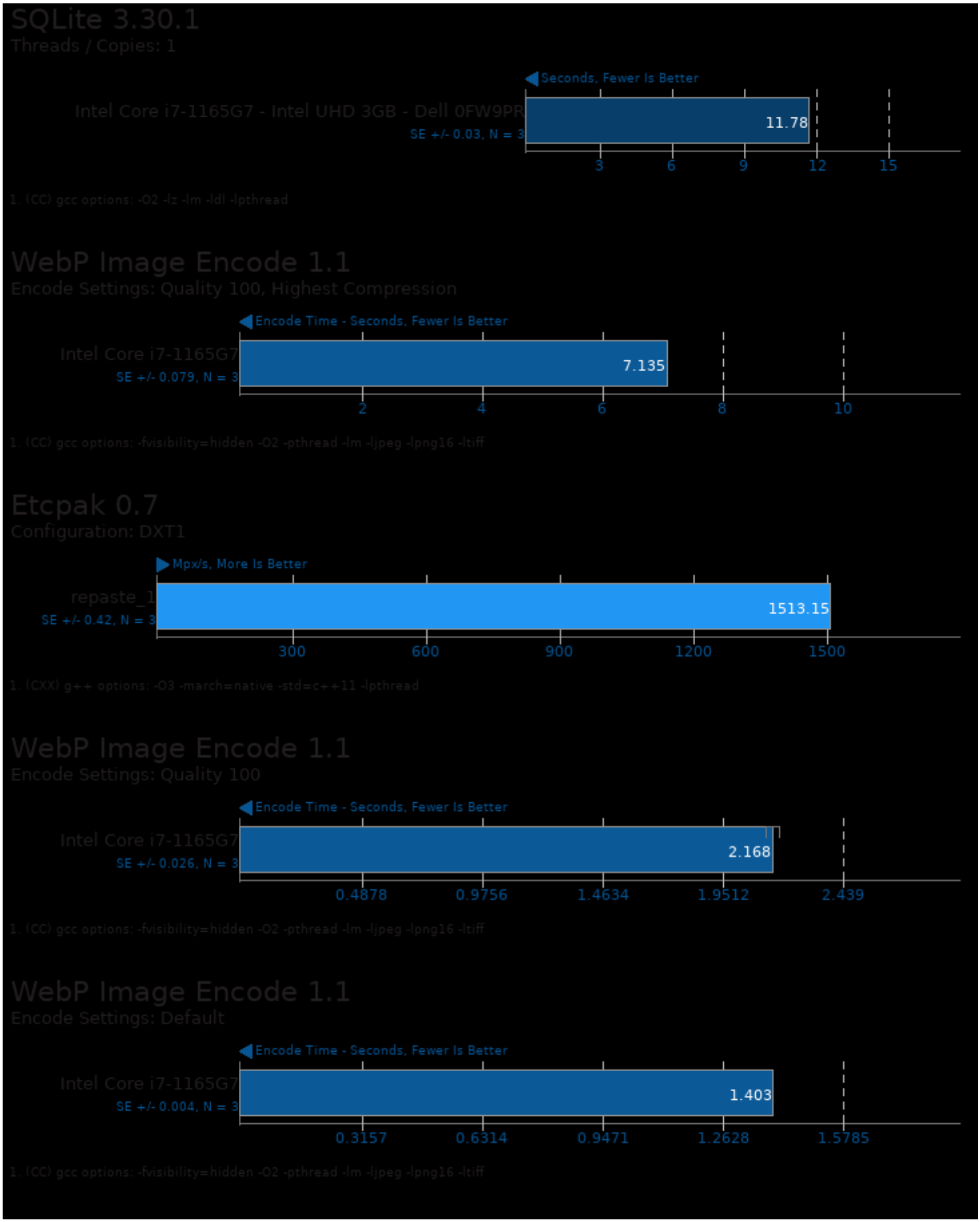


1. (CXX) g++ options: -O3 -march=native -std=c++11 -lpthread

GLmark2 2020.04

Resolution: 1920 x 1080





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

08:38.