

www.phoronix-test-suite.com

zbook finance

Intel Core i9-10885H testing with a HP 8736 (S91 Ver. 01.02.01 BIOS) and NVIDIA Quadro RTX 5000 with Max-Q Design 16GB on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

4 had the most wins, coming in first place for 50% of the tests.

Based on the geometric mean of all complete results, the fastest (1) was 1.01x the speed of the slowest (2). 1 was 1x the speed of 4 and 2 was 0.99x the speed of 1.

Test Systems:

1

Processor: Intel Core i9-10885H @ 5.30GHz (8 Cores / 16 Threads), Motherboard: HP 8736 (S91 Ver. 01.02.01 BIOS), Chipset: Intel Comet Lake PCH, Memory: 32GB, Disk: 2048GB Kioxia KXG50PNV2T04, Graphics: NVIDIA Quadro RTX 5000 with Max-Q Design 16GB (600/6000MHz), Audio: Intel Comet Lake PCH cAVS, Network: Intel Wi-Fi 6 AX201

zbook finance

OS: Ubuntu 20.04, Kernel: 5.6.0-1042-oem (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.9, Display Driver: NVIDIA 450.102.04, OpenGL: 4.6.0, OpenCL: OpenCL 1.2 CUDA 11.0.228, Vulkan: 1.2.133, Compiler: GCC 9.3.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

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++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/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: 0xe0 - Thermald 1.9.1
OpenCL Notes: GPU Compute Cores: 3072
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + 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

2

4

Processor: Intel Core i9-10885H @ 5.30GHz (8 Cores / 16 Threads), Motherboard: HP 8736 (S91 Ver. 01.02.01 BIOS), Chipset: Intel Comet Lake PCH, Memory: 32GB, Disk: 2048GB Kioxia KXG50PNV2T04, Graphics: NVIDIA Quadro RTX 5000 with Max-Q Design 16GB (300/405MHz), Audio: Intel Comet Lake PCH cAVS, Network: Intel Wi-Fi 6 AX201

OS: Ubuntu 20.04, Kernel: 5.6.0-1042-oem (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.9, Display Driver: NVIDIA 450.102.04, OpenGL: 4.6.0, OpenCL: OpenCL 1.2 CUDA 11.0.228, Vulkan: 1.2.133, Compiler: GCC 9.3.0 + CUDA 10.1, File-System: ext4, Screen Resolution: 1920x1080

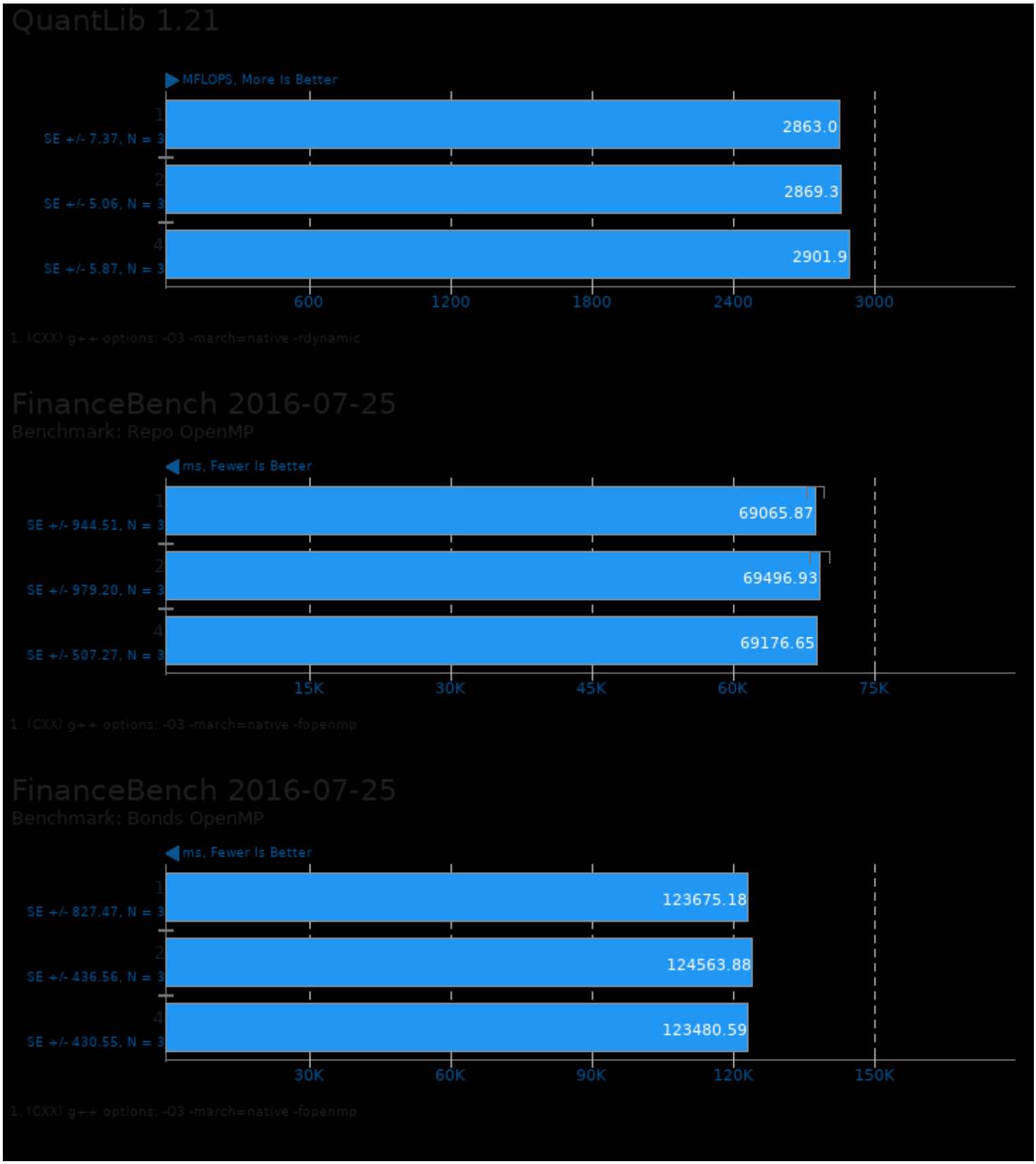
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/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: 0xe0 - Thermald 1.9.1
OpenCL Notes: GPU Compute Cores: 3072
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + 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	2	4
QuantLib (MFLOPS)	**2863**	2869	**2902**
Normalized	98.66%	98.88%	100%
Standard Deviation	0.4%	0.3%	0.4%
FinanceBench - Repo OpenMP (ms)	**69066**	**69497**	69177
Normalized	100%	99.38%	99.84%
Standard Deviation	2.4%	2.4%	1.3%
FinanceBench - Bonds OpenMP (ms)	123675	**124564**	**123481**
Normalized	99.84%	99.13%	100%
Standard Deviation	1.2%	0.6%	0.6%
FinanceBench - Monte-Carlo OpenCL (ms)	**1649**	1650	**1653**
Normalized	100%	99.94%	99.79%
Standard Deviation	0.1%	0%	0.1%
FinanceBench - Monte-Carlo OpenMP (ms)	56069	**56410**	**55927**
Normalized	99.75%	99.14%	100%
Standard Deviation	2%	1.3%	1.9%

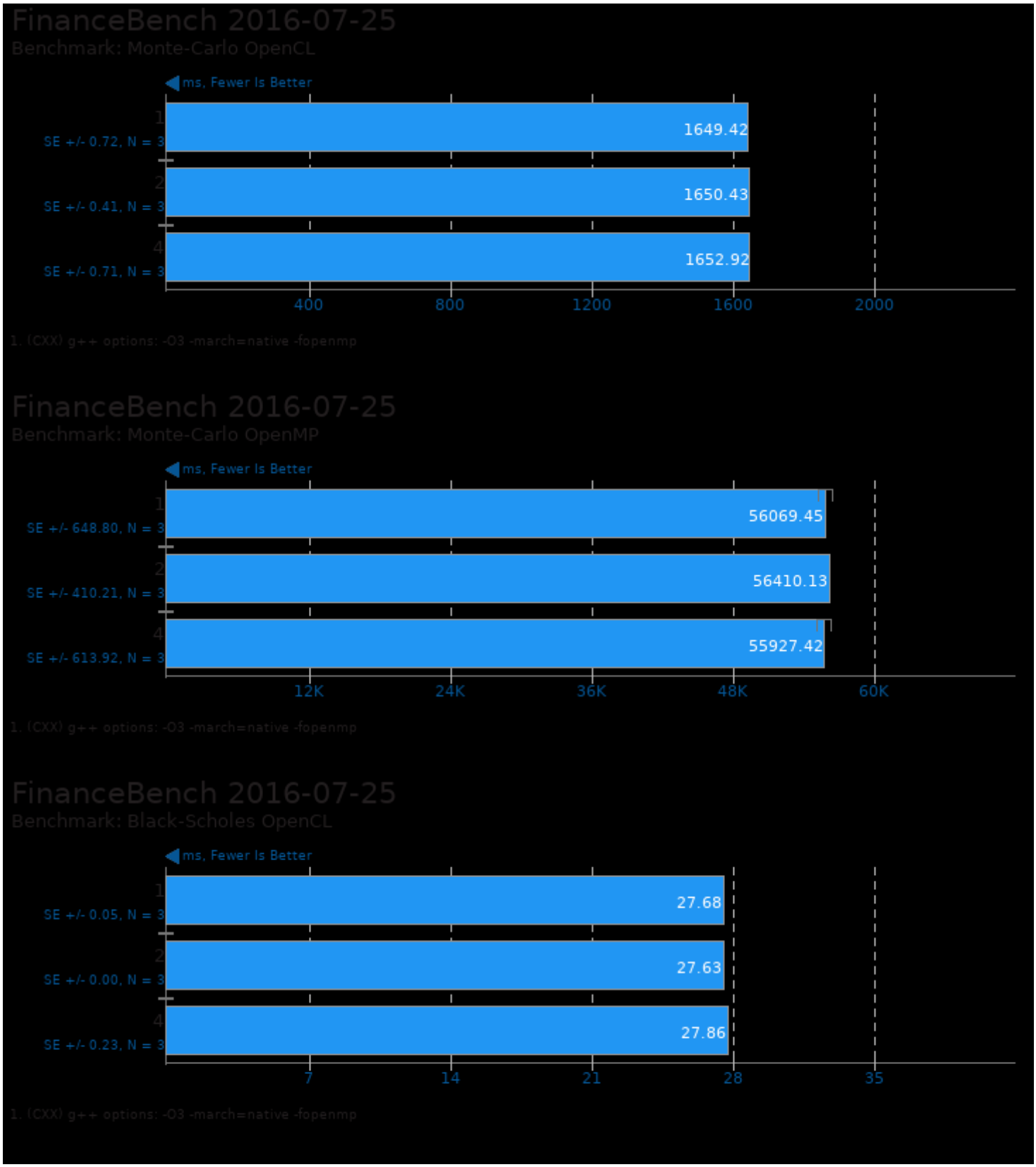
zbook finance

FinanceBench - B.S.O (ms)	27.684667	**27.633333**	**27.864000**
Normalized	99.81%	100%	99.17%
Standard Deviation	0.3%	0%	1.4%

zbook finance



zbook finance



zbook finance

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



Geometric mean based upon tests: pts/financebench and pts/quantlib

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 11:05.