

www.phoronix-test-suite.com

System76 Oryx Pro Gen6 System Suite

Intel Core i7-1165G7 testing with a TUXEDO PHxTxX1 (N.1.12A04 BIOS) and Intel Xe TGL GT2 3GB on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

Infinity Book Pro 14 2021 had the most wins, coming in first place for 50% of the tests.

Based on the geometric mean of all complete results, the fastest (Infinity Book Pro 14 2021) was 1.115x the speed of the slowest (System76 Oryx Pro Gen6).

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

Radiance Benchmark (Test: Serial) at 1.653x
OpenSSL (RSA 4096-bit Performance) at 1.622x
Selenium (Benchmark: Speedometer - Browser: Firefox) at 1.574x
OSBench (Test: Create Files) at 1.567x
x264 (H.264 Video Encoding) at 1.492x
Rodinia (Test: OpenMP HotSpot3D) at 1.486x
Selenium (Benchmark: Octane - Browser: Firefox) at 1.461x
LAME MP3 Encoding (WAV To MP3) at 1.444x
Radiance Benchmark (Test: SMP Parallel) at 1.426x

Rodinia (Test: OpenMP LavaMD) at 1.395x.

Test Systems:

System76 Oryx Pro Gen6

Processor: Intel Core i7-10875H @ 5.10GHz (8 Cores / 16 Threads), Motherboard: System76 Oryx Pro (2020-10-19_d5deed5 BIOS), Chipset: Intel Comet Lake PCH, Memory: 32GB, Disk: 500GB Western Digital WDS500G2B0C-00PXH0 + Samsung SSD 970 EVO Plus 500GB, Graphics: Intel UHD (1200MHz), Audio: Realtek ALC1220, Network: Realtek RTL8111/8168/8411 + Intel Wi-Fi 6 AX201

OS: Pop 20.04, Kernel: 5.8.0-7630-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.8, Display Driver: modesetting 1.20.8, OpenGL: 4.6 Mesa 20.0.8, Compiler: GCC 9.3.0, 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
Python Notes: Python 3.8.5
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + 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

Infinity Book Pro 14 2021

Processor: Intel Core i7-1165G7 @ 4.70GHz (4 Cores / 8 Threads), Motherboard: TUXEDO PHxTxX1 (N.1.12A04 BIOS), Chipset: Intel Device a0ef, Memory: 32GB, Disk: Samsung SSD 970 EVO Plus 500GB, Graphics: Intel Xe TGL GT2 3GB (1300MHz), Audio: Realtek ALC256, Network: Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.8.0-59-generic (x86_64), Desktop: KDE Plasma 5.18.5, Display Server: X Server 1.20.9, OpenGL: 4.6 Mesa 20.2.6, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 2880x1800

Kernel Notes: 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++,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 performance - CPU Microcode: 0x8a - Thermald 1.9.1
Python Notes: Python 3.8.10
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

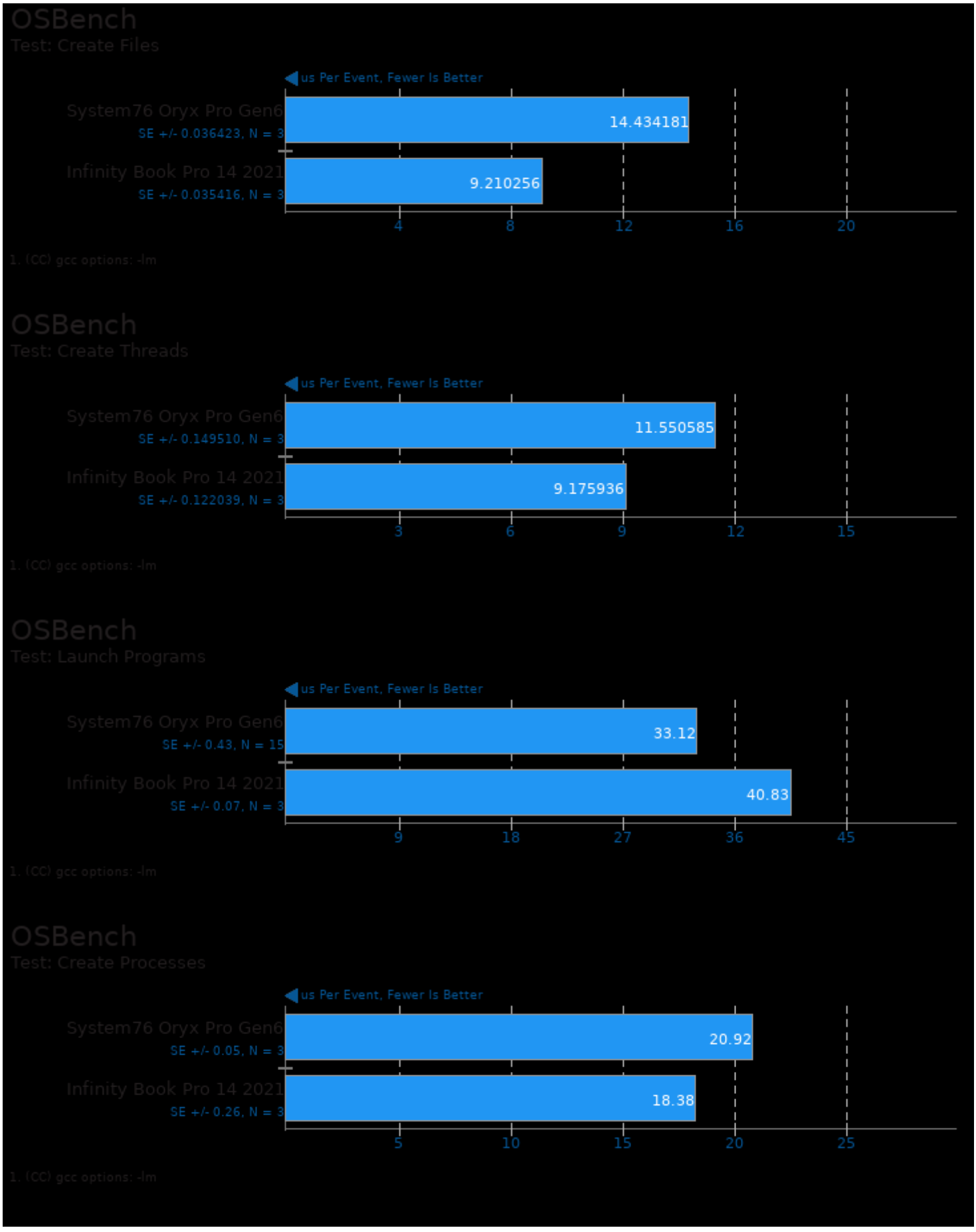
	System76 Oryx Pro Gen6	Infinity Book Pro 14 2021
OSBench - Create Files (us/Event)	14.434181	9.210256

Normalized	63.81%	100%
Standard Deviation	0.4%	0.7%
OSBench - Create Threads (us/Event)	**11.550585**	**9.175936**
Normalized	79.44%	100%
Standard Deviation	2.2%	2.3%
OSBench - Launch Programs (us/Event)	**33.119678**	**40.826798**
Normalized	100%	81.12%
Standard Deviation	5.1%	0.3%
OSBench - Create Processes (us/Event)	**20.922820**	**18.383662**
Normalized	87.86%	100%
Standard Deviation	0.4%	2.4%
OSBench - Memory Allocations (Ns/Event)	**81.563314**	**59.213082**
Normalized	72.6%	100%
Standard Deviation	0.2%	0%
Rodinia - OpenMP LavaMD (sec)	**347.894**	**485.139**
Normalized	100%	71.71%
Standard Deviation	1.3%	1.8%
Rodinia - OpenMP HotSpot3D (sec)	**119.946**	**80.743**
Normalized	67.32%	100%
Standard Deviation	1.6%	0.2%
Rodinia - OpenMP Leukocyte (sec)	**172.080**	**197.371**
Normalized	100%	87.19%
Standard Deviation	1.2%	0.4%
Rodinia - OpenMP CFD Solver (sec)	**27.139**	**31.919**
Normalized	100%	85.02%
Standard Deviation	1.2%	0.9%
Rodinia - O.S (sec)	**18.184**	**20.585**
Normalized	100%	88.34%
Standard Deviation	0.1%	0.6%
x264 - H.2.V.E (FPS)	**76.89**	**51.54**
Normalized	100%	67.03%
Standard Deviation	1.6%	0.6%
x265 - Bosphorus 1080p (FPS)	**47.02**	**38.68**
Normalized	100%	82.26%
Standard Deviation	2.2%	0.9%
7-Zip Compression - C.S.T (MIPS)	**42115**	**30337**
Normalized	100%	72.03%
Standard Deviation	1.3%	1.2%
Timed Linux Kernel Compilation - Time To Compile	**120.105**	**155.973**
Normalized	100%	77%
Standard Deviation	0.3%	0.3%
POV-Ray - Trace Time (sec)	71.001	
Standard Deviation	1.4%	
LAME MP3 Encoding - WAV To MP3 (sec)	**9.888**	**6.848**
Normalized	69.26%	100%
Standard Deviation	0.1%	0.7%
Radiance Benchmark - Serial (sec)	**821.609**	**497.013**
Normalized	60.49%	100%
Radiance Benchmark - SMP Parallel (sec)	**255.924**	**179.413**
Normalized	70.1%	100%
OpenSSL - R.4.b.P (Signs/sec)	**2032**	**1253**
Normalized	100%	61.66%
Standard Deviation	2.9%	0.3%
Darktable - Boat - CPU-only (sec)	**13.487**	**11.428**
Normalized	84.73%	100%

System76 Oryx Pro Gen6 System Suite

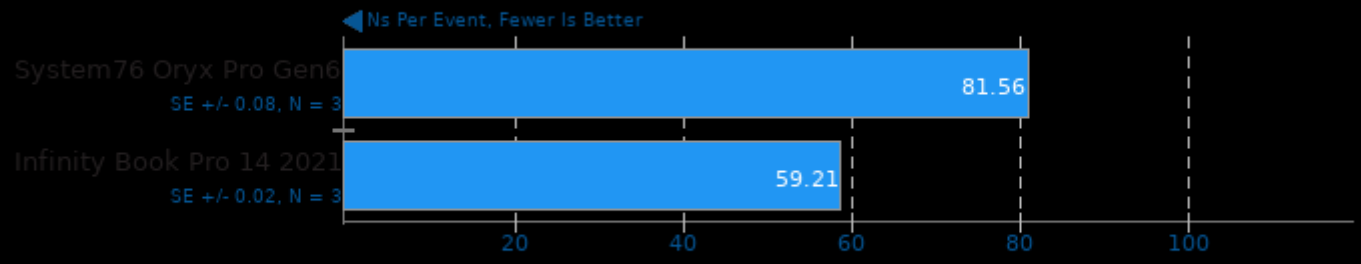
Standard Deviation	0.2%	0.6%
Darktable - Masskrug - CPU-only (sec)	**7.231**	**7.886**
Normalized	100%	91.69%
Standard Deviation	0.2%	2.4%
Darktable - Server Rack - CPU-only (sec)	**0.18**	**0.219**
Normalized	100%	82.19%
Standard Deviation	0%	0.8%
Darktable - Server Room - CPU-only (sec)	**4.554**	**5.691**
Normalized	100%	80.02%
Standard Deviation	0.1%	0.4%
Selenium - Octane - Firefox (Geometric Mean)	**16591**	**24240**
Normalized	68.44%	100%
Standard Deviation	0.3%	0.3%
Selenium - Basemark - Firefox (Overall Score)	457.22	
Standard Deviation	3.6%	
Selenium - MotionMark - Firefox (Score)	**72.92**	**520.36**
Normalized	14.01%	100%
Standard Deviation	26.4%	0.5%
Selenium - Speedometer - Firefox (Runs/min)	**85.27**	**134.2**
Normalized	63.54%	100%
Standard Deviation	0.2%	0.1%
Git - T.T.C.C.G.C (sec)	**57.783**	**45.240**
Normalized	78.29%	100%
Standard Deviation	0.8%	0.4%

System76 Oryx Pro Gen6 System Suite



OSBench

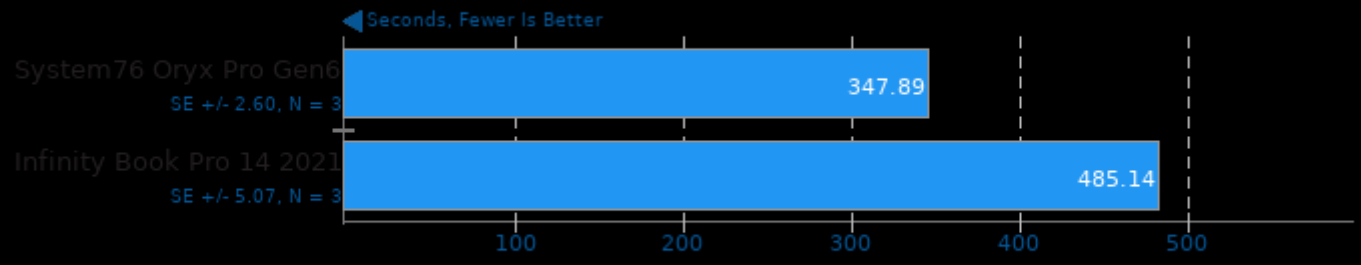
Test: Memory Allocations



1. (CC) gcc options: -lm

Rodinia 3.1

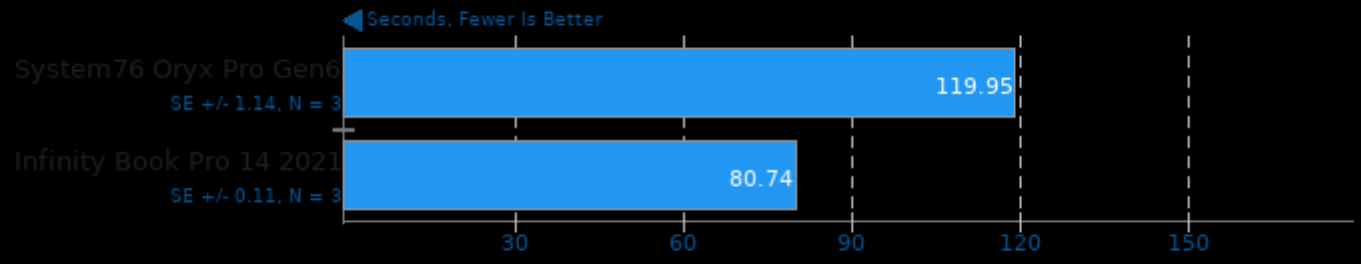
Test: OpenMP LavaMD



1. (CXX) g++ options: -O2 -lOpenCL

Rodinia 3.1

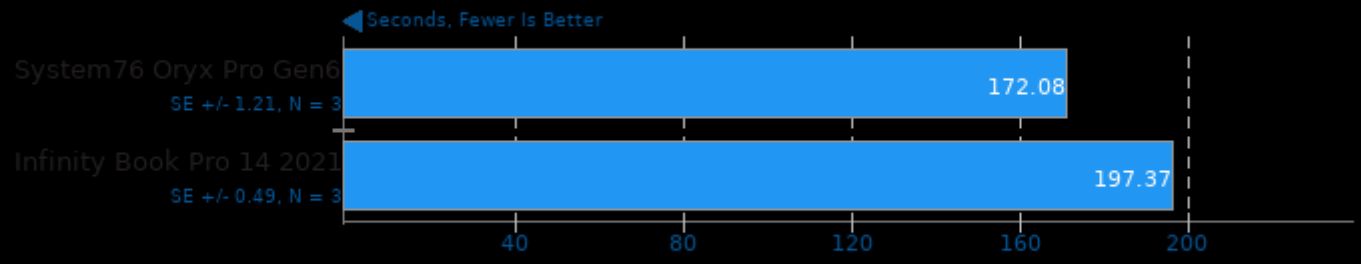
Test: OpenMP HotSpot3D



1. (CXX) g++ options: -O2 -lOpenCL

Rodinia 3.1

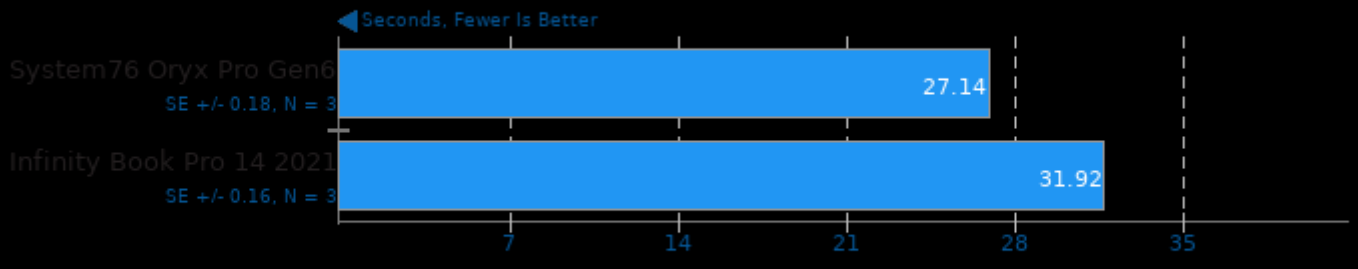
Test: OpenMP Leukocyte



1. (CXX) g++ options: -O2 -lOpenCL

Rodinia 3.1

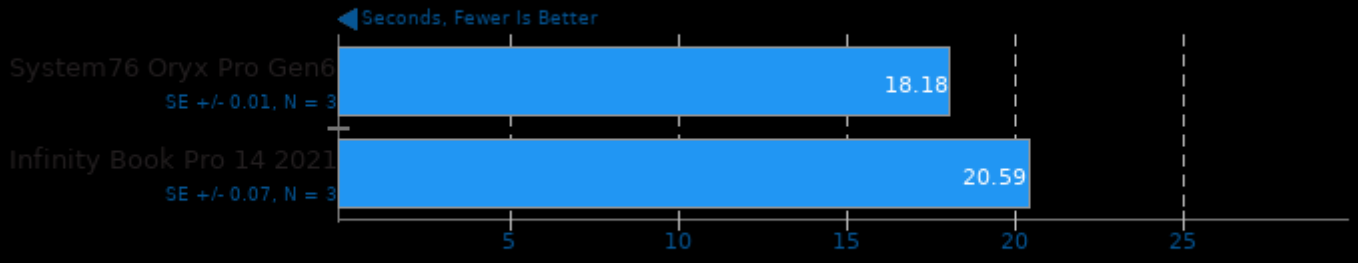
Test: OpenMP CFD Solver



1. (CXX) g++ options: -O2 -lOpenCL

Rodinia 3.1

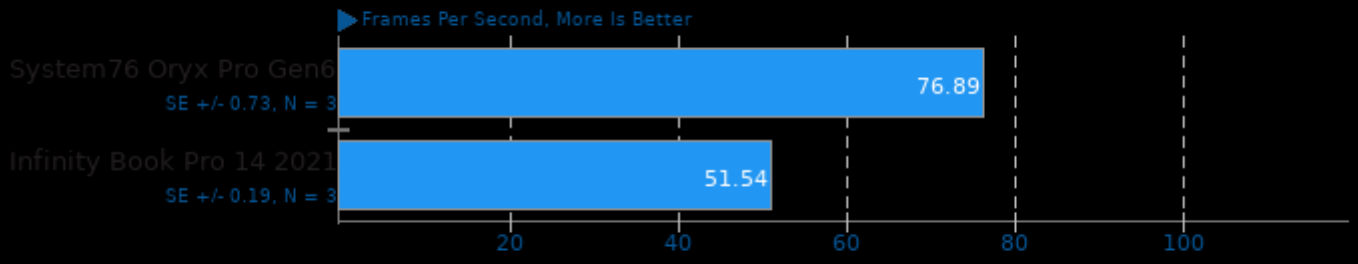
Test: OpenMP Streamcluster



1. (CXX) g++ options: -O2 -lOpenCL

x264 2019-12-17

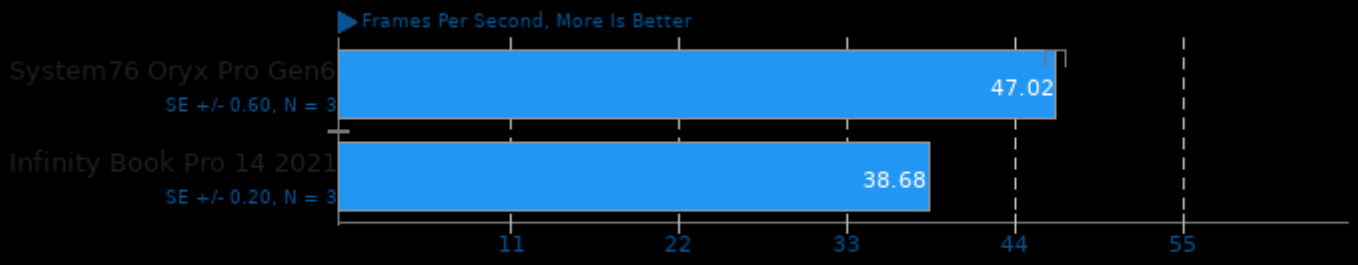
H.264 Video Encoding



1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fPIC -fomit-frame-pointer -fno-tree-vectorize

x265 3.4

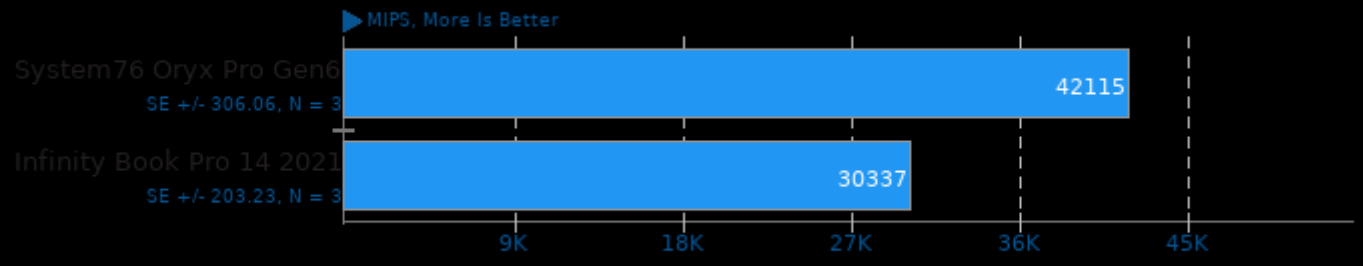
Video Input: Bosphorus 1080p



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

7-Zip Compression 16.02

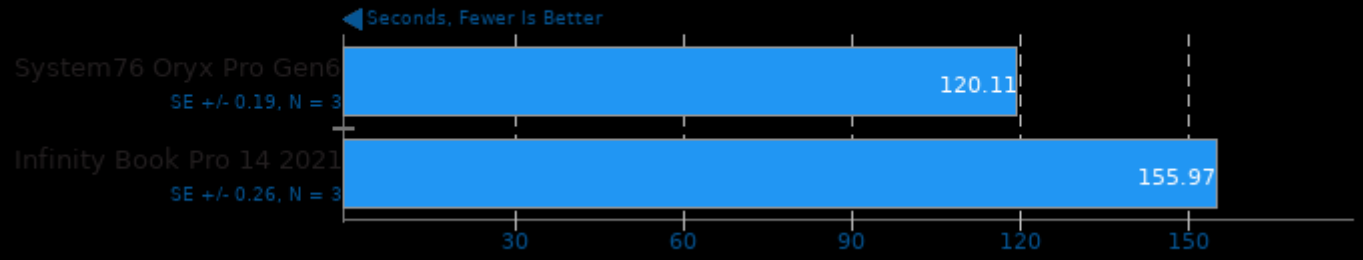
Compress Speed Test



1. (CXX) g++ options: -pipe -lpthread

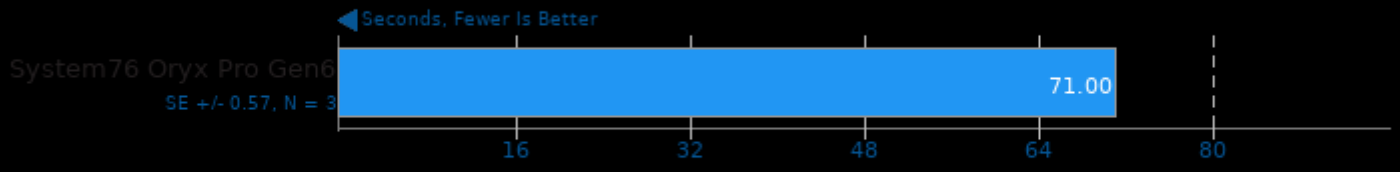
Timed Linux Kernel Compilation 5.4

Time To Compile



POV-Ray 3.7.0.7

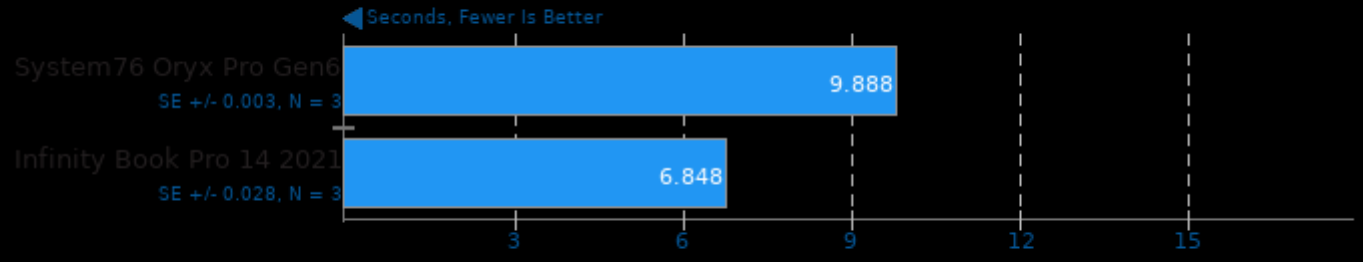
Trace Time



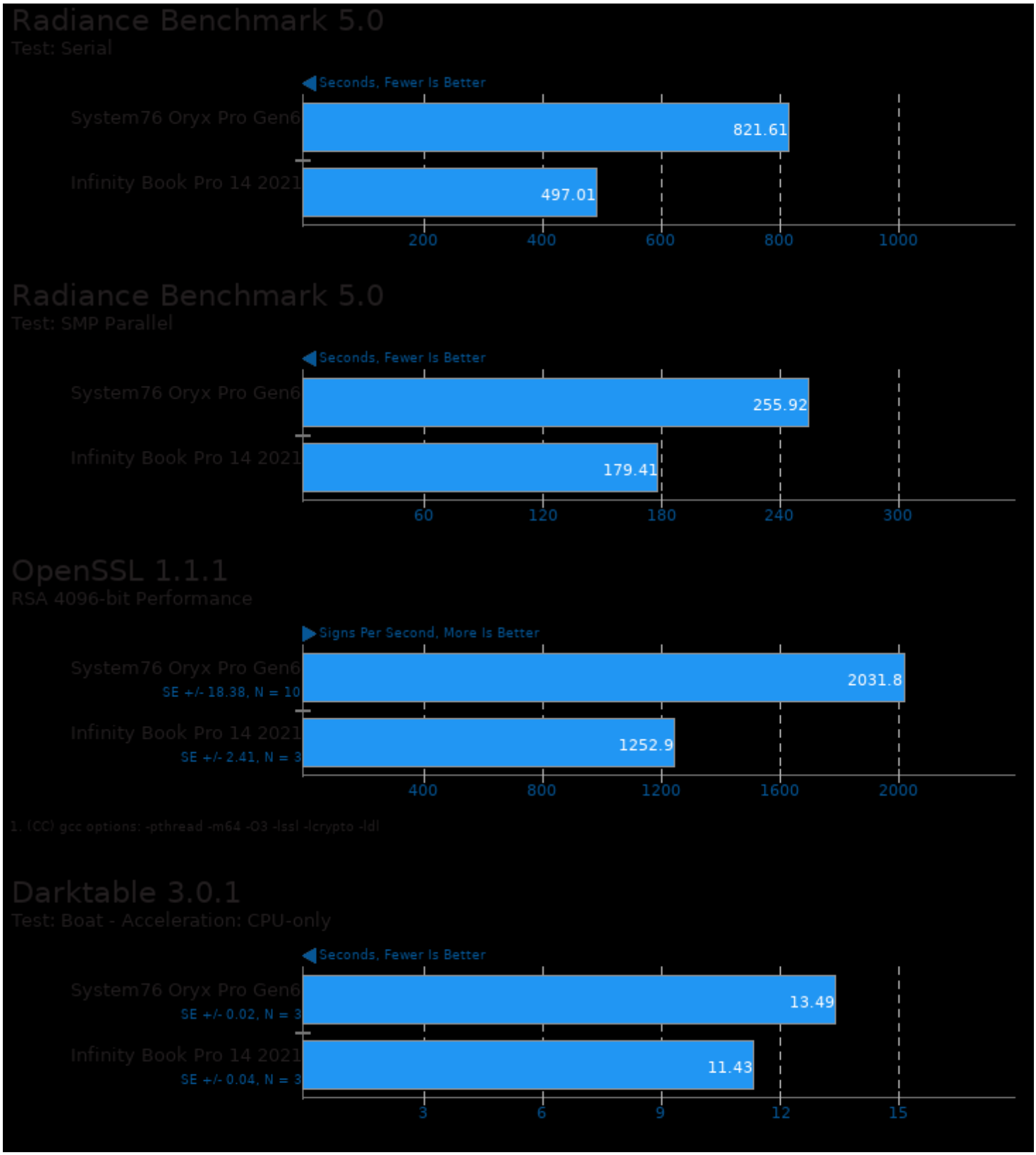
1. (CXX) g++ options: -pipe -O3 -ffast-math -march=native -pthread -lXpm -lSM -lICE -lX11 -ltiff -ljpeg -lpng -lz -lrt -lm -lboost_thread -lboost_system

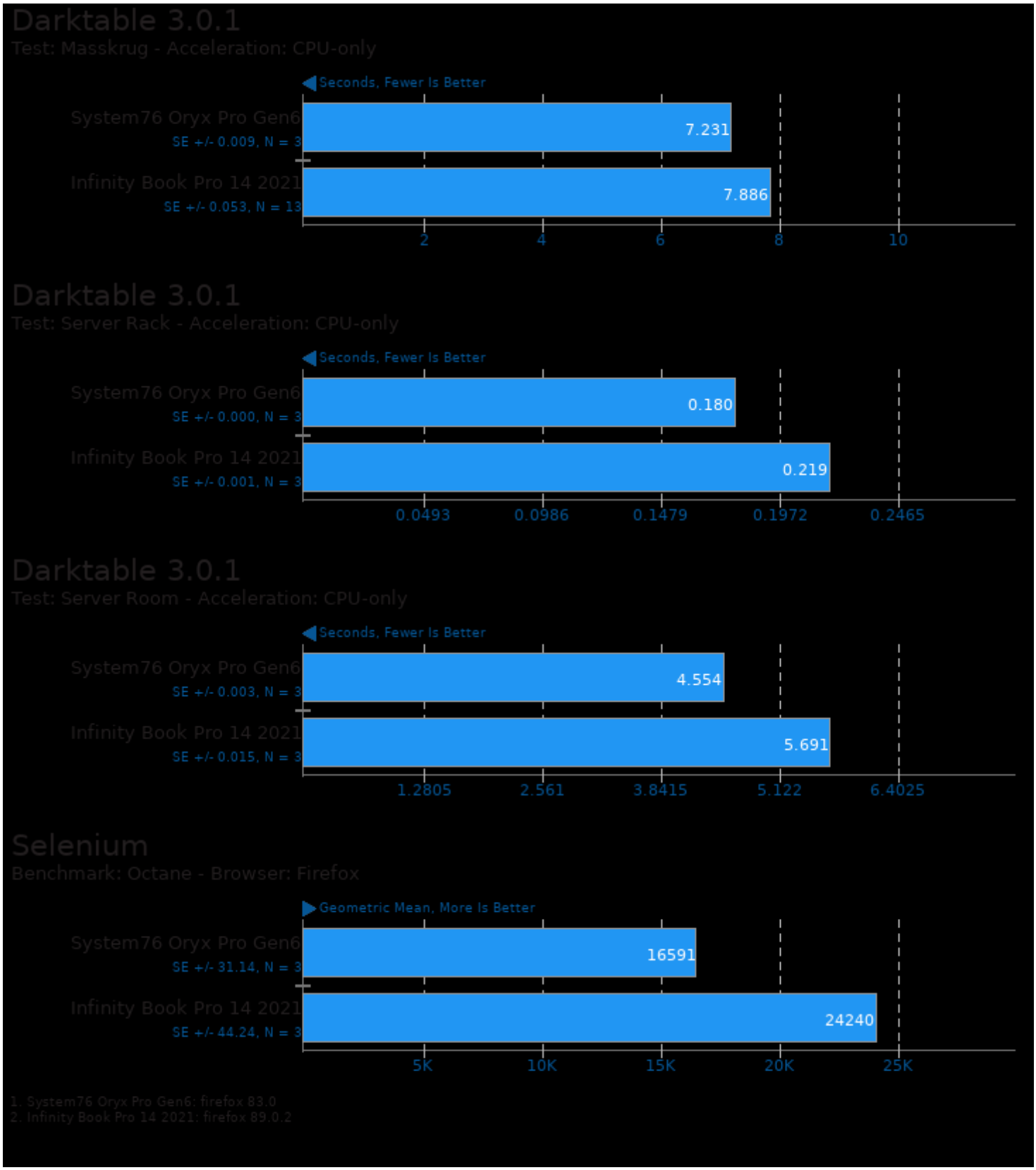
LAME MP3 Encoding 3.100

WAV To MP3



1. (CC) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -lm

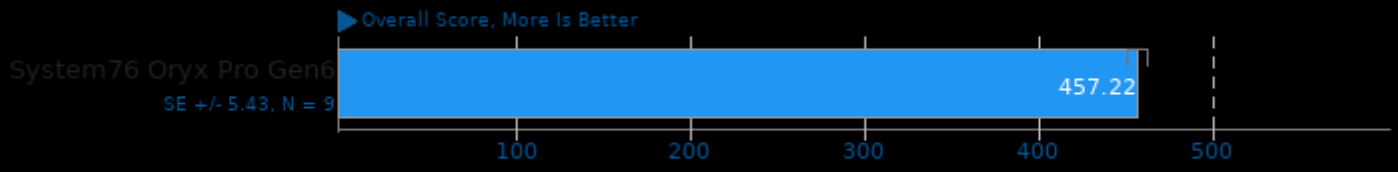

Radiance Benchmark 5.0
Test: Serial
Seconds, Fewer Is Better
System76 Oryx Pro Gen6
821.61
Infinity Book Pro 14 2021
497.01
200
400
600
800
1000
Radiance Benchmark 5.0
Test: SMP Parallel
Seconds, Fewer Is Better
System76 Oryx Pro Gen6
255.92
Infinity Book Pro 14 2021
179.41
60
120
180
240
300
OpenSSL 1.1.1
RSA 4096-bit Performance
Signs Per Second, More Is Better
System76 Oryx Pro Gen6
SE +/- 18.38, N = 10
2031.8
Infinity Book Pro 14 2021
SE +/- 2.41, N = 3
1252.9
400
800
1200
1600
2000
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl
Darktable 3.0.1
Test: Boat - Acceleration: CPU-only
Seconds, Fewer Is Better
System76 Oryx Pro Gen6
SE +/- 0.02, N = 3
13.49
Infinity Book Pro 14 2021
SE +/- 0.04, N = 3
11.43
3
6
9
12
15


Darktable 3.0.1
Test: Masskrug - Acceleration: CPU-only
Seconds, Fewer Is Better
System76 Oryx Pro Gen6
SE +/- 0.009, N = 3
7.231
Infinity Book Pro 14 2021
SE +/- 0.053, N = 13
7.886
2
4
6
8
10
Darktable 3.0.1
Test: Server Rack - Acceleration: CPU-only
Seconds, Fewer Is Better
System76 Oryx Pro Gen6
SE +/- 0.000, N = 3
0.180
Infinity Book Pro 14 2021
SE +/- 0.001, N = 3
0.219
0.0493
0.0986
0.1479
0.1972
0.2465
Darktable 3.0.1
Test: Server Room - Acceleration: CPU-only
Seconds, Fewer Is Better
System76 Oryx Pro Gen6
SE +/- 0.003, N = 3
4.554
Infinity Book Pro 14 2021
SE +/- 0.015, N = 3
5.691
1.2805
2.561
3.8415
5.122
6.4025
Selenium
Benchmark: Octane - Browser: Firefox
Geometric Mean, More Is Better
System76 Oryx Pro Gen6
SE +/- 31.14, N = 3
16591
Infinity Book Pro 14 2021
SE +/- 44.24, N = 3
24240
5K
10K
15K
20K
25K
1. System76 Oryx Pro Gen6: firefox 83.0
2. Infinity Book Pro 14 2021: firefox 89.0.2

System76 Oryx Pro Gen6 System Suite

Selenium

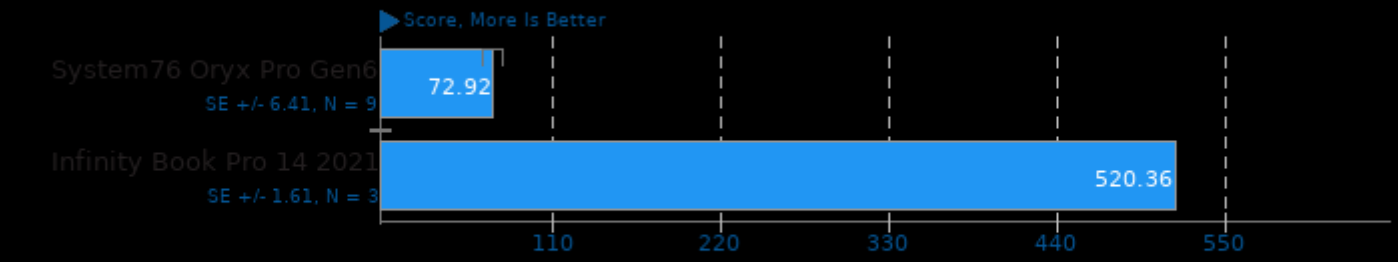
Benchmark: Basemark - Browser: Firefox



1. firefox 83.0

Selenium

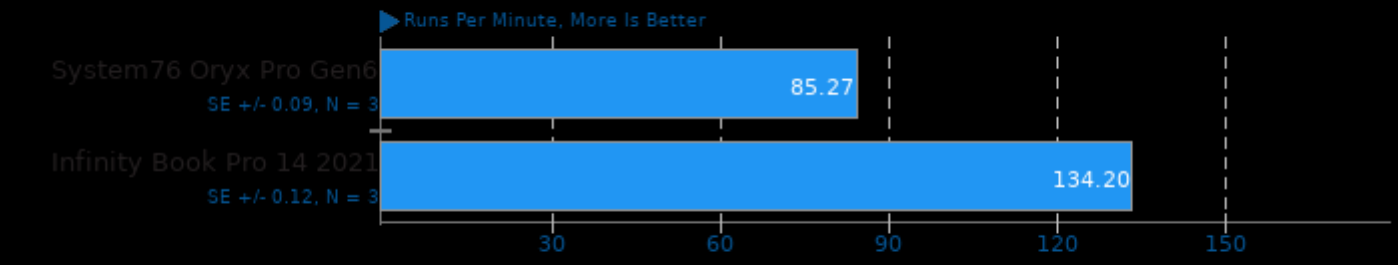
Benchmark: MotionMark - Browser: Firefox



1. System76 Oryx Pro Gen6: firefox 83.0
2. Infinity Book Pro 14 2021: firefox 89.0.2

Selenium

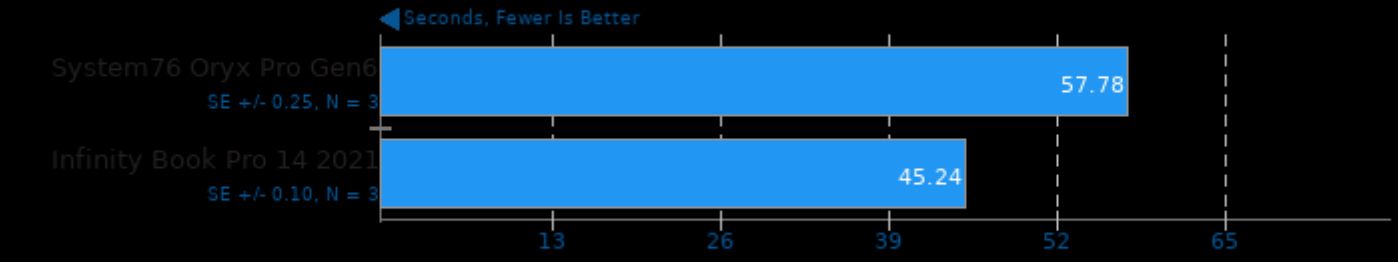
Benchmark: Speedometer - Browser: Firefox



1. System76 Oryx Pro Gen6: firefox 83.0
2. Infinity Book Pro 14 2021: firefox 89.0.2

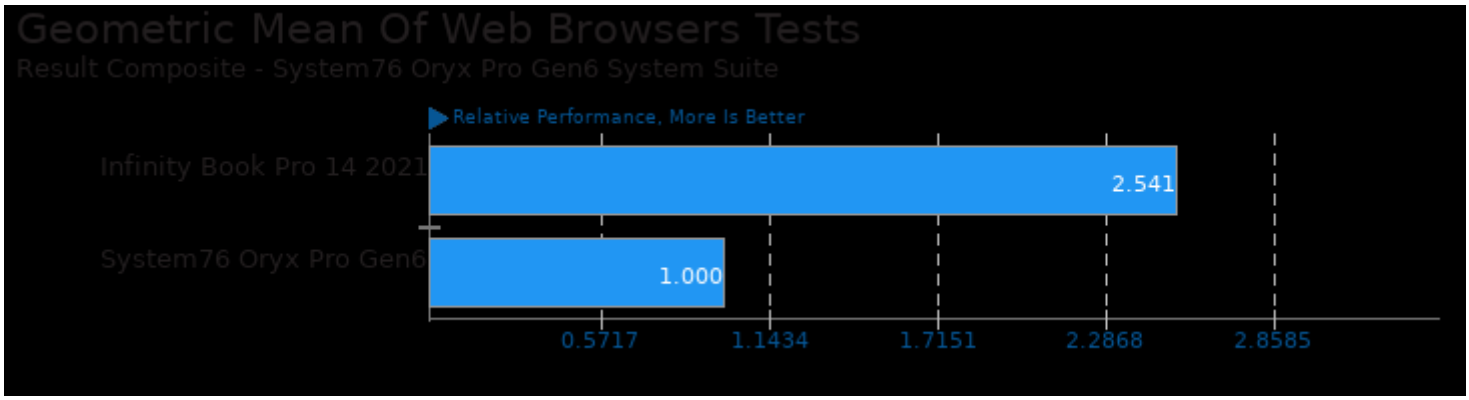
Git

Time To Complete Common Git Commands

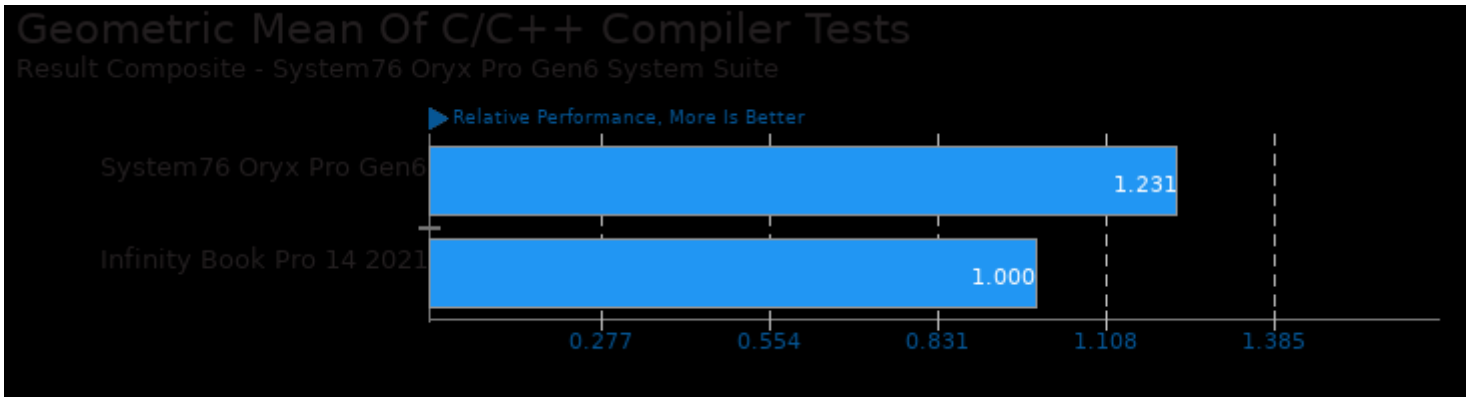


1. git version 2.25.1

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



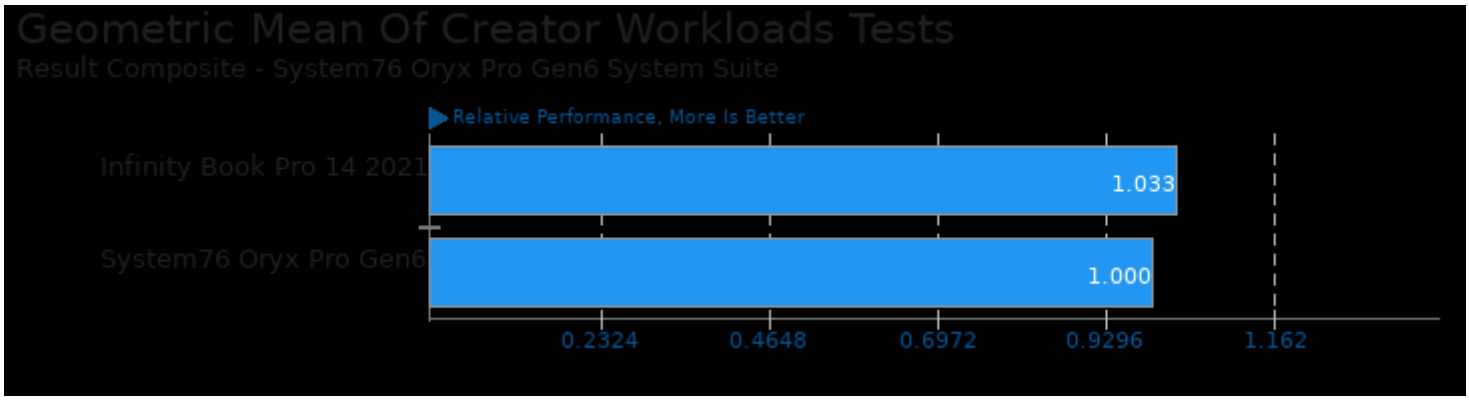
Geometric mean based upon tests: system/selenium



Geometric mean based upon tests: pts/compress-7zip, pts/encode-mp3, pts/x264, pts/x265 and pts/openssl



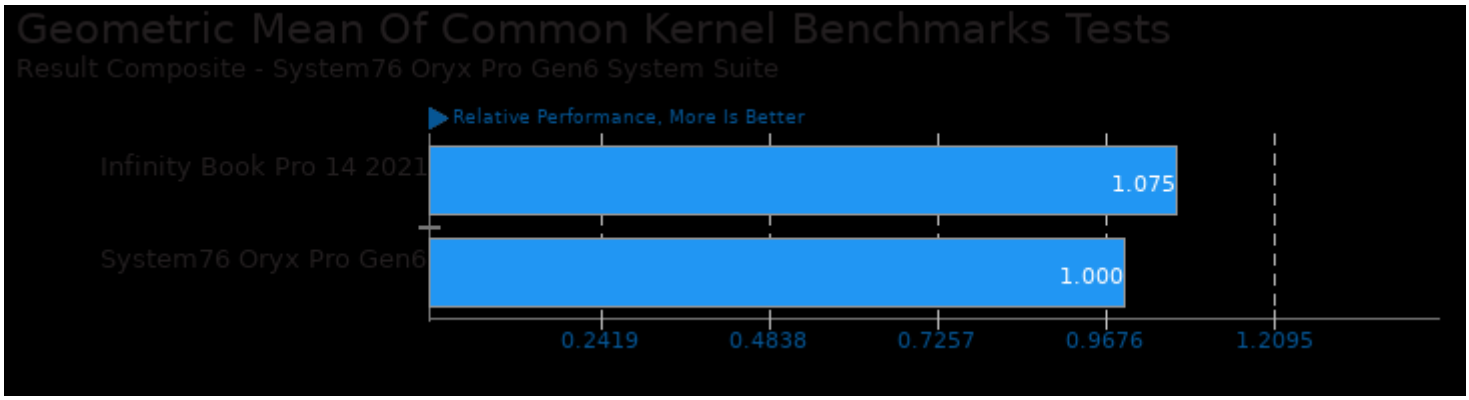
Geometric mean based upon tests: pts/build-linux-kernel, pts/compress-7zip, pts/x264, pts/x265, pts/encode-mp3, pts/openssl, pts/povray, pts/radiance, pts/rodinia and system/darktable



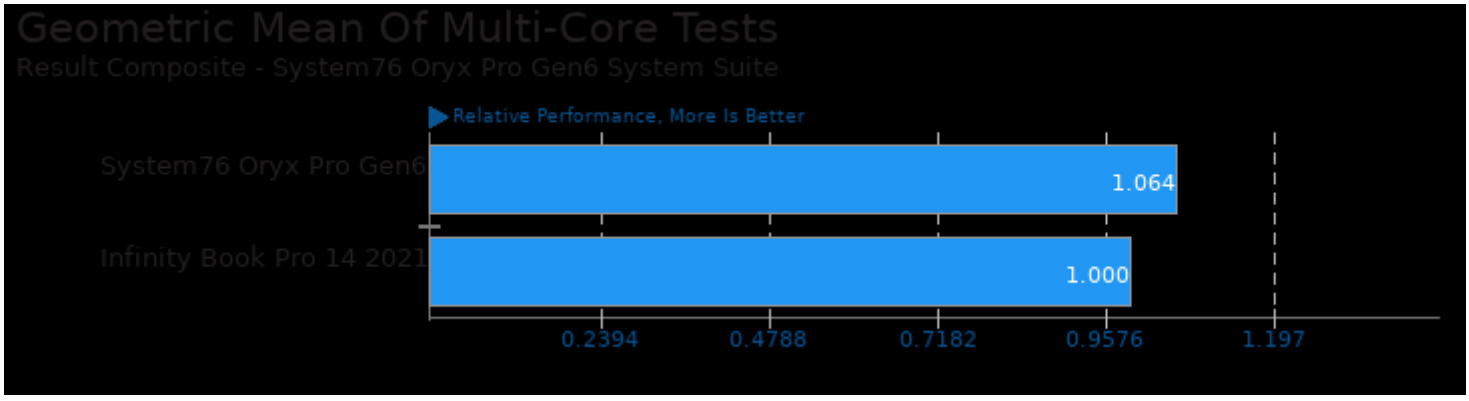
Geometric mean based upon tests: pts/povray, pts/radiance, pts/x264, pts/x265, pts/encode-mp3 and system/darktable



Geometric mean based upon tests: pts/encode-mp3, pts/x264 and pts/x265

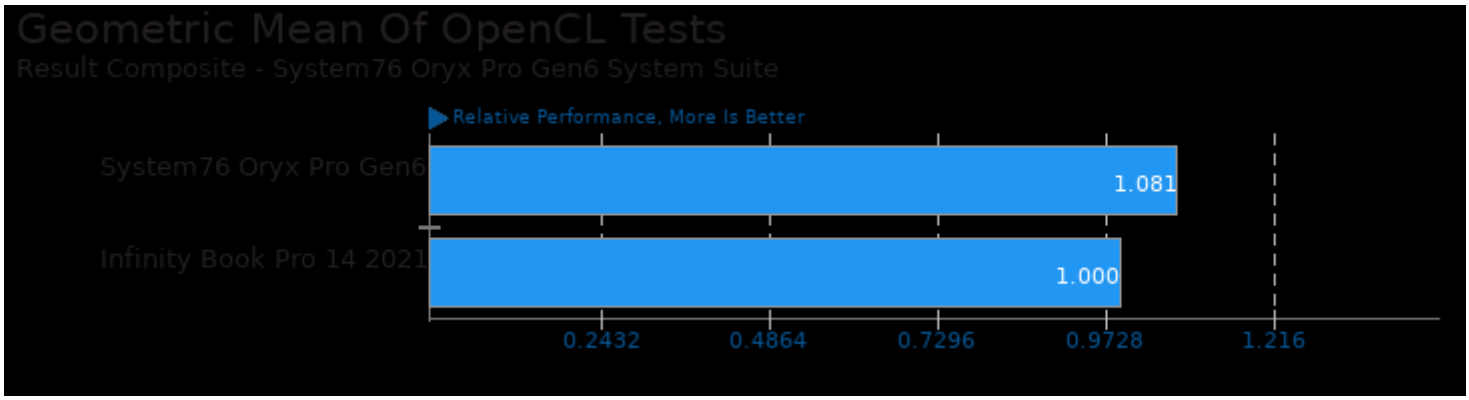


Geometric mean based upon tests: pts/openssl and pts/osbench

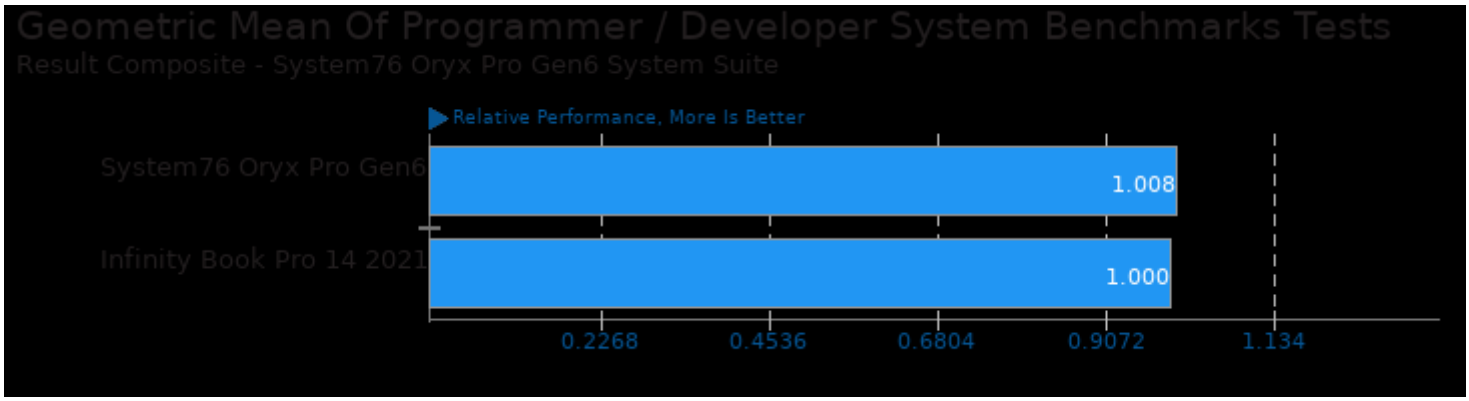


Geometric mean based upon tests: pts/povray, pts/x264, pts/x265, pts/rodinia, pts/compress-7zip, pts/build-linux-kernel

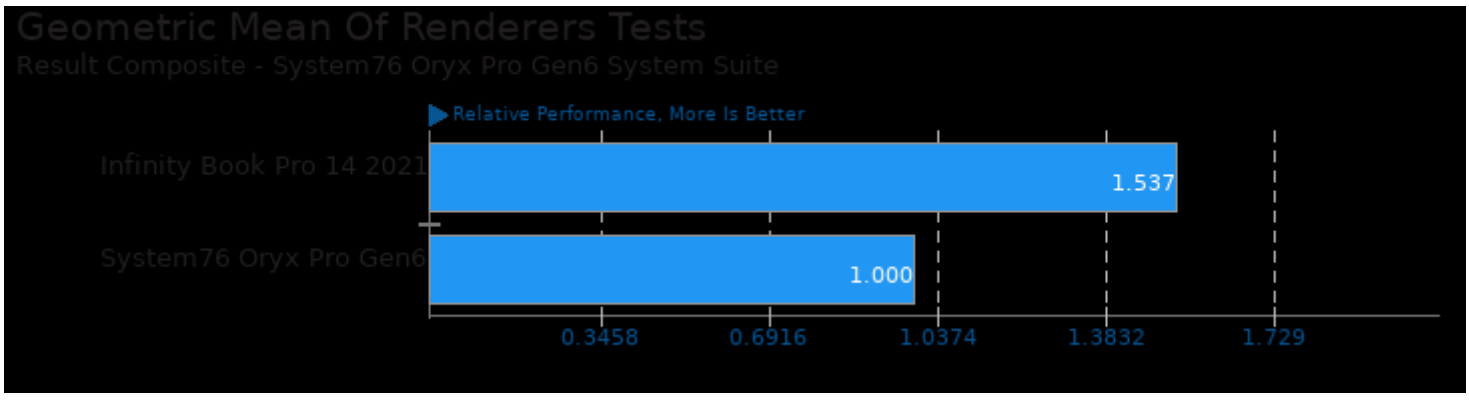
and pts/radiance



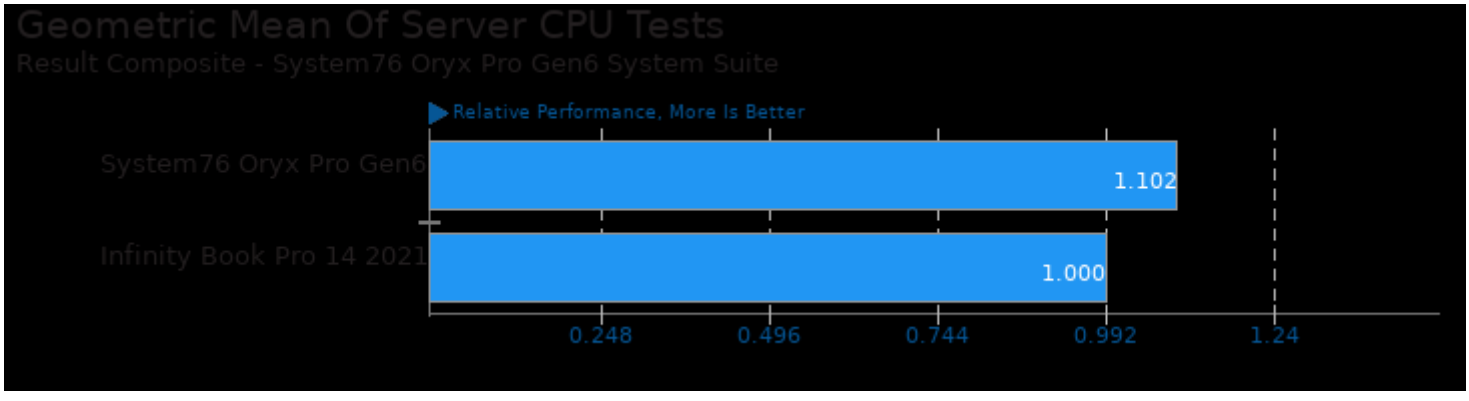
Geometric mean based upon tests: pts/rodinia and system/darktable



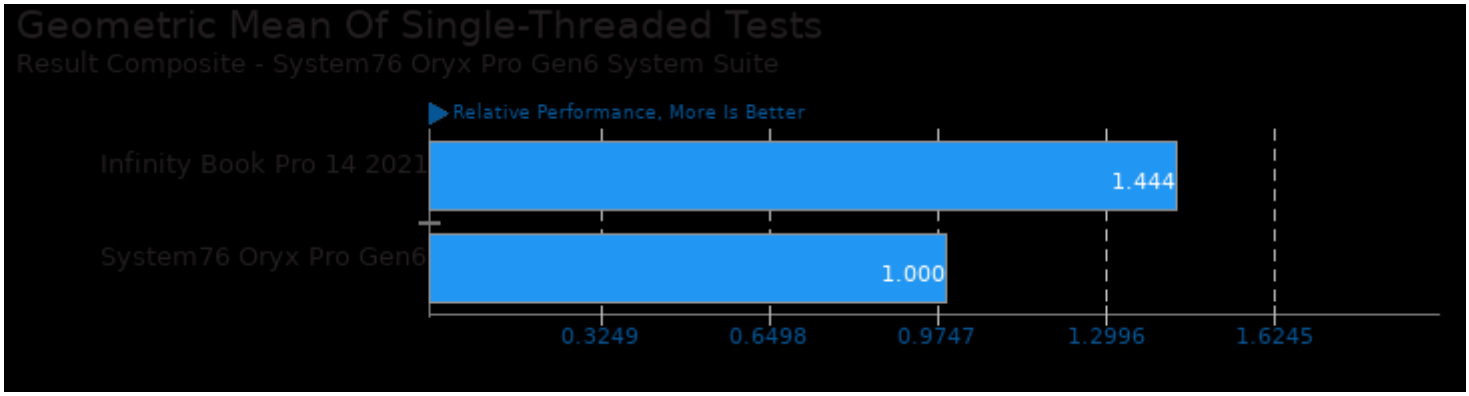
Geometric mean based upon tests: pts/git and pts/build-linux-kernel



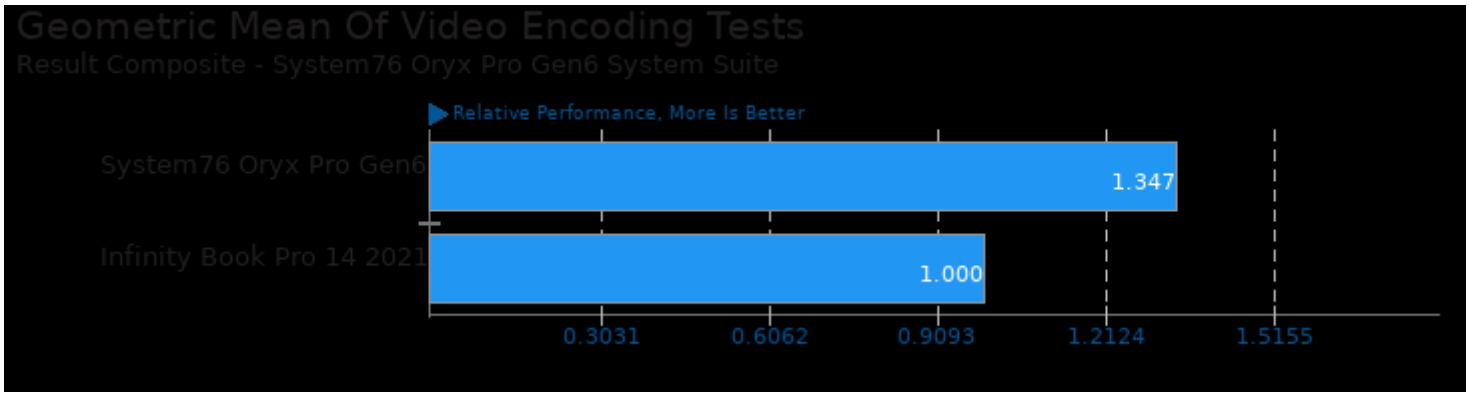
Geometric mean based upon tests: pts/povray and pts/radiance



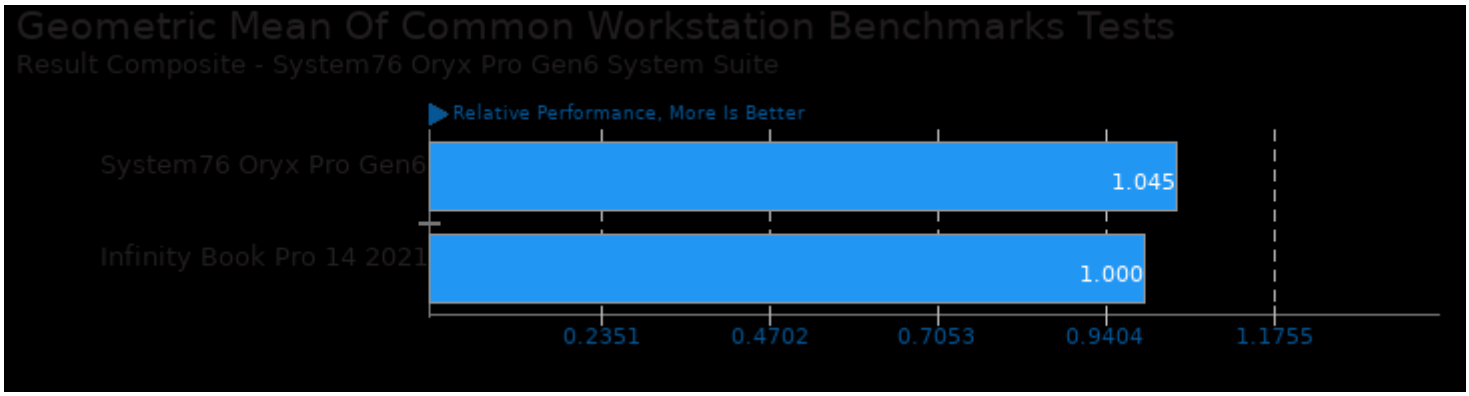
Geometric mean based upon tests: pts/rodinia, pts/x264, pts/x265, pts/compress-7zip, pts/build-linux-kernel, pts/povray, pts/radiance and pts/openssl



Geometric mean based upon tests: pts/encode-mp3, pts/radiance and pts/git



Geometric mean based upon tests: pts/x264 and pts/x265



Geometric mean based upon tests: pts/rodinia, pts/x265 and pts/git

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