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easybench-multitest

Apple M1 testing with a Apple MacBook Air and Apple M1 on macOS 12.1 via the Phoronix Test Suite.

Automated Executive Summary

M1Air-Asahi-Alpha- had the most wins, coming in first place for 42% of the tests.

Test Systems:

Latitude-E7240/DDR3L-1600MHzCL13/Intel-HD-4400

Processor: Intel Core i7-4600U @ 3.30GHz (2 Cores / 4 Threads), Motherboard: Dell 0PRPKP (A22 BIOS), Chipset: Intel Haswell-ULT DRAM, Memory: 16GB, Disk: 256GB LITEON LMH-256V2, Graphics: Intel HD 4400 HSW GT2 2GB (1100MHz), Audio: Intel Haswell-ULT HD Audio, Network: Intel I218-LM + Intel 7260

OS: EndeavourOS rolling, Kernel: 5.17.5-xanmod1-linux-xanmod-edge (x86_64), Desktop: Cinnamon 5.2.7, Display Server: X Server 1.21.1.3, OpenGL: 4.6 Mesa 22.2.0-devel (git-2f8123abab), OpenCL: OpenCL 2.0 beignet 1.4 (git-419c0417) + OpenCL 2.1 LINUX + OpenCL 1.1 Mesa 22.2.0-devel (git-2f8123abab), Vulkan: 1.3.211, Compiler:

GCC 11.2.0 + Clang 15.0.0, File-System: ext4, Screen Resolution: 1366x768

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-link-serialization=1 --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-build-config=bootstrap-lto --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: intel_cpufreq performance - CPU Microcode: 0x26
Python Notes: Python 3.10.4
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Mitigation of Microcode + tsx_async_abort: Not affected

M1Air-Asahi-Alpha

M1Air-Asahi-Alpha-

Processor: Apple M1 @ 2.06GHz (4 Cores / 8 Threads), Motherboard: Apple MacBook Air (M1 2020), Memory: 16GB, Disk: 500GB APPLE SSD AP0512Q + 2 x 0GB APPLE SSD AP0512Q, Graphics: llvmpipe, Network: Broadcom BRCM4378 + Broadcom Device 5f69

OS: Arch Linux ARM, Kernel: 5.17.0-rc7-asahi-next-20220310-5-2-ARCH (aarch64), Desktop: KDE Plasma 5.24.4, Display Server: X Server 1.21.1.3, OpenGL: 4.5 Mesa 22.2.0-devel (git-53fe6f1084) (LLVM 13.0.1 128 bits), OpenCL: OpenCL 1.1 Mesa 22.2.0-devel (git-53fe6f1084), Vulkan: 1.3.211, Compiler: GCC 11.2.0 + Clang 13.0.1 + LLVM 13.0.1, File-System: ext4, Screen Resolution: 2560x1600

Compiler Notes: --build=aarch64-unknown-linux-gnu --disable-libssp --disable-libstdcxx-pch --disable-multilib --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-fix-cortex-a53-835769 --enable-fix-cortex-a53-843419 --enable-gnu-indirect-function --enable-gnu-unique-object --enable-languages=c,c++,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-unknown-linux-gnu --mandir=/usr/share/man --with-arch=armv8-a --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: apple-cpufreq performance
Python Notes: Python 3.10.4
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Not affected + srbds: Not affected + tsx_async_abort: Not affected

Apple M1

Processor: Apple M1 (8 Cores), Motherboard: Apple MacBook Air, Memory: 8GB, Disk: 229GB, Graphics: Apple M1, Monitor: Color LCD

OS: macOS 12.1, Kernel: 21.2.0 (arm64), Compiler: GCC 13.1.6 + Clang 13.1.6 + Xcode 13.2.1, File-System: APFS, Screen Resolution: 2560x1600

Environment Notes: XPC_FLAGS=0x0
Python Notes: Python 2.7.18 + Python 3.8.10

	Latitude-E7240/DDR3L-1600MHzCL13/Intel-HD-4400	M1Air-Asahi-Alpha	M1Air-Asahi-Alpha-	Apple M1
OpenSSL - SHA256 (byte/s)	**473670340**		**4578219705**	
Normalized	10.35%		100%	
Standard Deviation	0.3%		2.2%	
Sysbench - CPU (Events/sec)	**3112**		**27336**	

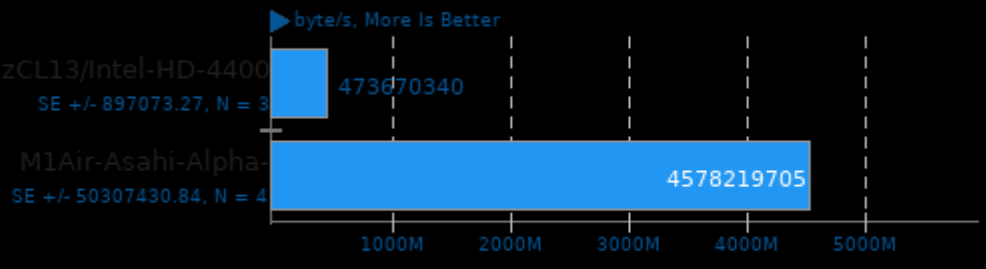
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Normalized	11.38%		100%	
Standard Deviation	0%		4.3%	
Sysbench - RAM / Memory (MiB/sec)	**11602**		**10105**	
Normalized	100%		87.1%	
Standard Deviation	0.4%		0.1%	
ctx_clock - C.S.T (Clocks)	1086			
Standard Deviation	0%			
PyBench - T.F.A.T.T (Milliseconds)	1402		**1019**	**1478**
Normalized	72.68%		100%	68.94%
Standard Deviation	0.1%		3.7%	0.3%
OpenJPEG - N.C.P.M (ms)	92484			
Standard Deviation	0.2%			
LAME MP3 Encoding - WAV To MP3 (sec)	**11.908**	**6.156**	6.175	
Normalized	51.7%	100%	99.69%	
Standard Deviation	1%	0%	0.1%	

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OpenSSL 3.0

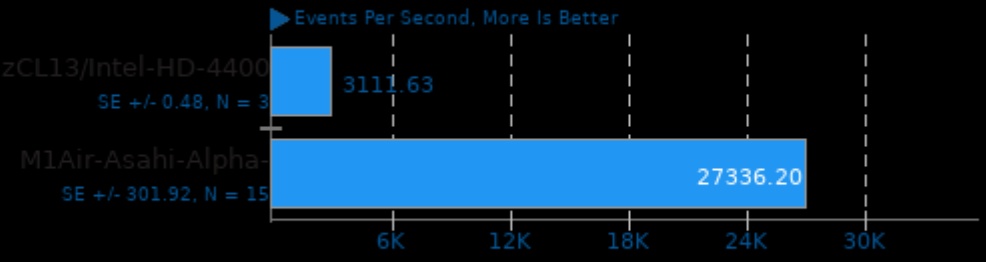
Algorithm: SHA256



1. (CC) gcc options: -pthread -O3 -lssl -lcrypto -ldl

Sysbench 1.0.20

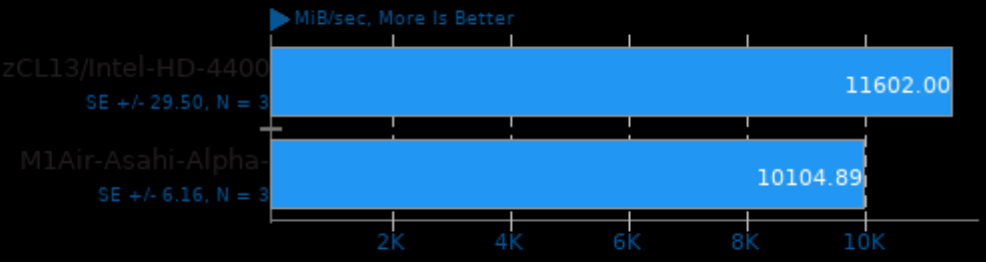
Test: CPU



1. (CC) gcc options: -O2 -funroll-loops -rdynamic -ldl -laio -lm

Sysbench 1.0.20

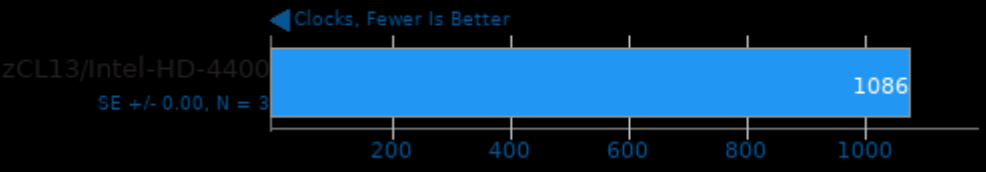
Test: RAM / Memory

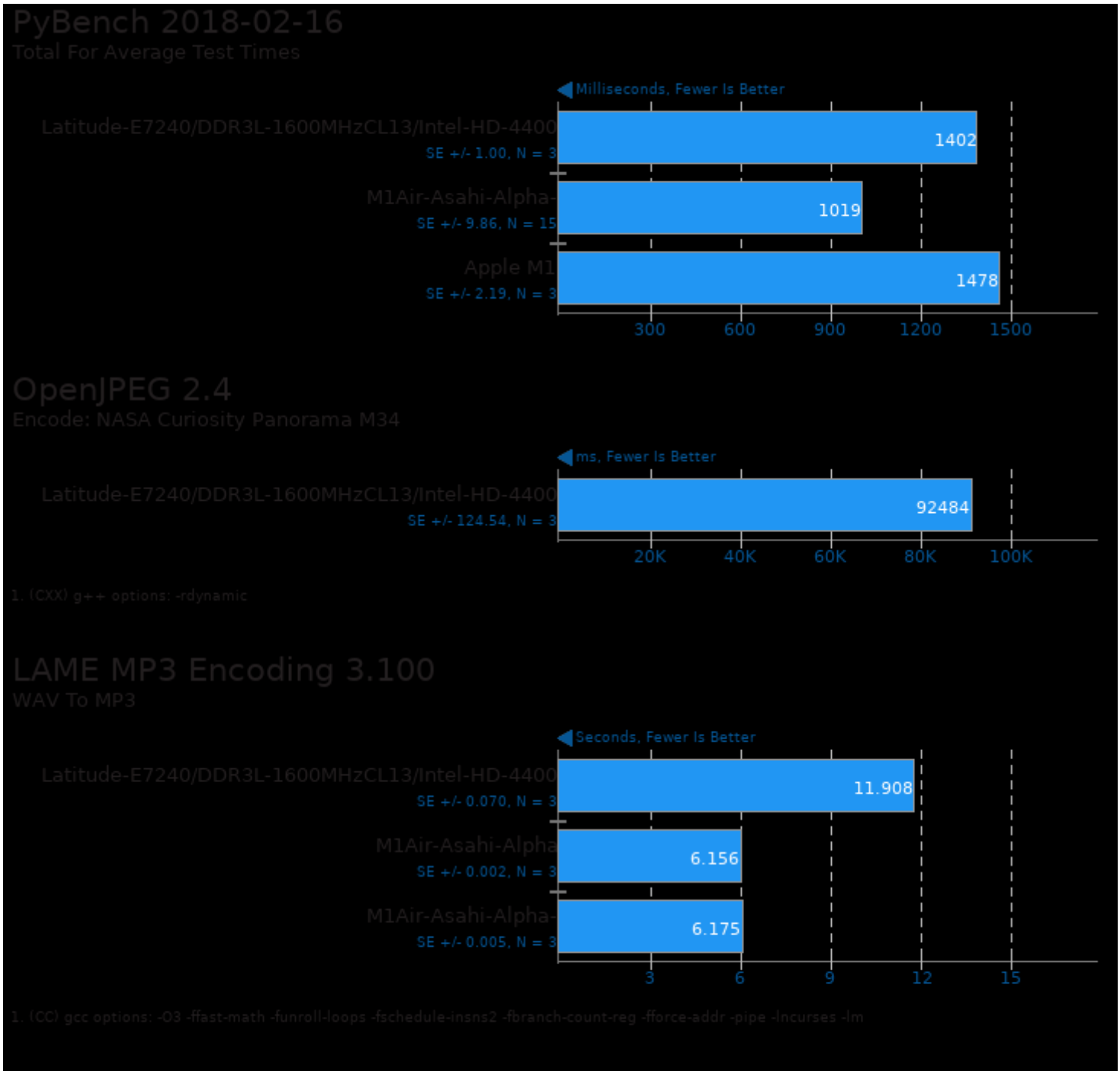


1. (CC) gcc options: -O2 -funroll-loops -rdynamic -ldl -laio -lm

ctx_clock

Context Switch Time





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