



test-cpu-3750

AMD Ryzen 7 1700 Eight-Core testing with a ASRock X370 Gaming X (P5.20 BIOS) and Sapphire AMD Radeon RX 470/480/570/570X/580/580X/590 4GB on Arch rolling via the Phoronix Test Suite.

Test Systems:

Samsung SSD 970 EVO - AMD Ryzen 7 1700 Eight-Core

AMD Ryzen 7 1700 Eight-Core

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX

Processor: AMD Ryzen 7 1700 Eight-Core @ 3.00GHz (8 Cores / 16 Threads), Motherboard: ASRock X370 Gaming X (P5.20 BIOS), Chipset: AMD 17h, Memory: 32GB, Disk: Samsung SSD 970 EVO 250GB + 256GB TS256GSSD370 + SATA3 240GB SSD, Graphics: Sapphire AMD Radeon RX 470/480/570/570X/580/580X/590 4GB (1284/1750MHz), Audio: AMD Ellesmere HDMI Audio, Monitor: MSI MAG341CQ, Network: Intel I211

OS: Arch rolling, Kernel: 5.11.16-arch1-1 (x86_64), Desktop: Xfce 4.16, Display Server: X Server 1.20.11, OpenGL: 4.6

Mesa 21.0.3 (LLVM 11.1.0), OpenCL: OpenCL 1.1 Mesa 21.0.3, Vulkan: 1.2.145, Compiler: GCC 10.2.0 + Clang 11.1.0 + LLVM 11.1.0, File-System: ext4, Screen Resolution: 3440x1440

Kernel Notes: Transparent Huge Pages: madvise

Environment Notes: NVM_CD_FLAGS=

Compiler Notes: --disable-libssp --disable-libstdc++-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-liberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu

Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0x8001137

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/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional STIBP: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	Samsung SSD 970 EVO - AMD Ryzen 7 1700 Eight-Core	AMD Ryzen 7 1700 Eight-Core	AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX
LAMMPS Molecular Dynamics Simulator - 20k Atoms (ns/day)		5.334	
IOR - 16MB - /home/kub0x/nvme_disk (MB/s)	201.89		
Standard Deviation	4.8%		
CppPerformanceBenchmarks - Rand Numbers (sec)		1223	
GnuPG - 2.7.S.F.E (sec)		63.233	
Standard Deviation		2.4%	
Crypto++ - All Algorithms (MiB/s)		1406	
Xmrig - Monero - 1M (H/s)		1901	
GNU GMP GMPbench - Total Time (GMPbench Score)		4542	
Crypto++ - Keyed Algorithms (MiB/s)		554.352098	
CppPerformanceBenchmarks - Math Library (sec)		350.179	
Xmrig - Wownero - 1M (H/s)		3158	
Zstd Compression - 19, Long Mode - D.S (MB/s)		2576	
Standard Deviation		0.1%	
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)		18.2	
Standard Deviation		2.5%	
Rodinia - OpenMP LavaMD (sec)		273.966	
Crypto++ - I.E.C.P.K.A (MiB/s)		4135	
LZ4 Compression - 9 - D.S (MB/s)		7159	
Standard Deviation		0.1%	
LZ4 Compression - 9 - Compression Speed (MB/s)		37.83	
Standard Deviation		2.1%	
Tinymembench - Standard Memset (MB/s)			10197
Tinymembench - Standard Memcpy (MB/s)			12766
LZ4 Compression - 3 - D.S (MB/s)		7148	
Standard Deviation		0.3%	

LZ4 Compression - 3 - Compression Speed	38.82	
(MB/s)		
Standard Deviation	0.8%	
RAR Compression - L.S.T.A.T.R (sec)	71.997	
Standard Deviation	2.4%	
Zstd Compression - 19 - D.S (MB/s)	2597	
Standard Deviation	0.1%	
Zstd Compression - 19 - Compression Speed	20.9	
(MB/s)		
Standard Deviation	2.2%	
Izbench - XZ 0 - Decompression (MB/s)	97	
Standard Deviation	0%	
Izbench - XZ 0 - Compression (MB/s)	32	
Standard Deviation	1.8%	
Rodinia - OpenMP Leukocyte (sec)	146.716	
Parboil - OpenMP LBM (sec)	139.726059	
XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)	47.458	
Standard Deviation	0.4%	
Gzip Compression - L.S.T.A.T.t.g (sec)	46.749	
Standard Deviation	0.7%	
7-Zip Compression - C.S.T (MIPS)	34130	
Standard Deviation	1.5%	
Zstd Compression - 8 - D.S (MB/s)	2843	
Standard Deviation	0.1%	
Zstd Compression - 8 - Compression Speed	222.0	
(MB/s)		
Standard Deviation	0.8%	
CacheBench - Read (MB/s)	2781	
CacheBench - R.M.W (MB/s)	48450	
CacheBench - Write (MB/s)	24462	
ONNX Runtime - fcn-resnet101-11 - OpenMP	36	
CPU (Inferences/min)		
ONNX Runtime - yolov4 - OpenMP CPU	190	
(Inferences/min)		
Zstd Compression - 8, Long Mode - D.S	3025	
Standard Deviation	0.1%	
Zstd Compression - 8, Long Mode -	291.6	
Compression Speed (MB/s)		
Standard Deviation	0.8%	
ONNX Runtime - shufflenet-v2-10 - OpenMP	8847	
CPU (Inferences/min)		
ONNX Runtime - super-resolution-10 -	2741	
OpenMP CPU (Inferences/min)		
MBW - M.C.F.B.S - 8192 MiB (MiB/s)		7313
Zstd Compression - 3 - D.S (MB/s)	2755	
Standard Deviation	0.1%	
Zstd Compression - 3 - Compression Speed	1760	
(MB/s)		
Standard Deviation	1%	
Zstd Compression - 3, Long Mode - D.S	2920	
Standard Deviation	0.1%	

Zstd Compression - 3, Long Mode - Compression Speed (MB/s)	777.2	
Standard Deviation	0.5%	
Rodinia - OpenMP HotSpot3D (sec)	113.123	
Java SciMark - Composite (Mflops)	2441	
Standard Deviation	0.9%	
LZ4 Compression - 1 - D.S (MB/s)	7381	
Standard Deviation	1.4%	
LZ4 Compression - 1 - Compression Speed (MB/s)	6589	
Standard Deviation	0.1%	
LuaJIT - Composite (Mflops)	1267	
Standard Deviation	0.5%	
C-Blosc - blosclz (MB/s)	8121	
Standard Deviation	0.8%	
NGINX Benchmark - S.W.P.S (Reqs/sec)	20958	
Parboil - O.M.G (sec)	96.698586	
RAMspeed SMP - Add - Integer (MB/s)		20912
IOR - 8MB - /home/kub0x/nvme_disk (MB/s)	249.88	
Standard Deviation	0.3%	
RAMspeed SMP - Scale - Integer (MB/s)		17283
RAMspeed SMP - Copy - Integer (MB/s)		18452
RAMspeed SMP - Triad - Integer (MB/s)		17197
RAMspeed SMP - Average - Integer (MB/s)		18659
RAMspeed SMP - Average - Floating Point (MB/s)		19458
RAMspeed SMP - Add - Floating Point (MB/s)		21043
RAMspeed SMP - Triad - Floating Point		20414
RAMspeed SMP - Copy - Floating Point		18531
RAMspeed SMP - Scale - Floating Point		17884
CppPerformanceBenchmarks - Stepanov Vector (sec)	85.285	
CppPerformanceBenchmarks - Atol (sec)	79.107	
Izbench - Crush 0 - Decompression (MB/s)	428	
Standard Deviation	0.1%	
Izbench - Crush 0 - Compression (MB/s)	72	
Standard Deviation	0%	
Izbench - Zstd 8 - Decompression (MB/s)	1550	
Standard Deviation	0.2%	
Izbench - Zstd 8 - Compression (MB/s)	80	
Standard Deviation	0.7%	
MBW - Memory Copy - 8192 MiB (MiB/s)		12528
Izbench - Brotli 2 - Decompression (MB/s)	590	
Standard Deviation	0.3%	
Izbench - Brotli 2 - Compression (MB/s)	171	
Standard Deviation	0%	
Izbench - Brotli 0 - Decompression (MB/s)	507	
Standard Deviation	0.1%	
Izbench - Brotli 0 - Compression (MB/s)	410	
Standard Deviation	0.1%	
Crypto++ - Unkeyed Algorithms (MiB/s)	321.694665	

Izbench - Zstd 1 - Decompression (MB/s)	1397	
Standard Deviation	0.1%	
Izbench - Zstd 1 - Compression (MB/s)	447	
Standard Deviation	0%	
Himeno Benchmark - P.P.S (MFLOPS)	3980	
MBW - M.C.F.B.S - 4096 MiB (MiB/s)		7254
Izbench - Libdeflate 1 - Compression (MB/s)	203	
Standard Deviation	2.2%	
IOR - 4MB - /home/kub0x/nvme_disk (MB/s)	243.12	
Standard Deviation	0.5%	
CppPerformanceBenchmarks - Ctype (sec)	38.594	
MBW - Memory Copy - 4096 MiB (MiB/s)		12171
Botan - AES-256 - Decrypt (MiB/s)	4951	
Botan - AES-256 (MiB/s)	4944	
Cryptsetup - T.X.5.D (MiB/s)	359.2	
Cryptsetup - T.X.5.E (MiB/s)	359.9	
Cryptsetup - S.X.5.D (MiB/s)	348.3	
Cryptsetup - S.X.5.E (MiB/s)	351.5	
Cryptsetup - A.X.5.D (MiB/s)	2128	
Cryptsetup - A.X.5.E (MiB/s)	2142	
Cryptsetup - T.X.2.E (MiB/s)	360.3	
Cryptsetup - S.X.2.D (MiB/s)	348.8	
Cryptsetup - S.X.2.E (MiB/s)	351.1	
Cryptsetup - A.X.2.D (MiB/s)	2500	
Cryptsetup - A.X.2.E (MiB/s)	2490	
Cryptsetup - PBKDF2-whirlpool	584490	
Cryptsetup - PBKDF2-sha512 (Iterations/sec)	1367113	
CppPerformanceBenchmarks - S.A (sec)	32.406	
Cpuminer-Opt - Q.S.2.P (kH/s)	63800	
Cpuminer-Opt - Magi (kH/s)	320	
Cpuminer-Opt - T.S.2.O (kH/s)	87170	
Cpuminer-Opt - Garlicoin (kH/s)	1190	
Botan - Blowfish - Decrypt (MiB/s)	389.487	
Botan - Blowfish (MiB/s)	385.235	
Botan - Twofish - Decrypt (MiB/s)	324.035	
Botan - Twofish (MiB/s)	320.888	
Cpuminer-Opt - Ringcoin (kH/s)	1655	
Cpuminer-Opt - Skeincoin (kH/s)	38070	
Cpuminer-Opt - Myriad-Groestl (kH/s)	11460	
Botan - ChaCha20Poly1305 - Decrypt (MiB/s)	436.821	
Botan - ChaCha20Poly1305 (MiB/s)	441.36	
Rodinia - OpenMP CFD Solver (sec)	30.237	
Cpuminer-Opt - Deepcoin (kH/s)	4573	
Botan - CAST-256 - Decrypt (MiB/s)	126.47	
Botan - CAST-256 (MiB/s)	126.41	
Cpuminer-Opt - LBC, LBRY Credits (kH/s)	10900	
Aircrack-ng (k/s)	13799	
Botan - KASUMI - Decrypt (MiB/s)	78.311	

Botan - KASUMI (MiB/s)	80.907	
Cpuminer-Opt - Blake-2 S (kH/s)	210610	
Cpuminer-Opt - x25x (kH/s)	242.46	
Rodinia - O.S (sec)	29.009	
IOR - 2MB - /home/kub0x/nvme_disk (MB/s)	235.57	
Standard Deviation	1%	
t-test1 - 1 (sec)		23.228
System ZLIB Decompression (ms)	1948	
Standard Deviation	0.1%	
ArrayFire - BLAS CPU (GFLOPS)	211.291	
CppPerformanceBenchmarks - Function	17.034	
Objects (sec)		
Parboil - OpenMP Stencil (sec)	14.004133	
ArrayFire - BLAS OpenCL (GFLOPS)	1428	
MBW - M.C.F.B.S - 1024 MiB (MiB/s)		7070
Parallel BZIP2 Compression - 2.F.C (sec)	4.772	
Standard Deviation	0.8%	
System XZ Decompression (sec)	4.450	
Standard Deviation	0%	
Parboil - OpenCL BFS (sec)	1.726123	
Standard Deviation	1%	
Bork File Encrypter - F.E.T (sec)	10.369	
Normalized	100%	
System GZIP Decompression (sec)	3.395	
Standard Deviation	0%	
MBW - Memory Copy - 1024 MiB (MiB/s)		12373
t-test1 - 2 (sec)		7.62
MBW - M.C.F.B.S - 512 MiB (MiB/s)		7058
ArrayFire - C.G.C (ms)	35.52	
MBW - Memory Copy - 512 MiB (MiB/s)		12301
LAMMPS Molecular Dynamics Simulator -	5.15	
Rhodopsin Protein (ns/day)		
Parboil - OpenMP CUTCP (sec)	3.117468	
MBW - M.C.F.B.S - 128 MiB (MiB/s)		6350
MBW - Memory Copy - 128 MiB (MiB/s)		12035
BLAKE2 (Cycles/Byte)	5.11	
LuaJIT - J.S.O.R (Mflops)	1621	
Standard Deviation	0%	
LuaJIT - D.L.M.F (Mflops)	2987	
Standard Deviation	1%	
LuaJIT - S.M.M (Mflops)	1042	
Standard Deviation	0.1%	
LuaJIT - F.F.T (Mflops)	255.53	
Standard Deviation	0.1%	
LuaJIT - Monte Carlo (Mflops)	431.46	
Standard Deviation	0.2%	
Java SciMark - J.S.O.R (Mflops)	1379	
Standard Deviation	0%	
Java SciMark - D.L.M.F (Mflops)	5580	
Standard Deviation	1.9%	

Java SciMark - S.M.M (Mflops)	2388
Standard Deviation	0%
Java SciMark - F.F.T (Mflops)	1455
Standard Deviation	2.9%
Java SciMark - Monte Carlo (Mflops)	1404
Standard Deviation	0.2%

LAMMPS Molecular Dynamics Simulator 29Oct2020

Model: 20k Atoms



1. (CXX) g++ options: -O3 -pthread -lm

IOR 3.3.0

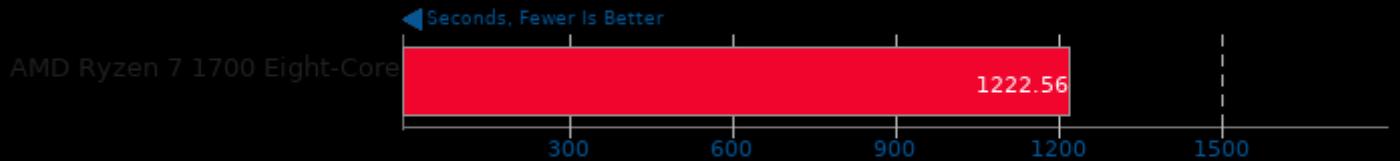
Block Size: 16MB - Disk Target: /home/kub0x/nvme_disk



1. (C) gcc options: -O2 -lm -pthread -mpi

CppPerformanceBenchmarks 9

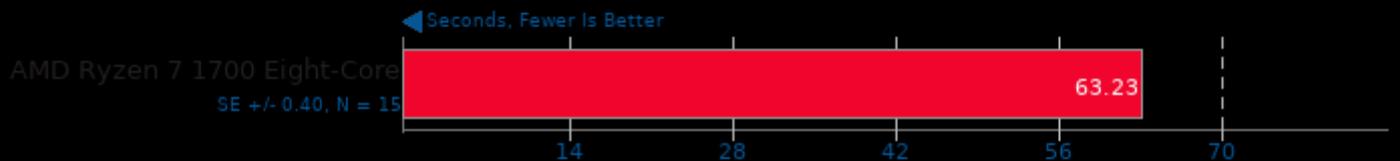
Test: Random Numbers



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

GnuPG 2.2.27

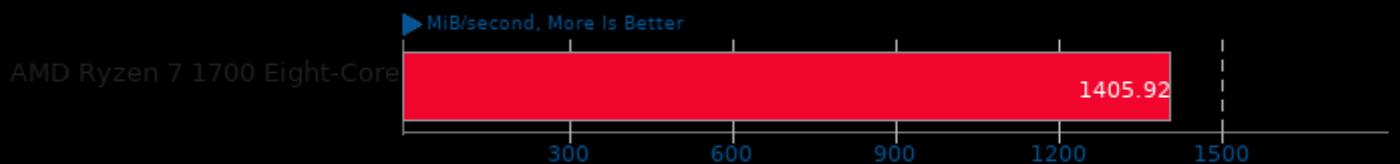
2.7GB Sample File Encryption



1. (C) gcc options: -O2

Crypto++ 8.2

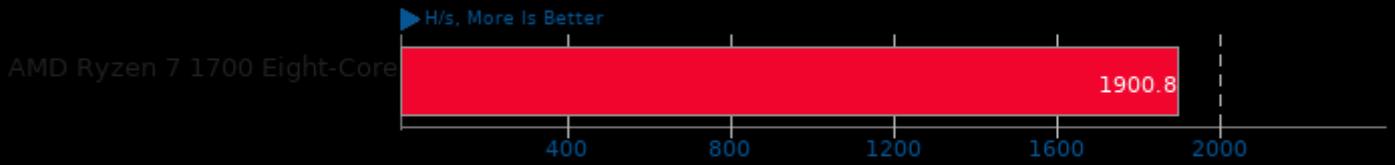
Test: All Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

Xmrig 6.12.1

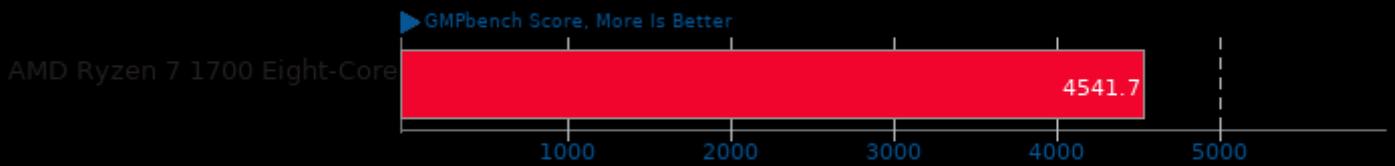
Variant: Monero - Hash Count: 1M



1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -hwloc

GNU GMP GMPbench 6.2.1

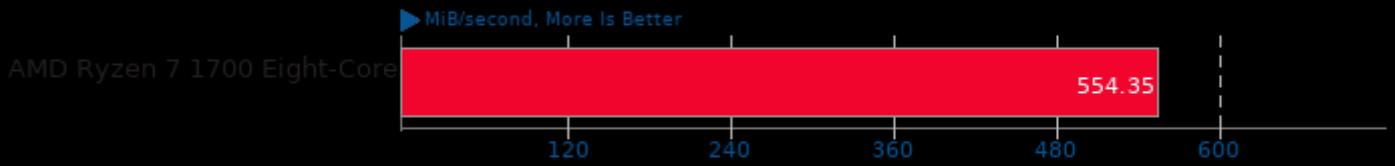
Total Time



1. (C) gcc options: -O3 -fomit-frame-pointer -lm

Crypto++ 8.2

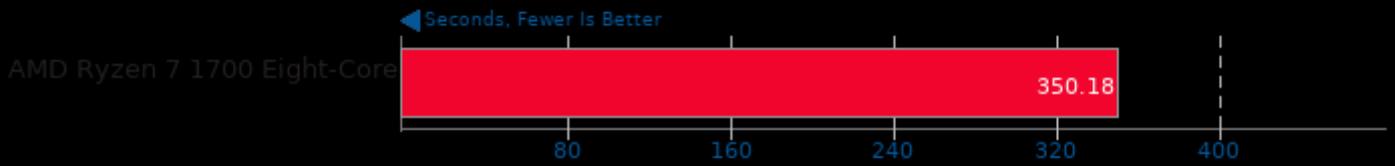
Test: Keyed Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

CppPerformanceBenchmarks 9

Test: Math Library



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

Xmrig 6.12.1

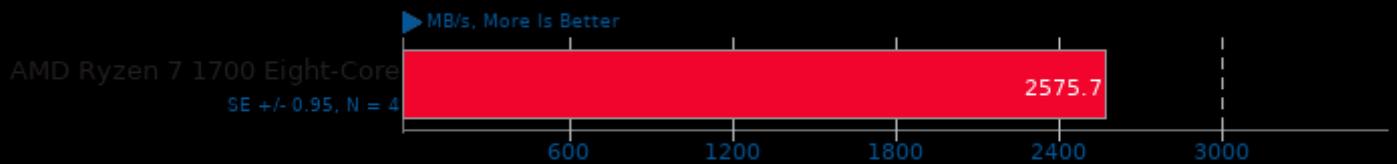
Variant: Wownero - Hash Count: 1M



1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -hwloc

Zstd Compression 1.4.9

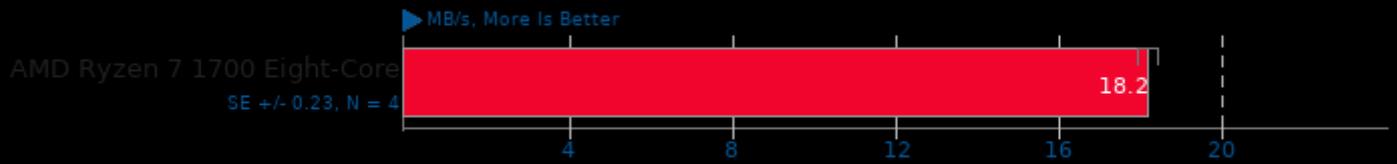
Compression Level: 19, Long Mode - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -lzma -llz4

Zstd Compression 1.4.9

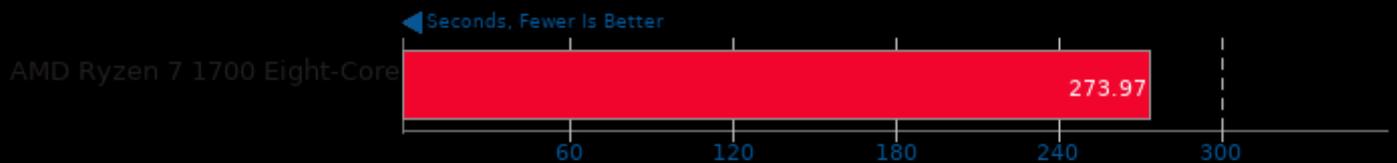
Compression Level: 19, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -lzma -llz4

Rodinia 3.1

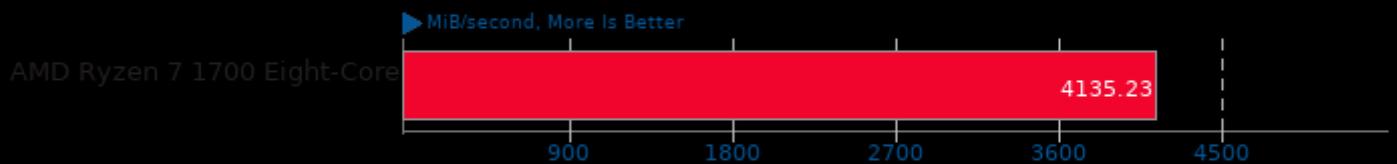
Test: OpenMP LavaMD



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

Crypto++ 8.2

Test: Integer + Elliptic Curve Public Key Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

LZ4 Compression 1.9.3

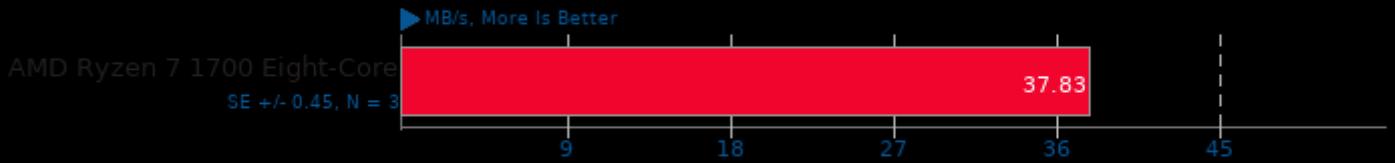
Compression Level: 9 - Decompression Speed



1, (CC) gcc options: -O3

LZ4 Compression 1.9.3

Compression Level: 9 - Compression Speed



1, (CC) gcc options: -O3

Tinymembench 2018-05-28

Standard Memset



1, (CC) gcc options: -O2 -lm

Tinymembench 2018-05-28

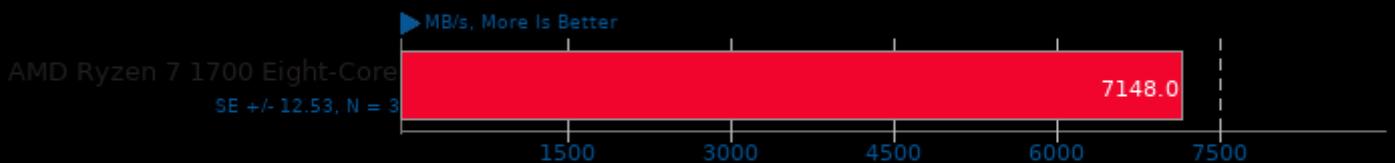
Standard Memcpy



1, (CC) gcc options: -O2 -lm

LZ4 Compression 1.9.3

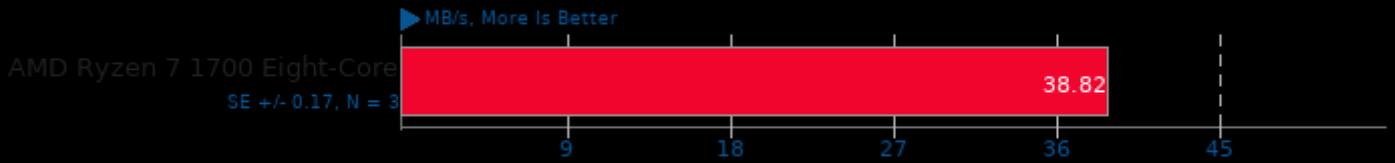
Compression Level: 3 - Decompression Speed



1, (CC) gcc options: -O3

LZ4 Compression 1.9.3

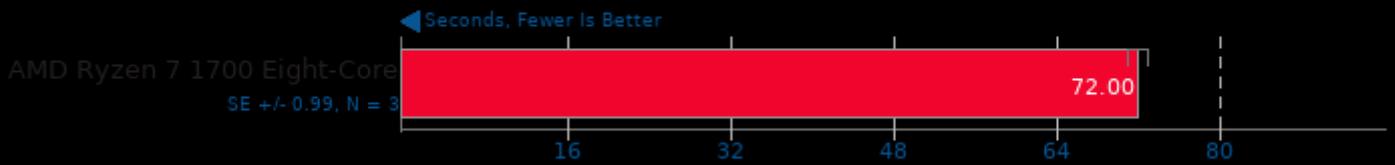
Compression Level: 3 - Compression Speed



1. (CC) gcc options: -O3

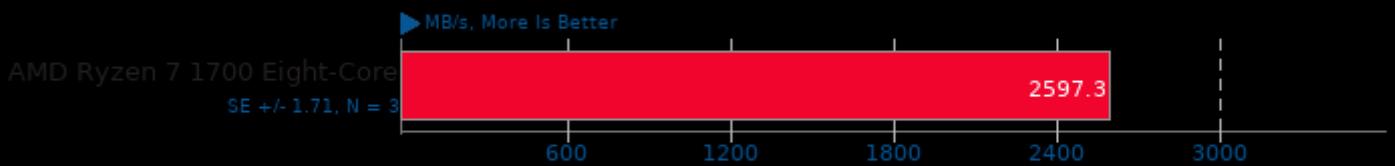
RAR Compression 5.6.1

Linux Source Tree Archiving To RAR



Zstd Compression 1.4.9

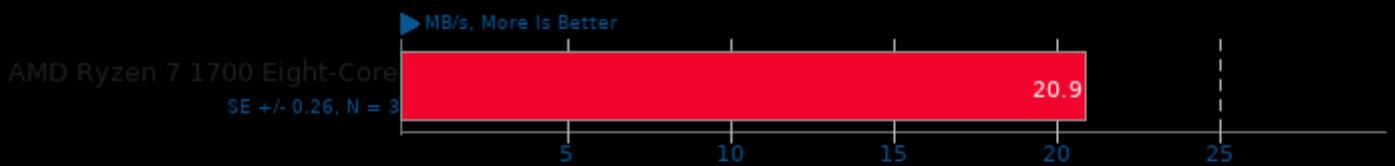
Compression Level: 19 - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.4.9

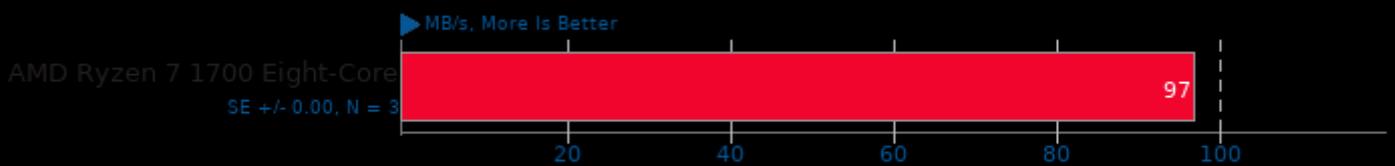
Compression Level: 19 - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Izbench 1.8

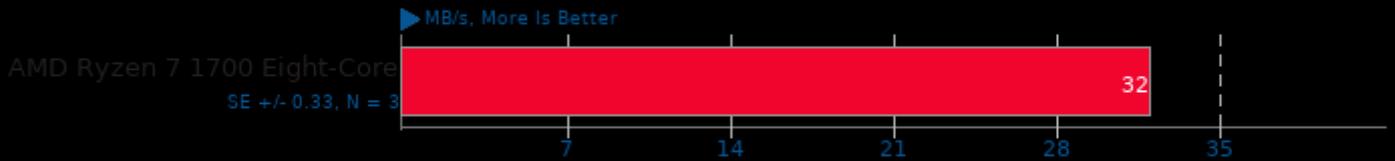
Test: XZ 0 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

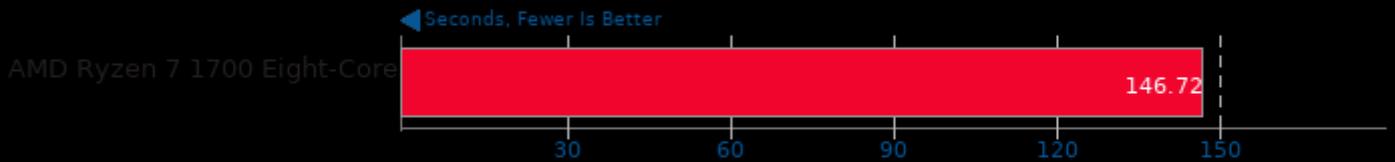
Test: XZ 0 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Rodinia 3.1

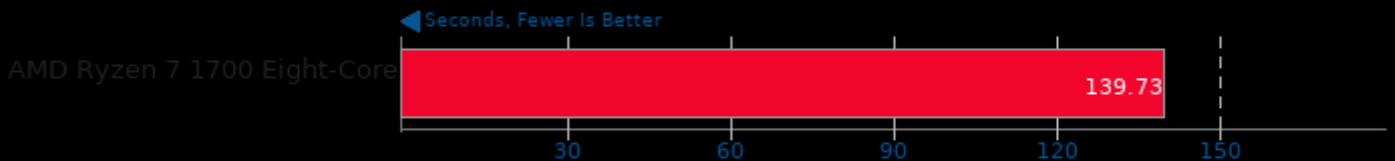
Test: OpenMP Leukocyte



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

Parboil 2.5

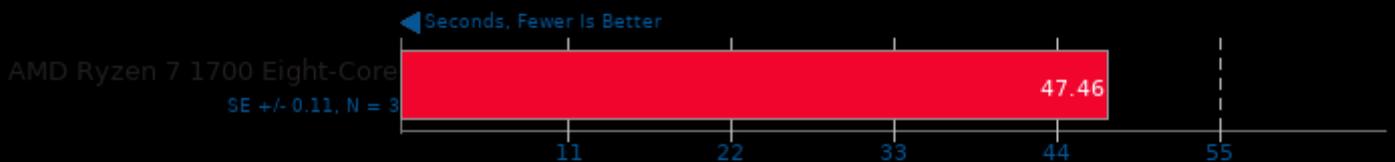
Test: OpenMP LBM



1. (CXX) g++ options: -lm -pthread -lgomp -O3 -ffast-math -fopenmp

XZ Compression 5.2.4

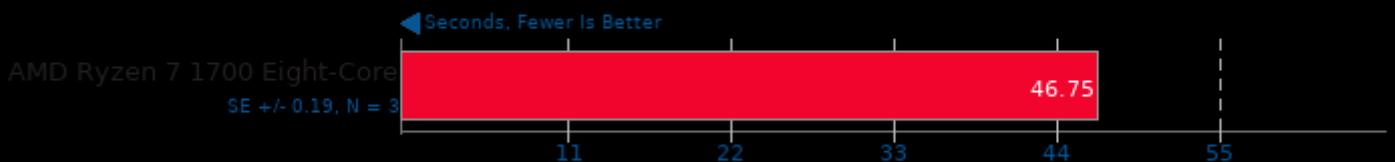
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 9



1. (CC) gcc options: -pthread -fvisibility=hidden -O2

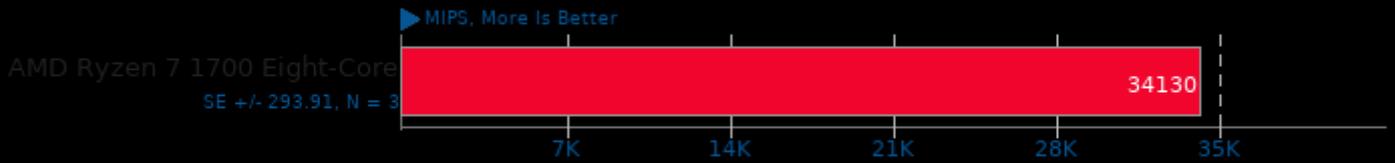
Gzip Compression

Linux Source Tree Archiving To .tar.gz



7-Zip Compression 16.02

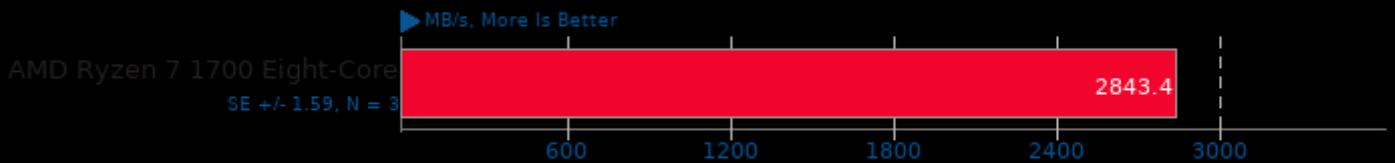
Compress Speed Test



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

Zstd Compression 1.4.9

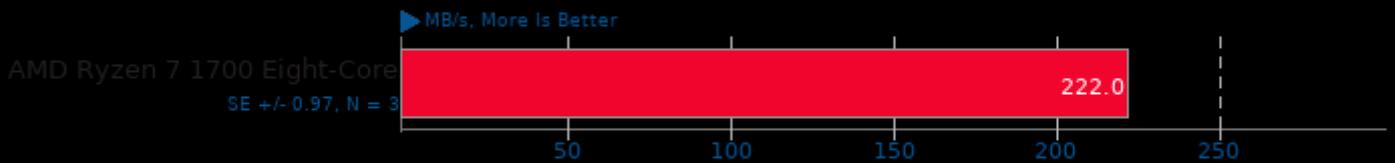
Compression Level: 8 - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.4.9

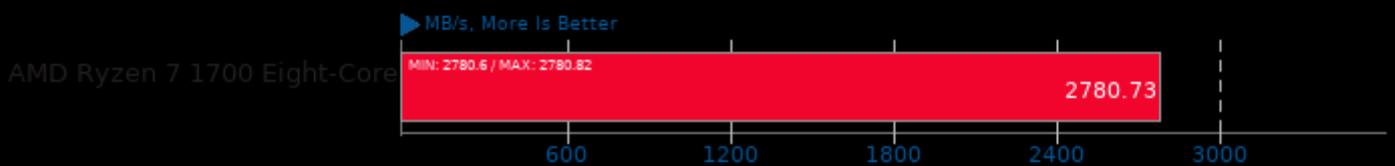
Compression Level: 8 - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

CacheBench

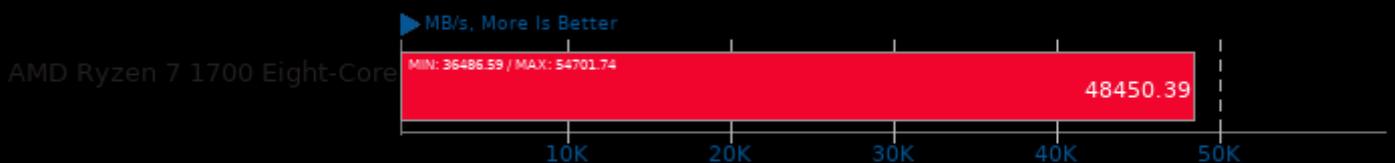
Test: Read



1. (CC) gcc options: -lrt

CacheBench

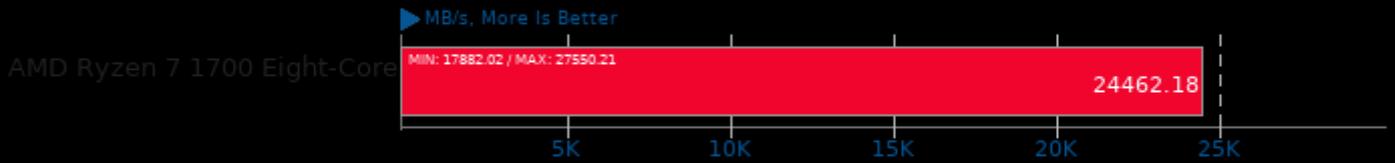
Test: Read / Modify / Write



1. (CC) gcc options: -lrt

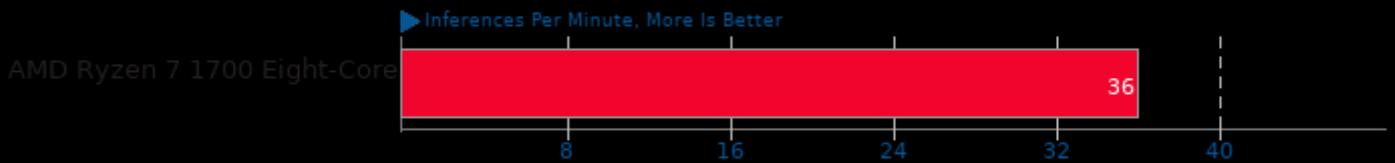
CacheBench

Test: Write



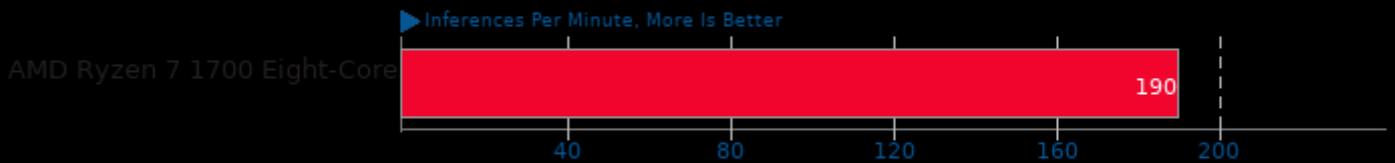
ONNX Runtime 1.6

Model: fcn-resnet101-11 - Device: OpenMP CPU



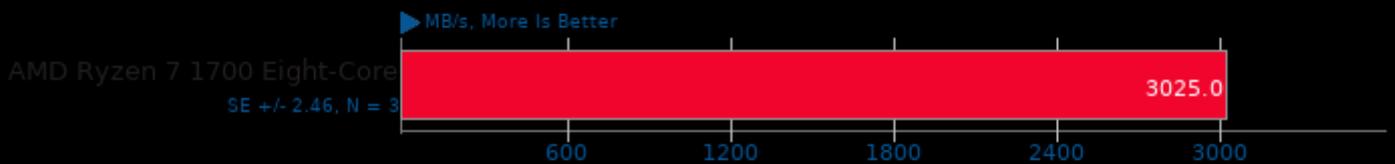
ONNX Runtime 1.6

Model: yolov4 - Device: OpenMP CPU



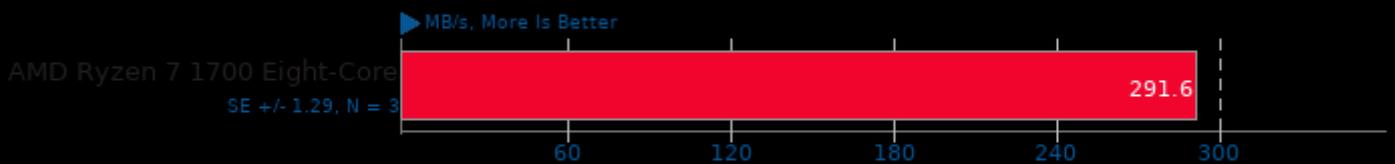
Zstd Compression 1.4.9

Compression Level: 8, Long Mode - Decompression Speed



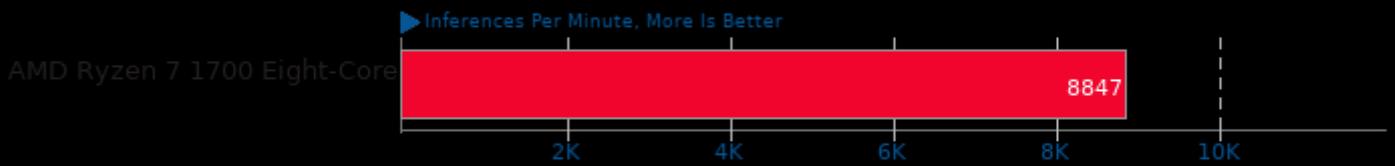
Zstd Compression 1.4.9

Compression Level: 8, Long Mode - Compression Speed



ONNX Runtime 1.6

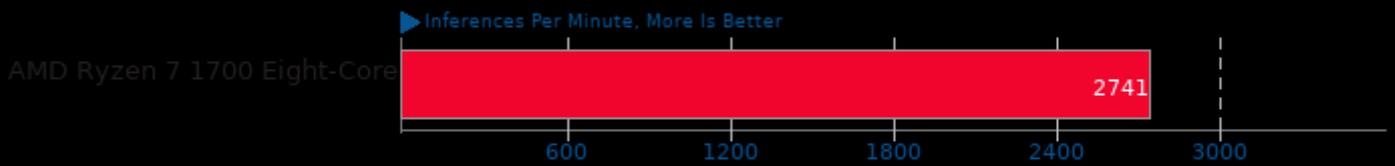
Model: shufflenet-v2-10 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -function-sections -fdata-sections -O3 -ldl -lrt

ONNX Runtime 1.6

Model: super-resolution-10 - Device: OpenMP CPU



1. (CXX) g++ options: -fopenmp -function-sections -fdata-sections -O3 -ldl -lrt

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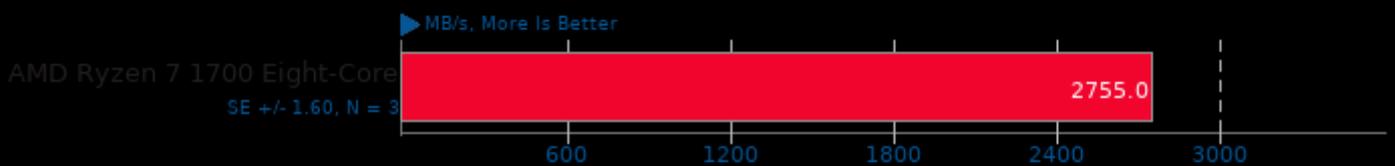
Test: Memory Copy, Fixed Block Size - Array Size: 8192 MiB



1. (CC) gcc options: -O3 -march=native

Zstd Compression 1.4.9

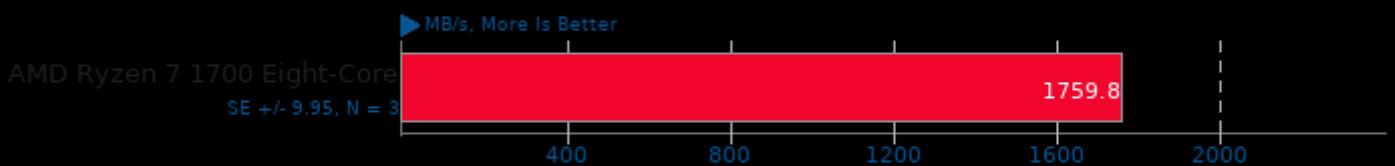
Compression Level: 3 - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.4.9

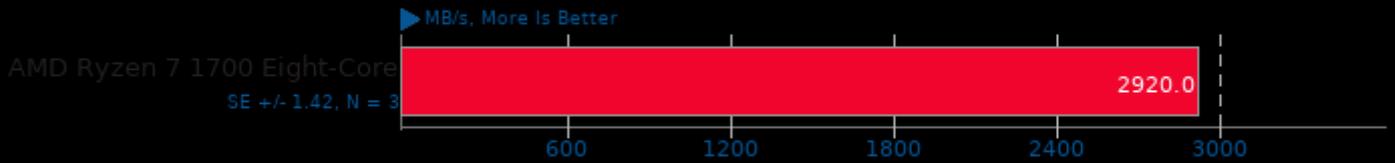
Compression Level: 3 - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.4.9

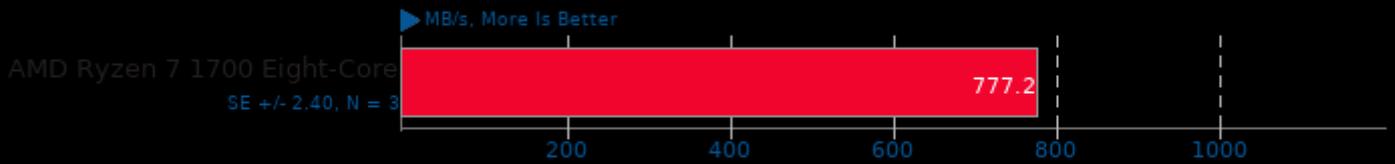
Compression Level: 3, Long Mode - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.4.9

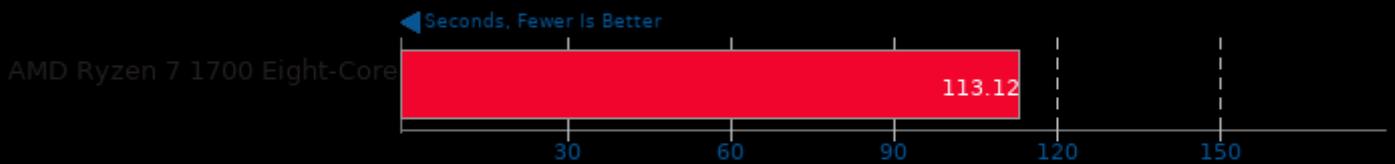
Compression Level: 3, Long Mode - Compression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Rodinia 3.1

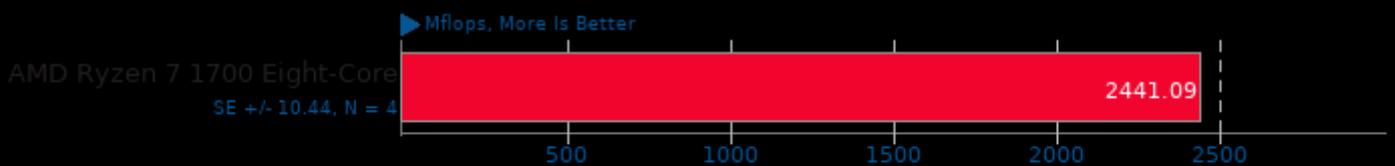
Test: OpenMP HotSpot3D



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

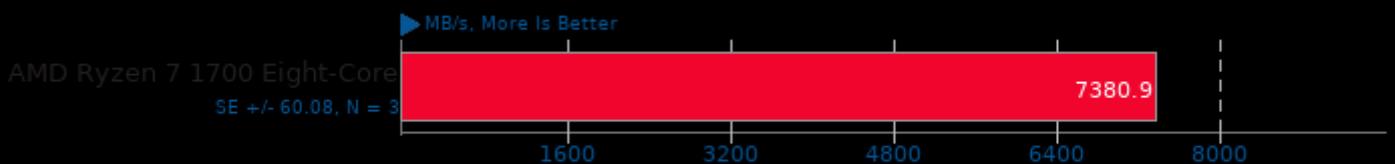
Java SciMark 2.0

Computational Test: Composite



LZ4 Compression 1.9.3

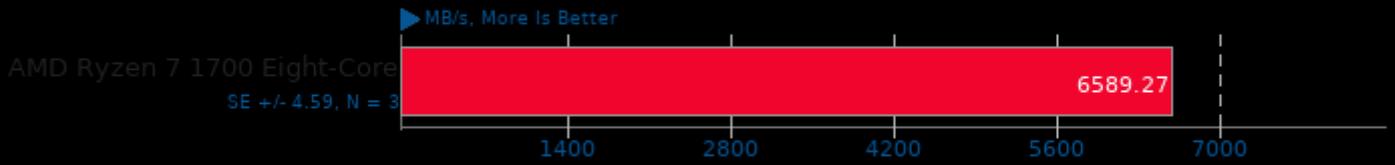
Compression Level: 1 - Decompression Speed



1. (CC) gcc options: -O3

LZ4 Compression 1.9.3

Compression Level: 1 - Compression Speed



1. (ICC) gcc options: -O3

LuajIT 2.1-git

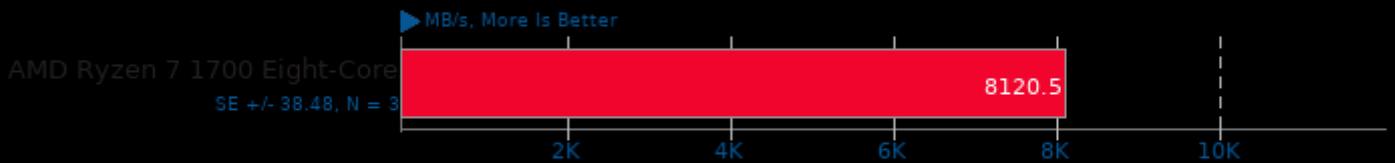
Test: Composite



1. (ICC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

C-Blosc 2.0 Beta 5

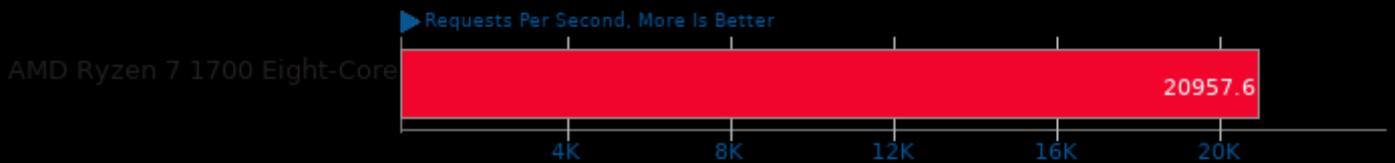
Compressor: blosclz



1. (CXX) g++ options: -rdynamic

NGINX Benchmark 1.9.9

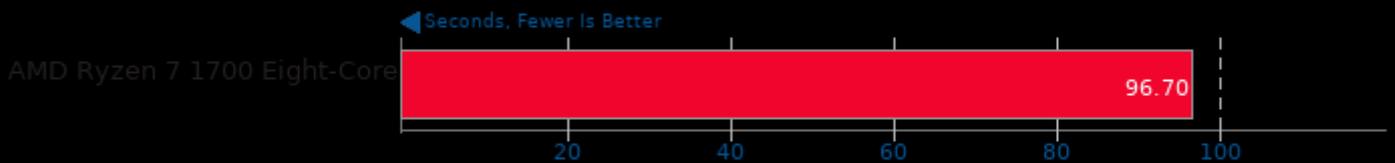
Static Web Page Serving



1. (ICC) gcc options: -lpthread -lcrypt -lcrypto -lz -O3 -march=native

Parboil 2.5

Test: OpenMP MRI Gridding

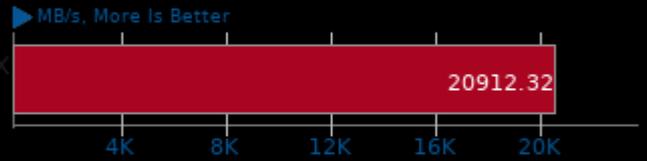


1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

RAMspeed SMP 3.5.0

Type: Add - Benchmark: Integer

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX



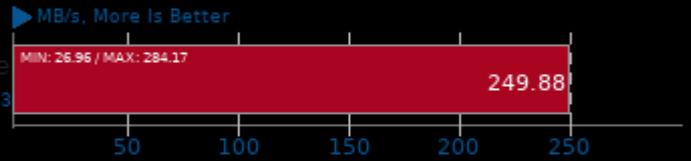
1. (CC) gcc options: -O3 -march=native

IOR 3.3.0

Block Size: 8MB - Disk Target: /home/kub0x/nvme_disk

Samsung SSD 970 EVO - AMD Ryzen 7 1700 Eight-Core

SE +/- 0.50, N = 3



1. (CC) gcc options: -O2 -lm -pthread -lmpi

RAMspeed SMP 3.5.0

Type: Scale - Benchmark: Integer

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX

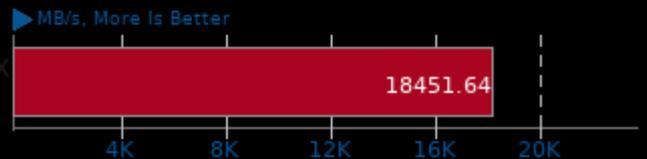


1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Copy - Benchmark: Integer

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Triad - Benchmark: Integer

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX

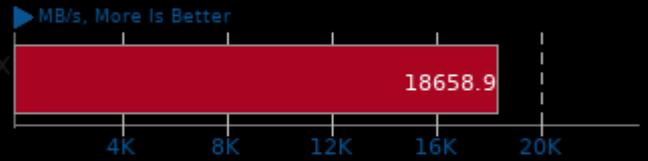


1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Average - Benchmark: Integer

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX

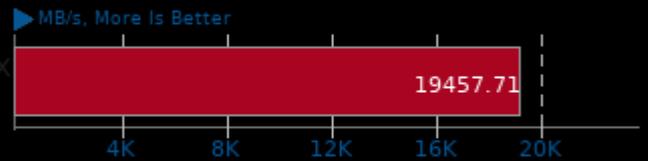


1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Average - Benchmark: Floating Point

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Add - Benchmark: Floating Point

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX

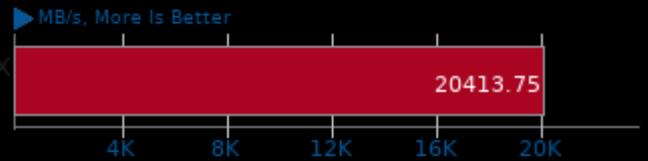


1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Triad - Benchmark: Floating Point

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX

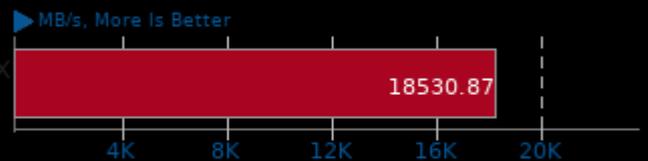


1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Copy - Benchmark: Floating Point

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX

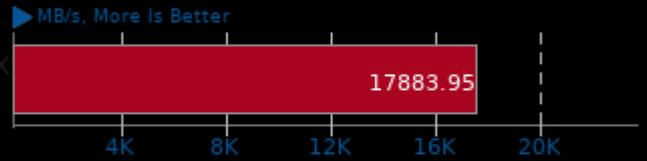


1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Scale - Benchmark: Floating Point

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX

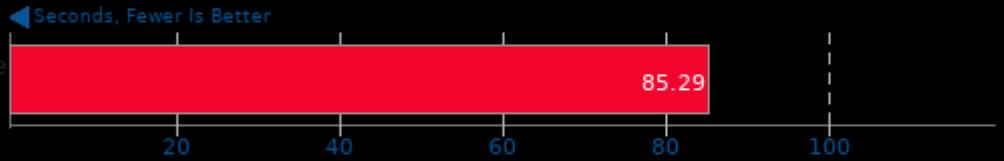


1. (GCC) gcc options: -O3 -march=native

CppPerformanceBenchmarks 9

Test: Stepanov Vector

AMD Ryzen 7 1700 Eight-Core

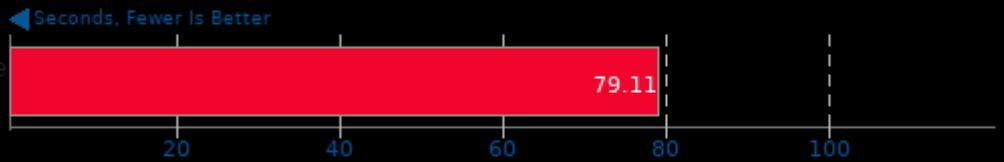


1. (GCC) g++ options: -std=c++11 -O3

CppPerformanceBenchmarks 9

Test: Atol

AMD Ryzen 7 1700 Eight-Core



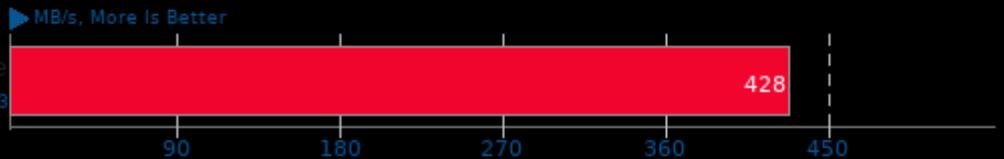
1. (GCC) g++ options: -std=c++11 -O3

Izbench 1.8

Test: Crush 0 - Process: Decompression

AMD Ryzen 7 1700 Eight-Core

SE +/- 0.33, N = 3



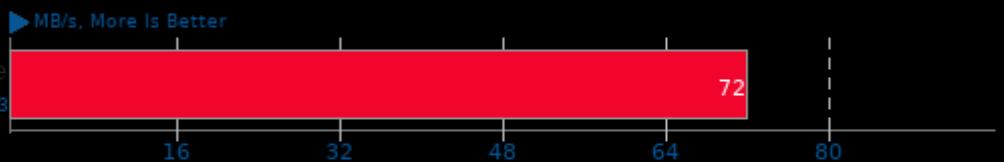
1. (GCC) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

Test: Crush 0 - Process: Compression

AMD Ryzen 7 1700 Eight-Core

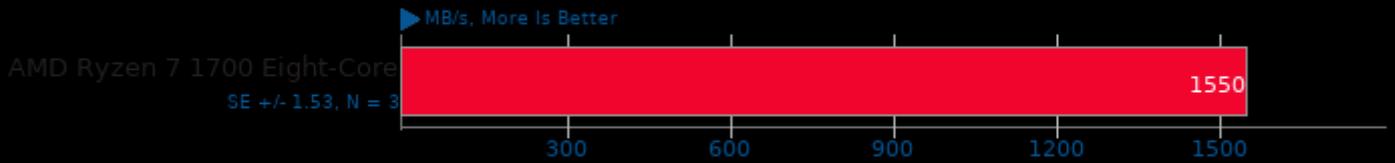
SE +/- 0.00, N = 3



1. (GCC) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

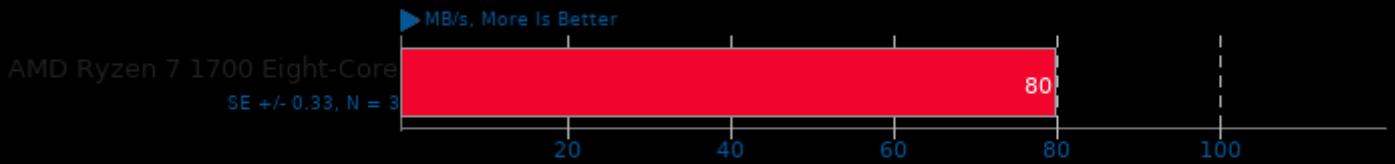
Test: Zstd 8 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

Test: Zstd 8 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

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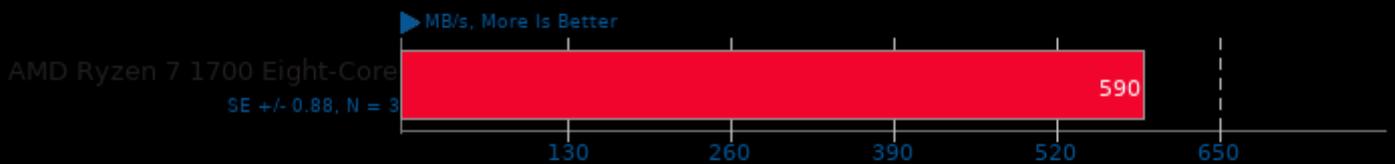
Test: Memory Copy - Array Size: 8192 MiB



1. (C) gcc options: -O3 -march=native

Izbench 1.8

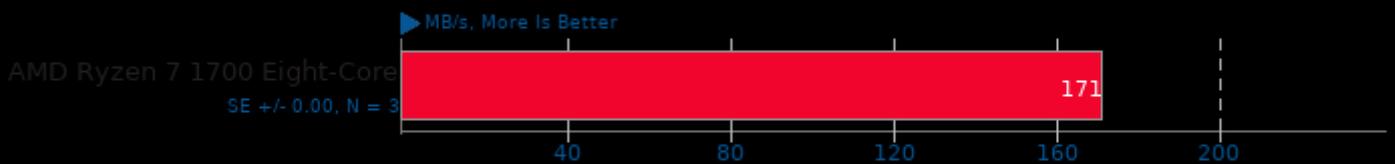
Test: Brotli 2 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

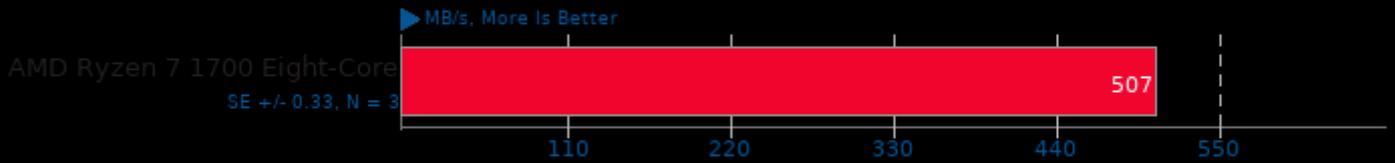
Test: Brotli 2 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

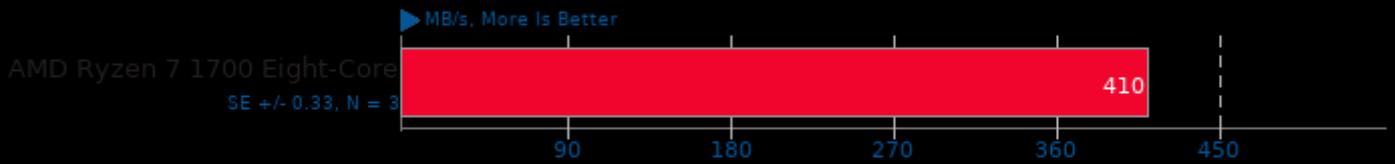
Test: Brotli 0 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

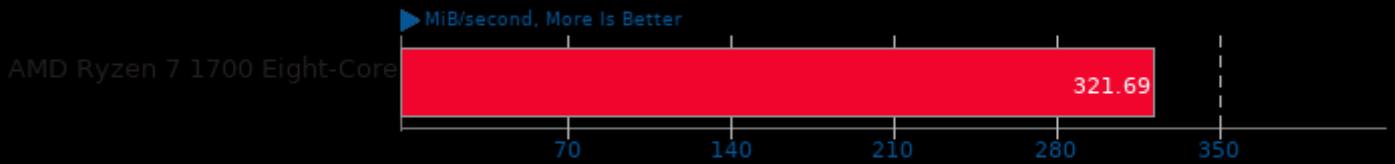
Test: Brotli 0 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Crypto++ 8.2

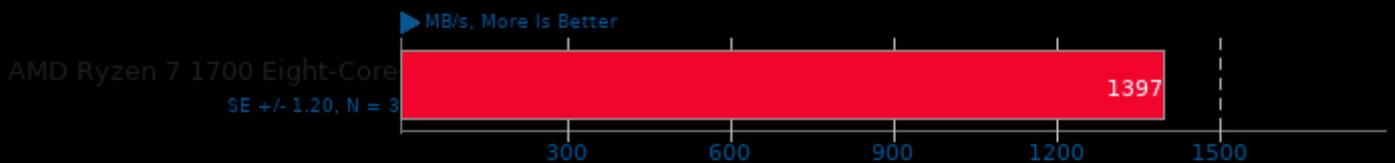
Test: Unkeyed Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

Izbench 1.8

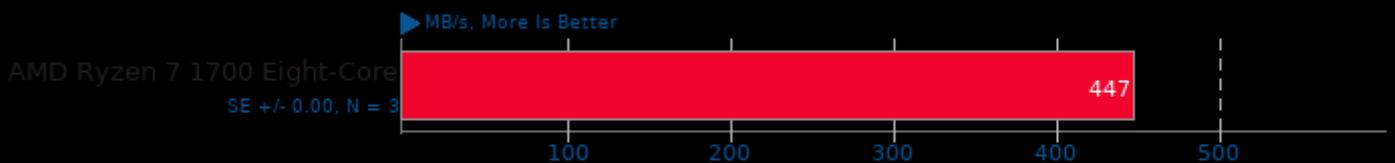
Test: Zstd 1 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Izbench 1.8

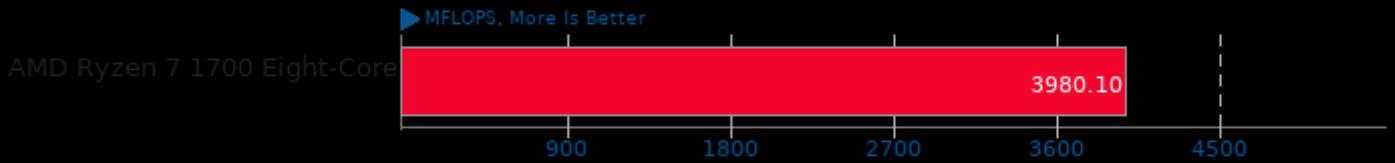
Test: Zstd 1 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

Himeno Benchmark 3.0

Poisson Pressure Solver



1. (CC) gcc options: -O3 -mavx2

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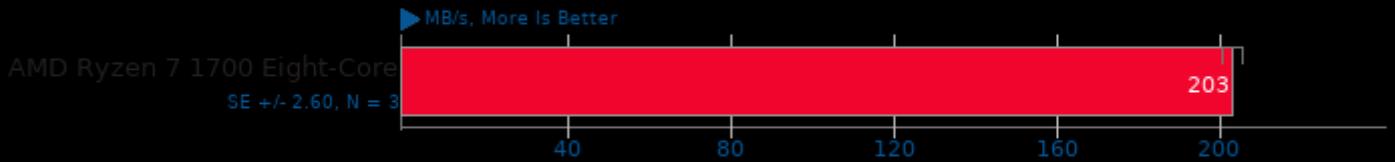
Test: Memory Copy, Fixed Block Size - Array Size: 4096 MiB



1. (CC) gcc options: -O3 -march=native

Izbench 1.8

Test: Libdeflate 1 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

IOR 3.3.0

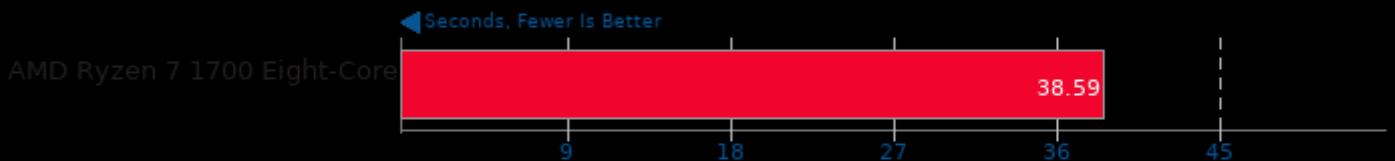
Block Size: 4MB - Disk Target: /home/kub0x/nvme_disk



1. (CC) gcc options: -O2 -lm -pthread -lmpi

CppPerformanceBenchmarks 9

Test: Ctype



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

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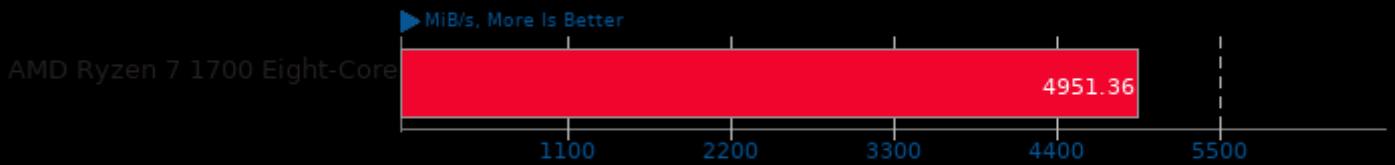
Test: Memory Copy - Array Size: 4096 MiB



1. (CC) gcc options: -O3 -march=native

Botan 2.17.3

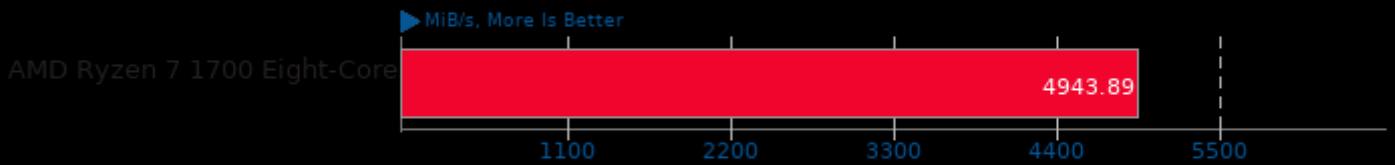
Test: AES-256 - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.17.3

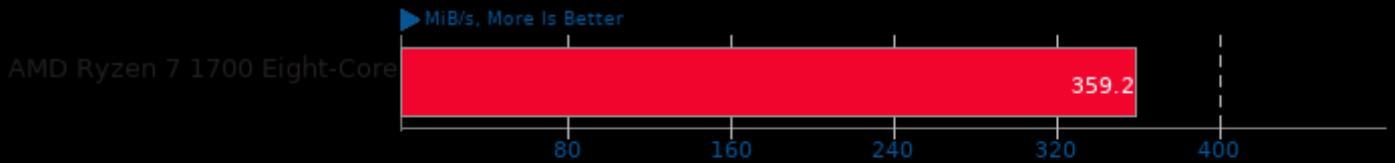
Test: AES-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

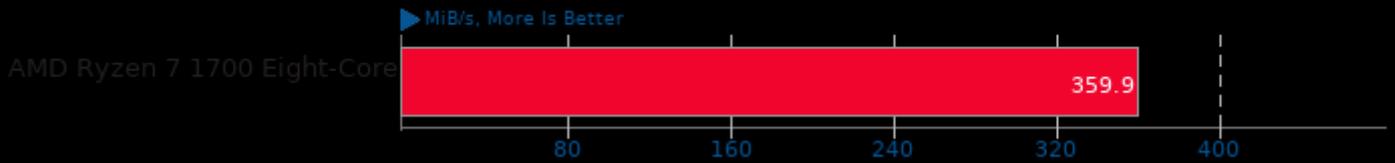
Cryptsetup

Twofish-XTS 512b Decryption



Cryptsetup

Twofish-XTS 512b Encryption



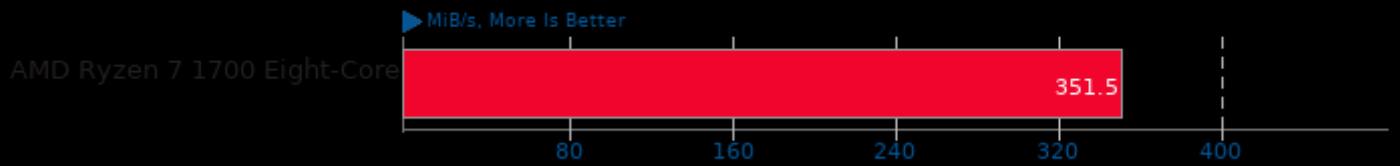
Cryptsetup

Serpent-XTS 512b Decryption



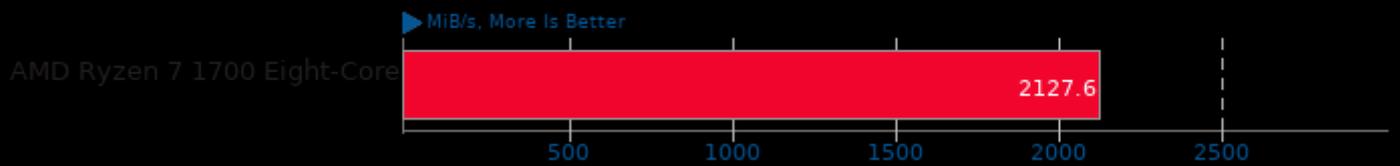
Cryptsetup

Serpent-XTS 512b Encryption



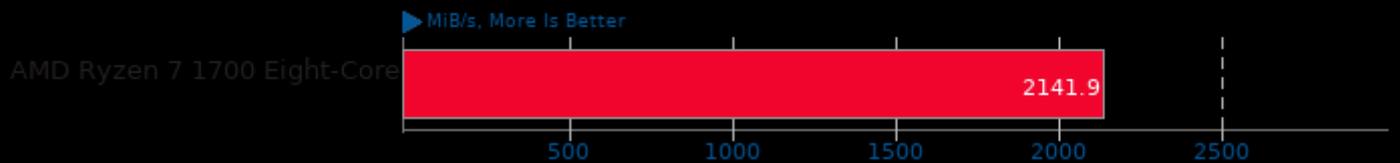
Cryptsetup

AES-XTS 512b Decryption



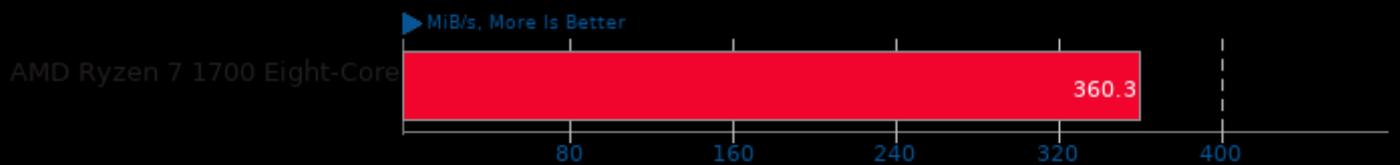
Cryptsetup

AES-XTS 512b Encryption



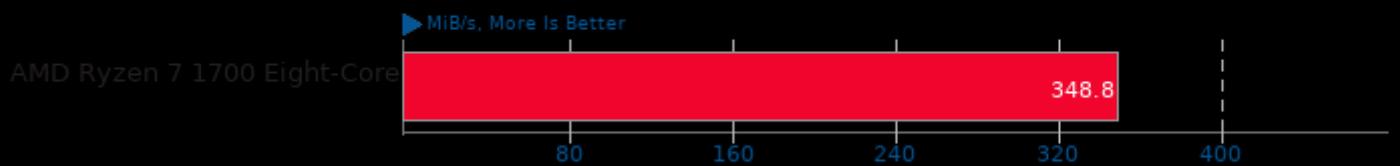
Cryptsetup

Twofish-XTS 256b Encryption



Cryptsetup

Serpent-XTS 256b Decryption



Cryptsetup

Serpent-XTS 256b Encryption



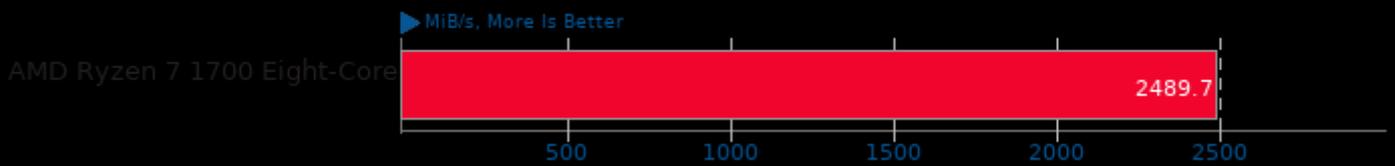
Cryptsetup

AES-XTS 256b Decryption



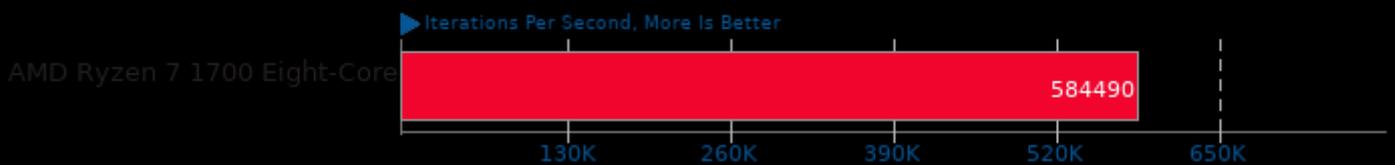
Cryptsetup

AES-XTS 256b Encryption



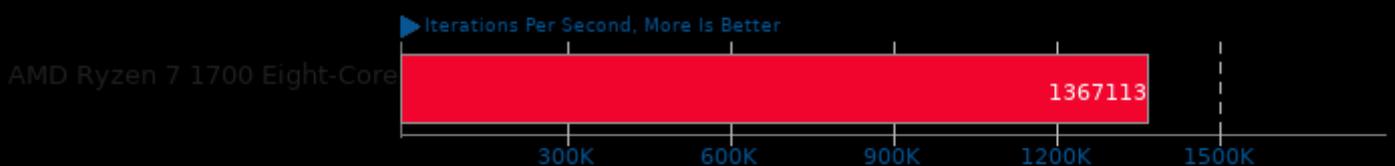
Cryptsetup

PBKDF2-whirlpool



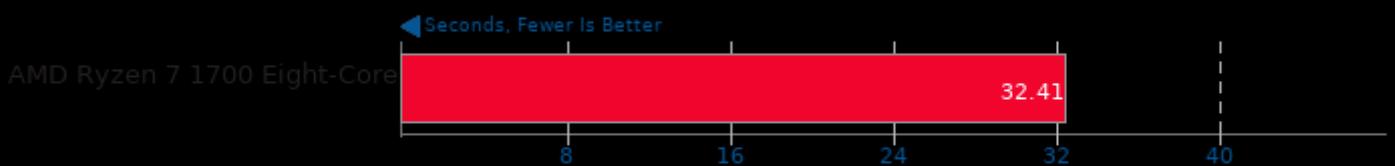
Cryptsetup

PBKDF2-sha512



CppPerformanceBenchmarks 9

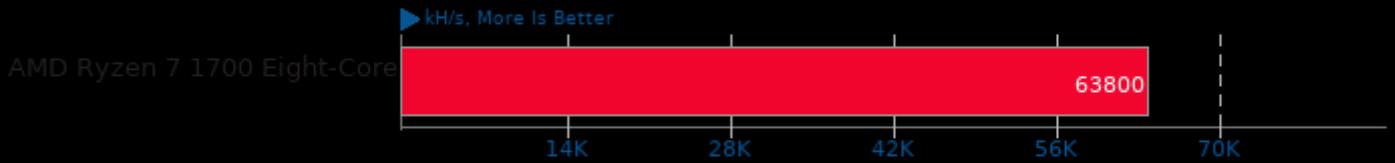
Test: Stepanov Abstraction



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

Cpuminer-Opt 3.15.5

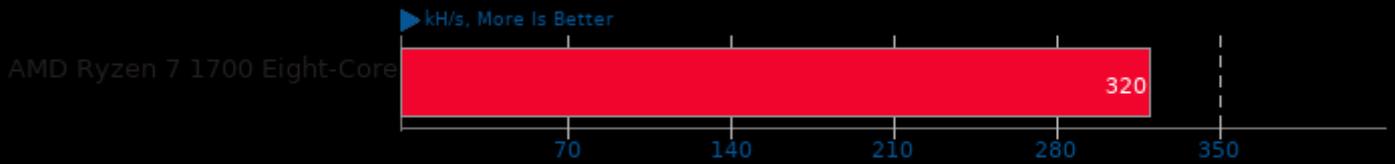
Algorithm: Quad SHA-256, Pyrite



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Cpuminer-Opt 3.15.5

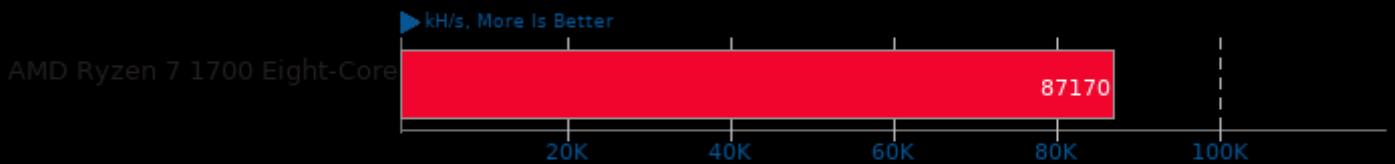
Algorithm: Magi



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Cpuminer-Opt 3.15.5

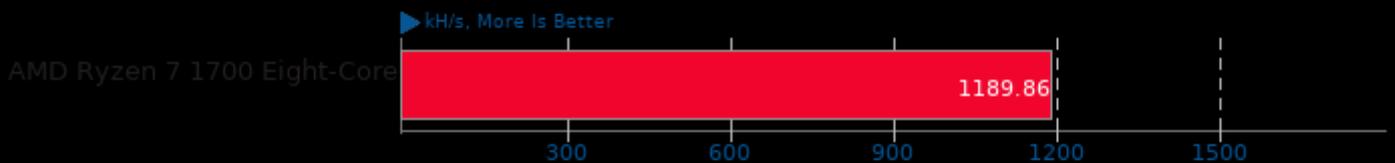
Algorithm: Triple SHA-256, Onecoin



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Cpuminer-Opt 3.15.5

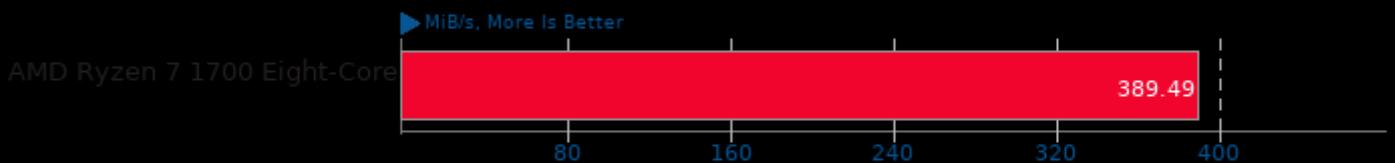
Algorithm: Garlicoin



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Botan 2.17.3

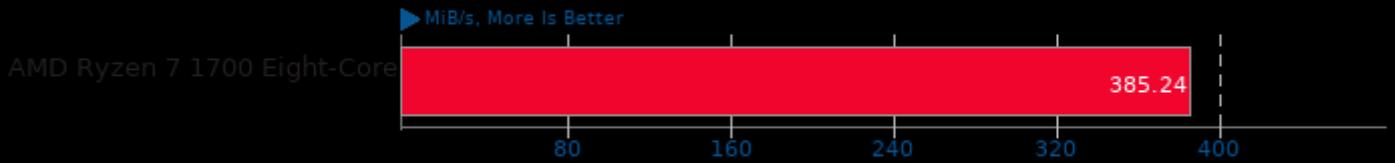
Test: Blowfish - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.17.3

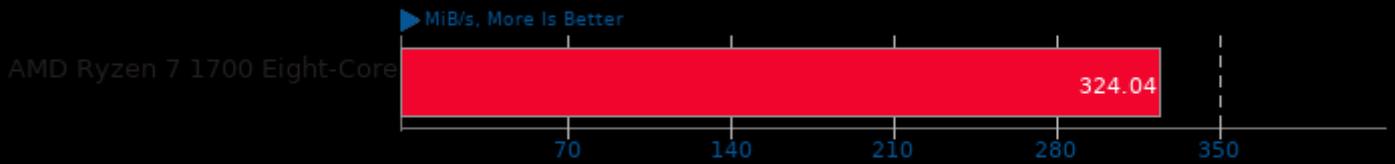
Test: Blowfish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.17.3

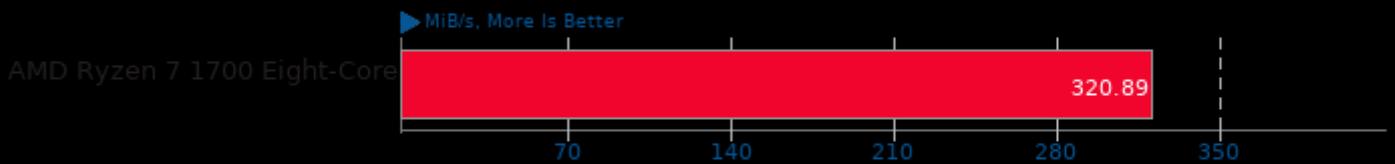
Test: Twofish - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.17.3

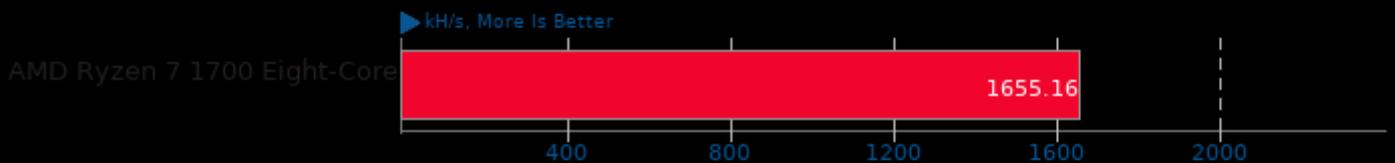
Test: Twofish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Cpuminer-Opt 3.15.5

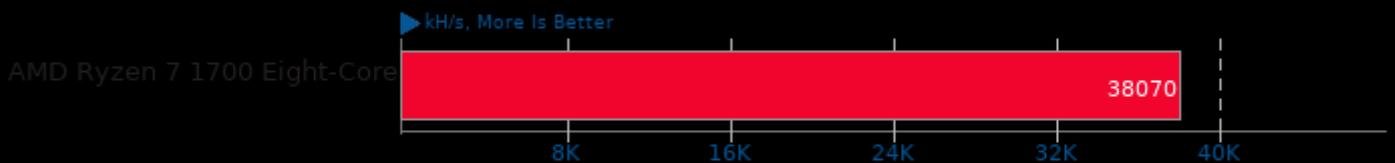
Algorithm: Ringcoin



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Cpuminer-Opt 3.15.5

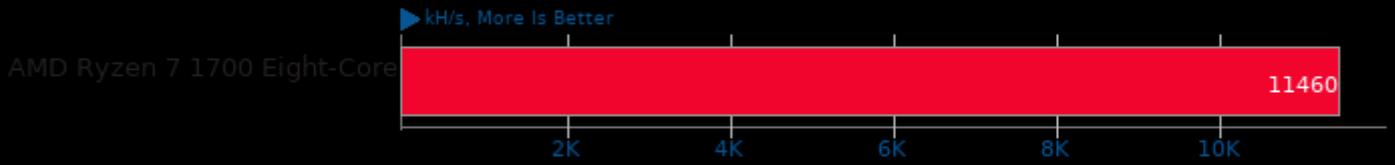
Algorithm: Skeincoin



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Cpuminer-Opt 3.15.5

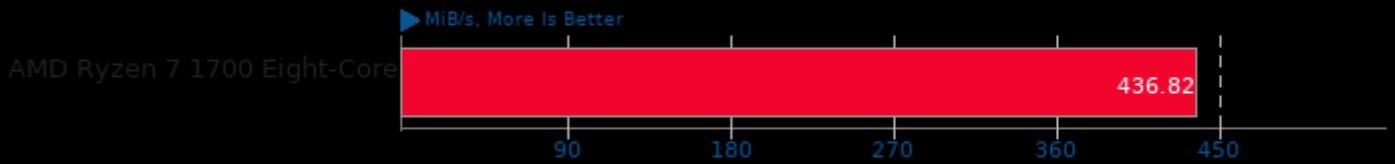
Algorithm: Myriad-Groestl



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Botan 2.17.3

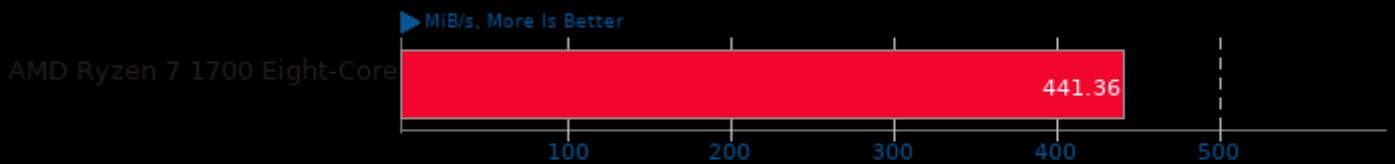
Test: ChaCha20Poly1305 - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.17.3

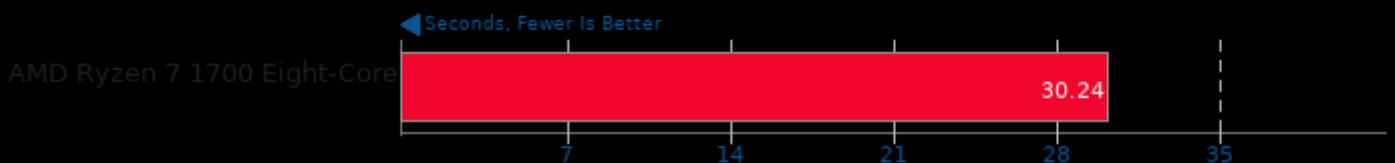
Test: ChaCha20Poly1305



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Rodinia 3.1

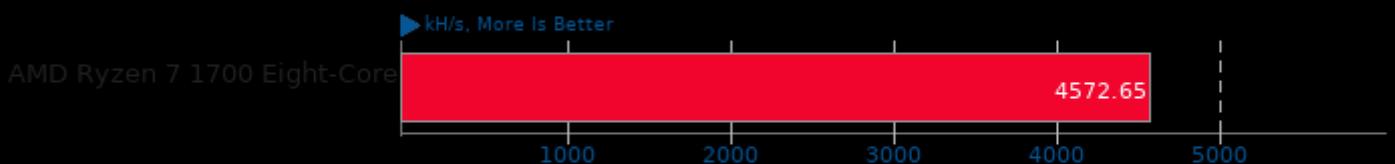
Test: OpenMP CFD Solver



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

Cpuminer-Opt 3.15.5

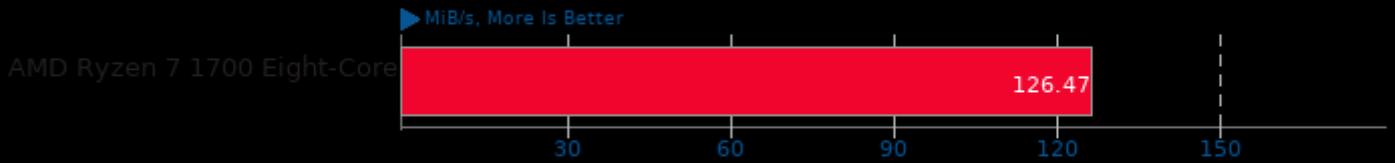
Algorithm: Deepcoin



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Botan 2.17.3

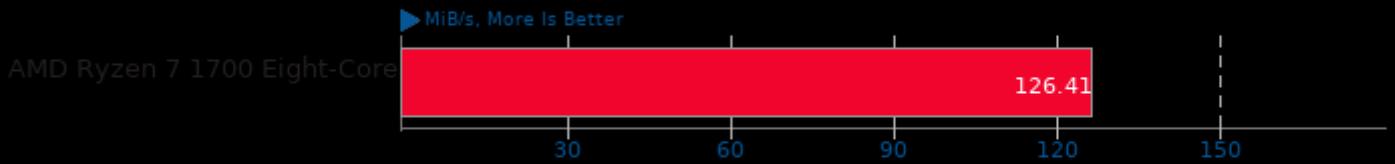
Test: CAST-256 - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.17.3

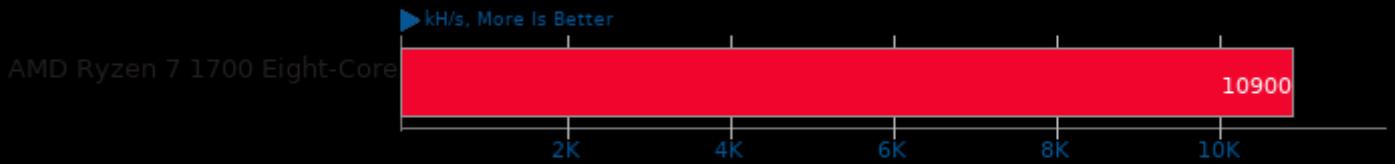
Test: CAST-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

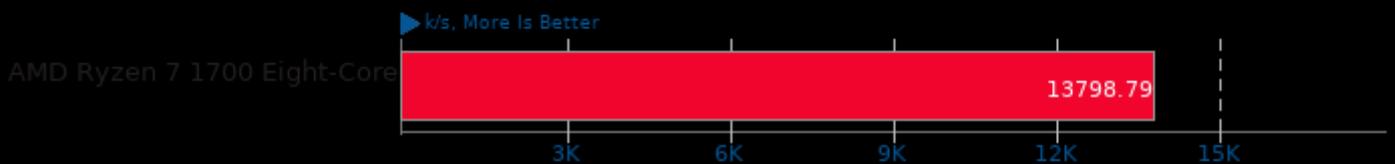
Cpuminer-Opt 3.15.5

Algorithm: LBC, LBRY Credits



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

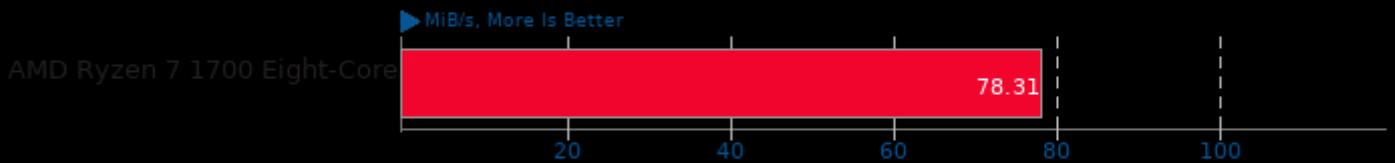
Aircrack-ng 1.5.2



1. (CXX) g++ options: -O3 -fvisibility=hidden -masm=intel -fcommon -rdynamic -lsqlite3 -lpthread -lz -lcrypto -lhwloc -ldl -lm -pthread

Botan 2.17.3

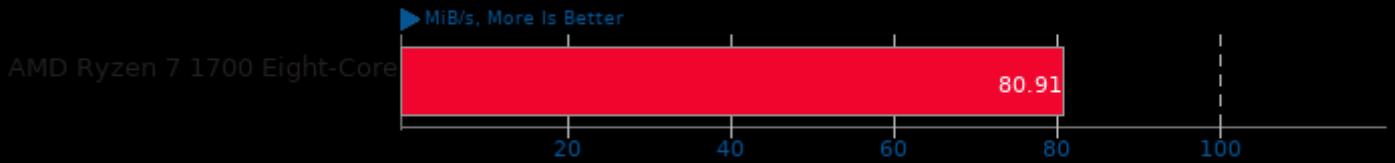
Test: KASUMI - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.17.3

Test: KASUMI



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Cpuminer-Opt 3.15.5

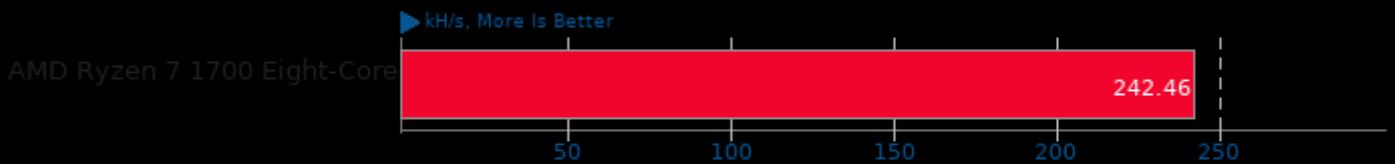
Algorithm: Blake-2 S



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Cpuminer-Opt 3.15.5

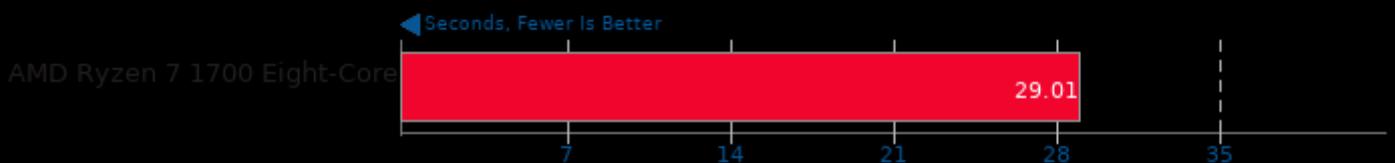
Algorithm: x25x



1. (CXX) g++ options: -O2 -lcurl -lz -ljansson -lpthread -lssl -lcrypto -lgmp

Rodinia 3.1

Test: OpenMP Streamcluster



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

IOR 3.3.0

Block Size: 2MB - Disk Target: /home/kub0x/nvme_disk

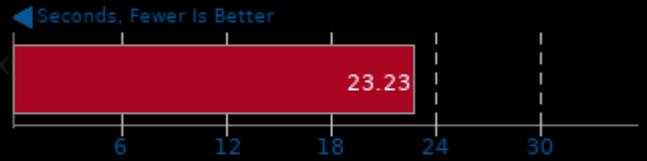


1. (CC) gcc options: -O2 -lm -pthread -lmpi

t-test1 2017-01-13

Threads: 1

AMD Ryzen 7 1700 Eight-Core - Sapphire AMD Radeon RX

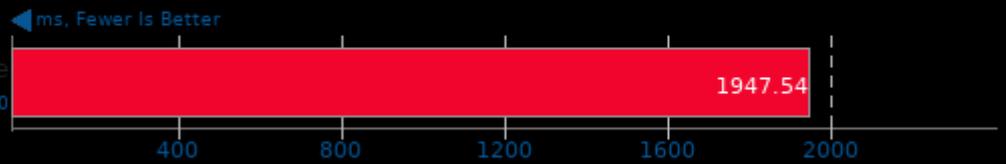


1. (CC) gcc options: -pthread

System ZLIB Decompression 1.2.7

AMD Ryzen 7 1700 Eight-Core

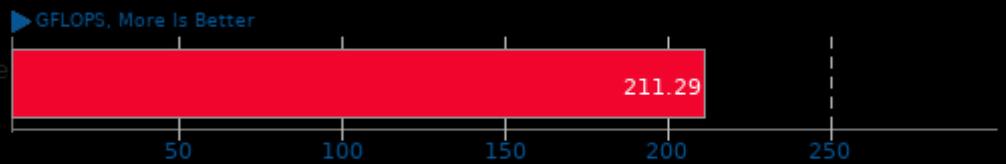
SE +/- 0.91, N = 10



ArrayFire 3.7

Test: BLAS CPU

AMD Ryzen 7 1700 Eight-Core

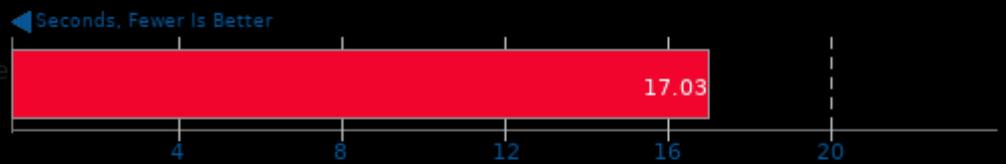


1. (CXX) g++ options: -rdynamic

CppPerformanceBenchmarks 9

Test: Function Objects

AMD Ryzen 7 1700 Eight-Core

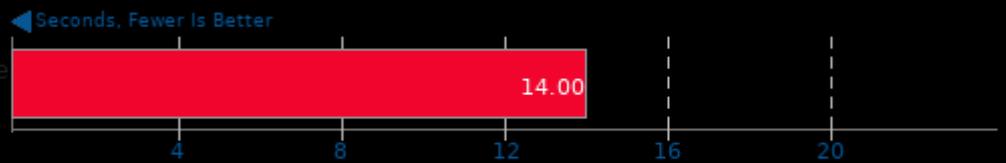


1. (CXX) g++ options: -std=c++11 -O3

Parboil 2.5

Test: OpenMP Stencil

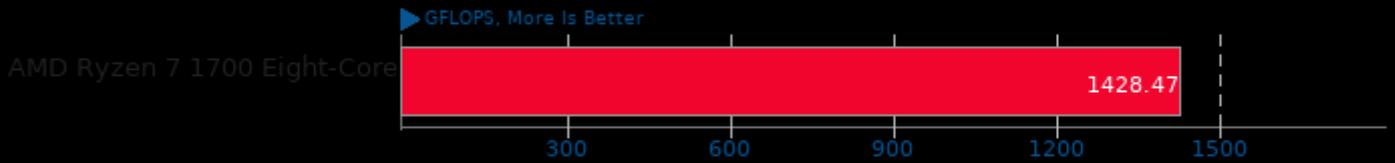
AMD Ryzen 7 1700 Eight-Core



1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

ArrayFire 3.7

Test: BLAS OpenCL



1. (CXX) g++ options: -rdynamic

MBW 2018-09-08

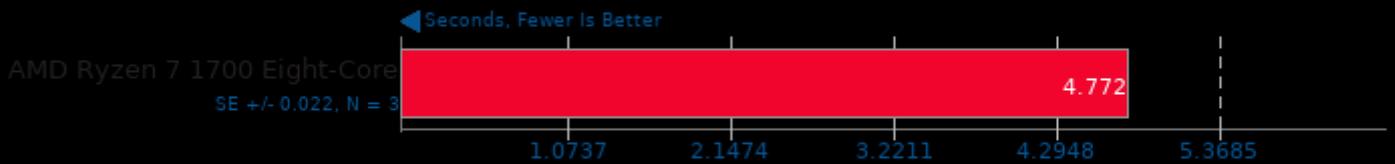
Test: Memory Copy, Fixed Block Size - Array Size: 1024 MiB



1. (C) gcc options: -O3 -march=native

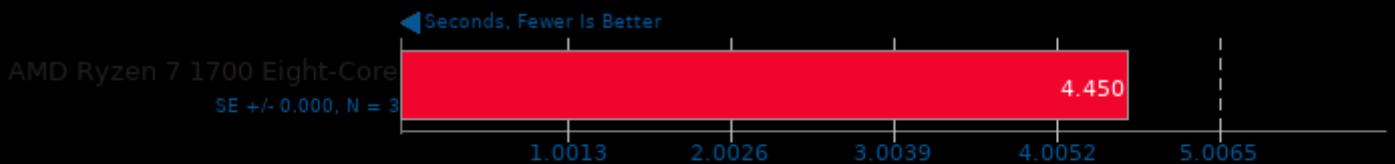
Parallel BZIP2 Compression 1.1.12

256MB File Compression



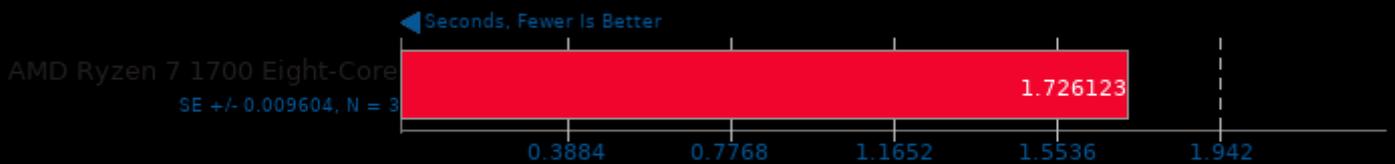
1. (CXX) g++ options: -O2 -pthread -lbz2 -lpthread

System XZ Decompression



Parboil 2.5

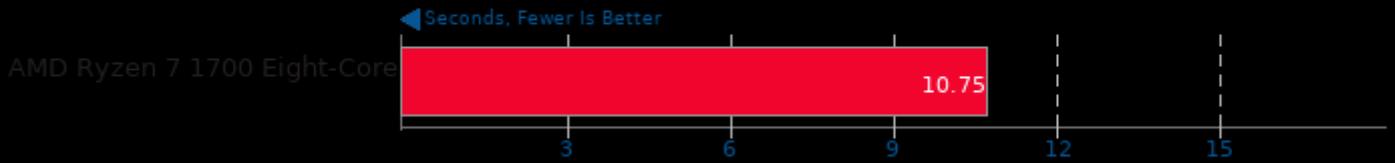
Test: OpenCL BFS



1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

Bork File Encrypter 1.4

File Encryption Time



System GZIP Decompression



MBW 2018-09-08

Test: Memory Copy - Array Size: 1024 MiB



1. (C) gcc options: -O3 -march=native

t-test1 2017-01-13

Threads: 2



1. (C) gcc options: -pthread

MBW 2018-09-08

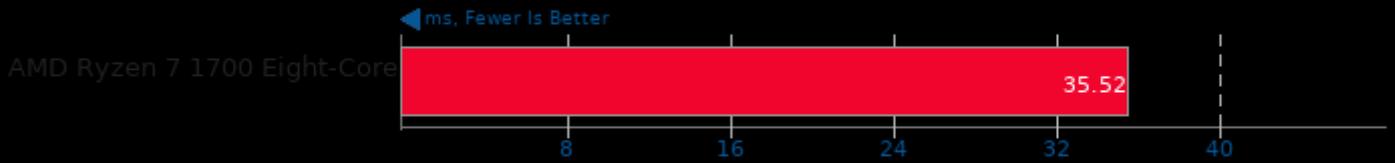
Test: Memory Copy, Fixed Block Size - Array Size: 512 MiB



1. (C) gcc options: -O3 -march=native

ArrayFire 3.7

Test: Conjugate Gradient CPU



1. (CXX) g++ options: -rdynamic

MBW 2018-09-08

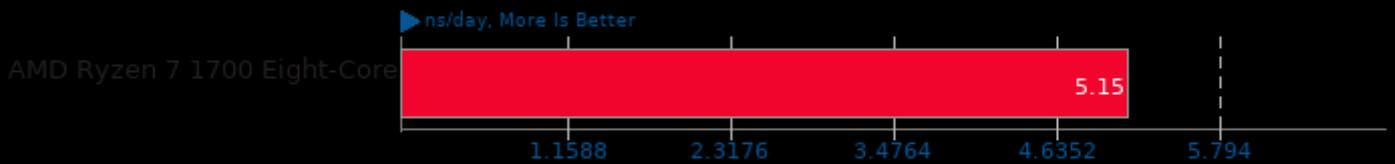
Test: Memory Copy - Array Size: 512 MiB



1. (CC) gcc options: -O3 -march=native

LAMMPS Molecular Dynamics Simulator 29Oct2020

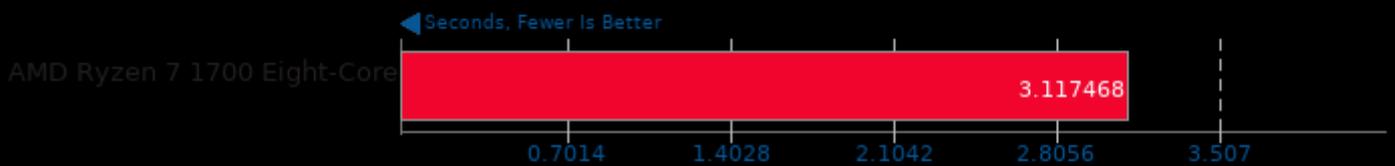
Model: Rhodopsin Protein



1. (CXX) g++ options: -O3 -pthread -lm

Parboil 2.5

Test: OpenMP CUTCP



1. (CXX) g++ options: -lm -pthread -lgomp -O3 -ffast-math -fopenmp

MBW 2018-09-08

Test: Memory Copy, Fixed Block Size - Array Size: 128 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

Test: Memory Copy - Array Size: 128 MiB



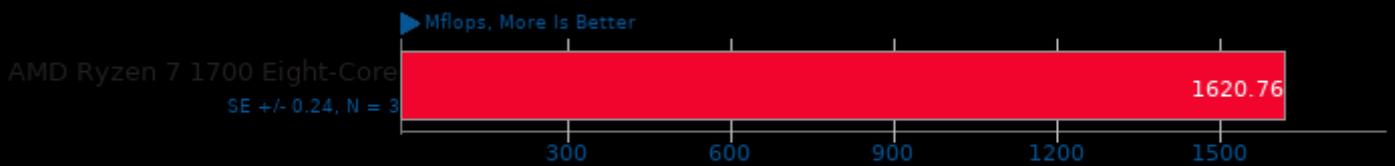
1, (CC) gcc options: -O3 -march=native

BLAKE2 20170307



LuajIT 2.1-git

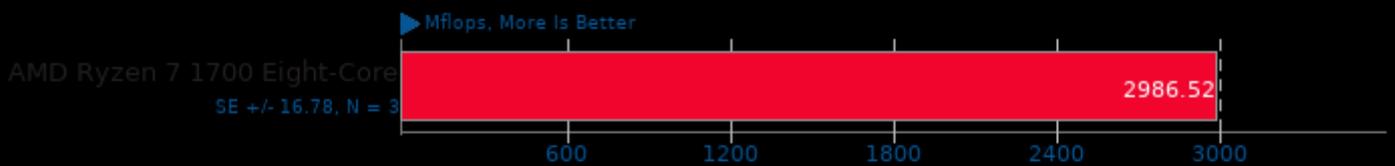
Test: Jacobi Successive Over-Relaxation



1, (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

LuajIT 2.1-git

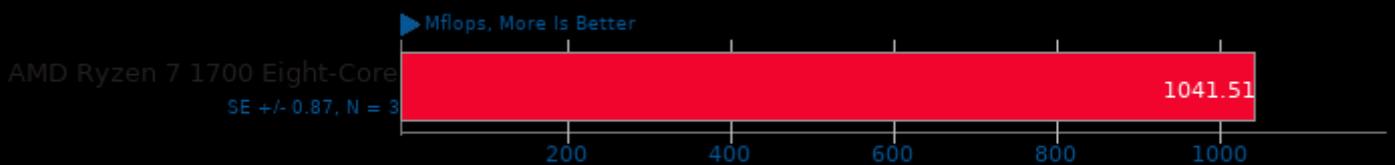
Test: Dense LU Matrix Factorization



1, (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

LuajIT 2.1-git

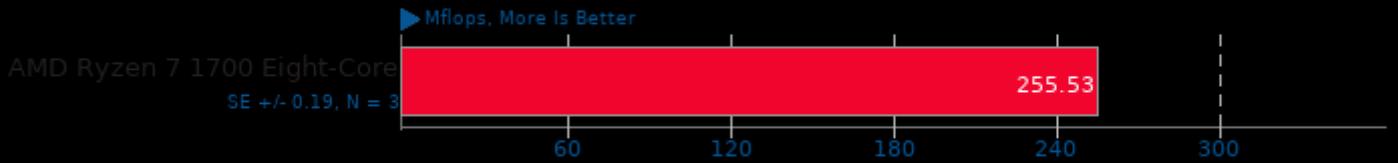
Test: Sparse Matrix Multiply



1, (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

LuaJIT 2.1-git

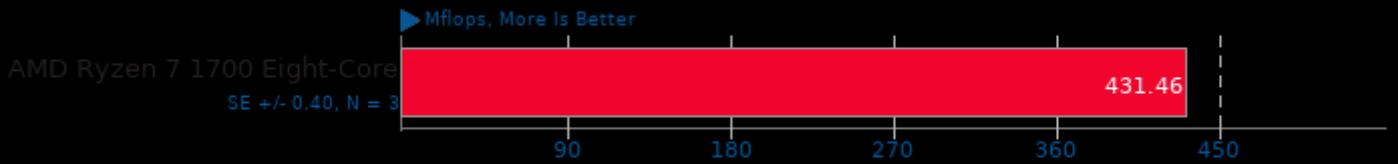
Test: Fast Fourier Transform



1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

LuaJIT 2.1-git

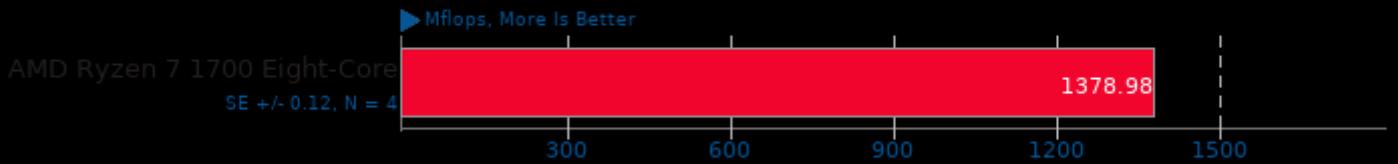
Test: Monte Carlo



1. (CC) gcc options: -lm -ldl -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

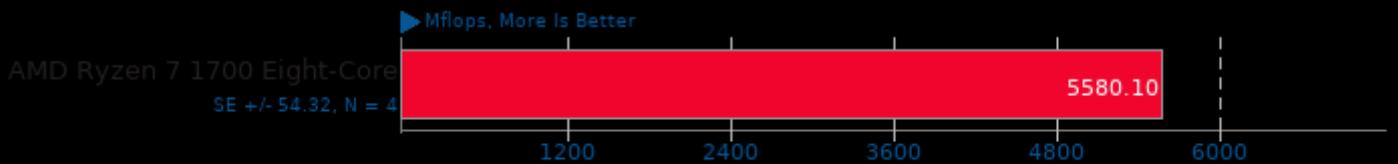
Java SciMark 2.0

Computational Test: Jacobi Successive Over-Relaxation



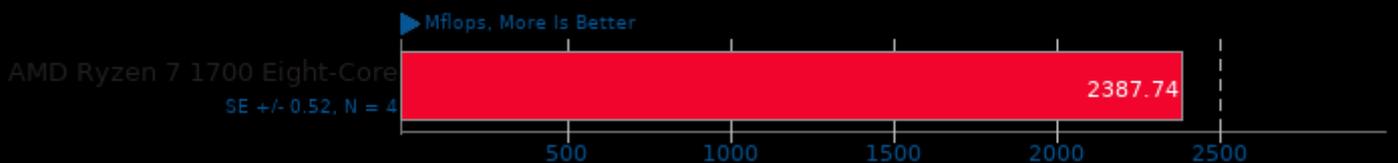
Java SciMark 2.0

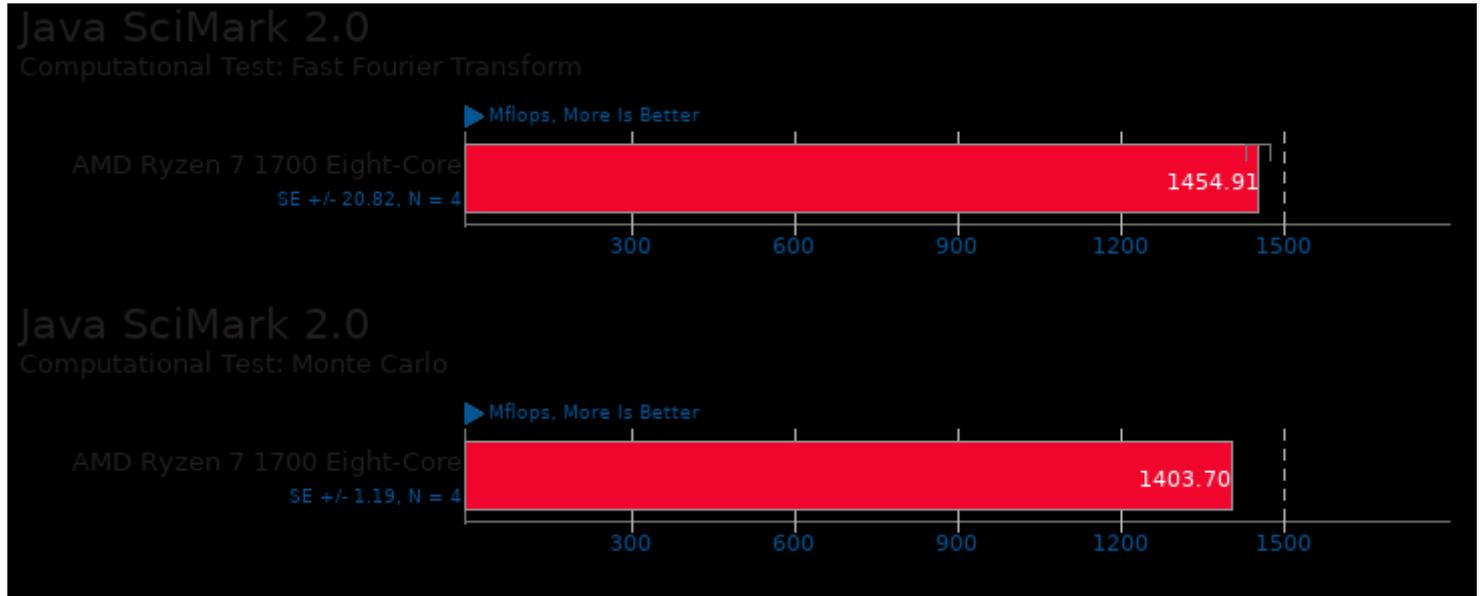
Computational Test: Dense LU Matrix Factorization



Java SciMark 2.0

Computational Test: Sparse Matrix Multiply





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