firstrun

Loongson-3A6000-HV testing with a Loongson Loongson-3A6000-HV-7A2000-NUC (Loongson-UDK2018-V4.0.05692-stable202402 BIOS) and loonggpudrmfb on Loongnix 20 via the Phoronix Test Suite.

firstrun

	ZHITAI PC005 Active	Loongson-3A6000-HV - loonggpudrmfb - Loongson
Processor	Loongson-3A6000-HV @ 2.50GHz (4 Cores / 8 Threads)	
Motherboard	Loongson Loongson-3A6000-HV-7A2000-NUC (Loongson-UDK2018-V4.0.05692-stable202402 BIOS)	
Chipset	Loongson LLC Hyper Transport Bridge	
Memory	1 x 16384 MB DDR4-3200MT/s Hakatronics Z6FAGH3SBCA-MC	
Disk	ZHITAI PC005 Active 256GB	
Graphics	LoongGPU LG110 1GB	loonggpudrmfb
Audio	Loongson LLC Device 7a37	
Monitor	DELL S3221QS	
Network	Loongson LLC Device 7a13 + Realtek RTL8822CE 802.11ac PCIe	
OS	Loongnix 20	
Kernel	4.19.0-19-loongson-3 (loongarch64)	
Display Server	X Server 1.20.4	
OpenGL	2.1 Mesa 18.3.6 (LLVM 8.0.1)	
Compiler	GCC 8.3.0	
File-System	xfs	
Screen Resolution	3840x2160	

Kernel Details

- Transparent Huge Pages: always

Compiler Details

- --build=loongarch64-linux-gnu --disable-emultls --disable-host-shared --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,c++,fortran --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-plugin --enable-shared --enable-threads=posix --enable-tls --host=loongarch64-linux-gnu --program-prefix=loongarch64-linux-gnu- --target=loongarch64-linux-gnu --with-abi=lp64 --with-arch=loongarch64 --with-default-libstdcxx-abi=new --with-gcc-major-version-only -v

Disk Details

- ZHITAI PC005 Active: NONE / attr2,inode64,noatime,noquota,rw / Block Size: 4096

Processor Details

- Scaling Governor: acpi-cpufreq performance

Java Details

- ZHITAI PC005 Active: OpenJDK Runtime Environment Loongson11.7.0 (build 11.0.20+8)

Python Details

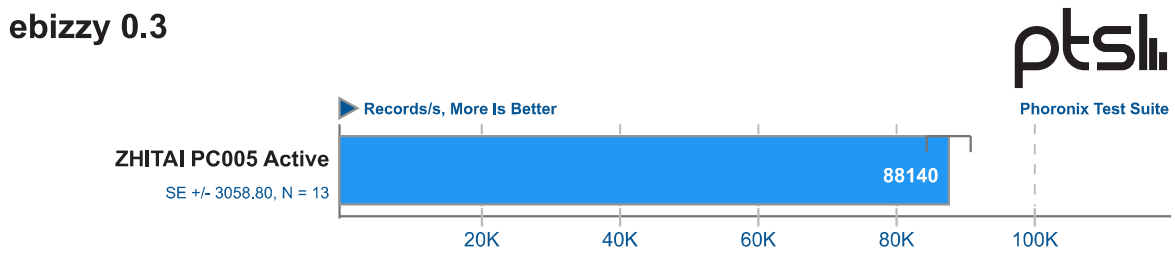
- ZHITAI PC005 Active: Python 2.7.16 + Python 3.7.3

Phoronix Test Suite

firstrun

	ZHITAI PC005 Active	Loongsor
ebizzy:	88140	
perl-benchmark: Pod2html	0.16926701	
perl-benchmark: Interpreter	0.00096136	
openssl: SHA256	693483547	
openssl: SHA512	1063737240	
openssl: RSA4096	362.6	
openssl: RSA4096	27923.1	
openssl: ChaCha20	17422122917	
rodinia: OpenMP LavaMD		
rodinia: OpenMP CFD Solver		
kvazaar: Bosphorus 4K - Slow		
kvazaar: Bosphorus 4K - Medium		
kvazaar: Bosphorus 1080p - Slow		
kvazaar: Bosphorus 1080p - Medium		
kvazaar: Bosphorus 4K - Very Fast		
kvazaar: Bosphorus 4K - Ultra Fast		
kvazaar: Bosphorus 1080p - Very Fast		
kvazaar: Bosphorus 1080p - Ultra Fast		
compress-7zip: Compression Rating		
compress-7zip: Decompression Rating		
povray: Trace Time		
openssl: AES-128-GCM		
openssl: AES-256-GCM		
openssl: ChaCha20-Poly1305		
sysbench: CPU		

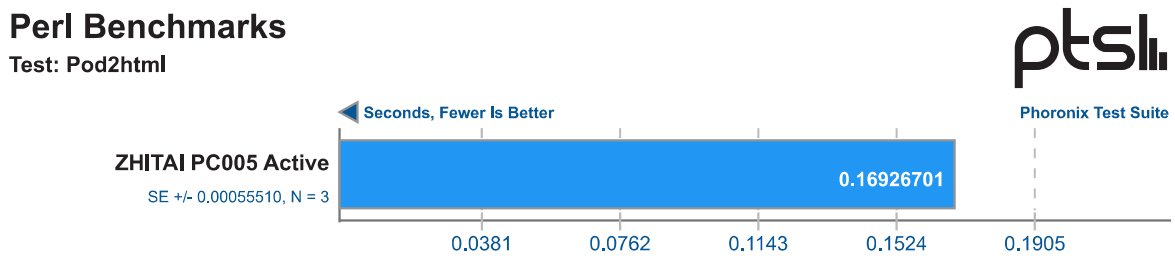
ebizzy



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

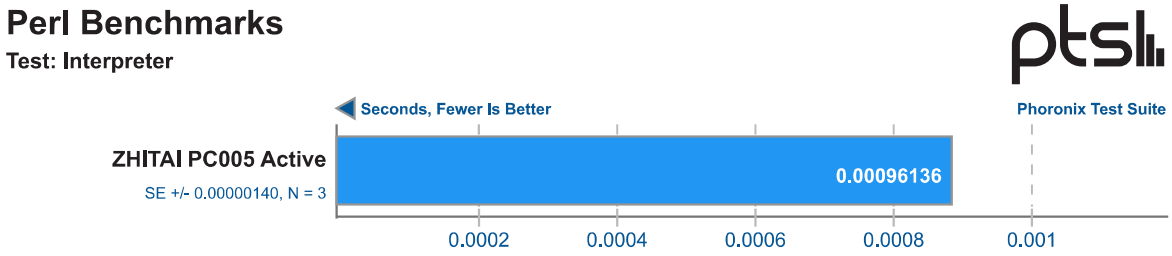
Perl Benchmarks

Test: Pod2html



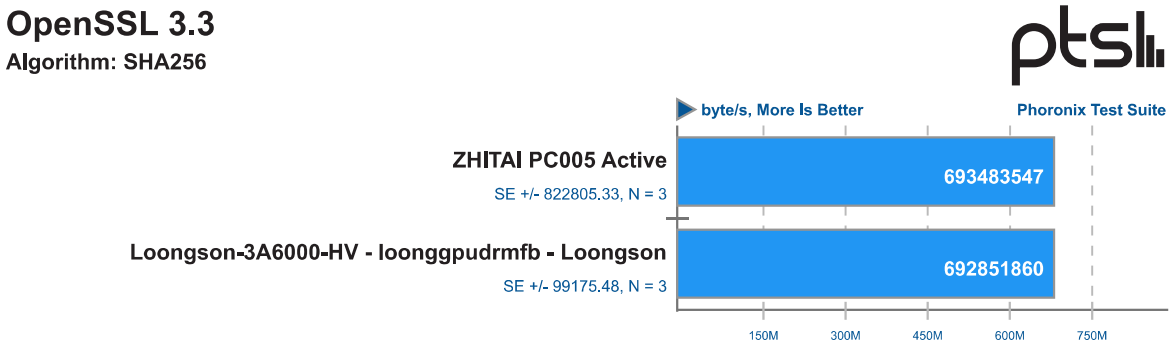
Perl Benchmarks

Test: Interpreter



OpenSSL

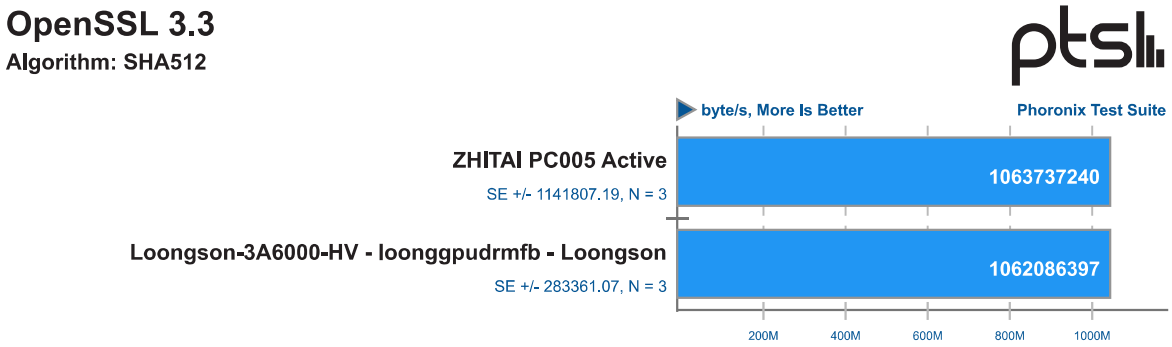
Algorithm: SHA256



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

OpenSSL

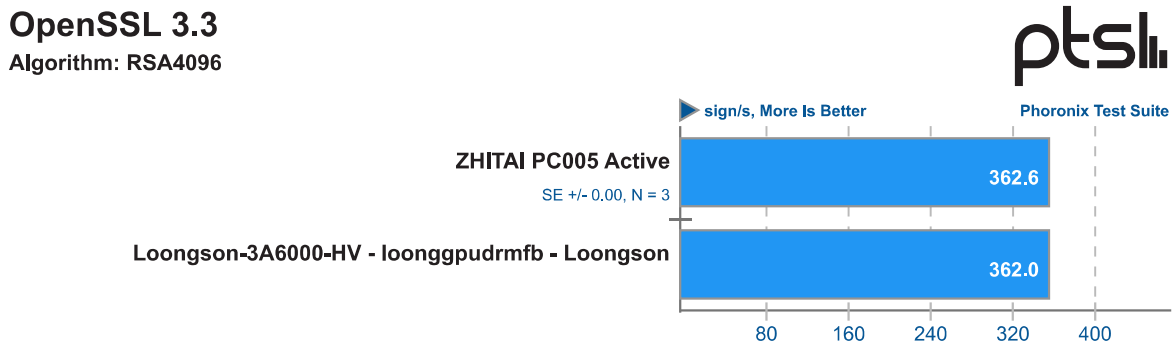
Algorithm: SHA512



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

OpenSSL

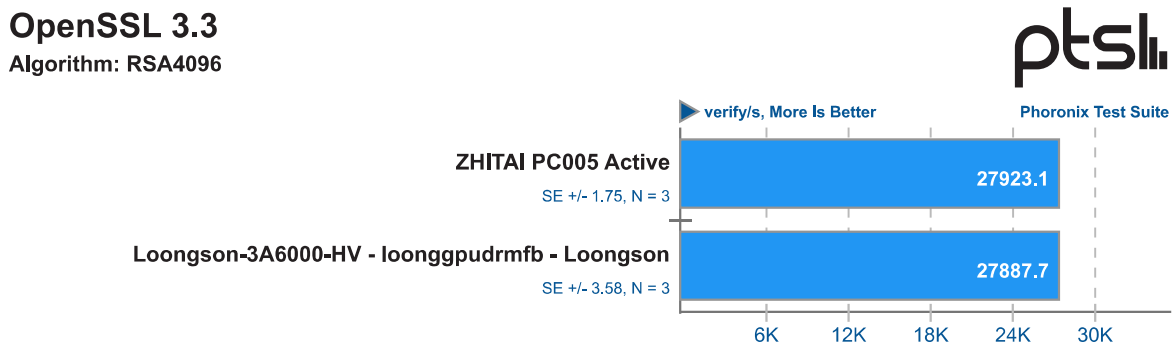
Algorithm: RSA4096



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

OpenSSL

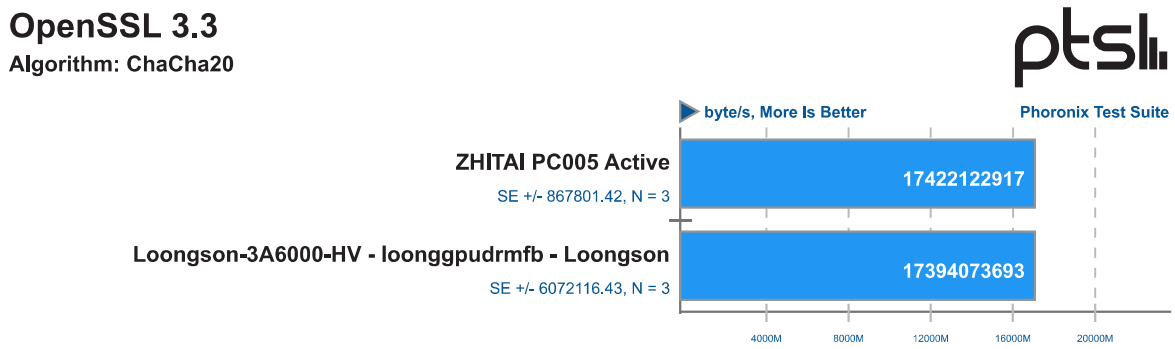
Algorithm: RSA4096



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

OpenSSL

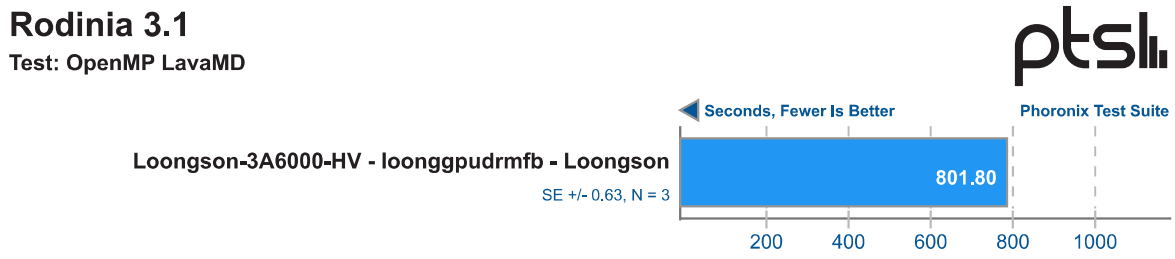
Algorithm: ChaCha20



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

Rodinia

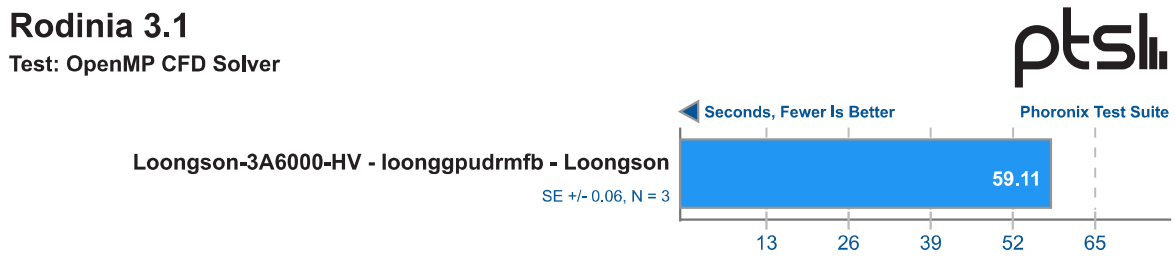
Test: OpenMP LavaMD



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

Rodinia

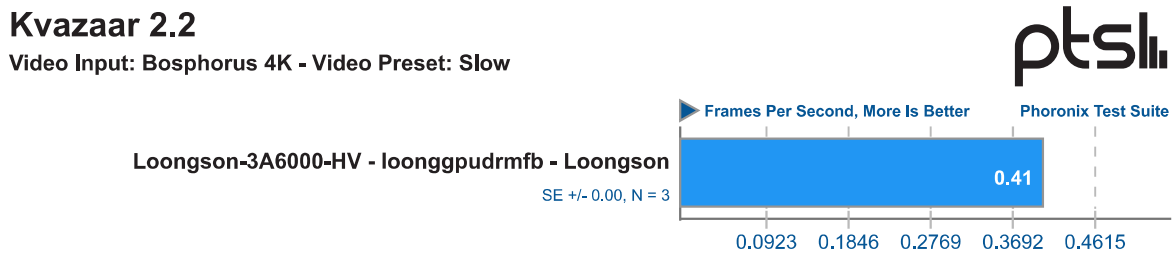
Test: OpenMP CFD Solver



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

Kvazaar

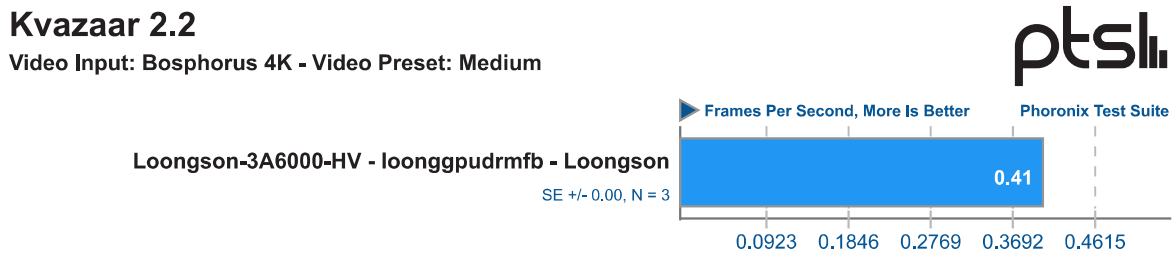
Video Input: Bosphorus 4K - Video Preset: Slow



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar

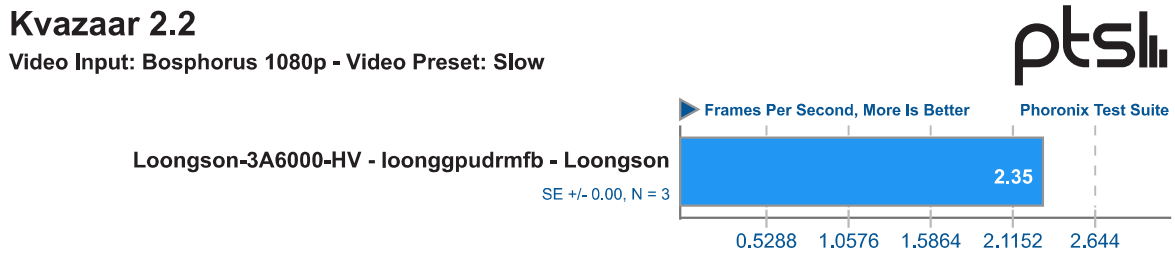
Video Input: Bosphorus 4K - Video Preset: Medium



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar

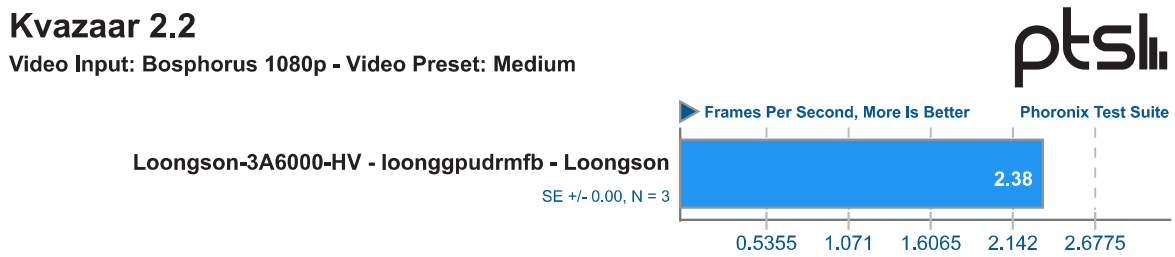
Video Input: Bosphorus 1080p - Video Preset: Slow



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar

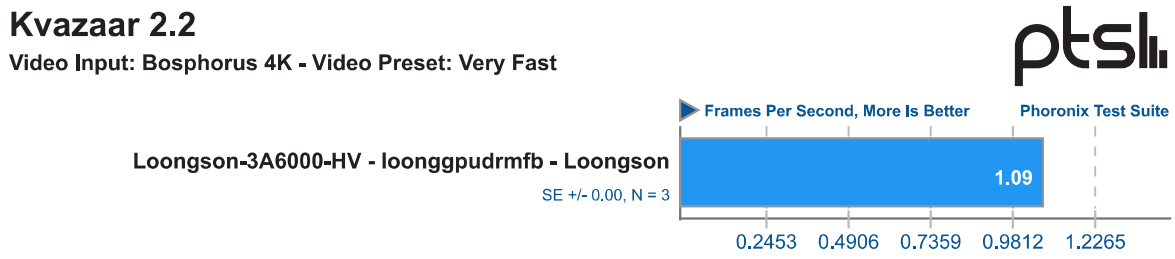
Video Input: Bosphorus 1080p - Video Preset: Medium



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar

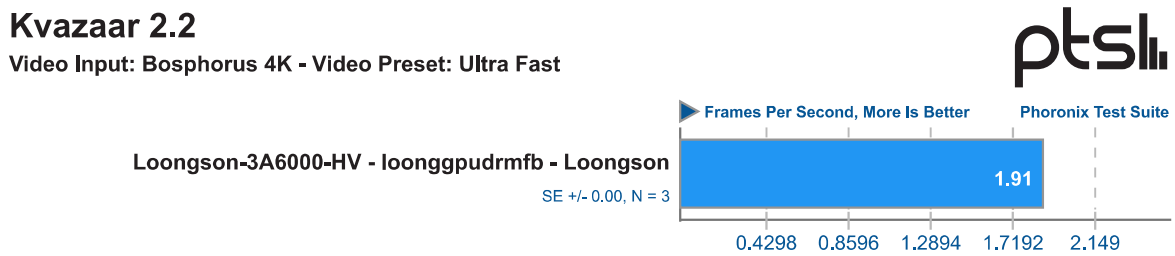
Video Input: Bosphorus 4K - Video Preset: Very Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar

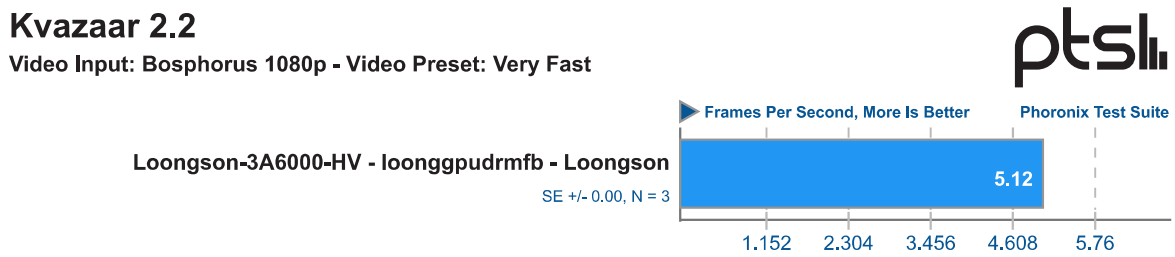
Video Input: Bosphorus 4K - Video Preset: Ultra Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar

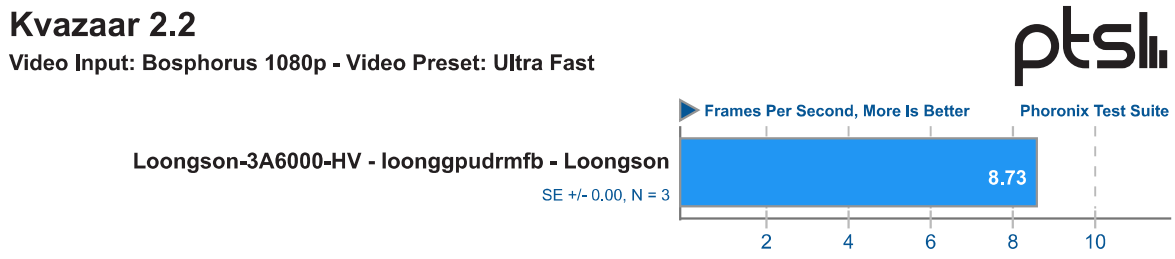
Video Input: Bosphorus 1080p - Video Preset: Very Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar

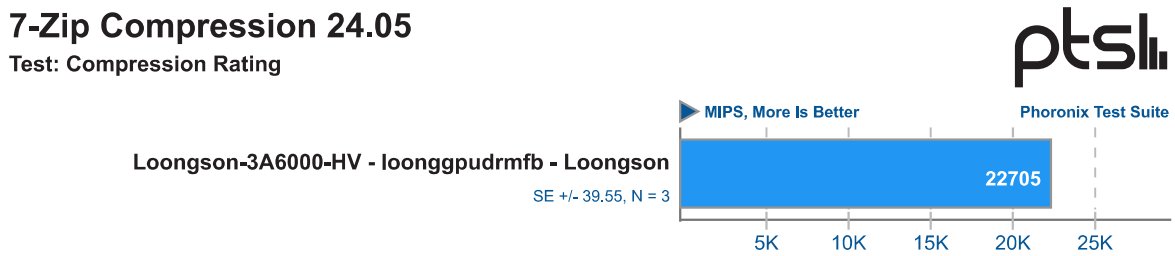
Video Input: Bosphorus 1080p - Video Preset: Ultra Fast



1. (CC) gcc options: -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

7-Zip Compression

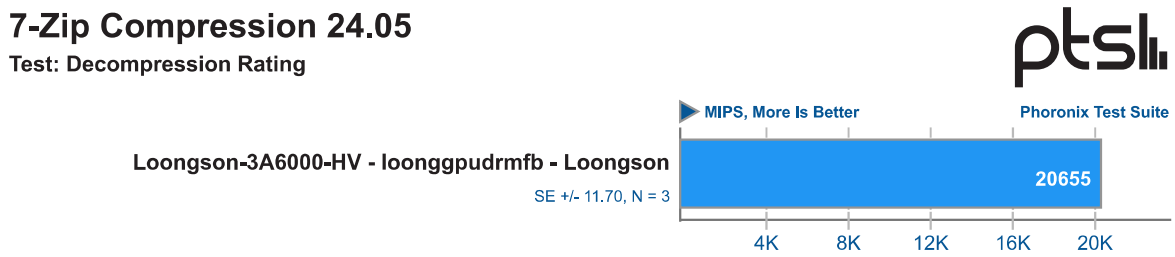
Test: Compression Rating



1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

7-Zip Compression

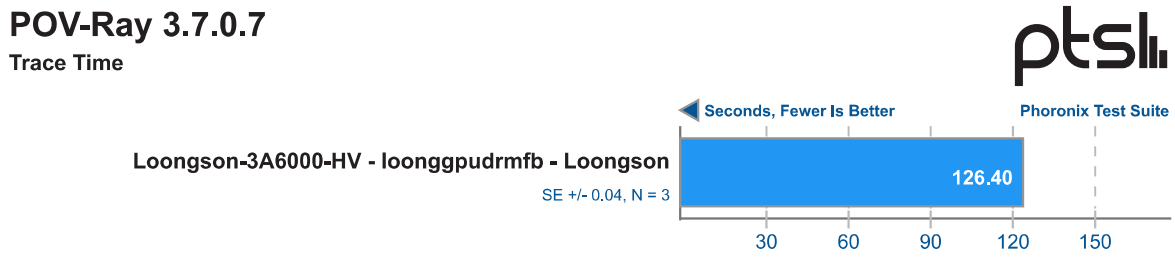
Test: Decompression Rating



1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

POV-Ray

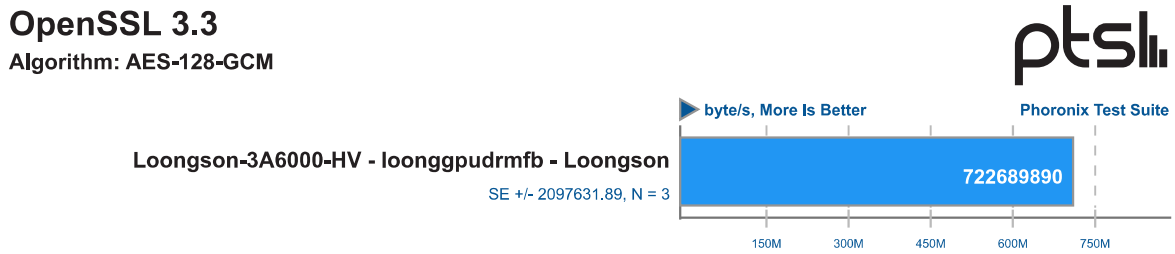
Trace Time



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

OpenSSL

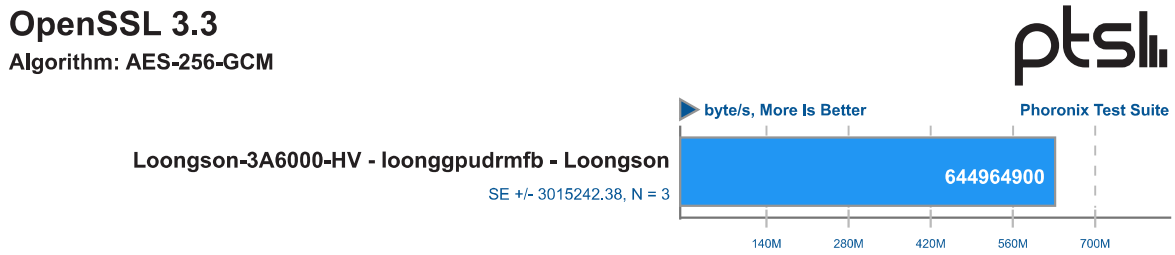
Algorithm: AES-128-GCM



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

OpenSSL

Algorithm: AES-256-GCM



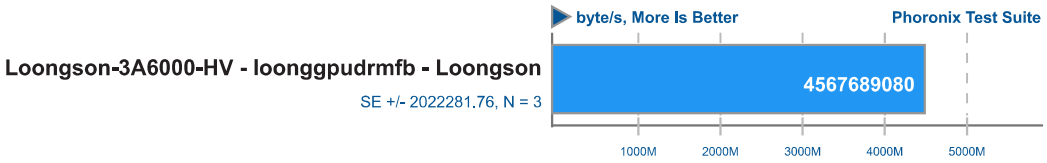
1. (CC) gcc options: -pthread -O3 -lssl -lcrypto -ldl

OpenSSL

Algorithm: ChaCha20-Poly1305

OpenSSL 3.3

Algorithm: ChaCha20-Poly1305



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