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# xeon silver april

Intel Xeon Silver 4216 testing with a TYAN S7100AG2NR (V4.02 BIOS) and ASPEED on Debian 10 via the Phoronix Test Suite.

**Automated Executive Summary**

*1 had the most wins, coming in first place for 48% of the tests.*

*Based on the geometric mean of all complete results, the fastest (3) was 1.003x the speed of the slowest (2). 1 was 0.998x the speed of 3 and 2 was 0.999x the speed of 1.*

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

*LuxCoreRender (Scene: Rainbow Colors and Prism - Acceleration: CPU) at 1.035x*
*ViennaCL (Test: CPU BLAS - sAXPY) at 1.028x*
*ViennaCL (Test: CPU BLAS - dGEMM-TT) at 1.028x*
*LuxCoreRender (Scene: Danish Mood - Acceleration: CPU) at 1.024x*
*ViennaCL (Test: CPU BLAS - dGEMV-N) at 1.022x*
*Timed LLVM Compilation (Build System: Unix Makefiles) at 1.021x*
*ViennaCL (Test: CPU BLAS - sCOPY) at 1.017x*
*LuxCoreRender (Scene: LuxCore Benchmark - Acceleration: CPU) at 1.015x*
*ViennaCL (Test: CPU BLAS - dCOPY) at 1.013x*

*ViennaCL (Test: CPU BLAS - dGEMM-TN) at 1.012x.*

# Test Systems:

## 1

## 2

## 3

Processor: Intel Xeon Silver 4216 @ 3.20GHz (16 Cores / 32 Threads), Motherboard: TYAN S7100AG2NR (V4.02 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 24GB, Disk: 240GB Corsair Force MP500, Graphics: ASPEED, Audio: Realtek ALC892, Network: 2 x Intel I350

OS: Debian 10, Kernel: 4.19.0-9-amd64 (x86_64), Desktop: GNOME Shell 3.30.2, Display Server: X Server, Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --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++ --enable-libmpx --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none --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 --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x500002c
Python Notes: Python 2.7.16 + Python 3.7.3
Security Notes: itlb_multihit: KVM: Mitigation of Split huge pages + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Mitigation of TSX disabled

| | 1 | 2 | 3 |
|---|---|---|---|
| **LuxCoreRender - R.C.a.P - CPU (M samples/sec)** | 7.39 | **7.38** | **7.64** |
| **Normalized** | 96.73% | 96.6% | 100% |
| **Standard Deviation** | 3.8% | 2.3% | 0.8% |
| **ViennaCL - CPU BLAS - sAXPY (GB/s)** | **110** | **107** | 108 |
| **Normalized** | 100% | 97.27% | 98.18% |
| **Standard Deviation** | 1.1% | 1.1% | 1.9% |
| **ViennaCL - CPU BLAS - dGEMM-TT (GFLOPs/s)** | **39.6** | **40.7** | 40.3 |
| **Normalized** | 97.3% | 100% | 99.02% |
| **Standard Deviation** | | 0% | 1.4% |
| **LuxCoreRender - Danish Mood - CPU (M samples/sec)** | **1.26** | **1.23** | **1.26** |
| **Normalized** | 100% | 97.62% | 100% |
| **Standard Deviation** | 2.4% | 0.5% | 2.1% |
| **ViennaCL - CPU BLAS - dGEMV-N (GB/s)** | **92.9** | 94.1 | **94.9** |

| | | | |
|---|---|---|---|
| Normalized | 97.89% | 99.16% | 100% |
| Standard Deviation | 3.4% | 1.1% | 0.6% |
| **Timed LLVM Compilation - Unix Makefiles** | **521.103** | 519.249 | **510.308** |
| Normalized | 97.93% | 98.28% | 100% |
| Standard Deviation | 1.1% | 0.8% | 2.1% |
| **ViennaCL - CPU BLAS - sCOPY (GB/s)** | **71.9** | **70.7** | **70.7** |
| Normalized | 100% | 98.33% | 98.33% |
| Standard Deviation | 0.6% | 0.7% | 2.1% |
| **LuxCoreRender - LuxCore Benchmark - CPU (M samples/sec)** | **1.34** | 1.35 | **1.36** |
| Normalized | 98.53% | 99.26% | 100% |
| Standard Deviation | 0.9% | 0.9% | 0.4% |
| **ViennaCL - CPU BLAS - dCOPY (GB/s)** | **61.6** | **60.8** | 61.5 |
| Normalized | 100% | 98.7% | 99.84% |
| Standard Deviation | 1.7% | 2.6% | 0.5% |
| **ViennaCL - CPU BLAS - dGEMM-TN (GFLOPs/s)** | **40.9** | **41.4** | 41.3 |
| Normalized | 98.79% | 100% | 99.76% |
| Standard Deviation | 1.9% | 0.6% | 1% |
| **LuxCoreRender - DLSC - CPU (M** | **1.83** | **1.85** | **1.83** |
| Normalized | 98.92% | 100% | 98.92% |
| Standard Deviation | 1.4% | 1.7% | 1.4% |
| **ViennaCL - CPU BLAS - dGEMM-NT (GFLOPs/s)** | **39.6** | **40.0** | 39.9 |
| Normalized | 99% | 100% | 99.75% |
| Standard Deviation | 1.4% | 0.3% | 0.4% |
| **ViennaCL - CPU BLAS - dAXPY (GB/s)** | 92.4 | **91.7** | **92.6** |
| Normalized | 99.78% | 99.03% | 100% |
| Standard Deviation | 2% | 2.6% | 0.2% |
| **Xmrig - Monero - 1M (H/s)** | **6079** | 6026 | **6023** |
| Normalized | 100% | 99.12% | 99.07% |
| Standard Deviation | 0.3% | 0.4% | 0.3% |
| **Xmrig - Wownero - 1M (H/s)** | **9452** | 9407 | **9365** |
| Normalized | 100% | 99.52% | 99.07% |
| Standard Deviation | 0.2% | 0.1% | 0.3% |
| **ViennaCL - CPU BLAS - dGEMV-T (GB/s)** | **107** | **108** | **108** |
| Normalized | 99.07% | 100% | 100% |
| Standard Deviation | | 2% | |
| **Google Draco - Church Facade (ms)** | **9212** | 9192 | **9131** |
| Normalized | 99.12% | 99.34% | 100% |
| Standard Deviation | 0.3% | 0.2% | 0.2% |
| **libjpeg-turbo tjbench - D.T (Megapixels/sec)** | 146.215852 | **145.425097** | **146.709279** |
| Normalized | 99.66% | 99.12% | 100% |
| Standard Deviation | 1.2% | 1.1% | 0.6% |
| **ViennaCL - CPU BLAS - sDOT (GB/s)** | **117** | **117** | **116** |
| Normalized | 100% | 100% | 99.15% |
| Standard Deviation | 1.3% | 1.8% | |
| **Google Draco - Lion (ms)** | **7438** | 7413 | **7382** |
| Normalized | 99.25% | 99.58% | 100% |
| Standard Deviation | 0.3% | | 0.2% |
| **Botan - Twofish - Decrypt (MiB/s)** | **278.218** | **276.648** | 278.078 |
| Normalized | 100% | 99.44% | 99.95% |
| Standard Deviation | 0.1% | 0.9% | 0.1% |
| **Botan - Twofish (MiB/s)** | **277.071** | **275.626** | 276.632 |
| Normalized | 100% | 99.48% | 99.84% |

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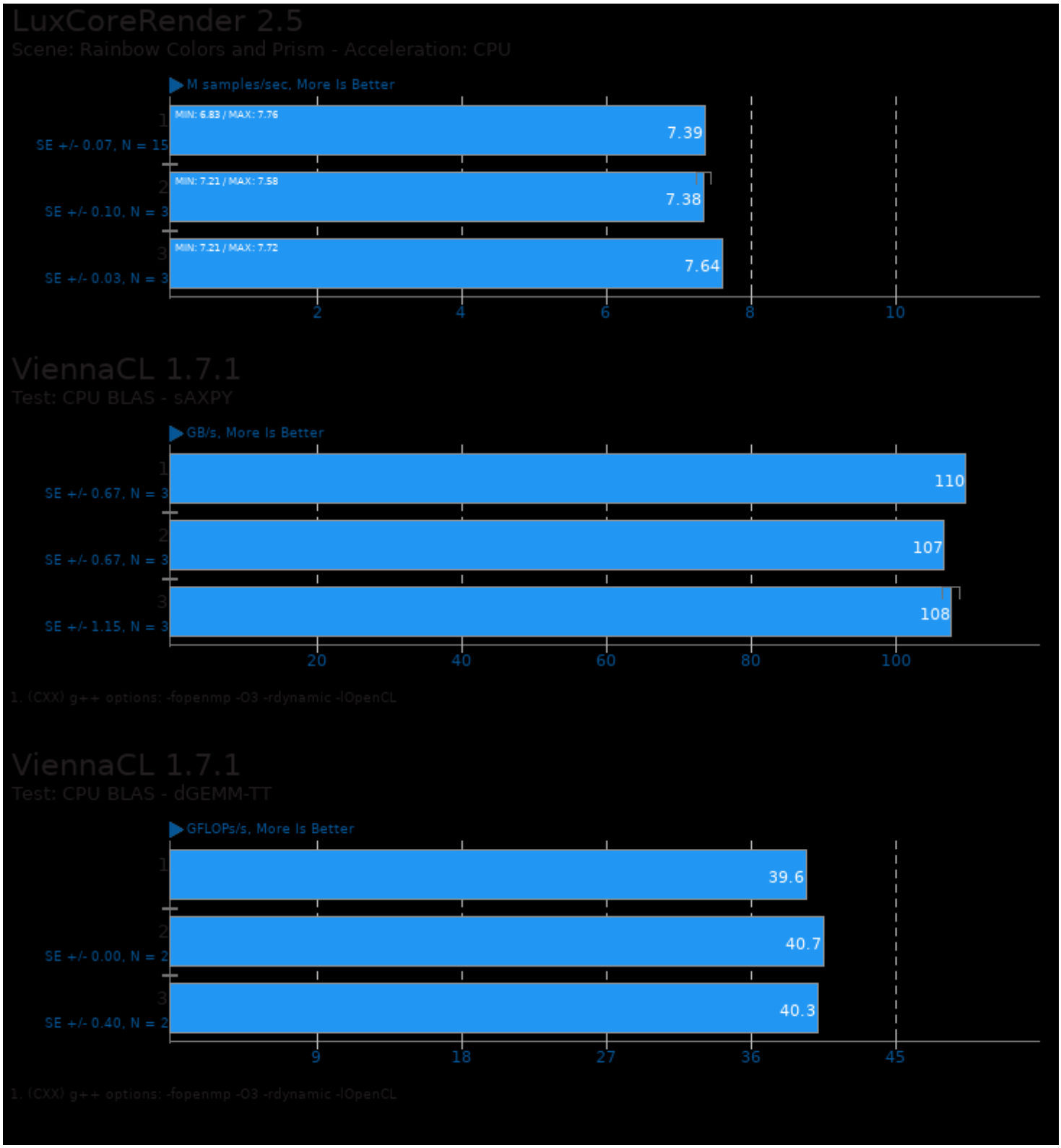
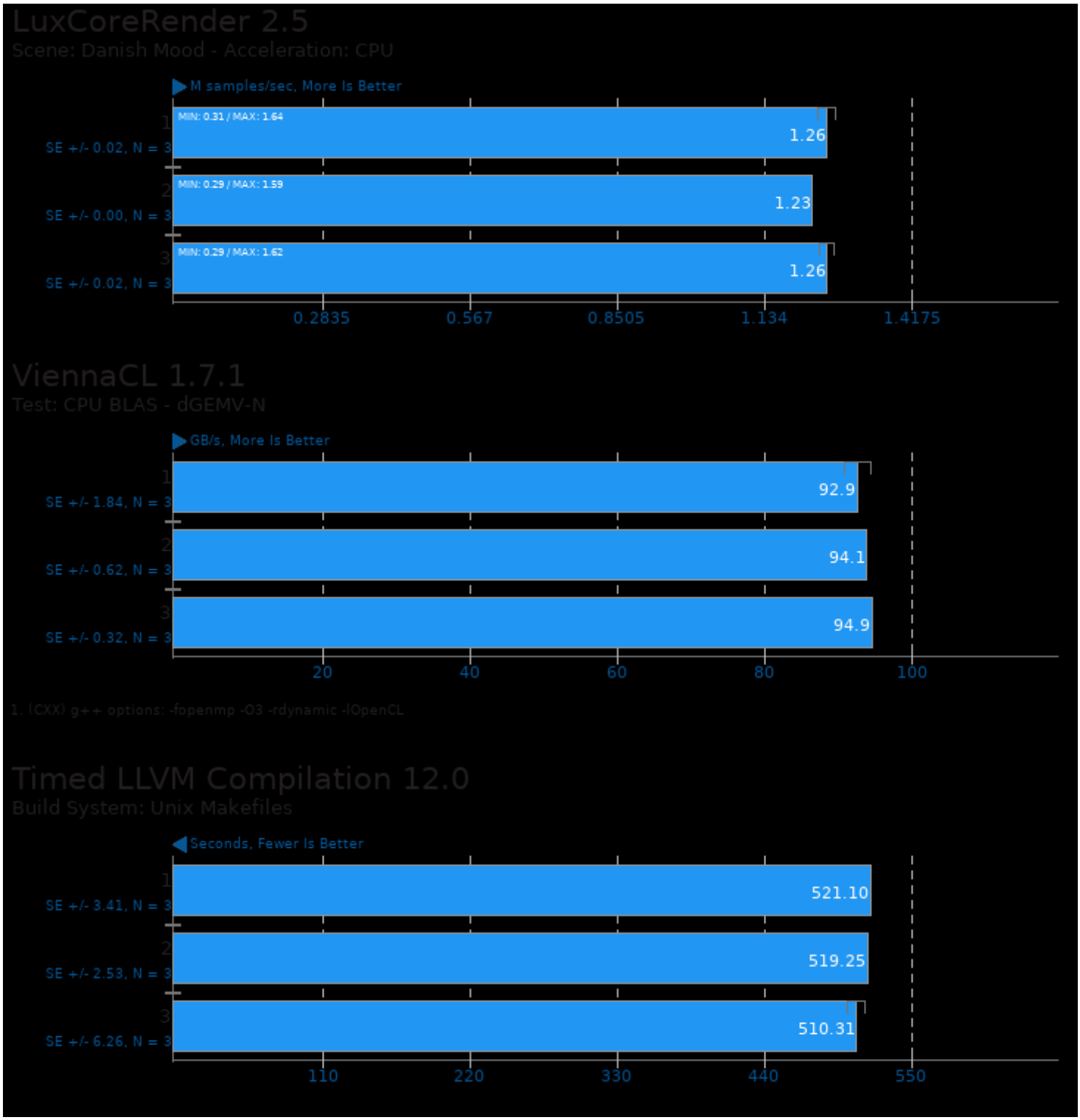
| | | | |
|---|---|---|---|
| **Standard Deviation** | 0.1% | 0.8% | 0% |
| **Helsing - 12 digit (sec)** | **5.127** | 5.13 | **5.153** |
| **Normalized** | 100% | 99.94% | 99.5% |
| **ViennaCL - CPU BLAS - dGEMM-NN (GFLOPs/s)** | 40.7 | **40.8** | **40.6** |
| **Normalized** | 99.75% | 100% | 99.51% |
| **Standard Deviation** | 0.1% | 0.1% | 0.8% |
| **LuxCoreRender - Orange Juice - CPU (M samples/sec)** | **2.95** | **2.94** | **2.94** |
| **Normalized** | 100% | 99.66% | 99.66% |
| **Standard Deviation** | 0.2% | 0.5% | 0.4% |
| **Botan - ChaCha20Poly1305 (MiB/s)** | 506.443 | **506.580** | **505.493** |
| **Normalized** | 99.97% | 100% | 99.79% |
| **Standard Deviation** | 0.1% | 0.1% | 0.4% |
| **Botan - Blowfish - Decrypt (MiB/s)** | **345.576** | 345.860 | **346.048** |
| **Normalized** | 99.86% | 99.95% | 100% |
| **Standard Deviation** | 0.1% | 0.1% | 0% |
| **GNU GMP GMPbench - Total Time (GMPbench Score)** | **3998** | **3993** | 3998 |
| **Normalized** | 100% | 99.87% | 99.99% |
| **Botan - CAST-256 - Decrypt (MiB/s)** | **109.656** | **109.551** | 109.605 |
| **Normalized** | 100% | 99.9% | 99.95% |
| **Standard Deviation** | 0% | 0.2% | 0.1% |
| **Botan - Blowfish (MiB/s)** | 346.475 | **346.695** | **346.400** |
| **Normalized** | 99.94% | 100% | 99.91% |
| **Standard Deviation** | 0.1% | 0.1% | 0.1% |
| **Botan - CAST-256 (MiB/s)** | **109.457** | **109.543** | 109.499 |
| **Normalized** | 99.92% | 100% | 99.96% |
| **Standard Deviation** | 0.1% | 0% | 0.1% |
| **Helsing - 14 digit (sec)** | **538.255** | **538.663** | 538.471 |
| **Normalized** | 100% | 99.92% | 99.96% |
| **Botan - KASUMI - Decrypt (MiB/s)** | **69.639** | **69.594** | 69.606 |
| **Normalized** | 100% | 99.94% | 99.95% |
| **Standard Deviation** | 0% | 0% | 0% |
| **Botan - AES-256 - Decrypt (MiB/s)** | **3066** | 3064 | **3064** |
| **Normalized** | 100% | 99.95% | 99.95% |
| **Standard Deviation** | 0.1% | 0.1% | 0.1% |
| **Timed LLVM Compilation - Ninja (sec)** | **473.567** | 473.684 | **473.736** |
| **Normalized** | 100% | 99.98% | 99.96% |
| **Standard Deviation** | 0.1% | 0.1% | 0.1% |
| **Botan - AES-256 (MiB/s)** | 3057 | **3056** | **3057** |
| **Normalized** | 99.98% | 99.97% | 100% |
| **Standard Deviation** | 0.1% | 0.1% | 0.1% |
| **Botan - KASUMI (MiB/s)** | **71.768** | **71.75** | 71.764 |
| **Normalized** | 100% | 99.97% | 99.99% |
| **Standard Deviation** | 0.1% | 0.1% | 0.1% |
| **Botan - ChaCha20Poly1305 - Decrypt (MiB/s)** | **500.926** | **500.997** | 500.963 |
| **Normalized** | 99.99% | 100% | 99.99% |
| **Standard Deviation** | 0% | 0.1% | 0.1% |
| **ViennaCL - CPU BLAS - dDOT (GB/s)** | 104 | 104 | 104 |
| **Standard Deviation** | 1.5% | 1.5% | 0.6% |


LuxCoreRender 2.5
Scene: Rainbow Colors and Prism - Acceleration: CPU
M samples/sec, More Is Better
1
MIN: 6.83 / MAX: 7.76
7.39
SE +/- 0.07, N = 15
2
MIN: 7.21 / MAX: 7.58
7.38
SE +/- 0.10, N = 3
3
MIN: 7.21 / MAX: 7.72
7.64
SE +/- 0.03, N = 3
2
4
6
8
10
ViennaCL 1.7.1
Test: CPU BLAS - sAXPY
GB/s, More Is Better
1
110
SE +/- 0.67, N = 3
2
107
SE +/- 0.67, N = 3
3
108
SE +/- 1.15, N = 3
20
40
60
80
100
1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL
ViennaCL 1.7.1
Test: CPU BLAS - dGEMM-TT
GFLOPs/s, More Is Better
1
39.6
2
40.7
SE +/- 0.00, N = 2
3
40.3
SE +/- 0.40, N = 2
9
18
27
36
45
1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL


LuxCoreRender 2.5
Scene: Danish Mood - Acceleration: CPU
M samples/sec, More Is Better
1
MIN: 0.31 / MAX: 1.64
1.26
SE +/- 0.02, N = 3
2
MIN: 0.29 / MAX: 1.59
1.23
SE +/- 0.00, N = 3
3
MIN: 0.29 / MAX: 1.62
1.26
SE +/- 0.02, N = 3
0.2835
0.567
0.8505
1.134
1.4175
ViennaCL 1.7.1
Test: CPU BLAS - dGEMV-N
GB/s, More Is Better
1
92.9
SE +/- 1.84, N = 3
2
94.1
SE +/- 0.62, N = 3
3
94.9
SE +/- 0.32, N = 3
20
40
60
80
100
1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL
Timed LLVM Compilation 12.0
Build System: Unix Makefiles
Seconds, Fewer Is Better
1
521.10
SE +/- 3.41, N = 3
2
519.25
SE +/- 2.53, N = 3
3
510.31
SE +/- 6.26, N = 3
110
220
330
440
550

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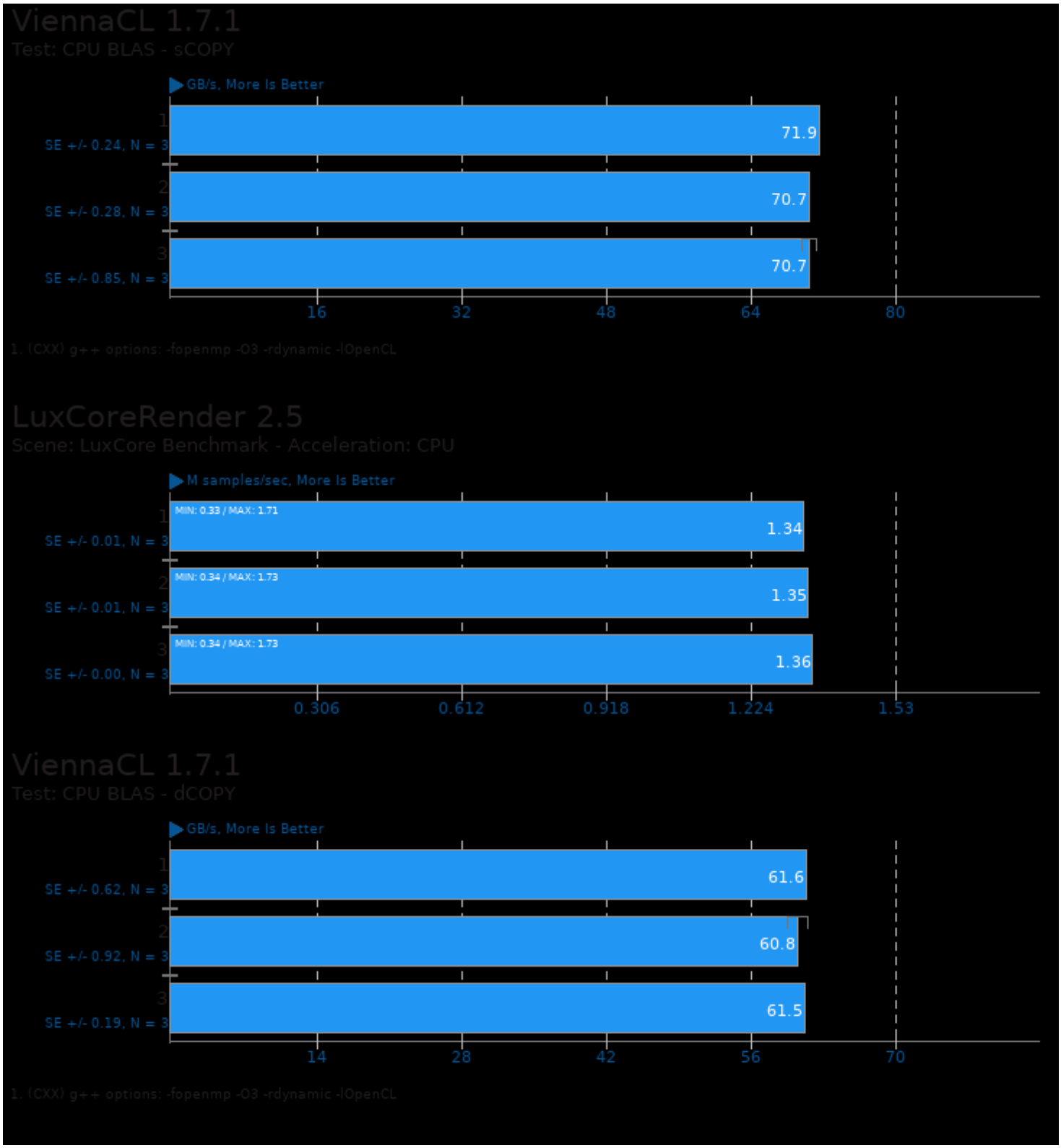
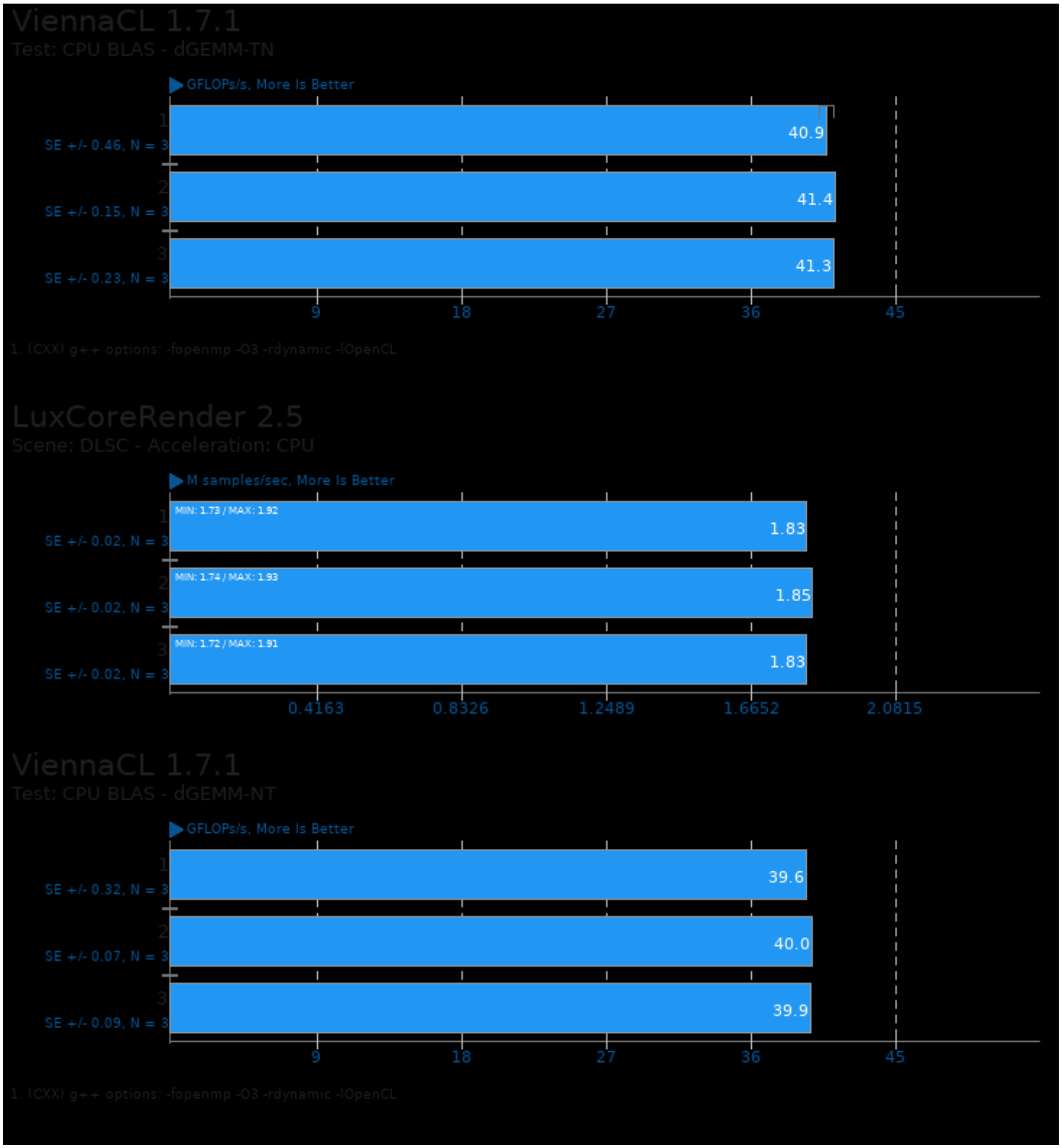
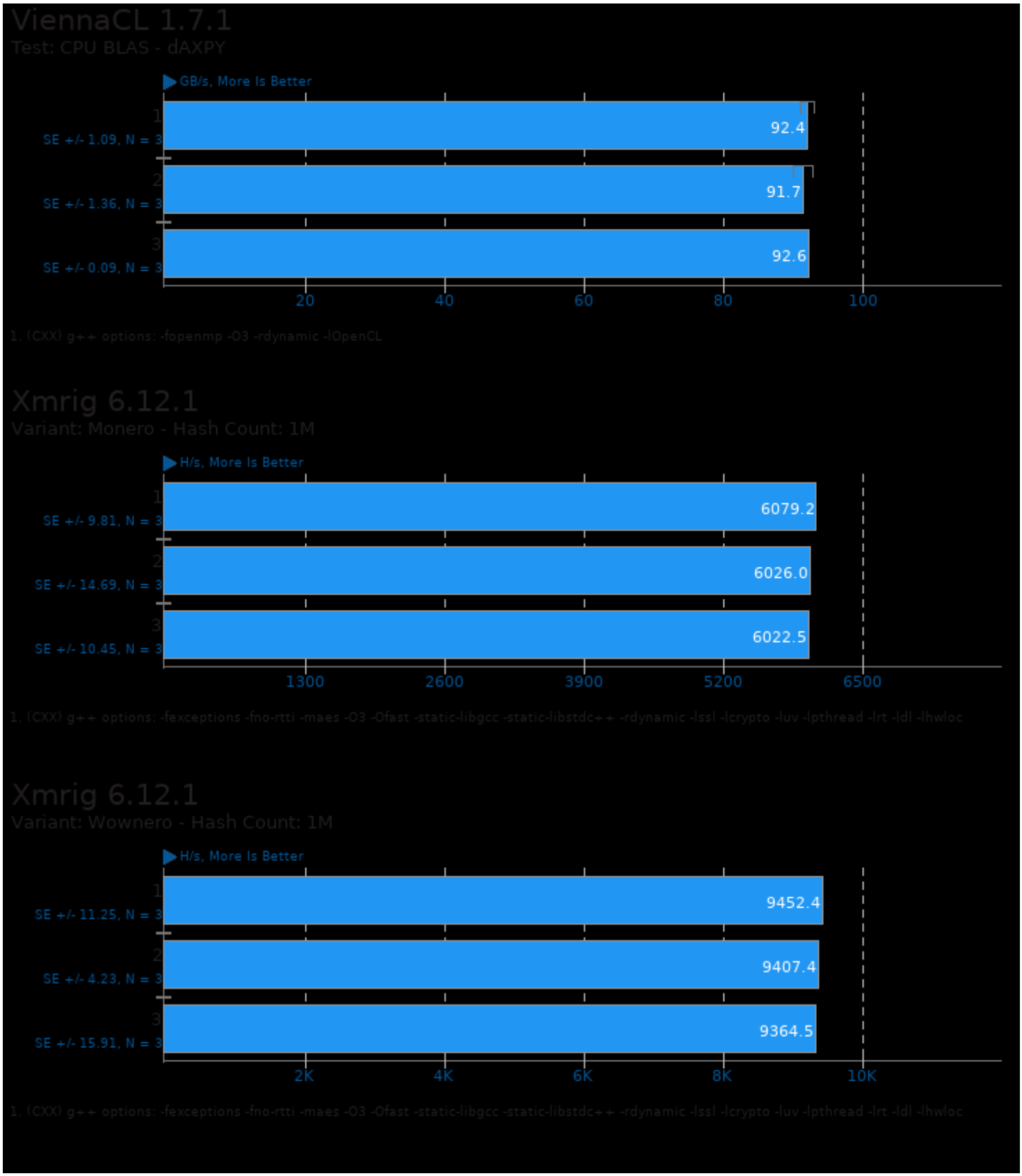
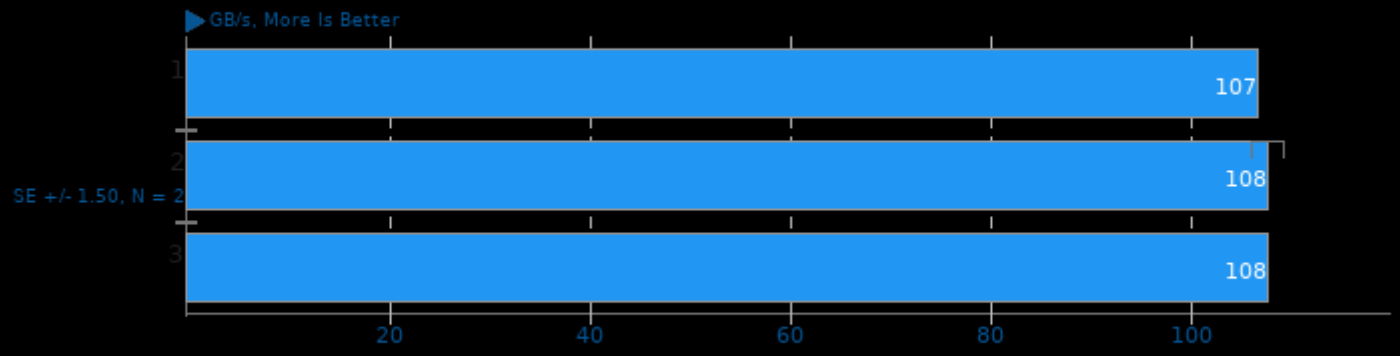



ViennaCL 1.7.1
Test: CPU BLAS - dGEMM-TN
GFLOPs/s, More Is Better
1
SE +/- 0.46, N = 3
40.9
2
SE +/- 0.15, N = 3
41.4
3
SE +/- 0.23, N = 3
41.3
9
18
27
36
45
1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL
LuxCoreRender 2.5
Scene: DLSC - Acceleration: CPU
M samples/sec, More Is Better
1
MIN: 1.73 / MAX: 1.92
SE +/- 0.02, N = 3
1.83
2
MIN: 1.74 / MAX: 1.93
SE +/- 0.02, N = 3
1.85
3
MIN: 1.72 / MAX: 1.91
SE +/- 0.02, N = 3
1.83
0.4163
0.8326
1.2489
1.6652
2.0815
ViennaCL 1.7.1
Test: CPU BLAS - dGEMM-NT
GFLOPs/s, More Is Better
1
SE +/- 0.32, N = 3
39.6
2
SE +/- 0.07, N = 3
40.0
3
SE +/- 0.09, N = 3
39.9
9
18
27
36
45
1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL


ViennaCL 1.7.1
Test: CPU BLAS - dAXPY
GB/s, More Is Better
1
SE +/- 1.09, N = 3
92.4
2
SE +/- 1.36, N = 3
91.7
3
SE +/- 0.09, N = 3
92.6
20
40
60
80
100
1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL
Xmrig 6.12.1
Variant: Monero - Hash Count: 1M
H/s, More Is Better
1
SE +/- 9.81, N = 3
6079.2
2
SE +/- 14.69, N = 3
6026.0
3
SE +/- 10.45, N = 3
6022.5
1300
2600
3900
5200
6500
1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -lhwloc
Xmrig 6.12.1
Variant: Wownero - Hash Count: 1M
H/s, More Is Better
1
SE +/- 11.25, N = 3
9452.4
2
SE +/- 4.23, N = 3
9407.4
3
SE +/- 15.91, N = 3
9364.5
2K
4K
6K
8K
10K
1. (CXX) g++ options: -fexceptions -fno-rtti -maes -O3 -Ofast -static-libgcc -static-libstdc++ -rdynamic -lssl -lcrypto -luv -lpthread -lrt -ldl -lhwloc

## ViennaCL 1.7.1

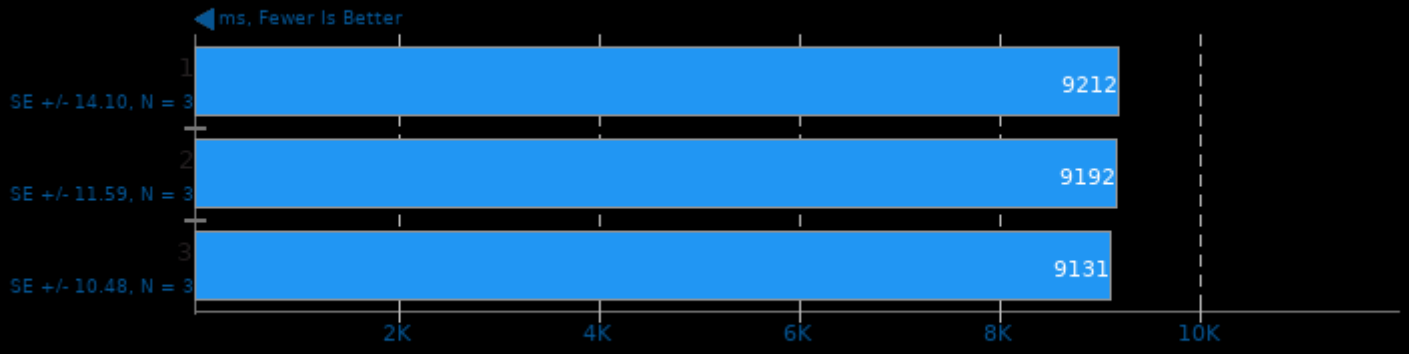
Test: CPU BLAS - dGEMV-T




1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

## Google Draco 1.4.1

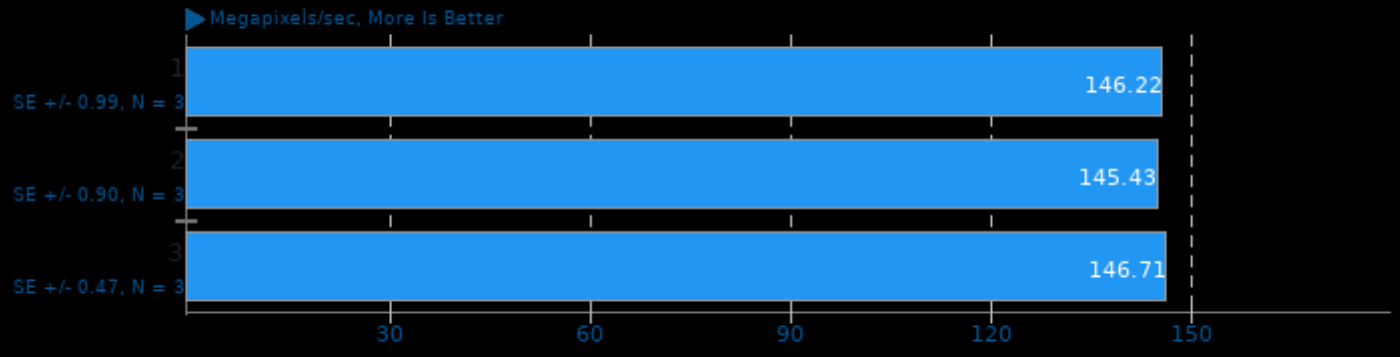
Model: Church Facade




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

## libjpeg-turbo tjbench 2.1.0

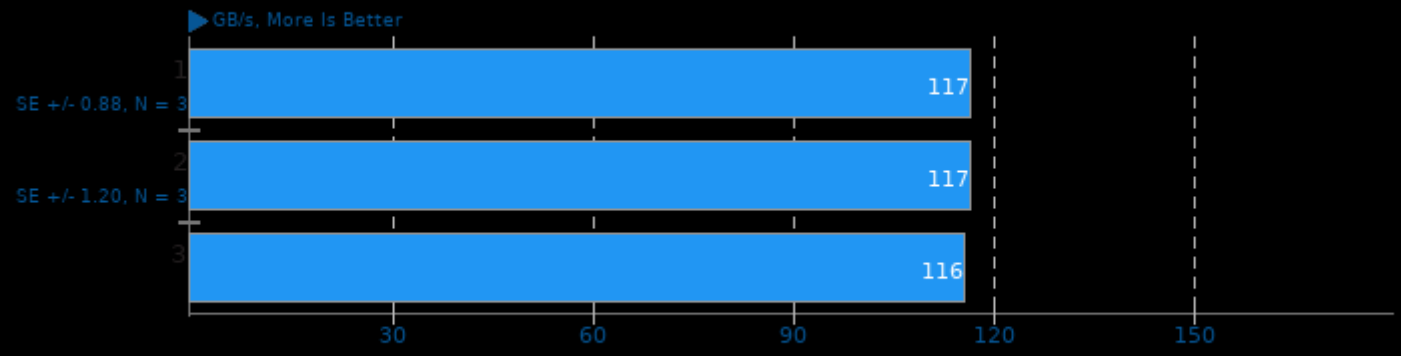
Test: Decompression Throughput




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

## ViennaCL 1.7.1

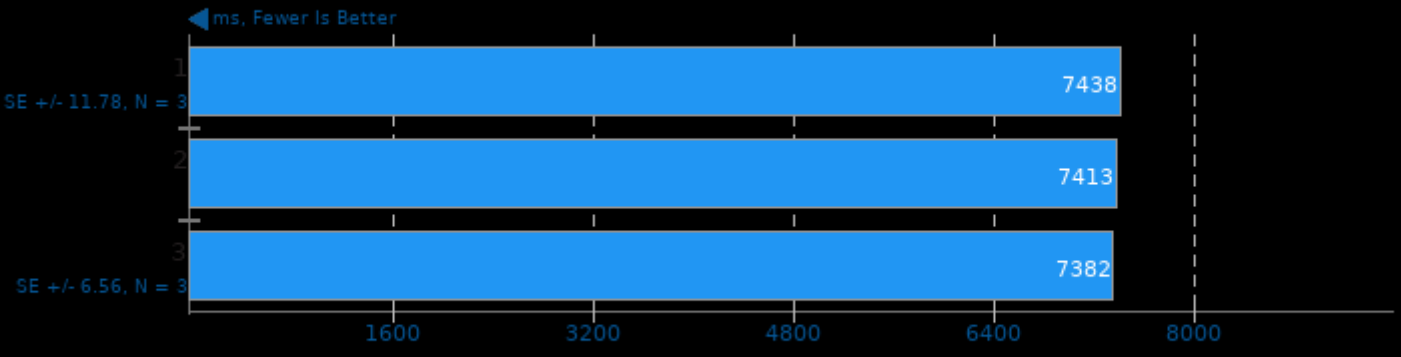
Test: CPU BLAS - sDOT




1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

## Google Draco 1.4.1

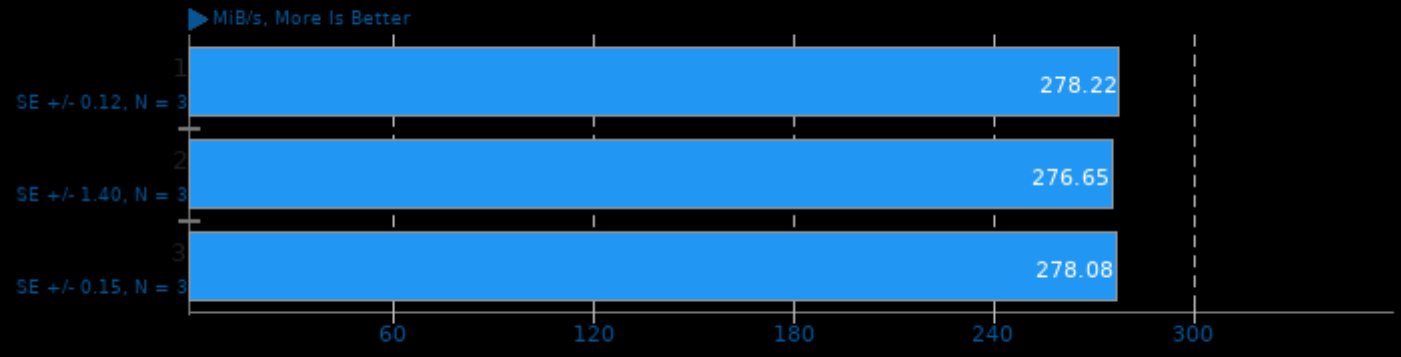
Model: Lion




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

## Botan 2.17.3

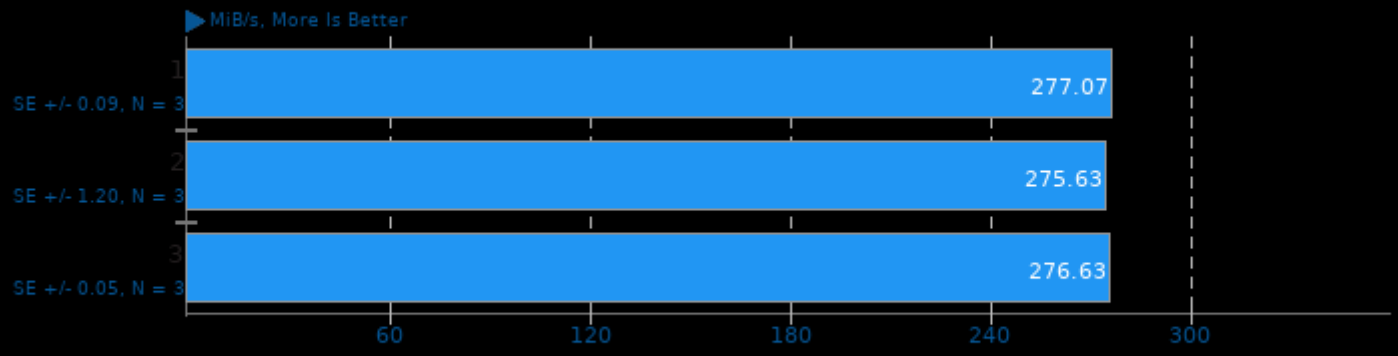
Test: Twofish - Decrypt




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

## Botan 2.17.3

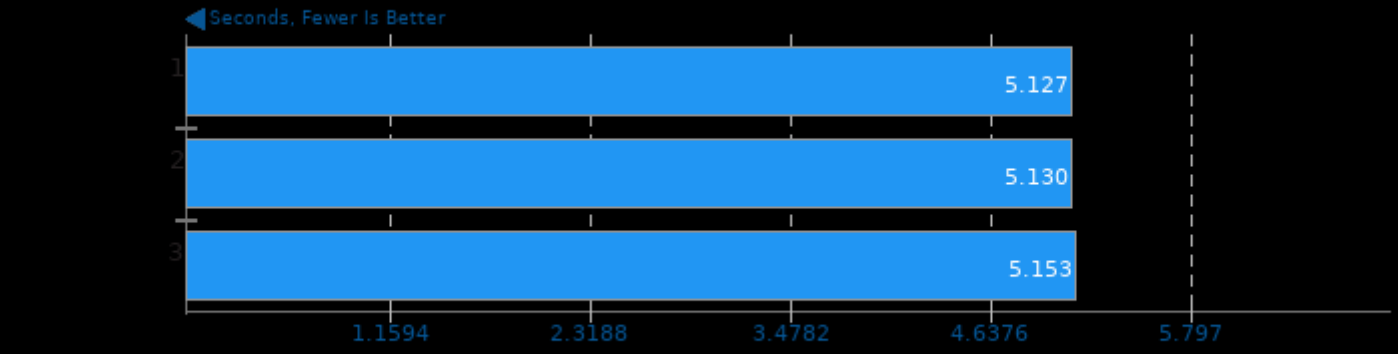
Test: Twofish




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

## Helsing 1.0-beta

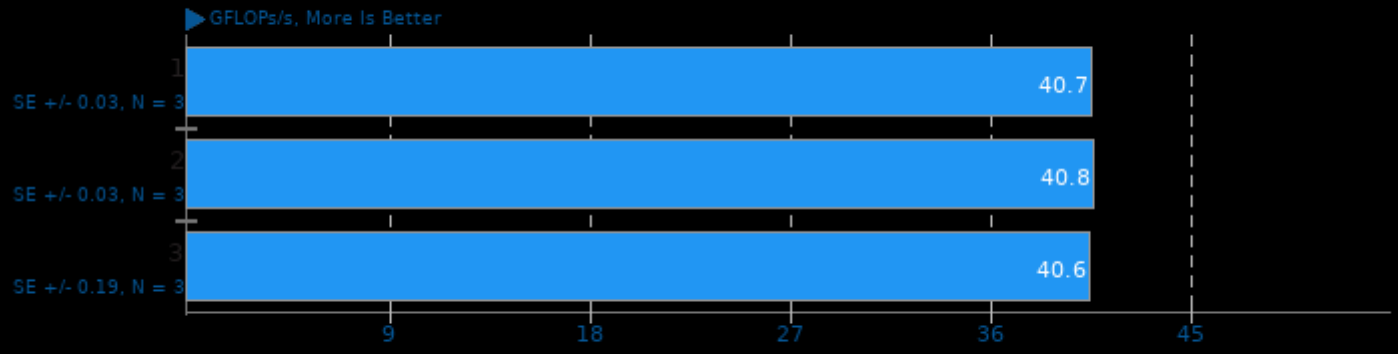
Digit Range: 12 digit



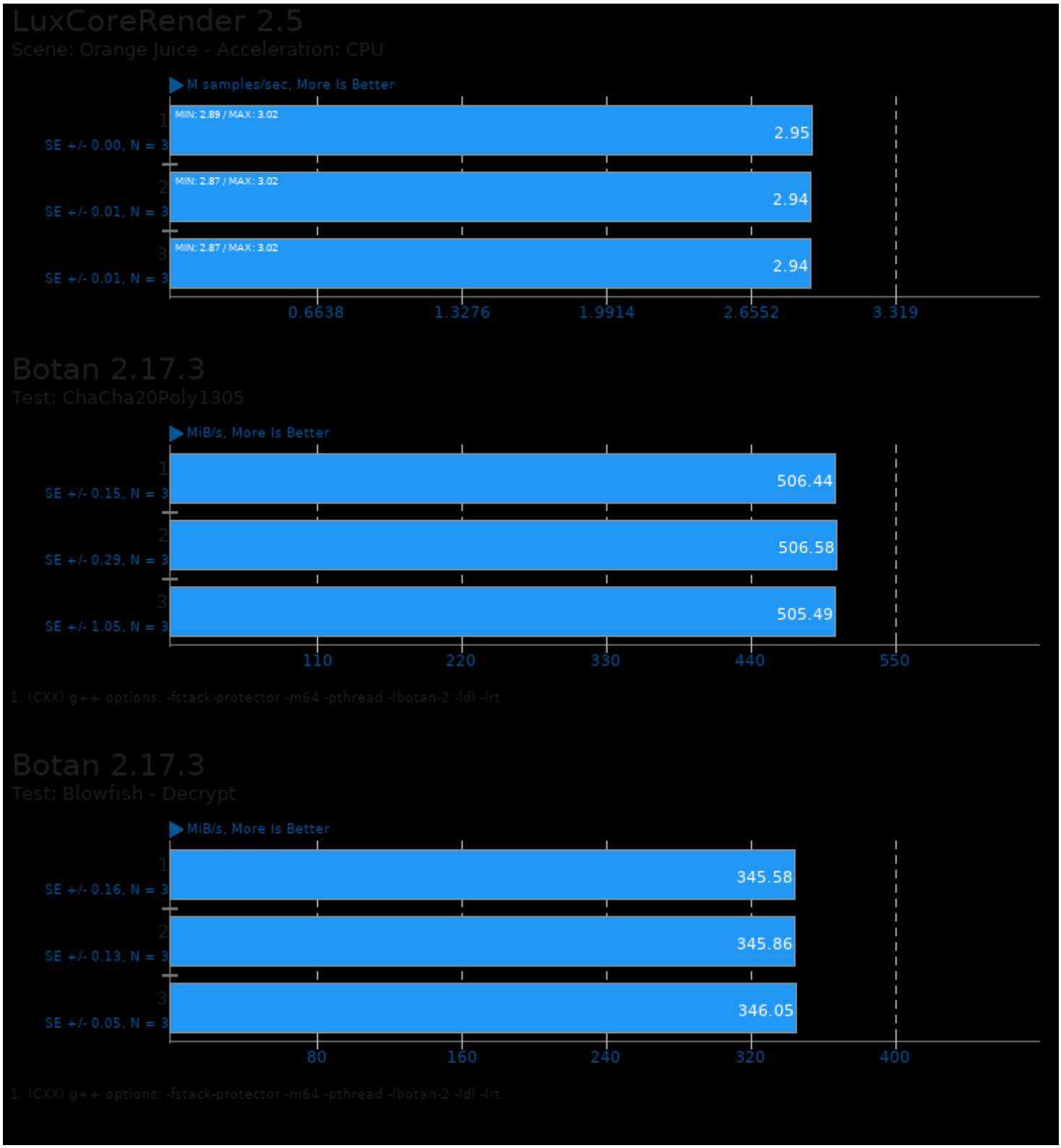

1. (CC) gcc options: -O2 -pthread -lcrypto

## ViennaCL 1.7.1

Test: CPU BLAS - dGEMM-NN

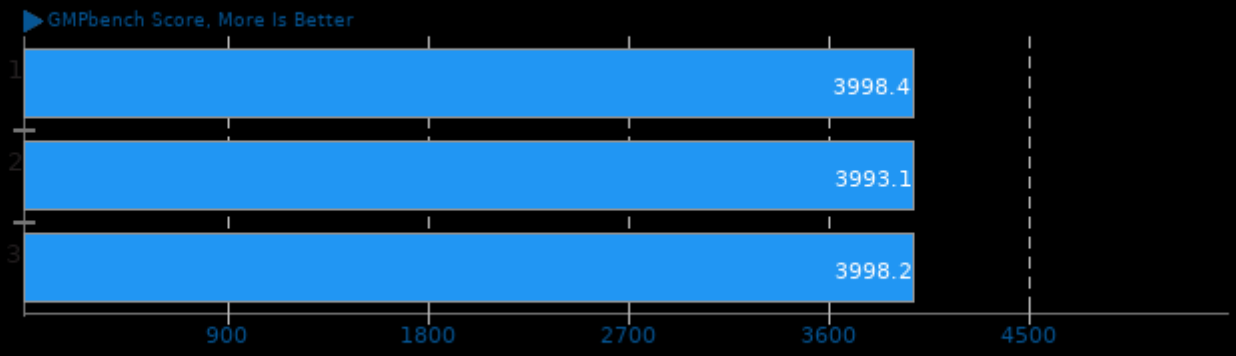



1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL


LuxCoreRender 2.5
Scene: Orange Juice - Acceleration: CPU
M samples/sec, More Is Better
1
MIN: 2.89 / MAX: 3.02
2.95
SE +/- 0.00, N = 3
2
MIN: 2.87 / MAX: 3.02
2.94
SE +/- 0.01, N = 3
3
MIN: 2.87 / MAX: 3.02
2.94
SE +/- 0.01, N = 3
0.6638
1.3276
1.9914
2.6552
3.319
Botan 2.17.3
Test: ChaCha20Poly1305
MiB/s, More Is Better
1
506.44
SE +/- 0.15, N = 3
2
506.58
SE +/- 0.29, N = 3
3
505.49
SE +/- 1.05, N = 3
110
220
330
440
550
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt
Botan 2.17.3
Test: Blowfish - Decrypt
MiB/s, More Is Better
1
345.58
SE +/- 0.16, N = 3
2
345.86
SE +/- 0.13, N = 3
3
346.05
SE +/- 0.05, N = 3
80
160
240
320
400
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

## GNU GMP GMPbench 6.2.1

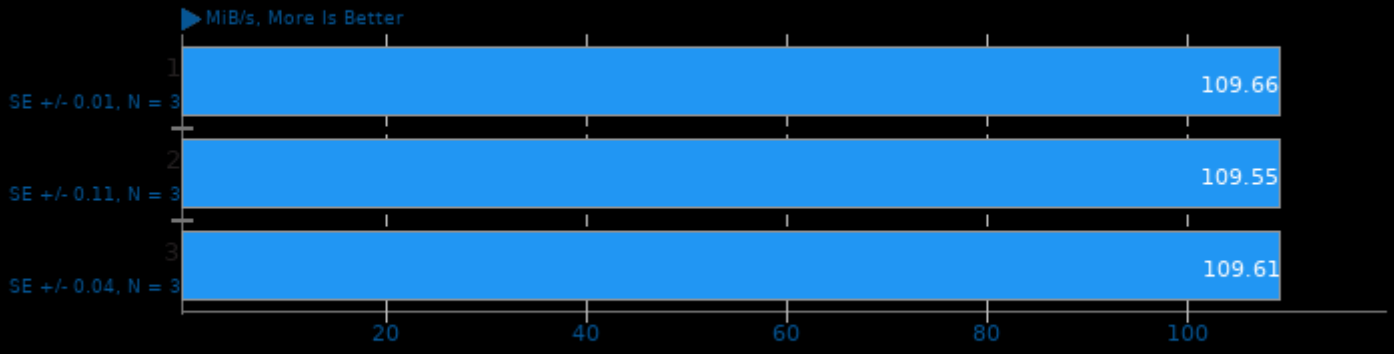
Total Time




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

## Botan 2.17.3

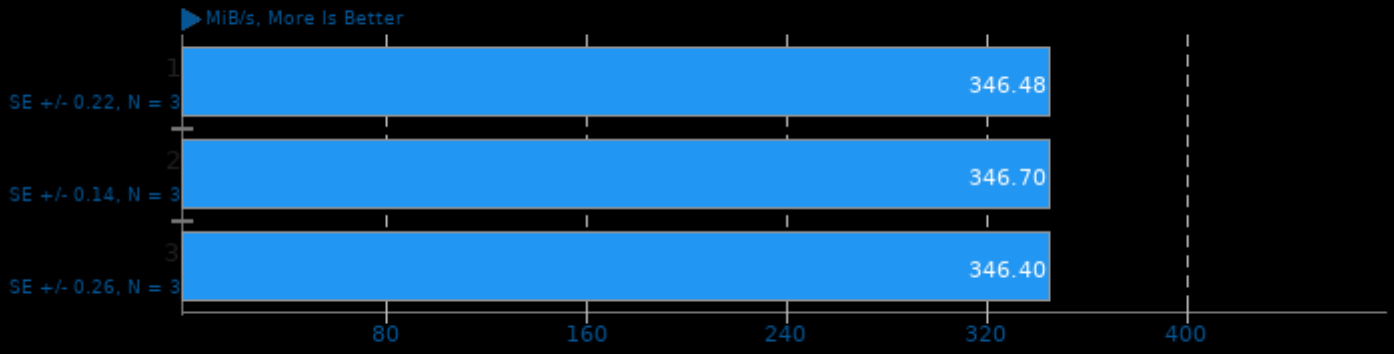
Test: CAST-256 - Decrypt



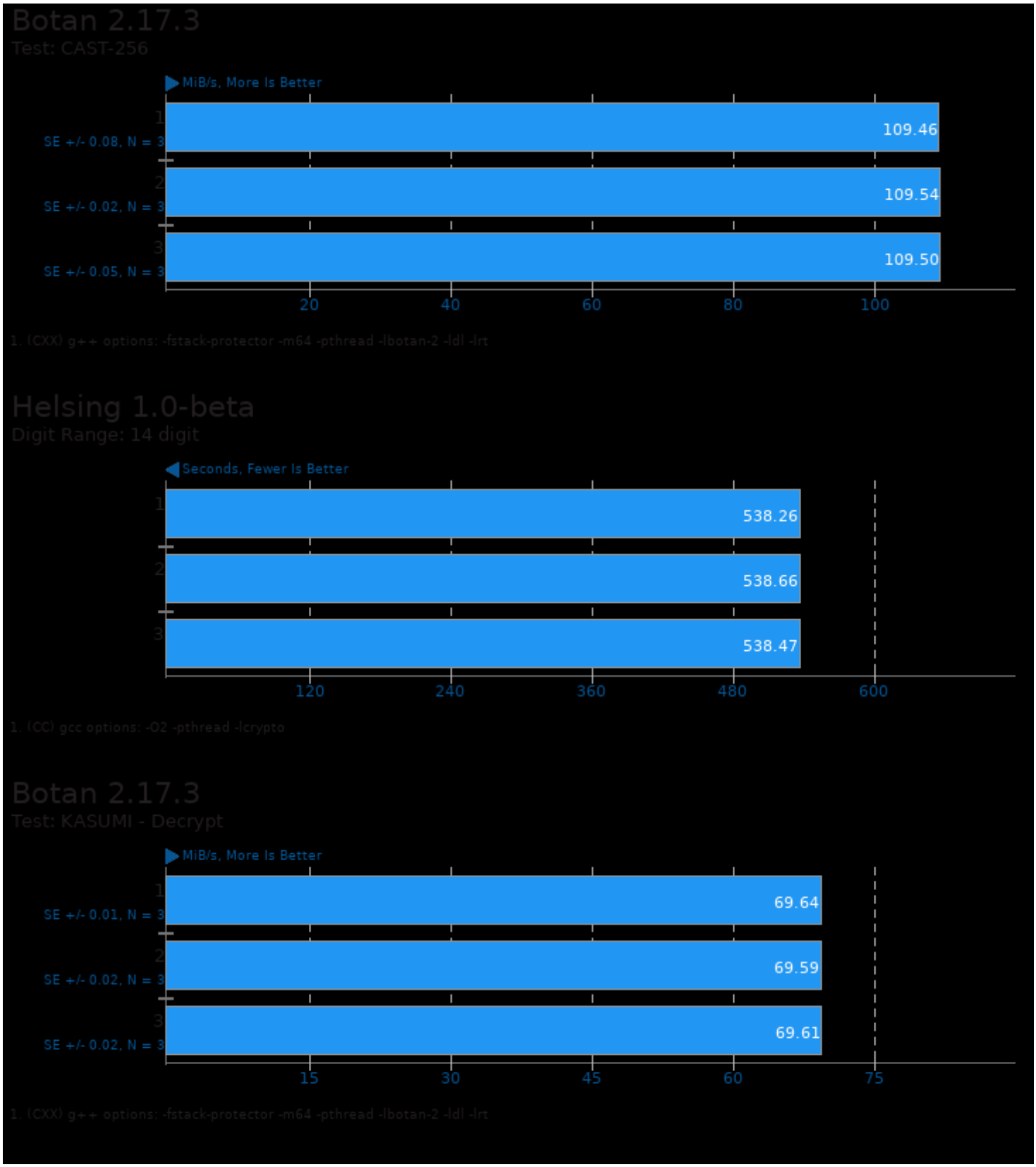

1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

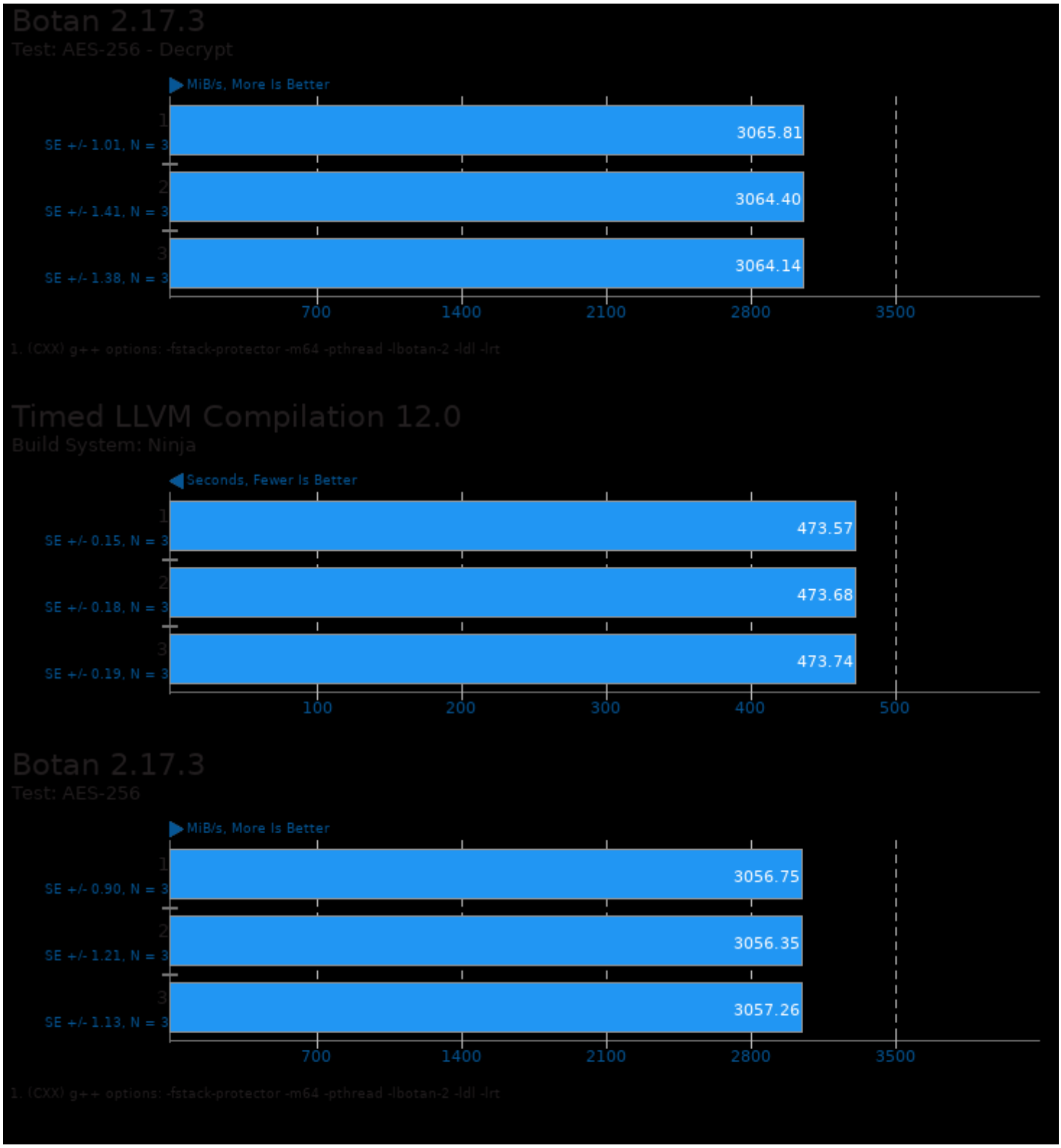
## Botan 2.17.3

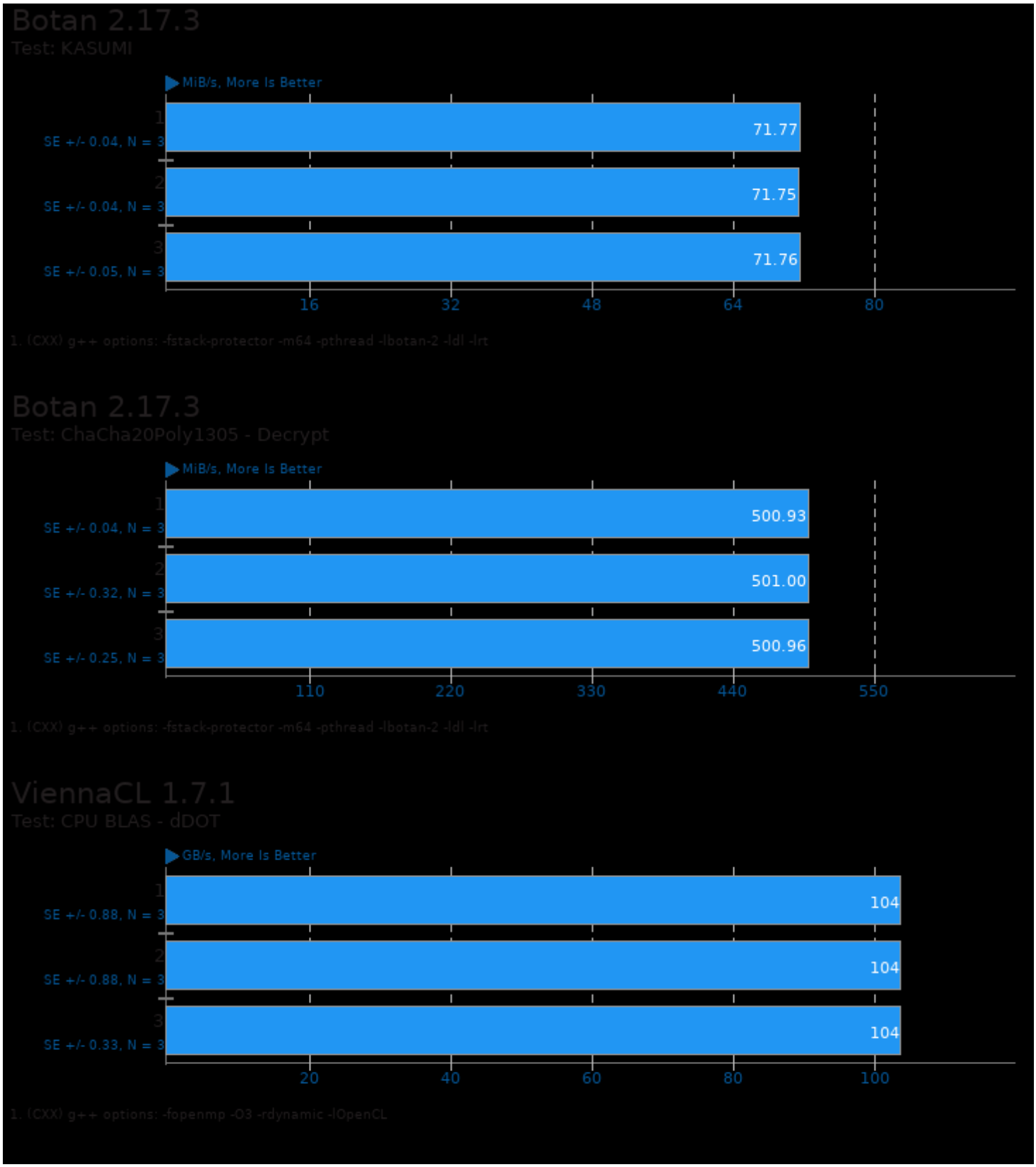
Test: Blowfish




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


Botan 2.17.3
Test: CAST-256
MiB/s, More Is Better
1
SE +/- 0.08, N = 3
109.46
2
SE +/- 0.02, N = 3
109.54
3
SE +/- 0.05, N = 3
109.50
20
40
60
80
100
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt
Helsing 1.0-beta
Digit Range: 14 digit
Seconds, Fewer Is Better
1
538.26
2
538.66
3
538.47
120
240
360
480
600
1. (CC) gcc options: -O2 -pthread -lcrypto
Botan 2.17.3
Test: KASUMI - Decrypt
MiB/s, More Is Better
1
SE +/- 0.01, N = 3
69.64
2
SE +/- 0.02, N = 3
69.59
3
SE +/- 0.02, N = 3
69.61
15
30
45
60
75
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt


Botan 2.17.3
Test: AES-256 - Decrypt
MiB/s, More Is Better
1
SE +/- 1.01, N = 3
3065.81
2
SE +/- 1.41, N = 3
3064.40
3
SE +/- 1.38, N = 3
3064.14
700
1400
2100
2800
3500
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt
Timed LLVM Compilation 12.0
Build System: Ninja
Seconds, Fewer Is Better
1
SE +/- 0.15, N = 3
473.57
2
SE +/- 0.18, N = 3
473.68
3
SE +/- 0.19, N = 3
473.74
100
200
300
400
500
Botan 2.17.3
Test: AES-256
MiB/s, More Is Better
1
SE +/- 0.90, N = 3
3056.75
2
SE +/- 1.21, N = 3
3056.35
3
SE +/- 1.13, N = 3
3057.26
700
1400
2100
2800
3500
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

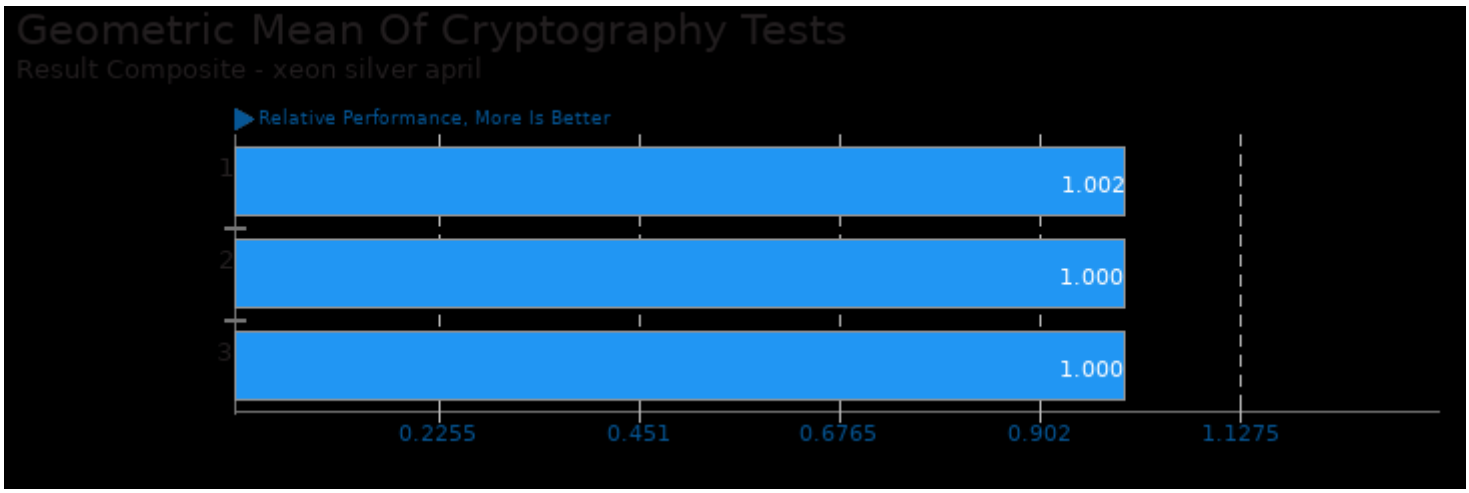

Botan 2.17.3
Test: KASUMI
MiB/s, More Is Better
1
SE +/- 0.04, N = 3
71.77
2
SE +/- 0.04, N = 3
71.75
3
SE +/- 0.05, N = 3
71.76
16
32
48
64
80
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt
Botan 2.17.3
Test: ChaCha20Poly1305 - Decrypt
MiB/s, More Is Better
1
SE +/- 0.04, N = 3
500.93
2
SE +/- 0.32, N = 3
501.00
3
SE +/- 0.25, N = 3
500.96
110
220
330
440
550
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt
ViennaCL 1.7.1
Test: CPU BLAS - dDOT
GB/s, More Is Better
1
SE +/- 0.88, N = 3
104
2
SE +/- 0.88, N = 3
104
3
SE +/- 0.33, N = 3
104
20
40
60
80
100
1. (CXX) g++ options: -fopenmp -O3 -rdynamic -lOpenCL

# xeon silver april

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

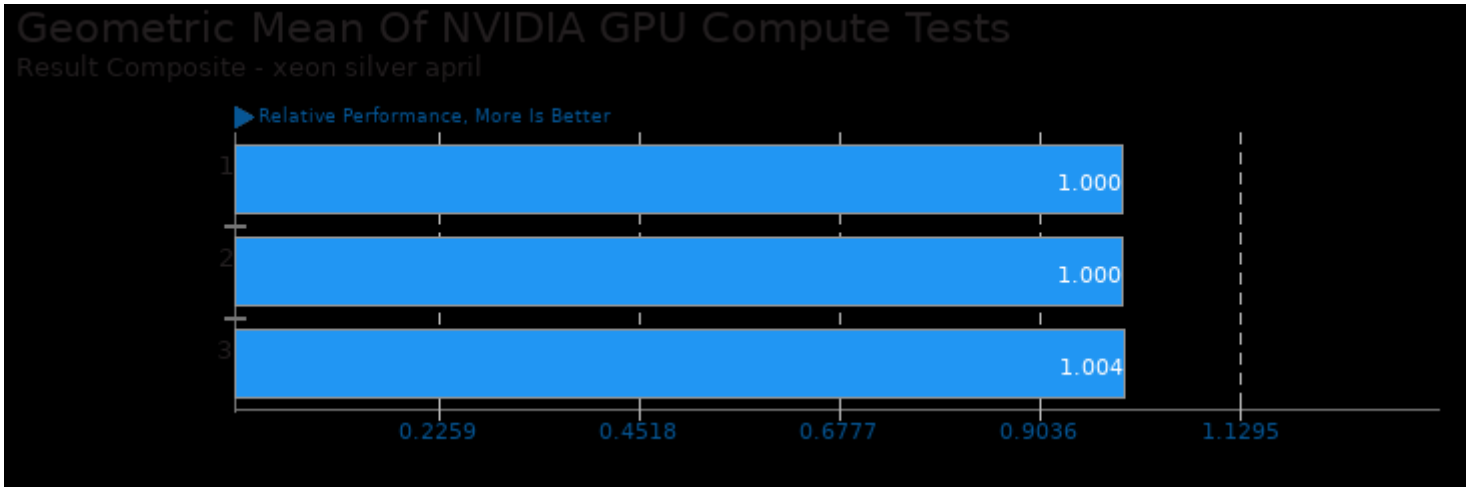

Geometric mean based upon tests: pts/build-llvm, pts/botan and pts/tjbench


Geometric mean based upon tests: pts/luxcorerender, pts/tjbench and pts/draco

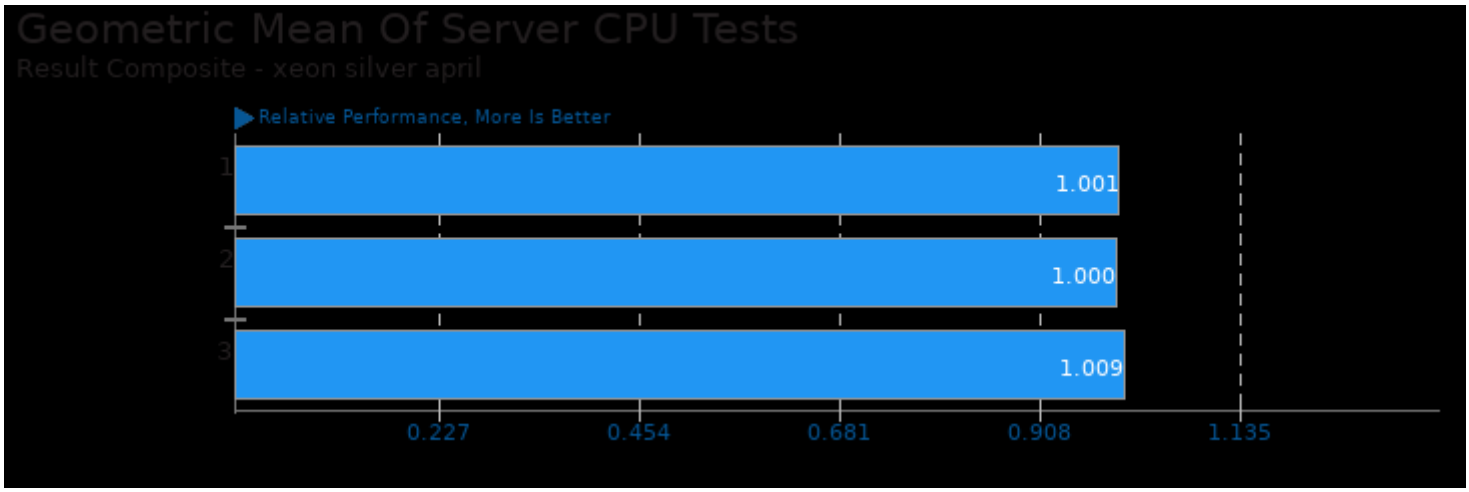



Geometric mean based upon tests: pts/botan and pts/xmrig


Geometric mean based upon tests: pts/build-llvm and pts/luxcorerender

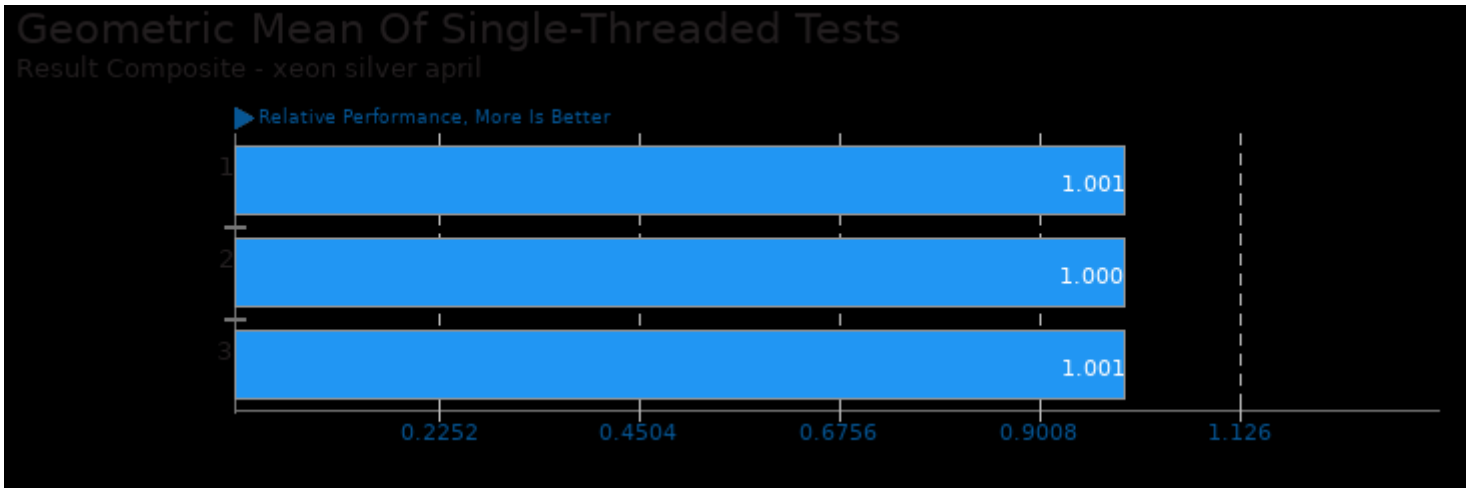



Geometric mean based upon tests: pts/luxcorerender and pts/viennacl




Geometric mean based upon tests: pts/build-llvm and pts/tjbench

# xeon silver april




Geometric mean based upon tests: pts/gmpbench, pts/botan and pts/tjbench

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 05:40.*