

# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

not applicable

SPECspeed®2017\_fp\_base = 0.00

SPECspeed®2017\_fp\_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)

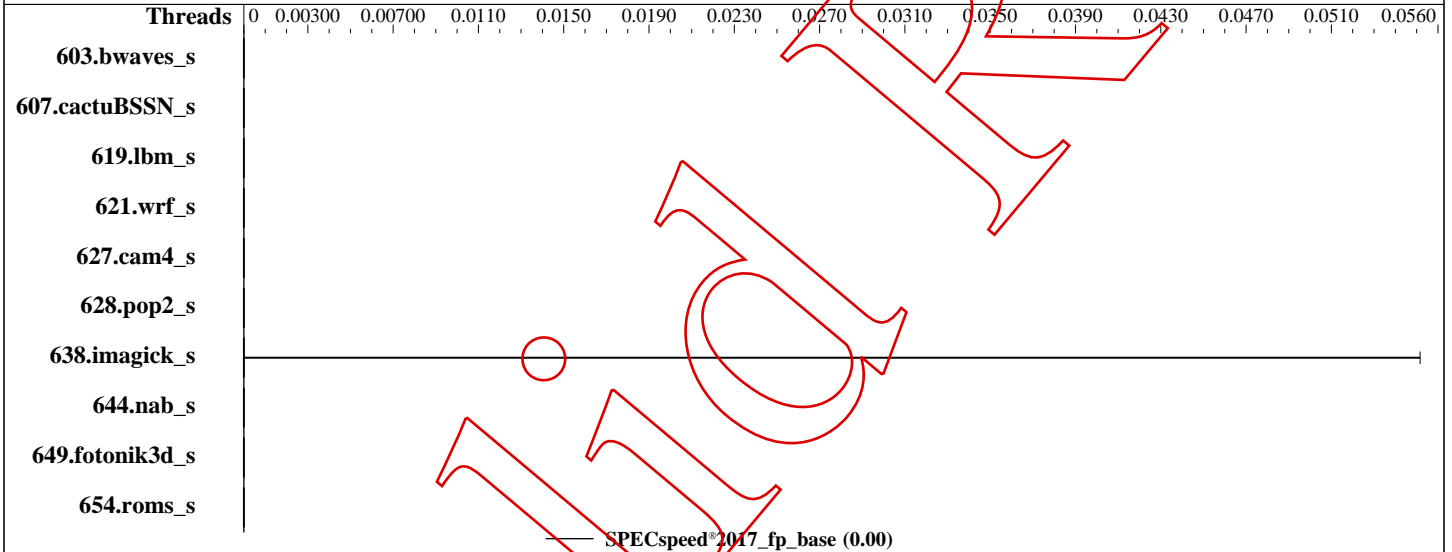
Test Sponsor: not applicable

Tested by: not applicable

Test Date: Nov-2020

Hardware Availability:

Software Availability:



## Hardware

CPU Name: Intel Xeon Bronze 3106  
Max MHz:  
Nominal:  
Enabled: cores, 1 chip, threads/core  
Orderable:  
Cache L1:  
L2:  
L3:  
Other:  
Memory: 78.334 GB fixme: If using DDR4, the format is:  
'N GB (N x N GB nRxn PC4-nnnnX-X)'  
Storage: 6.9 TB add more disk info here  
Other:

## Software

OS: Ubuntu 18.04.3 LTS  
4.15.0-70-generic  
Compiler: C/C++/Fortran: Version 10.1.0 of GCC, the  
GNU Compiler Collection  
Parallel: Yes  
Firmware:  
File System: nfs  
System State: Run level 5 (add definition here)  
Base Pointers: 64-bit  
Peak Pointers: Not Applicable  
Other:  
Power Management: --

## Errors

'reportable' flag not set during run  
654.roms\_s (base) did not have enough runs!  
644.nab\_s (base) did not have enough runs!  
619.lbm\_s (base) did not have enough runs!  
621.wrf\_s (base) did not have enough runs!  
607.cactuBSSN\_s (base) did not have enough runs!  
627.cam4\_s (base) did not have enough runs!  
603.bwaves\_s (base) did not have enough runs!  
638.imagick\_s (base) did not have enough runs!  
649.fotonik3d\_s (base) did not have enough runs!  
628.pop2\_s (base) did not have enough runs!

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## Errors (Continued)

638.imagick\_s (base) had invalid runs!

Run of 638.imagick\_s (base) was not valid; status is VE

Unknown flags were used! See

<https://www.spec.org/cpu2017/Docs/runcpu.html#flagsurl>  
for information about how to get rid of this error.

## Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s														
607.cactuBSSN_s														
619.lbm_s														
621.wrf_s														
627.cam4_s														
628.pop2_s														
638.imagick_s	1	261524	0.00											
644.nab_s														
649.fotonik3d_s														
654.roms_s														

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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Submit Notes

The config file option 'submit' was used.

## Environment Variables Notes

Environment variables set by runcpu before the start of the run:

LD\_LIBRARY\_PATH =

"/u/home/schmidt/riscv-float-toolchain/build/lib64:/u/home/schmidt/riscv-float-toolchain/build/lib:/lib64"

OMP\_STACKSIZE = "120M"

## Platform Notes

Sysinfo program /u/home/schmidt/spec/bin/sysinfo

Rev: r6365 of 2019-08-21 295195f888a3d7edble6e46a485a0011

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## Platform Notes (Continued)

running on sksmall Thu Nov 19 07:40:02 2020

SUT (System Under Test) info as seen by some common utilities.

For more information on this section, see

<https://www.spec.org/cpu2017/Docs/config.html#sysinfo>

From /proc/cpuinfo

model name : Intel(R) Xeon(R) Bronze 3106 CPU @ 1.70GHz

1 "physical id"s (chips)

8 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

cpu cores : 8

siblings : 8

physical 0: cores 0 1 2 3 4 5 6 7

From lscpu:

Architecture: x86\_64

CPU op-mode(s): 32-bit, 64-bit

Byte Order: Little Endian

CPU(s): 8

On-line CPU(s) list: 0-7

Thread(s) per core: 1

Core(s) per socket: 8

Socket(s): 1

NUMA node(s): 1

Vendor ID: GenuineIntel

CPU family: 6

Model: 85

Model name: Intel(R) Xeon(R) Bronze 3106 CPU @ 1.70GHz

Stepping: 4

CPU MHz: 1184.569

CPU max MHz: 1700.0000

CPU min MHz: 800.0000

BogoMIPS: 3400.00

Virtualization: VT-x

L1d cache: 32K

L1i cache: 32K

L2 cache: 1024K

L3 cache: 11264K

NUMA node0 CPU(s): 0-7

Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov

pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp

lm constant\_tsc art arch\_perfmon pebs bts rep\_good nopl xtopology nonstop\_tsc cpuid

aperfperf pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16

xtpr pdcm pcid dca sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave

avx f16c rdrand lahf\_lm abm 3dnowprefetch cpuid\_fault epb cat\_l3 cdp\_l3

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## Platform Notes (Continued)

invpcid\_single pti intel\_ppin ssbd mba ibrs ibpb stibs tpr\_shadow vnmi flexpriority  
ept vpid fsgsbase tsc\_adjust bml hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt\_a  
avx512f avx512dq rdseed adx smap clflushopt clwb intel\_pt avx512cd avx512bw avx512vl  
xsavesopt xsaves xgetbv1 xsaves cqm\_llc cqm\_occup\_llc cqm\_mbm\_total cqm\_mbm\_local  
dtherm arat pln pts hwp hwp\_act\_window hwp\_pkg\_req pku ospke md\_clear flush\_lld

```
/proc/cpuinfo cache data
cache size : 11264 KB
```

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a physical chip.

```
From /proc/meminfo
MemTotal:      82139464 kB
HugePages_Total: 0
Hugepagesize:   2048 kB
```

```
/usr/bin/lsb_release -d
Ubuntu 18.04.3 LTS
```

```
From /etc/*release* /etc/*version*
debian_version: buster/sid
os-release:
NAME="Ubuntu"
VERSION="18.04.3 LTS (Bionic Beaver)"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 18.04.3 LTS"
VERSION_ID="18.04"
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
```

```
uname -a:
Linux sksmall 4.15.0-70-generic #79-Ubuntu SMP Tue Nov 12 10:36:11 UTC 2019 x86_64
x86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

itlb\_multihit:  
CVE-2018-3620 (L1 Terminal Fault):

Microarchitectural Data Sampling:  
CVE-2017-5754 (Meltdown):

CVE-2018-3639 (Speculative Store Bypass):

CVE-2017-5753 (Spectre variant 1):

KVM: Mitigation: Split huge pages

Mitigation: PTE Inversion; VMX: conditional  
cache flushes, SMT disabled

Mitigation: Clear CPU buffers; SMT disabled  
Mitigation: PTI

Mitigation: Speculative Store Bypass disabled  
via prctl and seccomp  
Mitigation: usercopy/swapgs barriers and \_\_user  
pointer sanitization

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## Platform Notes (Continued)

CVE-2017-5715 (Spectre variant 2):

Mitigation: Full generic retpoline, IBPB: conditional, IBRS\_FW, STIBP: disabled, RSB filling

tsx\_async\_abort:

Mitigation: Clear CPU buffers; SMT disabled

run-level 5 Nov 28 09:46

SPEC is set to: /u/home/schmidt/spec

Filesystem  
on

Type Size Used Avail Use% Mounted

nasill0.informatik.tu-muenchen.de:/srv/ill10/home nfs 6.9T 4.4T 2.3T 67% /u/home

From /sys/devices/virtual/dmi/id

BIOS: HPE U32 11/16/2019

Vendor: HPE

Product: ProLiant DL360 Gen10

Product Family: ProLiant

Cannot run dmidecode; consider saying (as root)

chmod +s /usr/sbin/dmidecode

(End of data from sysinfo program)

## Compiler Version Notes

=====  
C | 638.imagick\_s(base)  
=====

Using built-in specs.

COLLECT\_GCC=/u/home/schmidt/riscv-float-toolchain/build/bin/riscv64-unknown-linux-gnu-gcc

COLLECT\_LTO\_WRAPPER=/u/home/schmidt/riscv-float-toolchain/build/libexec/gcc/riscv64-unknown-linux-gnu/10.1.0/lto-wrapper

Target: riscv64-unknown-linux-gnu

Configured with: /u/home/schmidt/riscv-float-toolchain/riscv-gcc/configure

--target=riscv64-unknown-linux-gnu

--prefix=/u/home/schmidt/riscv-float-toolchain/build

--with-sysroot=/u/home/schmidt/riscv-float-toolchain/build/sysroot

--with-system-zlib --enable-shared --enable-tls

--enable-languages=c,c++,fortran --disable-libmudflap --disable-libssp

--disable-libquadmath --disable-lsanitizer --disable-nls

--disable-bootstrap --src=../riscv-gcc --disable-multilib

--with-abi=lp64d --with-arch=rv64imafd --with-tune=rocket

'CFLAGS\_FOR\_TARGET=-O2 -mcmmodel=medlow' 'CXXFLAGS\_FOR\_TARGET=-O2

-mcmmodel=medlow'

Thread model: posix

Supported LTO compression algorithms: zlib

gcc version 10.1.0 (GCC)

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## Compiler Version Notes (Continued)

## Base Unknown Flags

638.imagick\_s: "/u/home/schmidt/riscv-float-toolchain/build/bin/riscv64-unknown-linux-gnu-" (in CC)  
"/u/home/schmidt/riscv-float-toolchain/build/bin/riscv64-unknown-linux-gnu-" (in LD)

## Base Runtime Environment

C benchmarks:

638.imagick\_s: No flags used

## Base Compiler Invocation

C benchmarks:

638.imagick\_s: gcc

## Base Portability Flags

638.imagick\_s: -static(\*) -DSPEC\_LP64

(\*) Indicates a portability flag that was found in a non-portability variable.

## Base Optimization Flags

C benchmarks:

638.imagick\_s: -std=c99 -O3 -DSPEC\_SUPPRESS\_OPENMP  
-fno-unsafe-math-optimizations -fno-openmp

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## Base Other Flags

C benchmarks:

638.imagick\_s: -fcommon -fallow-argument-mismatch

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For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.0 on 2020-11-19 07:40:00+0000.

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