

# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECspeed®2017\_int\_base = 2.35

SPECspeed®2017\_int\_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)

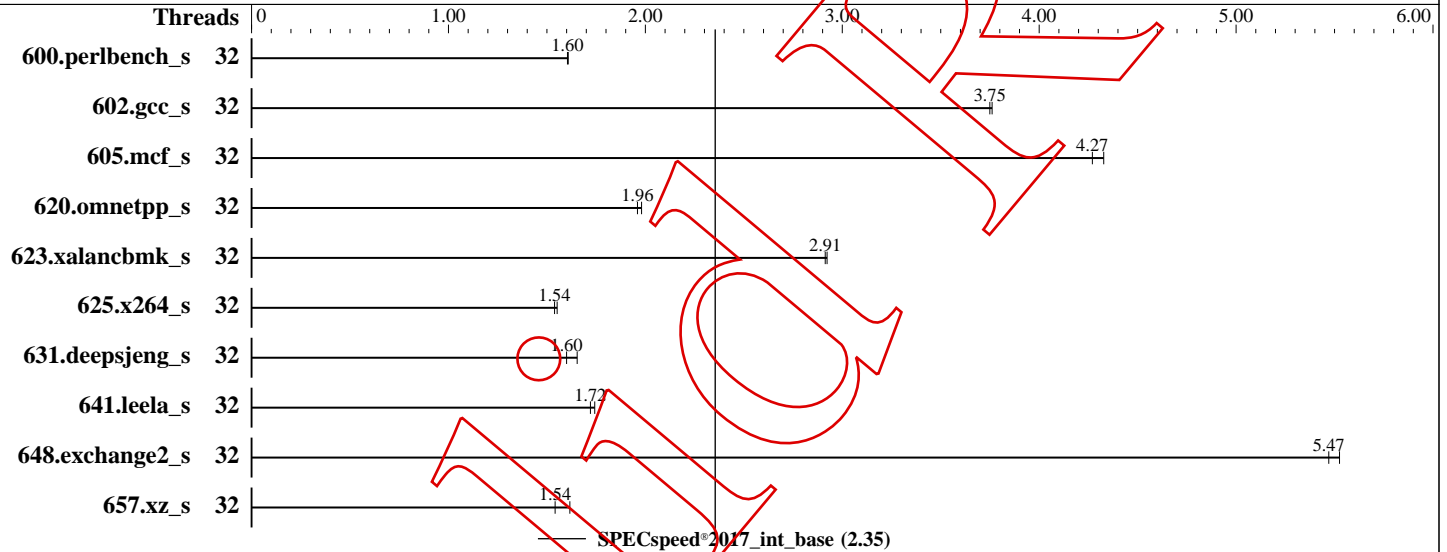
Test Sponsor: My Corporation

Tested by: My Corporation

Test Date: Oct-2021

Hardware Availability:

Software Availability:



## Hardware

CPU Name: AMD Ryzen Threadripper PRO 3955WX 16-Cores  
Max MHz:  
Nominal:  
Enabled: cores, 1 chip, threads/core  
Orderable:  
Cache L1:  
L2:  
L3:  
Other:  
Memory: 31.188 GB fixme: If using DDR4, the format is:  
'N GB (N x N GB nRxn PC4-xxxxX-X)'  
Storage: 6.9 TB add more disk info here  
Other:

## Software

OS: Ubuntu 20.04.2 LTS  
5.10.0-1044-oem  
Compiler: C/C++/Fortran: Version 9.3.0 (Ubuntu 9.3.0-17ubuntu1~20.04) of GCC, the GNU Compiler Collection  
Parallel: No  
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  
Unknown flags were used! See  
<https://www.spec.org/cpu2017/Docs/runcpu.html#flagsurl>  
for information about how to get rid of this error.

# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECspeed®2017\_int\_base = 2.35

SPECspeed®2017\_int\_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)

Test Sponsor: My Corporation

Tested by: My Corporation

Test Date: Oct-2021

Hardware Availability:

Software Availability:

## Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	32	1104	1.61	<b><u>1106</u></b>	<b><u>1.60</u></b>									
602.gcc_s	32	<b><u>1062</u></b>	<b><u>3.75</u></b>	1059	3.76									
605.mcf_s	32	<b><u>1106</u></b>	<b><u>4.27</u></b>	1091	4.33									
620.omnetpp_s	32	823	1.98	<b><u>832</u></b>	<b><u>1.96</u></b>									
623.xalancbmk_s	32	<b><u>486</u></b>	<b><u>2.91</u></b>	485	2.92									
625.x264_s	32	<b><u>1146</u></b>	<b><u>1.54</u></b>	1137	1.55									
631.deepsjeng_s	32	867	1.65	<b><u>896</u></b>	<b><u>1.60</u></b>									
641.leela_s	32	<b><u>991</u></b>	<b><u>1.72</u></b>	979	1.74									
648.exchange2_s	32	532	5.53	<b><u>537</u></b>	<b><u>5.47</u></b>									
657.xz_s	32	<b><u>4010</u></b>	<b><u>1.54</u></b>	3824	1.62									

SPECspeed®2017\_int\_base = 2.35

SPECspeed®2017\_int\_peak = Not Run

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/hettwer/toolchains/rv64g/lib64:/u/home/hettwer/toolchains/rv64g/lib/./lib64"

## Platform Notes

Sysinfo program /u/home/hettwer/cpu2017/bin/sysinfo  
Rev: r6365 of 2019-08-21 295195f888a3d7edble6e46a485a0011  
running on time-x Thu Oct 14 09:54:02 2021

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 : AMD Ryzen Threadripper PRO 3955WX 16-Cores

1 "physical id"s (chips)

32 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The following

(Continued on next page)

# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECSpeed®2017\_int\_base = 2.35

SPECSpeed®2017\_int\_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)

Test Sponsor: My Corporation

Tested by: My Corporation

Test Date: Oct-2021

Hardware Availability:

Software Availability:

## Platform Notes (Continued)

excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

cpu cores : 16

siblings : 32

physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

From lscpu:

Architecture:

x86\_64

CPU op-mode(s):

32-bit, 64-bit

Byte Order:

Little Endian

Address sizes:

43 bits physical, 48 bits virtual

CPU(s):

32

On-line CPU(s) list:

0-31

Thread(s) per core:

2

Core(s) per socket:

16

Socket(s):

1

NUMA node(s):

1

Vendor ID:

AuthenticAMD

CPU family:

23

Model:

49

Model name:

AMD Ryzen Threadripper PRO 3955WX 16-Cores

Stepping:

0

Frequency boost:

enabled

CPU MHz:

2291.098

CPU max MHz:

4402.7339

CPU min MHz:

2200.0000

BogoMIPS:

7785.19

Virtualization:

AMD-V

L1d cache:

512 KiB

L1i cache:

512 KiB

L2 cache:

8 MiB

L3 cache:

64 MiB

NUMA node0 CPU(s):

0-31

Vulnerability Itlb multihit:

Not affected

Vulnerability L1tf:

Not affected

Vulnerability Mds:

Not affected

Vulnerability Meltdown:

Not affected

Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via  
prctl and seccomp

Vulnerability Spectre v1:

Mitigation; usercopy/swaps barriers and \_\_user

pointer sanitization

Vulnerability Spectre v2:

Mitigation; Full AMD retpoline, IBPB conditional,

STIBP conditional, RSB filling

Vulnerability Srbds:

Not affected

Vulnerability Tsx async abort:

Not affected

Flags:

fpu vme de pse tsc msr pae mce cx8 apic sep mtrr

pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr\_opt

pdpe1gb rdtscp lm constant\_tsc rep\_good nopl nonstop\_tsc cpuid extd\_apicid

(Continued on next page)

# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECspeed®2017\_int\_base = 2.35

SPECspeed®2017\_int\_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)

Test Sponsor: My Corporation

Tested by: My Corporation

Test Date: Oct-2021

Hardware Availability:

Software Availability:

## Platform Notes (Continued)

aperfmpperf pni pclmulqdq monitor ssse3 fma cx16 sse4\_1 sse4\_2 movbe popcnt aes xsave  
avx fl6c rdrand lahf\_lm cmp\_legacy svm extapic cr8\_legacy abm sse4a misalignsse  
3dnowprefetch osvw ibs skinit wdt tce topoext perfctr\_core perfctr\_nb bpext  
perfctr\_llc mwaitx cpb cat\_l3 cdp\_l3 hw\_pstate sme ssbd mba sev ibpb stibp vmmcall  
sev\_es fsgsbase bmi1 avx2 smep bmi2 cqm rdt\_a rdseed adx smap clflushopt clwb sha\_ni  
xsaveopt xsavec xgetbv1 xsaves cqm\_llc cqm\_occup\_llc cqm\_mbm\_total cqm\_mbm\_local  
clzero irperf xsaveerptr rdpru wbnoinvd arat npt lbrv svm\_lock nrip\_save tsc\_scale  
vmcb\_clean flushbyasid decodeassists pausefilter pfthreshold avic v\_vmsave\_vmload  
vgif umip rdpid overflow\_recov succor smca

/proc/cpuinfo cache data  
cache size : 512 KB

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

From /proc/meminfo  
MemTotal: 32703484 KB  
HugePages\_Total: 0  
Hugepagesize: 2048 KB

/usr/bin/lsc\_release -d  
Ubuntu 20.04.2 LTS

From /etc/\*release\* /etc/\*version\*  
debian\_version: bullseye/sid  
os-release:  
NAME="Ubuntu"  
VERSION="20.04.2 LTS (Focal Fossa)"  
ID=ubuntu  
ID\_LIKE=debian  
PRETTY\_NAME="Ubuntu 20.04.2 LTS"  
VERSION\_ID="20.04"  
HOME\_URL="https://www.ubuntu.com/"  
SUPPORT\_URL="https://help.ubuntu.com/"

uname -a:  
Linux time-x 5.10.0-1044-oem #46-Ubuntu SMP Wed Aug 11 09:50:57 UTC 2021 x86\_64 x86\_64  
x86\_64 GNU/Linux

Kernel self-reported vulnerability status:

itlb_multihit:	Not affected
CVE-2018-3620 (L1 Terminal Fault):	Not affected
Microarchitectural Data Sampling:	Not affected
CVE-2017-5754 (Meltdown):	Not affected
CVE-2018-3639 (Speculative Store Bypass):	Mitigation: Speculative Store Bypass disabled

(Continued on next page)

# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECspeed®2017\_int\_base = 2.35

SPECspeed®2017\_int\_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)

Test Sponsor: My Corporation

Tested by: My Corporation

Test Date: Oct-2021

Hardware Availability:

Software Availability:

## Platform Notes (Continued)

via prctl and seccomp  
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swaps barriers and \_\_user pointer sanitization  
CVE-2017-5715 (Spectre variant 2): Mitigation: Full AMD retpoline, IBPB: conditional, STIBP: conditional, RSB filling  
srbds: Not affected  
tsx\_async\_abort: Not affected  
run-level 5 Aug 26 10:31  
SPEC is set to: /u/home/hettwer/cpu2017  
Filesystem Type Size Used Avail Use% Mounted on  
nasill10.informatik.tu-muenchen.de:/srv/ill10/home nfs 6.9T 5.4T 1.3T 82% /u/home  
From /sys/devices/virtual/dmi/id  
BIOS: LENOVO S07KT1FA 05/19/2021  
Vendor: LENOVO  
Product Family: ThinkStation P620  
Cannot run dmidecode; consider saying (as root)  
chmod +s /usr/sbin/dmidecode  
(End of data from sysinfo program)

## Compiler Version Notes

```
=====
C | 600.perlbench_s(base) 602.gcc_s(base) 605.mcf_s(base)
  | 625.x264_s(base) 657.xz_s(base)
=====
```

Using built-in specs.

COLLECT\_GCC=/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-gcc

COLLECT\_LTO\_WRAPPER=/u/home/hettwer/toolchains/rv64g/libexec/gcc/riscv64-unknown-linux-gnu/11.1.0/lto-wrapper

Target: riscv64-unknown-linux-gnu

Configured with:

/u/home/hettwer/build-rv64g/./riscv-gnu-toolchain/riscv-gcc/configure

--target=riscv64-unknown-linux-gnu

--prefix=/u/home/hettwer/toolchains/rv64g

--with-sysroot=/u/home/hettwer/toolchains/rv64g/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-gnu-toolchain/riscv-gcc --disable-multilib

--with-abi=lp64d --with-arch=rv64imafdc --with-tune=rocket

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

(Continued on next page)

# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECSpeed®2017\_int\_base = 2.35

SPECSpeed®2017\_int\_peak = Not Run

**CPU2017 License:** nnn (Your SPEC license number)

**Test Sponsor:** My Corporation

**Tested by:** My Corporation

**Test Date:** Oct-2021

**Hardware Availability:**

**Software Availability:**

## Compiler Version Notes (Continued)

-mcmmodel=medlow'  
Thread model: posix  
Supported LTO compression algorithms: zlib  
gcc version 11.1.0 (GCC)

=====  
C++ | 620.omnetpp\_s(base) 623.xalancbmk\_s(base) 631.deepsjeng\_s(base)  
| 641.leela\_s(base)  
=====

Using built-in specs.

COLLECT\_GCC=/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-g++

COLLECT\_LTO\_WRAPPER=/u/home/hettwer/toolchains/rv64g/libexec/gcc/riscv64-unknown-linux-gnu/11.1.0/lto-wrapper

Target: riscv64-unknown-linux-gnu

Configured with:

/u/home/hettwer/build-rv64g/./riscv-gnu-toolchain/riscv-gcc/configure  
--target=riscv64-unknown-linux-gnu  
--prefix=/u/home/hettwer/toolchains/rv64g  
--with-sysroot=/u/home/hettwer/toolchains/rv64g/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-gnu-toolchain/riscv-gcc --disable-multilib  
--with-abi=lp64d --with-arch=rv64imafdc --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 11.1.0 (GCC)

=====  
Fortran | 648.exchange2\_s(base)  
=====

Using built-in specs.

COLLECT\_GCC=/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-gfortran

COLLECT\_LTO\_WRAPPER=/u/home/hettwer/toolchains/rv64g/libexec/gcc/riscv64-unknown-linux-gnu/11.1.0/lto-wrapper

Target: riscv64-unknown-linux-gnu

Configured with:

/u/home/hettwer/build-rv64g/./riscv-gnu-toolchain/riscv-gcc/configure  
--target=riscv64-unknown-linux-gnu  
--prefix=/u/home/hettwer/toolchains/rv64g  
--with-sysroot=/u/home/hettwer/toolchains/rv64g/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-gnu-toolchain/riscv-gcc --disable-multilib

(Continued on next page)



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECSpeed®2017\_int\_base = 2.35

SPECSpeed®2017\_int\_peak = Not Run

**CPU2017 License:** nnn (Your SPEC license number)

**Test Sponsor:** My Corporation

**Tested by:** My Corporation

**Test Date:** Oct-2021

**Hardware Availability:**

**Software Availability:**

## Compiler Version Notes (Continued)

```
--with-abi=lp64d --with-arch=rv64imafdc --with-tune=rocket  
'CFLAGS_FOR_TARGET=-O2 -mcmodel=medlow' 'CXXFLAGS_FOR_TARGET=-O2  
-mcmodel=medlow'  
Thread model: posix  
Supported LTO compression algorithms: zlib  
gcc version 11.1.0 (GCC)
```

## Base Unknown Flags

```
600.perlbench_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in CC)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA_OPTIMIZE)  
  
602.gcc_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in CC)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA_OPTIMIZE)  
  
605.mcf_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in CC)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA_OPTIMIZE)  
  
620.omnetpp_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in CXX)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA_OPTIMIZE)  
  
623.xalanbmk_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in CXX)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA_OPTIMIZE)  
  
625.x264_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in CC)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA_OPTIMIZE)  
  
631.deepsjeng_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in CXX)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA_OPTIMIZE)
```

(Continued on next page)

# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECspeed®2017\_int\_base = 2.35

SPECspeed®2017\_int\_peak = Not Run

**CPU2017 License:** nnn (Your SPEC license number)

**Test Sponsor:** My Corporation

**Tested by:** My Corporation

**Test Date:** Oct-2021

**Hardware Availability:**

**Software Availability:**

## Base Unknown Flags (Continued)

641.leela\_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in CXX)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA\_OPTIMIZE)

648.exchange2\_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in FC)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA\_OPTIMIZE)

657.xz\_s: "/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in CC)  
"/u/home/hettwer/toolchains/rv64g/bin/riscv64-unknown-linux-gnu-" (in LD)  
"-fcommon -static" (in OPTIMIZE)  
"-fno-openmp" (in EXTRA\_OPTIMIZE)

## Base Compiler Invocation

C benchmarks:

gcc

C++ benchmarks:

g++

Fortran benchmarks:

gfortran

## Base Portability Flags

600.perlbench\_s: -DSPEC\_LINUX\_X64 -DSPEC\_LP64  
602.gcc\_s: -DSPEC\_LP64  
605.mcf\_s: -DSPEC\_LP64  
620.omnetpp\_s: -DSPEC\_LP64  
623.xalancbmk\_s: -DSPEC\_LINUX -DSPEC\_LP64  
625.x264\_s: -DSPEC\_LP64  
631.deepsjeng\_s: -DSPEC\_LP64  
641.leela\_s: -DSPEC\_LP64  
648.exchange2\_s: -DSPEC\_LP64  
657.xz\_s: -DSPEC\_LP64



# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECspeed®2017\_int\_base = 2.35

SPECspeed®2017\_int\_peak = Not Run

**CPU2017 License:** nnn (Your SPEC license number)

**Test Sponsor:** My Corporation

**Tested by:** My Corporation

**Test Date:** Oct-2021

**Hardware Availability:**

**Software Availability:**

## Base Optimization Flags

C benchmarks:

-std=c99 -O3 -fno-unsafe-math-optimizations -DSPEC\_SUPPRESS\_OPENMP  
-fno-strict-aliasing -fgnu89-inline

C++ benchmarks:

-std=c++03 -O3 -fno-unsafe-math-optimizations -DSPEC\_SUPPRESS\_OPENMP

Fortran benchmarks:

-O3 -fno-unsafe-math-optimizations -DSPEC\_SUPPRESS\_OPENMP

SPEC CPU and SPECspeed are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 2021-10-14 09:54:01+0200.

Report generated on 2021-10-14 16:48:09 by CPU2017 PDF formatter v6255.