

# SPEC CPU®2017 Integer Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

My Corporation

SPECSpeed®2017\_int\_base = 1.46

SPECSpeed®2017\_int\_peak = Not Run

CPU2017 License: nnn (Your SPEC license number)

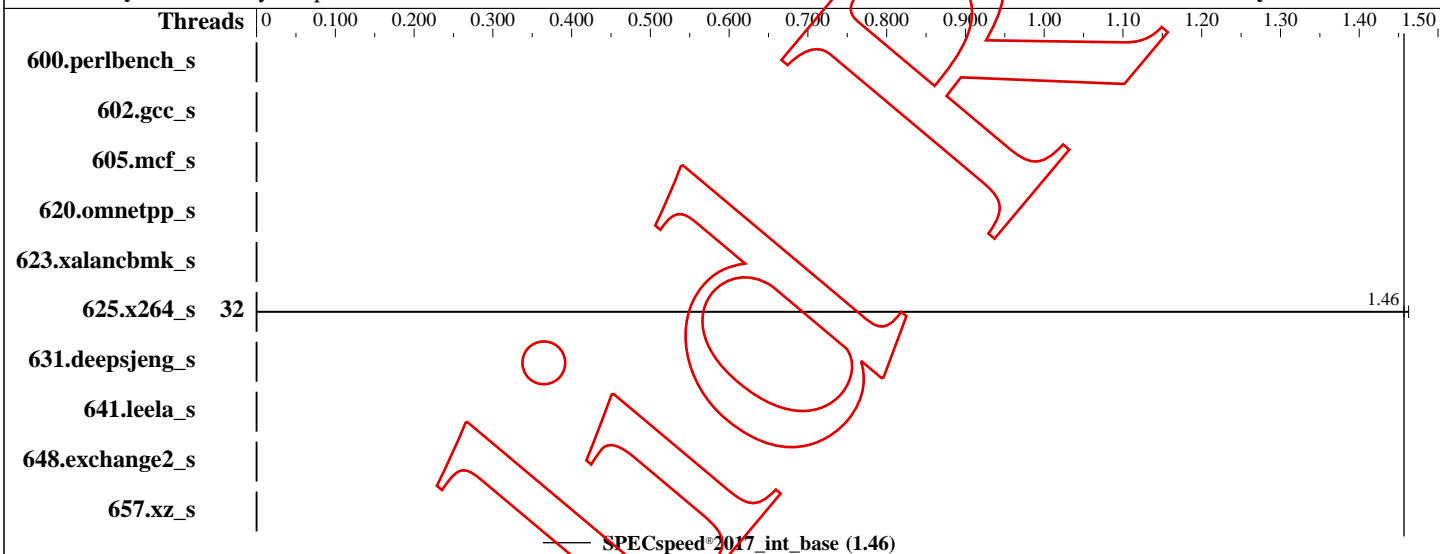
Test Sponsor: My Corporation

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-nnnnX-X)'

Storage: 6.9 TB add more disk info here

Other:

OS:

Compiler:

Parallel:

Firmware:

File System:

System State:

Base Pointers:

Peak Pointers:

Other:

Power Management: --

## Software

Ubuntu 20.04.2 LTS

5.10.0-1044-oem

C/C++/Fortran: Version 9.3.0 (Ubuntu  
9.3.0-17ubuntu1~20.04) of GCC, the  
GNU Compiler Collection

No

nfs

Run level 5 (add definition here)

64-bit

Not Applicable

## Errors

'reportable' flag not set during run

600.perlbench\_s (base) did not have enough runs!

641.leela\_s (base) did not have enough runs!

657.xz\_s (base) did not have enough runs!

648.exchange2\_s (base) did not have enough runs!

623.xalancbmk\_s (base) did not have enough runs!

602.gcc\_s (base) did not have enough runs!

605.mcf\_s (base) did not have enough runs!

631.deepsjeng\_s (base) did not have enough runs!

620.omnetpp\_s (base) did not have enough runs!

Unknown flags were used! See

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## Errors (Continued)

<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	Seconds	Ratio
600.perlbench_s																
602.gcc_s																
605.mcf_s																
620.omnetpp_s																
623.xalancbmk_s																
625.x264_s	32	1206	1.46	<u>1211</u>	<u>1.46</u>											
631.deepsjeng_s																
641.leela_s																
648.exchange2_s																
657.xz_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/hettwer/toolchains/rv64iamc/lib64/:/u/home/hettwer/toolchains/rv64iamc/lib64/::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 16:56:10 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>

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## Platform Notes (Continued)

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 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: 2196.286

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/swapgs barriers and \_\_user pointer sanitization

Vulnerability Spectre v2: Mitigation; Full AMD retpoline, IBPB conditional,

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## Platform Notes (Continued)

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  
aperfperf pni pclmulqdq monitor ssse3 fma cx16 sse4\_1 sse4\_2 movbe popcnt aes xsave  
avx f16c 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/lsb\_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:

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## Platform Notes (Continued)

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 via prctl and seccomp  
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swapgs 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

on

	Type	Size	Used	Avail	Use%	Mounted
nasill0.informatik.tu-muenchen.de	/srv/ill10/home nfs	6.9T	5.4T	1.3T	82%	/u/home

From /sys/devices/virtual/dmidecode

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 | 625.x264\_s(base)

Using built-in specs.

COLLECT\_GCC=/u/home/hettwer/toolchains/rv64iamc/bin/riscv64-unknown-linux-gnu-gcc

COLLECT\_LTO\_WRAPPER=/u/home/hettwer/toolchains/rv64iamc/libexec/gcc/riscv64-unknown-linux-gnu/11.1.0/lto-wrapper

Target: riscv64-unknown-linux-gnu

Configured with:

/u/home/hettwer/build-rv64iamc/./riscv-gnu-toolchain/riscv-gcc/configure

--target=riscv64-unknown-linux-gnu

--prefix=/u/home/hettwer/toolchains/rv64iamc

--with-sysroot=/u/home/hettwer/toolchains/rv64iamc/sysroot

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

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## Compiler Version Notes (Continued)

```
--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=lp64 --with-arch=rv64imac --with-tune=rocket
'CFLAGS_FOR_TARGET=-O2 -mmodel=medlow' 'CXXFLAGS_FOR_TARGET=-O2
-mmodel=medlow'
Thread model: posix
Supported LTO compression algorithms: zlib
gcc version 11.1.0 (GCC)
-----
```

## Base Unknown Flags

```
625.x264_s: "/u/home/hettwer/toolchains/rv64iamc/bin/riscv64-unknown-linux-gnu-" (in CC)
"/u/home/hettwer/toolchains/rv64iamc/bin/riscv64-unknown-linux-gnu-" (in LD)
"-fcommon -static" (in OPTIMIZE)
"-fno-openmp" (in EXTRA_OPTIMIZE)
```

## Base Runtime Environment

C benchmarks:

625.x264\_s: No flags used

## Base Compiler Invocation

C benchmarks:

625.x264\_s: gcc

## Base Portability Flags

625.x264\_s: -DSPEC\_LP64

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## Base Optimization Flags

C benchmarks:

625.x264\_s: -std=c99 -O3 -fno-unsafe-math-optimizations  
-DSPEC\_SUPPRESS\_OPENMP -fno-strict-aliasing -fgnu89-inline

## Base Other Flags

C benchmarks:

625.x264\_s: No flags used

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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 2021-10-14 16:56:10+0200.

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