## SPEC CPU®2017 Floating Point Speed Result

**ASUSTeK Computer Inc.**

ASUS ESC8000 G4(Z11PG-D24) Server System
(2.40 GHz, Intel Xeon Silver 4210R)

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_base</th>
<th>SPECspeed®2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.0</td>
<td>90.9</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 9016  
**Test Sponsor:** ASUSTeK Computer Inc.  
**Tested by:** ASUSTeK Computer Inc.  
**Test Date:** May-2020  
**Hardware Availability:** Feb-2020  
**Software Availability:** Sep-2019

### Threads

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>20</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
<td>20</td>
</tr>
<tr>
<td>619.lbm_s</td>
<td>20</td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>20</td>
</tr>
<tr>
<td>627.cam4_s</td>
<td>20</td>
</tr>
<tr>
<td>628.pop2_s</td>
<td>20</td>
</tr>
<tr>
<td>638.imagick_s</td>
<td>20</td>
</tr>
<tr>
<td>644.nab_s</td>
<td>20</td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>20</td>
</tr>
<tr>
<td>654.roms_s</td>
<td>20</td>
</tr>
</tbody>
</table>

### Software

**OS:** SUSE Linux Enterprise Server 15 SP1  
**Kernel:** 4.12.14-195-default  
**Compiler:** C/C++: Version 19.0.5.281 of Intel C/C++  
**Fortran:** Version 19.0.5.281 of Intel Fortran  
**Compiler Build:** 20190815 for Linux  
**Firmware:** Version 6102 released Dec-2019  
**File System:** xfs  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 64-bit  
**Peak Pointers:** 64-bit  
**Power Management:** BIOS and OS set to prefer performance at the cost of additional power usage

### Hardware

**CPU Name:** Intel Xeon Silver 4210R  
**Max MHz:** 3200  
**Nominal:** 2400  
**Enabled:** 20 cores, 2 chips  
**Orderable:** 1, 2 chip(s)  
**Cache L1:** 32 KB I + 32 KB D on chip per core  
**L2:** 1 MB I+D on chip per core  
**L3:** 13.75 MB I+D on chip per chip  
**Memory:** 768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R, running at 2400)  
**Storage:** 1 x 1 TB SATA SSD  
**Other:** None
ASUSTeK Computer Inc.

ASUS ESC8000 G4(Z11PG-D24) Server System
(2.40 GHz, Intel Xeon Silver 4210R)

SPECspeed®2017_fp_base = 90.0
SPECspeed®2017_fp_peak = 90.9

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>20</td>
<td>156</td>
<td>377</td>
<td>157</td>
<td>377</td>
<td>156</td>
<td>378</td>
<td>20</td>
<td>156</td>
<td>378</td>
<td>156</td>
<td>379</td>
<td>157</td>
<td>376</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
<td>20</td>
<td>170</td>
<td>98.0</td>
<td>171</td>
<td>97.7</td>
<td>171</td>
<td>97.7</td>
<td>20</td>
<td>170</td>
<td>98.0</td>
<td>171</td>
<td>97.7</td>
<td>171</td>
<td>97.7</td>
</tr>
<tr>
<td>619.lbm_s</td>
<td>20</td>
<td>69.4</td>
<td>75.5</td>
<td>69.6</td>
<td>75.3</td>
<td>69.4</td>
<td>75.5</td>
<td>20</td>
<td>69.4</td>
<td>75.5</td>
<td>69.6</td>
<td>75.3</td>
<td>69.4</td>
<td>75.5</td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>20</td>
<td>148</td>
<td>89.4</td>
<td>147</td>
<td>89.9</td>
<td>148</td>
<td>89.4</td>
<td>20</td>
<td>139</td>
<td>94.8</td>
<td>139</td>
<td>94.9</td>
<td>140</td>
<td>94.4</td>
</tr>
<tr>
<td>627.cam4_s</td>
<td>20</td>
<td>176</td>
<td>50.4</td>
<td>175</td>
<td>50.7</td>
<td>175</td>
<td>50.6</td>
<td>20</td>
<td>175</td>
<td>50.6</td>
<td>175</td>
<td>50.5</td>
<td>175</td>
<td>50.6</td>
</tr>
<tr>
<td>628.pop2_s</td>
<td>20</td>
<td>199</td>
<td>59.5</td>
<td>200</td>
<td>59.5</td>
<td>199</td>
<td>59.6</td>
<td>20</td>
<td>195</td>
<td>60.9</td>
<td>194</td>
<td>61.1</td>
<td>195</td>
<td>61.0</td>
</tr>
<tr>
<td>638.imagick_s</td>
<td>20</td>
<td>219</td>
<td>66.0</td>
<td>219</td>
<td>66.0</td>
<td>218</td>
<td>66.1</td>
<td>20</td>
<td>219</td>
<td>66.0</td>
<td>219</td>
<td>66.0</td>
<td>218</td>
<td>66.1</td>
</tr>
<tr>
<td>644.nab_s</td>
<td>20</td>
<td>141</td>
<td>124</td>
<td>141</td>
<td>124</td>
<td>141</td>
<td>124</td>
<td>20</td>
<td>141</td>
<td>124</td>
<td>141</td>
<td>124</td>
<td>141</td>
<td>124</td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>20</td>
<td>129</td>
<td>70.8</td>
<td>133</td>
<td>68.7</td>
<td>129</td>
<td>70.8</td>
<td>20</td>
<td>135</td>
<td>67.6</td>
<td>128</td>
<td>71.2</td>
<td>128</td>
<td>71.3</td>
</tr>
<tr>
<td>654.roms_s</td>
<td>20</td>
<td>196</td>
<td>80.5</td>
<td>195</td>
<td>80.7</td>
<td>195</td>
<td>80.9</td>
<td>20</td>
<td>196</td>
<td>80.5</td>
<td>195</td>
<td>80.7</td>
<td>195</td>
<td>80.9</td>
</tr>
</tbody>
</table>

SPECspeed®2017_fp_base = 90.0
SPECspeed®2017_fp_peak = 90.9

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
OS set to performance mode via cpupower frequency-set -g performance

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
KMP_AFFINITY = "granularity=fine,compact"
LD_LIBRARY_PATH = "/spec2017_19u5/lib/intel64"
OMP_STACKSIZE = "192M"

General Notes

Binaries compiled on a system with 1x Intel Core i9-9900K CPU + 64GB RAM
memory using Redhat Enterprise Linux 8.0
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
    sync; echo 3> /proc/sys/vm/drop_caches
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.
Platform Notes

BIOS Configuration:
VT-d = Disabled
Patrol Scrub = Disabled
HyperThreading = Disabled
ENERGY_PERF_BIAS_CFG mode = performance
CSM Support = Disabled
Engine Boost = Level3(Max)
LLC dead line allc = Disabled
SR-IOV Support = Disabled

Sysinfo program /spec2017_19u5/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d76e6e6e46485a0011
running on linux-628j Wed May 13 16:28:19 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) Silver 4210R CPU @ 2.40GHz
    2 "physical id"s (chips)
    20 "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 : 10
siblings : 10
physical 0: cores 0 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
Address sizes: 46 bits physical, 48 bits virtual
CPU(s): 20
On-line CPU(s) list: 0-19
Thread(s) per core: 1
Core(s) per socket: 10
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Silver 4210R CPU @ 2.40GHz
Stepping: 7
CPU MHz: 2400.000
CPU max MHz: 3200.0000
ASUSTeK Computer Inc.
ASUS ESC8000 G4(Z11PG-D24) Server System
(2.40 GHz, Intel Xeon Silver 4210R)

SPECspeed®2017_fp_base = 90.0
SPECspeed®2017_fp_peak = 90.9

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

Test Date: May-2020
Hardware Availability: Feb-2020
Software Availability: Sep-2019

Platform Notes (Continued)

CPU min MHz: 1000.0000
BogoMIPS: 4800.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 14080K
NUMA node0 CPU(s): 0-9
NUMA node1 CPU(s): 10-19
Flags: fpu vme de pse tsc msr pae 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
aperfmon perf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
xtr pdcn 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_1 cdp_13
invpcid_single intel_pinn ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi
flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm
cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd
avx512bw avx512vl xsaveopt xsaves xsavec xgetenv xsavec qm_llc qm_occup_llc qm_mbm_total
qm_mbm_local dtherm ida arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req pku
ospke avx512_vnni md_clear flush_l1d arch_capabilities

/proc/cpuinfo cache data
  cache size : 14080 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
  physical chip.
  available: 2 nodes (0-1)
  node 0 cpus: 0 1 2 3 4 5 6 7 8 9
  node 0 size: 385616 MB
  node 0 free: 384455 MB
  node 1 cpus: 10 11 12 13 14 15 16 17 18 19
  node 1 size: 387039 MB
  node 1 free: 386433 MB
  node distances:
    node 0 1
    0: 10  21
    1: 21  10

From /proc/meminfo
  MemTotal: 791200240 kB
  HugePages_Total: 0
  Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
  os-release:
    NAME="SLES"

(Continued on next page)
ASUSTeK Computer Inc.
ASUS ESC8000 G4(Z11PG-D24) Server System
(2.40 GHz, Intel Xeon Silver 4210R)

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

SPECspeed®2017_fp_base = 90.0
SPECspeed®2017_fp_peak = 90.9

Test Date: May-2020
Hardware Availability: Feb-2020
Software Availability: Sep-2019

CPU2017 License: 9016
Test Sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

SPECspeed®2017_fp_base = 90.0
SPECspeed®2017_fp_peak = 90.9

Test Date: May-2020
Hardware Availability: Feb-2020
Software Availability: Sep-2019

Platform Notes (Continued)

VERSION="15-SP1"
VERSION_ID="15.1"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP1"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp1"

uname -a:
    Linux linux-628j 4.12.14-195-default #1 SMP Tue May 7 10:55:11 UTC 2019 (8fba516)
    x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:
    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: __user pointer sanitization
    CVE-2017-5715 (Spectre variant 2): Mitigation: Enhanced IBRS, IBFB: conditional,
    RSB filling

run-level 3 May 12 18:12

SPEC is set to: /spec2017_19u5
    Filesystem Type Size Used Avail Use% Mounted on
    /dev/sda4 xfs 932G 19G 913G 3% /

From /sys/devices/virtual/dmi/id
    BIOS: American Megatrends Inc. 6102 12/19/2019
    Vendor: ASUSTeK COMPUTER INC.
    Product: Z11PG-D24 Series
    Product Family: Server
    Serial: System Serial Number

Additional information from dmidecode follows. WARNING: Use caution when you interpret
this section. The 'dmidecode' program reads system data which is "intended to allow
hardware to be accurately determined", but the intent may not be met, as there are
frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.
Memory:
    24x Samsung M393A4K40CB2-CVF 32 GB 2 rank 2933

(End of data from sysinfo program)
ASUSTeK Computer Inc.
ASUS ESC8000 G4(Z11PG-D24) Server System
(2.40 GHz, Intel Xeon Silver 4210R)

SPEC CPU®2017 Floating Point Speed Result
Copyright 2017-2020 Standard Performance Evaluation Corporation

SPECspeed®2017_fp_base = 90.0
SPECspeed®2017_fp_peak = 90.9

CPU2017 License: 9016
Test Date: May-2020
Test Sponsor: ASUSTeK Computer Inc.
Hardware Availability: Feb-2020
Tested by: ASUSTeK Computer Inc.
Software Availability: Sep-2019

Compiler Version Notes

==============================================================================
C               | 619.lbm_s(base, peak) 638.imagick_s(base, peak)
                | 644.nab_s(base, peak)
==============================================================================
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.5.281 Build 20190815
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
==============================================================================
C++, C, Fortran | 607.cactuBSSN_s(base, peak)
==============================================================================
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.5.281 Build 20190815
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.5.281 Build 20190815
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.5.281 Build 20190815
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
==============================================================================
Fortran         | 603.bwaves_s(base, peak) 649.fotonik3d_s(base, peak)
                | 654.roms_s(base, peak)
==============================================================================
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.5.281 Build 20190815
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
==============================================================================
Fortran, C      | 621.wrf_s(base, peak) 627.cam4_s(base, peak)
                | 628.pop2_s(base, peak)
==============================================================================
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.5.281 Build 20190815
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.5.281 Build 20190815
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.
## SPEC CPU®2017 Floating Point Speed Result

**ASUSTeK Computer Inc.**  
ASUS ESC8000 G4(Z11PG-D24) Server System  
(2.40 GHz, Intel Xeon Silver 4210R)  

<table>
<thead>
<tr>
<th>SPECspeed®2017_fp_peak</th>
<th>90.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_fp_base</td>
<td>90.0</td>
</tr>
</tbody>
</table>

CPU2017 License: 9016  
Test Sponsor: ASUSTeK Computer Inc.  
Tested by: ASUSTeK Computer Inc.  

Test Date: May-2020  
Hardware Availability: Feb-2020  
Software Availability: Sep-2019

---

### Base Compiler Invocation

**C benchmarks:**  
```bash
icc
```

**Fortran benchmarks:**  
```bash
ifort
```

**Benchmarks using both Fortran and C:**  
```bash
ifort icc
```

**Benchmarks using Fortran, C, and C++:**  
```bash
icpc icc ifort
```

---

### Base Portability Flags

- `bwaves_s`: `-DSPEC_LP64`  
- `cactuBSSN_s`: `-DSPEC_LP64`  
- `lbm_s`: `-DSPEC_LP64`  
- `wrf_s`: `-DSPEC_LP64` `-DSPEC_CASE_FLAG`  
- `cam4_s`: `-DSPEC_LP64` `-DSPEC_CASE_FLAG` `-convert big_endian`  
- `pop2_s`: `-DSPEC_LP64` `-DSPEC_CASE_FLAG` `-convert big_endian`  
- `imagick_s`: `-DSPEC_LP64`  
- `nab_s`: `-DSPEC_LP64`  
- `fotonik3d_s`: `-DSPEC_LP64`  
- `roms_s`: `-DSPEC_LP64`

---

### Base Optimization Flags

**C benchmarks:**  
```bash
-m64 -std=c11 -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP
```

**Fortran benchmarks:**  
```bash
-m64 -DSPEC_OPENMP -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp
-nostandard-realloc-lhs
```

**Benchmarks using both Fortran and C:**  
```bash
-m64 -std=c11 -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP
-nostandard-realloc-lhs
```
ASUSTeK Computer Inc.  
ASUS ESC8000 G4(Z11PG-D24) Server System  
(2.40 GHz, Intel Xeon Silver 4210R)

SPECspeed®2017_fp_base = 90.0
SPECspeed®2017_fp_peak = 90.9

**Base Optimization Flags (Continued)**

Benchmarks using Fortran, C, and C++:
- `m64 -std=c11 -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch`
- `ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP`
- `nostandard-realloc-lhs`

**Peak Compiler Invocation**

C benchmarks:
- `icc`

Fortran benchmarks:
- `ifort`

Benchmarks using both Fortran and C:
- `ifort icc`

Benchmarks using Fortran, C, and C++:
- `icpc icc ifort`

**Peak Portability Flags**

Same as Base Portability Flags

**Peak Optimization Flags**

C benchmarks:
- `619.lbm_s: basepeak = yes`
- `638.imagick_s: basepeak = yes`

Fortran benchmarks:
- `603.bwaves_s: -m64 -std=c11 -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP`

(Continued on next page)
ASUSTeK Computer Inc.
ASUS ESC8000 G4(Z11PG-D24) Server System
(2.40 GHz, Intel Xeon Silver 4210R)

SPECs\(_{\text{2017_fp_base}}\) = 90.0

SPECs\(_{\text{2017_fp_peak}}\) = 90.9

**CPU2017 License:** 9016

**Test Sponsor:** ASUSTeK Computer Inc.

**Tested by:** ASUSTeK Computer Inc.

**Test Date:** May-2020

**Hardware Availability:** Feb-2020

**Software Availability:** Sep-2019

---

**Peak Optimization Flags (Continued)**

603.bwaves\(_s\) (continued):
-`-qopt-mem-layout-trans=4` `-qopenmp` `-nostandard-realloc-lhs`

649.fotonik3d\(_s\): Same as 603.bwaves\(_s\)

654.roms\(_s\): basepeak = yes

**Benchmarks using both Fortran and C:**

621.wrf\(_s\): `-m64` `-std=c11` `-prof-gen(pass 1)` `-prof-use(pass 2)` `-O2`
-`-xCORE-AVX512` `-qopt-prefetch` `-ipo` `-O3` `-ffinite-math-only`
-`-no-prec-div` `-qopt-mem-layout-trans=4`
-`-DSPEC_SUPPRESS_OPENMP` `-qopenmp` `-DSPEC_OPENMP`
-`-nostandard-realloc-lhs`

627.cam4\(_s\): `-m64` `-std=c11` `-xCORE-AVX512` `-ipo` `-O3` `-no-prec-div`
-`-qopt-prefetch` `-ffinite-math-only` `-qopt-mem-layout-trans=4`
-`-qopenmp` `-DSPEC_OPENMP` `-nostandard-realloc-lhs`

628.pop2\(_s\): Same as 621.wrf\(_s\)

**Benchmarks using Fortran, C, and C++:**

607.cactuBSSN\(_s\): basepeak = yes

---

The flags files that were used to format this result can be browsed at


You can also download the XML flags sources by saving the following links:

http://www.spec.org/cpu2017/flags/Intel-ic19.0u5-official-linux64_rev0.xml


---

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.

Tested with SPEC CPU\(^{\text{2017 v1.1.0}}\) on 2020-05-13 04:28:18-0400.


Originally published on 2020-07-21.