# SPEC CPU®2017 Integer Rate Result

## ASUSTeK Computer Inc.
### ASUS RS720-E9(Z11PP-D24) Server System
(3.90 GHz, Intel Xeon Gold 6250)

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

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>SPECrate&lt;sup&gt;®&lt;/sup&gt;2017_int_base</th>
<th>SPECrate&lt;sup&gt;®&lt;/sup&gt;2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>32</td>
<td>123</td>
<td>125</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>32</td>
<td>745</td>
<td></td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>32</td>
<td>97.4</td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>525.x264_r</td>
<td>32</td>
<td>278</td>
<td></td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>32</td>
<td>229</td>
<td></td>
</tr>
<tr>
<td>541.leela_r</td>
<td>32</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>32</td>
<td>89.4</td>
<td>91.3</td>
</tr>
</tbody>
</table>

**Software**

- **OS**: SUSE Linux Enterprise Server 15 SP1
- **Kernel**: 4.12.14-195-default
- **Compiler**: C/C++: Version 19.1.1.217 of Intel C/C++ Compiler Build 20200306 for Linux;
  Fortran: Version 19.1.1.217 of Intel Fortran Compiler Build 20200306 for Linux
- **Firmware**: No
- **File System**: xfs
- **System State**: Run level 3 (multi-user)
- **Base Pointers**: 64-bit
- **Peak Pointers**: 32/64-bit
- **Other**: jemalloc: jemalloc memory allocator library V5.0.1

**Power Management**: BIOS and OS set to prefer performance at the cost of additional power usage

---

### Hardware

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU Name</strong>:</td>
<td>Intel Xeon Gold 6250</td>
</tr>
<tr>
<td><strong>Max MHz</strong>:</td>
<td>4500</td>
</tr>
<tr>
<td><strong>Nominal</strong>:</td>
<td>3900</td>
</tr>
<tr>
<td><strong>Enabled</strong>:</td>
<td>16 cores, 2 chips, 2 threads/core</td>
</tr>
<tr>
<td><strong>Orderable</strong>:</td>
<td>1, 2 chip(s)</td>
</tr>
<tr>
<td><strong>Cache L1</strong>:</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td><strong>L2</strong>:</td>
<td>1 MB I+D on chip per core</td>
</tr>
<tr>
<td><strong>L3</strong>:</td>
<td>35.75 MB I+D on chip per chip</td>
</tr>
<tr>
<td><strong>Other</strong>:</td>
<td>None</td>
</tr>
<tr>
<td><strong>Memory</strong>:</td>
<td>768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R)</td>
</tr>
<tr>
<td><strong>Storage</strong>:</td>
<td>1 x 1 TB SATA SSD</td>
</tr>
<tr>
<td><strong>Other</strong>:</td>
<td>None</td>
</tr>
</tbody>
</table>
## SPEC CPU®2017 Integer Rate Result

**ASUSTeK Computer Inc.**

ASUS RS720-E9(Z11PP-D24) Server System
(3.90 GHz, Intel Xeon Gold 6250)

**SPECRate®2017_int_base = 158**

**SPECRate®2017_int_peak = 164**

**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>32</td>
<td>483</td>
<td>105</td>
<td>483</td>
<td>105</td>
<td>482</td>
<td>106</td>
<td>32</td>
<td>416</td>
<td>123</td>
<td>414</td>
<td>123</td>
<td>415</td>
<td>123</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>32</td>
<td>361</td>
<td>126</td>
<td>362</td>
<td>125</td>
<td>362</td>
<td>125</td>
<td>32</td>
<td>313</td>
<td>145</td>
<td>313</td>
<td>145</td>
<td>316</td>
<td>143</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>32</td>
<td>186</td>
<td>279</td>
<td>186</td>
<td>277</td>
<td>186</td>
<td>278</td>
<td>32</td>
<td>186</td>
<td>279</td>
<td>186</td>
<td>277</td>
<td>186</td>
<td>278</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>32</td>
<td>429</td>
<td>97.8</td>
<td>431</td>
<td>97.4</td>
<td>433</td>
<td>97.0</td>
<td>32</td>
<td>429</td>
<td>97.8</td>
<td>431</td>
<td>97.4</td>
<td>433</td>
<td>97.0</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>32</td>
<td>147</td>
<td>229</td>
<td>147</td>
<td>229</td>
<td>147</td>
<td>229</td>
<td>32</td>
<td>147</td>
<td>229</td>
<td>147</td>
<td>229</td>
<td>147</td>
<td>229</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>32</td>
<td>178</td>
<td>315</td>
<td>178</td>
<td>315</td>
<td>179</td>
<td>313</td>
<td>32</td>
<td>172</td>
<td>325</td>
<td>171</td>
<td>327</td>
<td>174</td>
<td>321</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>32</td>
<td>297</td>
<td>123</td>
<td>297</td>
<td>123</td>
<td>297</td>
<td>123</td>
<td>32</td>
<td>297</td>
<td>123</td>
<td>297</td>
<td>123</td>
<td>297</td>
<td>123</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>32</td>
<td>463</td>
<td>115</td>
<td>462</td>
<td>115</td>
<td>462</td>
<td>115</td>
<td>32</td>
<td>463</td>
<td>115</td>
<td>462</td>
<td>115</td>
<td>462</td>
<td>115</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>32</td>
<td>283</td>
<td>296</td>
<td>284</td>
<td>295</td>
<td>284</td>
<td>295</td>
<td>32</td>
<td>283</td>
<td>296</td>
<td>284</td>
<td>295</td>
<td>284</td>
<td>295</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>32</td>
<td>387</td>
<td>89.4</td>
<td>387</td>
<td>89.4</td>
<td>388</td>
<td>89.2</td>
<td>32</td>
<td>378</td>
<td>91.3</td>
<td>379</td>
<td>91.1</td>
<td>378</td>
<td>91.4</td>
</tr>
</tbody>
</table>

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

## Compiler Notes

The inconsistent Compiler version information under Compiler Version section is due to a discrepancy in Intel Compiler.
The correct version of C/C++ compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux
The correct version of Fortran compiler is: Version 19.1.1.217 Build 20200306 Compiler for Linux

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.

## 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:
LD_LIBRARY_PATH = "/191u1/lib/intel64:/191u1/lib/ia32:/191u1/je5.0.1-32"
MALLOC_CONF = "retain:true"
ASUSTeK Computer Inc.  
ASUS RS720-E9(Z11PP-D24) Server System  
(3.90 GHz, Intel Xeon Gold 6250)

General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE 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
runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

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.

The jemalloc library was
configured and built at default for
32bit (i686) and 64bit (x86_64) targets;
built with the RedHat Enterprise 7.5,
and the system compiler gcc 4.8.5;
sources available from jemalloc.net or

Platform Notes

BIOS Configuration:
VT-d = Disabled
Patrol Scrub = Disabled
ENERGY_PERF_BIAS_CFG mode = performance
SNC = Enabled
IMC interleaving = 1-way
Engine Boost = Level3(Max)
Enforce POR = Disable
Memory Frequency = 2933
LLC dead line allc = Disabled
SR-IOV Support = Disabled
CSM Support = Disabled

Sysinfo program /191u1/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7edbl6e46a485a0011
running on linux-628j Wed Sep 2 04:17:22 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

(Continued on next page)
ASUSTeK Computer Inc.
ASUS RS720-E9(Z11PP-D24) Server System
(3.90 GHz, Intel Xeon Gold 6250)

SPEC CPU®2017 Integer Rate Result
Copyright 2017-2020 Standard Performance Evaluation Corporation

SPECrate®2017_int_base = 158
SPECrate®2017_int_peak = 164

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

Platform Notes (Continued)

From /proc/cpuinfo
  model name : Intel(R) Xeon(R) Gold 6250 CPU @ 3.90GHz
  2 "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: 8
  siblings: 16
  physical 0: cores 2 5 6 10 17 18 19 29
  physical 1: cores 2 3 10 12 13 17 19 29

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): 32
  On-line CPU(s) list: 0-31
  Thread(s) per core: 2
  Core(s) per socket: 8
  Socket(s): 2
  NUMA node(s): 4
  Vendor ID: GenuineIntel
  CPU family: 6
  Model: 85
  Model name: Intel(R) Xeon(R) Gold 6250 CPU @ 3.90GHz
  Stepping: 7
  CPU MHz: 3900.000
  CPU max MHz: 4500.0000
  CPU min MHz: 1200.0000
  BogoMIPS: 7800.00
  Virtualization: VT-x
  L1d cache: 32K
  L1i cache: 32K
  L2 cache: 1024K
  L3 cache: 36608K
  NUMA node0 CPU(s): 0,3-5,16,19-21
  NUMA node1 CPU(s): 1,2,6,7,17,18,22,23
  NUMA node2 CPU(s): 8-10,13,24-26,29
  NUMA node3 CPU(s): 11,12,14,15,27,28,30,31
  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
        aperfmperf 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

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

ASUSTeK Computer Inc.

ASUS RS720-E9(Z11PP-D24) Server System
(3.90 GHz, Intel Xeon Gold 6250)

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

SPECrate®2017_int_base = 158
SPECrate®2017_int_peak = 164

Test Date: Sep-2020
Hardware Availability: Feb-2020
Software Availability: Apr-2020

Platform Notes (Continued)

invpcid_single intel_ppin 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 xsave xsavec xsaveopt xsavec xgetbv1 xsaveopt xsave
ospec avx512_vnni md_clear flush_lld arch_capabilities

/proc/cpuinfo cache data
cache size : 36608 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
physical chip.
available: 4 nodes (0-3)
node 0 cpus: 0 3 4 5 16 19 20 21
node 0 size: 192081 MB
node 0 free: 191508 MB
node 1 cpus: 1 2 6 7 17 18 22 23
node 1 size: 193534 MB
node 1 free: 193092 MB
node 2 cpus: 8 9 10 13 24 25 26 29
node 2 size: 193504 MB
node 2 free: 193037 MB
node 3 cpus: 11 12 14 15 27 28 30 31
node 3 size: 193533 MB
node 3 free: 193104 MB
node distances:
node 0 1 2 3
0: 10 11 21 21
1: 11 10 21 21
2: 21 21 10 11
3: 21 21 11 10

From /proc/meminfo
MemTotal: 791198416 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

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

(Continued on next page)
Platform Notes (Continued)

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, IBPB: conditional,
                                               RSB filling

run-level 3 Sep 1 17:14

SPEC is set to: /191u1
    Filesystem  Type  Size  Used  Avail  Use% Mounted on
    /dev/sda4    xfs  932G  49G  884G   6%  /

From /sys/devices/virtual/dmi/id
    BIOS:    American Megatrends Inc. 6102 12/05/2019
    Vendor:  ASUSTeK COMPUTER INC.
    Product: Z11PP-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)

Compiler Version Notes

==============================================================================
C       | 502.gcc_r(peak)
==============================================================================

Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen
Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

(Continued on next page)
## SPEC CPU®2017 Integer Rate Result

**ASUSTeK Computer Inc.**

ASUS RS720-E9(Z11PP-D24) Server System
(3.90 GHz, Intel Xeon Gold 6250)

<table>
<thead>
<tr>
<th>CPU2017 License: 9016</th>
<th>SPECrate®2017_int_base = 158</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: ASUSTeK Computer Inc.</td>
<td>SPECrate®2017_int_peak = 164</td>
</tr>
<tr>
<td>Tested by: ASUSTeK Computer Inc.</td>
<td></td>
</tr>
</tbody>
</table>

**Compiler Version Notes (Continued)**

```
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)</td>
</tr>
<tr>
<td></td>
<td>525.x264_r(base, peak) 557.xz_r(base)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1
NextGen Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
```

```
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.1.217 Build 20200306
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
```

```
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen
Build 20200304
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
```

(Continued on next page)
ASUSTeK Computer Inc.  
ASUS RS720-E9(Z11PP-D24) Server System  
(3.90 GHz, Intel Xeon Gold 6250)

SPECPower®2017 Integer Rate Result  
Copyright 2017-2020 Standard Performance Evaluation Corporation

SPECPower®2017_int_base = 158  
SPECPower®2017_int_peak = 164

CPU2017 License: 9016  
Test Date: Sep-2020  
Test Sponsor: ASUSTeK Computer Inc.

Hardware Availability: Feb-2020  
Tested by: ASUSTeK Computer Inc.

Software Availability: Apr-2020

Compiler Version Notes (Continued)

Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen Build 20200304  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
C       | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
| 525.x264_r(base, peak) 557.xz_r(base)
==============================================================================

Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1 NextGen Build 20200304  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
C       | 500.perlbench_r(peak) 557.xz_r(peak)
==============================================================================

Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
C++     | 520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak)
| 531.deepsjeng_r(base, peak) 541.leela_r(base, peak)
==============================================================================

Intel(R) C++ Compiler for applications running on Intel(R) 64, Version 2021.1 NextGen Build 20200304  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
Fortran | 548.exchange2_r(base, peak)
==============================================================================

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

(Continued on next page)
ASUSTeK Computer Inc.  
ASUS RS720-E9(Z11PP-D24) Server System  
(3.90 GHz, Intel Xeon Gold 6250)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

SPECrate®2017_int_base = 158
SPECrate®2017_int_peak = 164

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

Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Base Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-m64 -gnextgen -std=c11
-WL,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-xCORE-AVX512 -O3 -ffast-math -flto -mfpmath=sse -funroll-loops
-fuse-ld=gold -qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

C++ benchmarks:
-m64 -gnextgen -Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto -mfpmath=sse
-funroll-loops -fuse-ld=gold -qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

Fortran benchmarks:
-m64 -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -Wl,-z,muldefs
-xCORE-AVX512 -O3 -ipo -no-prec-div -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto
-mbranches-within-32B-boundaries
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc
SPEC CPU®2017 Integer Rate Result
Copyright 2017-2020 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.
ASUS RS720-E9(Z11PP-D24) Server System (3.90 GHz, Intel Xeon Gold 6250)  

SPECrate®2017_int_base = 158
SPECrate®2017_int_peak = 164

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

Test Date: Sep-2020  
Hardware Availability: Feb-2020  
Software Availability: Apr-2020

Peak Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

Fortran benchmarks:  
ifort

Peak Portability Flags

500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64  
502.gcc_r: -D_FILE_OFFSET_BITS=64  
505.mcf_r: -DSPEC_LP64  
520.omnetpp_r: -DSPEC_LP64  
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX  
525.x264_r: -DSPEC_LP64  
531.deepsjeng_r: -DSPEC_LP64  
541.leela_r: -DSPEC_LP64  
548.exchange2_r: -DSPEC_LP64  
557.xz_r: -DSPEC_LP64

Peak Optimization Flags

C benchmarks:  


(Continued on next page)
# SPEC CPU®2017 Integer Rate Result

ASUSTeK Computer Inc.  
ASUS RS720-E9(Z11PP-D24) Server System  
(3.90 GHz, Intel Xeon Gold 6250)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>158</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>164</td>
</tr>
</tbody>
</table>

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

## Peak Optimization Flags (Continued)

505.mcf_r: basepeak = yes

525.x264_r: -m64 -qnextgen -std=c11  
-W1,-plugin-opt=-x86-branches-within-32B-boundaries  
-W1,-z,muldefs -xCORE-AVX512 -flto -O3 -ffast-math  
-fuse-ld=gold -qopt-mem-layout-trans=4 -fno-alias  
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin  
-lqkmalloc

557.xz_r: -W1,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries  
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin  
-lqkmalloc

### C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbmk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

541.leela_r: basepeak = yes

### Fortran benchmarks:

548.exchange2_r: 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:


SPEC CPU and SPECrate 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®2017 v1.1.0 on 2020-09-01 16:17:21-0400.  
Report generated on 2020-09-29 15:26:15 by CPU2017 PDF formatter v6255.  
Originally published on 2020-09-29.