# SPEC CPU®2017 Integer Rate Result

**Fujitsu**

PRIMERGY RX2530 M5, Intel Xeon Gold 5217, 3.00 GHz

<table>
<thead>
<tr>
<th>Copies</th>
<th>SPECrate®2017_int_base = 108</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r 32</td>
<td>82.0</td>
</tr>
<tr>
<td>502.gcc_r 32</td>
<td>83.6</td>
</tr>
<tr>
<td>505.mcf_r 32</td>
<td>144</td>
</tr>
<tr>
<td>520.omnetpp_r 32</td>
<td>68.5</td>
</tr>
<tr>
<td>523.xalancbmk_r 32</td>
<td>125</td>
</tr>
<tr>
<td>525.x264_r 32</td>
<td>213</td>
</tr>
<tr>
<td>531.deepsjeng_r 32</td>
<td>91.4</td>
</tr>
<tr>
<td>541.leela_r 32</td>
<td>82.1</td>
</tr>
<tr>
<td>548.exchange2_r 32</td>
<td>223</td>
</tr>
<tr>
<td>557.xz_r 32</td>
<td>69.7</td>
</tr>
</tbody>
</table>

---

## Software

**CPU Name:** Intel Xeon Gold 5217  
**Max MHz:** 3700  
**Nominal:** 3000  
**Enabled:** 16 cores, 2 chips, 2 threads/core  
**Orderable:** 1,2 chips  
**Cache L1:** 32 KB I + 32 KB D on chip per core  
**L2:** 1 MB I+D on chip per core  
**L3:** 11 MB I+D on chip per chip  
**Memory:** 768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R, running at 2666)  
**Storage:** 1 x SATA M.2 SSD, 240 GB  
**Compiler:** C/C++: Version 19.0.4.227 of Intel C/C++ Compiler Build 20190416 for Linux; Fortran: Version 19.0.4.227 of Intel Fortran Compiler Build 20190416 for Linux  
**Operating System:** SUSE Linux Enterprise Server 15  
**File System:** xfs  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 64-bit  
**Peak Pointers:** Not Applicable  
**Other:** None  
**Power Management:** --

---

## Hardware

**OS:** SUSE Linux Enterprise Server 15  
**Compiler:** C/C++: Version 19.0.4.227 of Intel C/C++ Compiler Build 20190416 for Linux; Fortran: Version 19.0.4.227 of Intel Fortran Compiler Build 20190416 for Linux  
**Firmware:** Fujitsu BIOS for D3384-B1x. Version V5.0.0.14 R1.13.0 released Aug-2019  
**Parallel:** No  
**File System:** xfs  
**System State:** Run level 3 (multi-user)  
**Base Pointers:** 64-bit  
**Peak Pointers:** Not Applicable  
**Other:** None  
**Power Management:** --
## Spec CPU®2017 Integer Rate Result

**Fujitsu**  
PRIMERGY RX2530 M5, Intel Xeon Gold 5217, 3.00 GHz  

<table>
<thead>
<tr>
<th>CPU2017 License</th>
<th>Test Date</th>
<th>Test Sponsor</th>
<th>Tested by</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Oct-2019</td>
<td>Fujitsu</td>
<td>Fujitsu</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Software Availability</th>
<th>Hardware Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>May-2019</td>
<td>May-2019</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 108**  
**SPECrate®2017_int_peak = Not Run**

### 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>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>622</td>
<td>81.9</td>
<td>621</td>
<td>82.0</td>
<td>621</td>
<td>82.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>32</td>
<td>542</td>
<td>83.6</td>
<td>543</td>
<td>83.4</td>
<td>541</td>
<td>83.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>32</td>
<td>364</td>
<td>142</td>
<td>357</td>
<td>145</td>
<td>359</td>
<td>144</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>32</td>
<td>613</td>
<td>68.4</td>
<td>613</td>
<td>68.5</td>
<td>613</td>
<td>68.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>32</td>
<td>271</td>
<td>125</td>
<td>271</td>
<td>125</td>
<td>271</td>
<td>125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>525.x264_r</td>
<td>32</td>
<td>263</td>
<td>213</td>
<td>265</td>
<td>212</td>
<td>261</td>
<td>214</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>32</td>
<td>401</td>
<td>91.5</td>
<td>401</td>
<td>91.4</td>
<td>401</td>
<td>91.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>541.leela_r</td>
<td>32</td>
<td>645</td>
<td>82.1</td>
<td>645</td>
<td>82.2</td>
<td>645</td>
<td>82.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>32</td>
<td>376</td>
<td>223</td>
<td>377</td>
<td>222</td>
<td>376</td>
<td>223</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>32</td>
<td>496</td>
<td>69.7</td>
<td>496</td>
<td>69.7</td>
<td>496</td>
<td>69.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 108**  
**SPECrate®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 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"  
Kernel Boot Parameter set with : nohz_full=1-31

### General Notes

Environment variables set by runcpu before the start of the run:  
LD_LIBRARY_PATH = "/home/Benchmark/speccpu2017-1.0.5/lib/intel64"

Binaries compiled on a system with 1x Intel Core i9-799X CPU + 32GB RAM  
memory using Redhat Enterprise Linux 7.5  
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.

(Continued on next page)
Fujitsu

PRIMERGY RX2530 M5, Intel Xeon Gold 5217, 3.00 GHz

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

SPECrater®2017_int_base = 108
SPECrater®2017_int_peak = Not Run

Test Date: Oct-2019
Hardware Availability: May-2019
Software Availability: May-2019

General Notes (Continued)

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:
Patrol Scrub = Disabled
DCU Ip Prefetcher = Disabled
DCU Streamer Prefetcher = Disabled
Fan Control = Full
Stale AtoS = Enable
WR CRC feature Control = Disabled
Sysinfo program /home/Benchmark/speccpu2017-1.0.5/bin/sysinfo
Rev: r5974 of 2018-05-19 9bce8f2999c33d61f64985e45859ea9
running on RX2530M5-AD-544 Thu Oct 24 00:15:43 2019

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) Gold 5217 CPU @ 3.00GHz
  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 0 1 2 3 4 5 6 7
  physical 1: 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): 32
On-line CPU(s) list: 0-31
Thread(s) per core: 2
Core(s) per socket: 8
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Gold 5217 CPU @ 3.00GHz
Stepping: 6

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

Fujitsu
PRIMERGY RX2530 M5, Intel Xeon Gold 5217, 3.00 GHz

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

SPECrater®2017_int_base = 108
SPECrater®2017_int_peak = Not Run

Platform Notes (Continued)

CPU MHz: 3000.000
CPU max MHz: 3700.0000
CPU min MHz: 1200.0000
BogoMIPS: 6000.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 11264K
NUMA node0 CPU(s): 0-7,16-23
NUMA node1 CPU(s): 8-15, 24-31
Flags: pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtsscp
lm constant_tsc 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 lahlf_l1m abm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3
invpcid_single intel_puin ssbd mba ibrs ibpb ibrs_enhanced tpr_shadow vnmi
flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2  ert ime invpcid rtm
cqm mpz rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd
avx512bw avx512vl xsaveopt xsaves xgetbv1 xsaves cqm_llc cqm_occmap_llc cqm_mbms_total
cqm_mbms_local dtherm ida arat pln pts hwp hwp_act_window hwp_epp hwp_pkg_req pkuu
ospke avx512_vnni flush_l1d arch_capabilities

/cacheinfo cache data
  cache size : 11264 KB

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
definition of a physical chip.
  available: 2 nodes (0-1)
  node 0 cpus: 0 1 2 3 4 5 6 7 16 17 18 19 20 21 22 23
  node 0 size: 385425 MB
  node 0 free: 384957 MB
  node 1 cpus: 8 9 10 11 12 13 14 15 24 25 26 27 28 29 30 31
  node 1 size: 386827 MB
  node 1 free: 386404 MB
  node distances:
    node 0 1
    0: 10 21
    1: 21 10

From /proc/meminfo
  MemTotal: 790787244 KB
  HugePages_Total: 0
  Hugepagesize: 2048 KB

From /etc/*release* /etc/*version*

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

Fujitsu
PRIMERGY RX2530 M5, Intel Xeon Gold 5217, 3.00 GHz

SPECrater®2017_int_base = 108
SPECrater®2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Oct-2019
Hardware Availability: May-2019
Software Availability: May-2019

Platform Notes (Continued)

os-release:
NAME="SLES"
VERSION="15"
VERSION_ID="15"
PRETTY_NAME="SUSE Linux Enterprise Server 15"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15"

uname -a:
Linux RX2530M5-AD-544 4.12.14-25.28-default #1 SMP Wed Jan 16 20:00:47 UTC 2019
dd6077c) x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:
CVE-2017-5754 (Meltdown): Not affected
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 Oct 23 20:13

SPEC is set to: /home/Benchmark/speccpu2017-1.0.5

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda5 xfs 191G 76G 116G 40% /home

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.

BIOS FUJITSU // American Megatrends Inc. V5.0.0.14 R1.13.0 for D3383-B1x 08/29/2019
Memory:
23x Micron 36ASF4G72PZ-2G9E2 32 GB 2 rank 2933, configured at 2666
1x Samsung M393A4K40CB2-CVF 32 GB 2 rank 2933, configured at 2666

(End of data from sysinfo program)

Compiler Version Notes

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

Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Fujitsu
PRIMERGY RX2530 M5, Intel Xeon Gold 5217, 3.00 GHz

SPECrate®2017_int_base = 108
SPECrate®2017_int_peak = Not Run

CPU2017 License: 19
Test Sponsor: Fujitsu
Tested by: Fujitsu

Test Date: Oct-2019
Hardware Availability: May-2019
Software Availability: May-2019

Compiler Version Notes (Continued)

Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

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

Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

------------------------------------------------------------------------------
==============================================================================
Fortran | 548.exchange2_r(base)
------------------------------------------------------------------------------

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)
64, Version 19.0.4.227 Build 20190416
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

------------------------------------------------------------------------------
Base Compiler Invocation

C benchmarks:
icc -m64 -std=c11

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

------------------------------------------------------------------------------
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

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

Fujitsu
PRIMERGY RX2530 M5, Intel Xeon Gold 5217, 3.00 GHz

SPECrate®2017_int_base = 108
SPECrate®2017_int_peak = Not Run

Base Portability Flags (Continued)

557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc

C++ benchmarks:
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc

Fortran benchmarks:
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc

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/Fujitsu-Platform-Settings-V1.0-CSL-RevE.xml

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 v1.0.5 on 2019-10-23 11:15:42-0400.
Report generated on 2019-11-12 15:01:08 by CPU2017 PDF formatter v6255.
Originally published on 2019-11-12.