## SPEC CPU®2017 Integer Rate Result

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)  
Tyrone Camarero DS400E1U-224R4  
(2.90 GHz, Intel Xeon Gold 6226R)

<table>
<thead>
<tr>
<th>Specrate®2017_int_base</th>
<th>235</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specrate®2017_int_peak</td>
<td>244</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 006042  
**Test Date:** Feb-2021  
**Test Sponsor:** Netweb Pte Ltd  
**Hardware Availability:** Aug-2020  
**Tested by:** Tyrone Systems  
**Software Availability:** Dec-2020

### Hardware

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU Name:</strong></td>
<td>Intel Xeon Gold 6226R</td>
</tr>
<tr>
<td><strong>Max MHz:</strong></td>
<td>3900</td>
</tr>
<tr>
<td><strong>Nominal:</strong></td>
<td>2900</td>
</tr>
<tr>
<td><strong>Enabled:</strong></td>
<td>32 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>22 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>384 GB (12 x 32 GB 2Rx4 PC4-2933Y-R)</td>
</tr>
<tr>
<td><strong>Storage:</strong></td>
<td>1 x 480 GB SATA SSD</td>
</tr>
<tr>
<td><strong>Other:</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OS:</strong></td>
<td>CentOS Linux release 8.3.2011</td>
</tr>
<tr>
<td></td>
<td>4.18.0-240.el8.x86_64</td>
</tr>
<tr>
<td><strong>Compiler:</strong></td>
<td>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</td>
</tr>
<tr>
<td><strong>Parallel:</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Firmware:</strong></td>
<td>Version 3.4 released Oct-2020</td>
</tr>
<tr>
<td><strong>File System:</strong></td>
<td>xfs</td>
</tr>
<tr>
<td><strong>System State:</strong></td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td><strong>Base Pointers:</strong></td>
<td>64-bit</td>
</tr>
<tr>
<td><strong>Peak Pointers:</strong></td>
<td>32/64-bit</td>
</tr>
<tr>
<td><strong>Other:</strong></td>
<td>jemalloc memory allocator V5.0.1</td>
</tr>
<tr>
<td><strong>Power Management:</strong></td>
<td>BIOS set to prefer performance at the cost of additional power usage</td>
</tr>
</tbody>
</table>

### Test Results

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>perlbench_r</td>
<td>64</td>
</tr>
<tr>
<td>gcc_r</td>
<td>64</td>
</tr>
<tr>
<td>mcf_r</td>
<td>64</td>
</tr>
<tr>
<td>omnetpp_r</td>
<td>64</td>
</tr>
<tr>
<td>xalancbmk_r</td>
<td>64</td>
</tr>
<tr>
<td>x264_r</td>
<td>64</td>
</tr>
<tr>
<td>deepsjeng_r</td>
<td>64</td>
</tr>
<tr>
<td>leela_r</td>
<td>64</td>
</tr>
<tr>
<td>exchange2_r</td>
<td>64</td>
</tr>
<tr>
<td>xz_r</td>
<td>64</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base** (235)  
**SPECrate®2017_int_peak** (244)
SPEC CPU®2017 Integer Rate Result

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)

**Tyrone Camarero DS400E1U-224R4**  
(2.90 GHz, Intel Xeon Gold 6226R)

**SPECrate®2017_int_base = 235**  
**SPECrate®2017_int_peak = 244**

**CPU2017 License:** 006042  
**Test Date:** Feb-2021

**Test Sponsor:** Netweb Pte Ltd  
**Hardware Availability:** Aug-2020

**Tested by:** Tyrone Systems  
**Software Availability:** Dec-2020

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## Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Peak</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>64</td>
<td>622</td>
<td>164</td>
<td>622</td>
<td>164</td>
<td>623</td>
<td>163</td>
<td>624</td>
<td>164</td>
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<tr>
<td>502.gcc_r</td>
<td>64</td>
<td>526</td>
<td>172</td>
<td>525</td>
<td>173</td>
<td>531</td>
<td>171</td>
<td>528</td>
<td>172</td>
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<td>505.mcf_r</td>
<td>64</td>
<td>266</td>
<td>389</td>
<td>265</td>
<td>390</td>
<td>265</td>
<td>390</td>
<td>265</td>
<td>390</td>
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<tr>
<td>520.omnetpp_r</td>
<td>64</td>
<td>642</td>
<td>131</td>
<td>640</td>
<td>131</td>
<td>640</td>
<td>131</td>
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<td>131</td>
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<tr>
<td>523.xalanbmk_r</td>
<td>64</td>
<td>214</td>
<td>315</td>
<td>216</td>
<td>313</td>
<td>216</td>
<td>313</td>
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<td>313</td>
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<tr>
<td>525.x264_r</td>
<td>64</td>
<td>225</td>
<td>499</td>
<td>229</td>
<td>490</td>
<td>226</td>
<td>496</td>
<td>219</td>
<td>511</td>
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<tr>
<td>531.deepsjeng_r</td>
<td>64</td>
<td>375</td>
<td>196</td>
<td>374</td>
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<td>541.leela_r</td>
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<td>580</td>
<td>183</td>
<td>569</td>
<td>186</td>
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<tr>
<td>548.exchange2_r</td>
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<td>469</td>
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<td>470</td>
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<td>470</td>
<td>357</td>
<td>470</td>
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<tr>
<td>557.xz_r</td>
<td>64</td>
<td>500</td>
<td>138</td>
<td>498</td>
<td>139</td>
<td>498</td>
<td>139</td>
<td>494</td>
<td>140</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 235**  
**SPECrate®2017_int_peak = 244**

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"

### Environment Variables Notes

Environment variables set by runcpu before the start of the run:  
LD_LIBRARY_PATH =  
"/home/cpu2017/lib/intel64:/home/cpu2017/lib/ia32:/home/cpu2017/je5.0.1-32"  
MALLOC_CONF = "retain:true"
SPEC CPU®2017 Integer Rate Result

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero DS400E1U-224R4
(2.90 GHz, Intel Xeon Gold 6226R)

SPECrate®2017_int_base = 235
SPECrate®2017_int_peak = 244

CPU2017 License: 006042
Test Sponsor: Netweb Pte Ltd
Tested by: Tyrone Systems

General Notes

Binaries compiled on a system with 2x Intel Cascade Lake CPU + 384 GB RAM
memory using CentOS 8.2 x86_64
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.
jemalloc, a general purpose malloc implementation
built with the CentOS 8.2 x86_64, and the system compiler gcc 4.8.5

Platform Notes

BIOS Settings:
Power Technology = Custom
Power Performance Tuning = BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode = Extreme Performance
SNC = Enable
Stale AtoS = Disable
IMC Interleaving = 1-way Interleave
Patrol Scrub = Disable

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on spec Fri Feb 5 15:37:52 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 : Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz
 2 "physical id"s (chips)
 64 "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

(Continued on next page)
Tyrone Systems  
(Test Sponsor: Netweb Pte Ltd)  
Tyrone Camarero DS400E1U-224R4  
(2.90 GHz, Intel Xeon Gold 6226R)

**Platform Notes (Continued)**

```
physical 1: 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
- **CPU(s)**: 64
- **On-line CPU(s) list**: 0-63
- **Thread(s) per core**: 2
- **Core(s) per socket**: 16
- **Socket(s)**: 2
- **NUMA node(s)**: 4
- **Vendor ID**: GenuineIntel
- **CPU family**: 6
- **Model**: 85
- **Model name**: Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz
- **Stepping**: 7
- **CPU MHz**: 3600.008
- **CPU max MHz**: 3900.0000
- **CPU min MHz**: 1200.0000
- **BogoMIPS**: 5800.00
- **Virtualization**: VT-x
- **L1d cache**: 32K
- **L1i cache**: 32K
- **L2 cache**: 1024K
- **L3 cache**: 22528K
- **NUMA node0 CPU(s)**: 0-3, 8-11, 32-35, 40-43
- **NUMA node1 CPU(s)**: 4-7, 12-15, 36-39, 44-47
- **NUMA node2 CPU(s)**: 16-19, 24-27, 48-51, 56-59
- **NUMA node3 CPU(s)**: 20-23, 28-31, 52-55, 60-63
- **Flags**: fpu vme de pse tsc msr pae mce 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 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 lpgov invpcid_single intel_pinn ssbd mbd ibrs ibpb ibrs_check ibrs_enhanced fs訾base tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid cqm mpx rtvd rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_prt avx512cd avx512bw xsaveopt xsaves cqm_llc cqm_occup_llc cqm_mbb_total cqm_mbb_local dtherm ida arat pln pts pku ospke avx512_vnni md_clear flush_l1d arch_capabilities

```
/proc/cpuinfo cache data
    cache size: 22528 KB
```

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

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

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**Tyrone Camarero DS400E1U-224R4**  
(2.90 GHz, Intel Xeon Gold 6226R)

<table>
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<tr>
<th>CPU2017 License: 006042</th>
<th>Test Date: Feb-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: Netweb Pte Ltd</td>
<td>Hardware Availability: Aug-2020</td>
</tr>
<tr>
<td>Tested by: Tyrone Systems</td>
<td>Software Availability: Dec-2020</td>
</tr>
</tbody>
</table>

**SPECrate®2017_int_base = 235**  
**SPECrate®2017_int_peak = 244**

---

**Platform Notes (Continued)**

```plaintext
available: 4 nodes (0-3)
node 0 cpus: 0 1 2 3 8 9 10 11 32 33 34 35 40 41 42 43
node 0 size: 91297 MB
node 0 free: 94748 MB
node 1 cpus: 4 5 6 7 12 13 14 15 36 37 38 39 44 45 46 47
node 1 size: 61836 MB
node 1 free: 64286 MB
node 2 cpus: 16 17 18 19 24 25 26 27 48 49 50 51 56 57 58 59
node 2 size: 92736 MB
node 2 free: 96397 MB
node 3 cpus: 20 21 22 23 28 29 30 31 52 53 54 55 60 61 62 63
node 3 size: 93129 MB
node 3 free: 96467 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: 361832316 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

/sbin/tuned-adm active

- Current active profile: throughput-performance

/sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has performance

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

- centos-release: CentOS Linux release 8.3.2011
- centos-release-upstream: Derived from Red Hat Enterprise Linux 8.3
- os-release:
  - NAME="CentOS Linux"
  - VERSION="8"
  - ID="centos"
  - ID_LIKE="rhel fedora"
  - VERSION_ID="8"
  - PLATFORM_ID="platform:el8"
  - PRETTY_NAME="CentOS Linux 8"
  - ANSI_COLOR="0;31"
- redhat-release: CentOS Linux release 8.3.2011
- system-release: CentOS Linux release 8.3.2011
- system-release-cpe: cpe:/o:centos:centos:8

(Continued on next page)
SPEC CPU®2017 Integer Rate Result
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SPECrate®2017_int_base = 235
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CPU2017 License: 006042
Test Sponsor: Netweb Pte Ltd
Tested by: Tyrone Systems

Platform Notes (Continued)

uname -a:
Linux spec 4.18.0-240.el8.x86_64 #1 SMP Fri Sep 25 19:48:47 UTC 2020 x86_64 x86_64
x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit):
CVE-2018-3620 (L1 Terminal Fault):
Microarchitectural Data Sampling:
CVE-2017-5754 (Meltdown):
CVE-2018-3639 (Speculative Store Bypass):
CVE-2017-5753 (Spectre variant 1):
CVE-2017-5715 (Spectre variant 2):
CVE-2020-0543 (Special Register Buffer Data Sampling):
CVE-2019-11135 (TSX Asynchronous Abort):

run-level 3 Feb 5 15:36

SPEC is set to: /home/cpu2017

Memory:
12x NO DIMM NO DIMM
1x Samsung M393A4K40CB2-CVF 2 rank 2933, configured at 2934
11x Samsung M393A4K40CB2-CVF 32 GB 2 rank 2933, configured at 2934

BIOS:
BIOS Vendor: American Megatrends Inc.
BIOS Version: 3.4
BIOS Date: 10/30/2020
BIOS Revision: 5.14

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

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Hardware Availability: Aug-2020
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Platform Notes (Continued)

(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.

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

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C       | 502.gcc_r(peak)
Intel(R) C Compiler for applications running on IA-32, Version 2021.1 NextGen
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C       | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
525.x264_r(base, peak) 557.xz_r(base)
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(Continued on next page)
**SPEC CPU®2017 Integer Rate Result**

Cpu: Tyrone Camarero DS400E1U-224R4
(2.90 GHz, Intel Xeon Gold 6226R)

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**Compiler Version Notes (Continued)**

---

**C** | 500.perlbench_r(peak) 557.xz_r(peak)
---

Intel(R) C 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** | 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.

---

**C** | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base)
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Intel(R) C Compiler for applications running on Intel(R) 64, Version 2021.1 NextGen Build 20200304
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---

**C** | 500.perlbench_r(peak) 557.xz_r(peak)
---

Intel(R) C Compiler for applications running on Intel(R) 64, Version 19.1.1.217 Build 20200306
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---

**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
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---

**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

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

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)

**Tyrone Camarero DS400E1U-224R4**  
(2.90 GHz, Intel Xeon Gold 6226R)

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</tr>
</tbody>
</table>

### Compiler Version Notes (Continued)

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### Base Compiler Invocation

- **C benchmarks:**
  - icc

- **C++ benchmarks:**
  - icpc

- **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 -qnextgen -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 -qnextgen -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`

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

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero DS400E1U-224R4
(2.90 GHz, Intel Xeon Gold 6226R)

SPECratio®2017_int_base = 235
SPECratio®2017_int_peak = 244

CPU2017 License: 006042
Test Sponsor: Netweb Pte Ltd
Tested by: Tyrone Systems

Test Date: Feb-2021
Hardware Availability: Aug-2020
Software Availability: Dec-2020

Base Optimization Flags (Continued)

C++ benchmarks (continued):
-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

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

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(Test Sponsor: Netweb Pte Ltd)
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Peak Optimization Flags (Continued)

500.perlbench_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2)
-xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-strict-overflow
-mbranches-within-32B-boundaries
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/intel64_lin
-lqkmalloc

502.gcc_r: -m32
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.1.217/linux/compiler/lib/ia32_lin
-std=gnu89
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX512 -flto
-Ofast(pass 1) -O3 -ffast-math -qnextgen -fuse-ld=gold
-qopt-mem-layout-trans=4 -L/usr/local/je5.0.1-32/lib
-ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -m64 -qnextgen -std=c11
-Wl,-plugin-opt=-x86-branches-within-32B-boundaries
-Wl,-z,muldefs -xCORE-AVX512 -flto -O3 -ffast-math
-flto -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: -Wl,-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
**SPEC CPU®2017 Integer Rate Result**

Tyrone Systems  
(Test Sponsor: Netweb Pte Ltd)  
Tyrone Camarero DS400E1U-224R4  
(2.90 GHz, Intel Xeon Gold 6226R)  

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

- [http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-CLX-revB.html](http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-CLX-revB.html)

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

- [http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-CLX-revB.xml](http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-CLX-revB.xml)

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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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