# SPEC CPU®2017 Integer Rate Result

## Tyrone Systems

(Test Sponsor: Netweb Pte Ltd)

**Tyrone Camarero SDI100C3R-28**

(2.60 GHz, Intel Xeon Gold 6348)

**SPECRate®2017_int_base = 391**

**SPECRate®2017_int_peak = 407**

<table>
<thead>
<tr>
<th>Copies</th>
<th>500.perlbench_r</th>
<th>502.gcc_r</th>
<th>505.mcf_r</th>
<th>520.omnetpp_r</th>
<th>523.xalancbmk_r</th>
<th>525.x264_r</th>
<th>531.deepsjeng_r</th>
<th>541.leela_r</th>
<th>548.exchange2_r</th>
<th>557.xz_r</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>40</td>
<td>80</td>
<td>120</td>
<td>160</td>
<td>200</td>
<td>240</td>
<td>280</td>
<td>320</td>
<td>360</td>
<td>400</td>
</tr>
<tr>
<td>40</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
<tr>
<td>80</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
<tr>
<td>120</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
<tr>
<td>160</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
<tr>
<td>200</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
<tr>
<td>240</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
<tr>
<td>280</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
<tr>
<td>320</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
<tr>
<td>360</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
<tr>
<td>400</td>
<td>280</td>
<td>283</td>
<td>350</td>
<td>607</td>
<td>488</td>
<td>861</td>
<td>901</td>
<td>903</td>
<td>903</td>
<td>903</td>
</tr>
</tbody>
</table>

---

## Hardware

**CPU Name:** Intel Xeon Gold 6348

- **Max MHz:** 3500
- **Nominal:** 2600
- **Enabled:** 56 cores, 2 chips, 2 threads/core
- **Orderable:** 1.2 Chips
- **Cache L1:** 32 KB I + 48 KB D on chip per core
- **L2:** 1.25 MB I+D on chip per core
- **L3:** 42 MB I+D on chip per chip
- **Other:** None
- **Memory:** 256 GB (16 x 16 GB 1Rx4 PC4-3200AA-R)
- **Storage:** 1 x 480 GB SATA SSD
- **Other:** None

---

## Software

**OS:** CentOS Linux release 8.4.2105

- **Kernel:** 4.18.0-305.3.1.el8.x86_64
- **Compiler:**
  - C/C++: Version 2021.1 of Intel oneAPI DPC++/C++
  - Fortran: Version 2021.1 of Intel Fortran Compiler
  - C/C++: Version 2021.1 of Intel C/C++ Compiler Classic Build 20201112 for Linux
- **Parallel:** No
- **Firmware:** Version 1.1a released Jun-2021
- **File System:** xfs
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 64-bit
- **Peak Pointers:** 32/64-bit
- **Other:** jemalloc memory allocator V5.0.1
- **Power Management:** BIOS set to prefer performance at the cost of additional power usage.
SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero SDI100C3R-28
(2.60 GHz, Intel Xeon Gold 6348)

Copyright 2017-2021 Standard Performance Evaluation Corporation

Test Sponsor: Netweb Pte Ltd
Tested by: Tyrone Systems

SPECr®ate2017_int_base = 391
SPECr®ate2017_int_peak = 407

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.perlb anch_r</td>
<td>112</td>
<td>634</td>
<td>281</td>
<td><strong>636</strong></td>
<td><strong>280</strong></td>
<td>637</td>
<td>280</td>
<td>112</td>
<td>545</td>
<td>327</td>
<td>547</td>
<td>326</td>
<td><strong>546</strong></td>
<td><strong>327</strong></td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>112</td>
<td><strong>561</strong></td>
<td><strong>283</strong></td>
<td>562</td>
<td>282</td>
<td>561</td>
<td>283</td>
<td>112</td>
<td>453</td>
<td>350</td>
<td><strong>453</strong></td>
<td><strong>350</strong></td>
<td>454</td>
<td>349</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>112</td>
<td>298</td>
<td>607</td>
<td>300</td>
<td>604</td>
<td><strong>298</strong></td>
<td><strong>607</strong></td>
<td>112</td>
<td>298</td>
<td>607</td>
<td>300</td>
<td>604</td>
<td><strong>298</strong></td>
<td><strong>607</strong></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>112</td>
<td>754</td>
<td>195</td>
<td>751</td>
<td>196</td>
<td><strong>752</strong></td>
<td><strong>195</strong></td>
<td>112</td>
<td>754</td>
<td>195</td>
<td>751</td>
<td>196</td>
<td><strong>752</strong></td>
<td><strong>195</strong></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>112</td>
<td>242</td>
<td>488</td>
<td><strong>242</strong></td>
<td><strong>488</strong></td>
<td>242</td>
<td>489</td>
<td>112</td>
<td>242</td>
<td>488</td>
<td><strong>242</strong></td>
<td><strong>488</strong></td>
<td>242</td>
<td>489</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>112</td>
<td>228</td>
<td>861</td>
<td>228</td>
<td>861</td>
<td>228</td>
<td>859</td>
<td>112</td>
<td>217</td>
<td>903</td>
<td><strong>218</strong></td>
<td><strong>901</strong></td>
<td>218</td>
<td>900</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>112</td>
<td>387</td>
<td>332</td>
<td><strong>387</strong></td>
<td><strong>332</strong></td>
<td>386</td>
<td>332</td>
<td>112</td>
<td>387</td>
<td>332</td>
<td><strong>387</strong></td>
<td><strong>332</strong></td>
<td>386</td>
<td>332</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>112</td>
<td>552</td>
<td>336</td>
<td><strong>560</strong></td>
<td><strong>331</strong></td>
<td>565</td>
<td>328</td>
<td>112</td>
<td>552</td>
<td>336</td>
<td><strong>560</strong></td>
<td><strong>331</strong></td>
<td>565</td>
<td>328</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>112</td>
<td>326</td>
<td>899</td>
<td><strong>325</strong></td>
<td><strong>903</strong></td>
<td>323</td>
<td>907</td>
<td>112</td>
<td>326</td>
<td>899</td>
<td><strong>325</strong></td>
<td><strong>903</strong></td>
<td>323</td>
<td>907</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>112</td>
<td>573</td>
<td>211</td>
<td>569</td>
<td>213</td>
<td><strong>569</strong></td>
<td><strong>213</strong></td>
<td>112</td>
<td>580</td>
<td>209</td>
<td><strong>579</strong></td>
<td><strong>209</strong></td>
<td>577</td>
<td>209</td>
</tr>
</tbody>
</table>

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"

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"

General Notes

Binaries compiled locally by Netweb
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.:

(Continued on next page)
General Notes (Continued)

numactl --interleave=all runcpu <etc>

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.
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.
NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.


Platform Notes

BIOS Settings:
Power Technology set to Custom
Power Performance Tuning set to BIOS Controls EPB
ENERGY_PERF_BIAS_CFG mode set to Performance
LLC Dead Line Alloc set to Disable

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
running on localhost.localdomain Mon Aug  9 01:15:19 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 6348 CPU @ 2.60GHz
  2 "physical id"s (chips)
  112 "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 : 28
siblings : 56
  physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
  physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

From lscpu from util-linux 2.32.1:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 112

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

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero SDI100C3R-28
(2.60 GHz, Intel Xeon Gold 6348)

SPECrate®2017_int_base = 391
SPECrate®2017_int_peak = 407

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

Test Date: Jul-2021
Hardware Availability: Apr-2021
Software Availability: Jun-2021

Platform Notes (Continued)

On-line CPU(s) list: 0-111
Thread(s) per core: 2
Core(s) per socket: 28
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
BIOS Vendor ID: Intel(R) Corporation
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Gold 6348 CPU @ 2.60GHz
BIOS Model name: Intel(R) Xeon(R) Gold 6348 CPU @ 2.60GHz
Stepping: 6
CPU MHz: 3400.518
CPU max MHz: 3500.0000
CPU min MHz: 800.0000
BogoMIPS: 5200.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 32008K
NUMA node0 CPU(s): 0-27,56-83
NUMA node0 CPU(s): 28-55,84-111
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 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 xtrpr 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 invpcid_single intel_pnpin ssbd mba ibpb ibpib ibrs ibrs_enhanced tpr_shadow vmmi flexpriority ept vpid ept_ad fssgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid cmqm rdt_a avx512f avx512dq rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha ni avx512bw avx512vl xsaveopt xsavec xatput xsavec qgtb v1 xsaves cmqm llc cmq_occup llc cmq_mbb_total cmq_mbb_local split_lock_detect wbinvd dtherm ida arat pni pts avx512vbmi umip pku ospe avx512_vmbmi2 gfnv xsave vclmulqdp avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid fqrn md_clear pconfig flush_l1d arch_capabilities

/proc/cpuinfo cache data
cache size : 43008 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 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83
node 0 size: 128601 MB
node 0 free: 127083 MB

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

Copyright 2017-2021 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero SDI100C3R-28
(2.60 GHz, Intel Xeon Gold 6348)

SPECrate®2017_int_base = 391
SPECrate®2017_int_peak = 407

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

Test Date: Jul-2021
Hardware Availability: Apr-2021
Software Availability: Jun-2021

Platform Notes (Continued)

node 1 cpus: 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
53 54 55 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106
107 108 109 110 111
node 1 size: 128972 MB
node 1 free: 128438 MB
node distances:
node 0 1
0: 10 20
1: 20 10

From /proc/meminfo
MemTotal: 263755836 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 8.4.2105
centos-release-upstream: Derived from Red Hat Enterprise Linux 8.4
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 8.4.2105
system-release: CentOS Linux release 8.4.2105
system-release-cpe: cpe:/o:centos:centos:8

uname -a:
Linux localhost.localdomain 4.18.0-305.3.1.el8.x86_64 #1 SMP Tue Jun 1 16:14:33 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:
CVE-2018-12207 (iTLB Multihit): Not affected
CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Not affected
CVE-2017-5754 (Meltdown): Not affected

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

Test Sponsor: Netweb Pte Ltd

Tyrone Systems

CPU2017 License: 006042
Test Date: Jul-2021

Tyrone Camarero SDI100C3R-28
(2.60 GHz, Intel Xeon Gold 6348)

Test Sponsor: Netweb Pte Ltd

SPECrate®2017_int_base = 391
Test Hardware Availability: Apr-2021

SPECrate®2017_int_peak = 407
Software Availability: Jun-2021

Tested by: Tyrone Systems

Platform Notes (Continued)

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: Enhanced IBRS, IBPB: conditional, RSB filling

CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Dec 31 19:13

SPEC is set to: /home/cpu2017

Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/cl-home xfs 163G 108G 56G 67% /home

From /sys/devices/virtual/dmi/id
Vendor:         Tyrone Systems
Product:        Tyrone Camarero SDI100C3R-28
Product Family: SMC X12
Serial:         123456789

Additional information from dmidecode 3.2 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:
16x Samsung M393A2K40DB3-CWE 16 GB 1 rank 3200

BIOS:
BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 1.1a
BIOS Date: 06/25/2021
BIOS Revision: 5.22

(End of data from sysinfo program)

Compiler Version Notes

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

Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
SPECCPU®2017 Integer Rate Result

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero SDI100C3R-28
(2.60 GHz, Intel Xeon Gold 6348)

SPECrate®2017_int_base = 391
SPECrate®2017_int_peak = 407

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

Compiler Version Notes (Continued)

C | 502.gcc_r(peak)

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version
2021.1 Build 20201113
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) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
Version 2021.1 Build 20201113
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 Classic for applications running on Intel(R)
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero SDI100C3R-28
(2.60 GHz, Intel Xeon Gold 6348)

SPEC CPU®2017 Integer Rate Result
Copyright 2017-2021 Standard Performance Evaluation Corporation

Compiler Version Notes (Continued)

Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
C       | 502.gcc_r(peak)
==============================================================================
Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2021.1 Build 20201113
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) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113
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) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

==============================================================================
Fortran | 548.exchange2_r(base, peak)
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

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

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero SDI100C3R-28
(2.60 GHz, Intel Xeon Gold 6348)

SPECrate®2017_int_base = 391
SPECrate®2017_int_peak = 407

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

Test Date: Jul-2021
Hardware Availability: Apr-2021
Software Availability: Jun-2021

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:
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math
-fflto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

C++ benchmarks:
-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

Fortran benchmarks:
-w -m64 -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/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc
**SPEC CPU®2017 Integer Rate Result**

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)  
Tyrone Camarero SDI100C3R-28  
(2.60 GHz, Intel Xeon Gold 6348)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>SPECrate®2017_int_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>391</td>
<td>407</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 006042  
**Test Date:** Jul-2021  
**Test Sponsor:** Netweb Pte Ltd  
**Tested by:** Tyrone Systems  
**Hardware Availability:** Apr-2021  
**Software Availability:** Jun-2021

---

**Peak Compiler Invocation**

C benchmarks (except as noted below):
- icx
- 500.perlbench_r: icc
- 557.xz_r: icc

C++ benchmarks:
- icpx

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:
- 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/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
- -lqkmalloc

- 502.gcc_r: -m32
- -L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/ia32_lin
- -std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
- -fprofile-use=default.proftdata(pass 2) -xCORE-AVX512 -flto
- -Ofast(pass 1) -O3 -ffast-math -qopt-mem-layout-trans=4

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

Copyright 2017-2021 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero SDI100C3R-28
(2.60 GHz, Intel Xeon Gold 6348)

SPECrate®2017_int_base = 391
SPECrate®2017_int_peak = 407

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

Peak Optimization Flags (Continued)

502.gcc_r (continued):
-mbranches-within-32B-boundaries
-L/usr/local/je5.0.1-32/lib -ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -flto
-O3 -ffast-math -qopt-mem-layout-trans=4 -fno-alias
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/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/opt/intel/oneapi/compiler/2021.1.1/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
http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-CLX-revI.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml
http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-CLX-revI.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 v1.1.8 on 2021-08-09 01:15:18-0400.
Report generated on 2021-09-21 16:16:10 by CPU2017 PDF formatter v6442.
Originally published on 2021-09-21.