**SPEC CPU®2017 Integer Speed Result**

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)  
Tyrone Camarero QS400TU-224R4  
(2.40 GHz, Intel Xeon Gold 6148)

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

<table>
<thead>
<tr>
<th>Threads</th>
<th>SPECspeed®2017_int_base = 10.7</th>
<th>SPECspeed®2017_int_peak = 10.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbench_s</td>
<td>6.37</td>
<td>7.29</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>9.87</td>
<td></td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>9.82</td>
<td>17.7</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>9.56</td>
<td></td>
</tr>
<tr>
<td>623.xalancbmk_s</td>
<td>12.9</td>
<td></td>
</tr>
<tr>
<td>625.x264_s</td>
<td>15.1</td>
<td>15.5</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>5.47</td>
<td></td>
</tr>
<tr>
<td>641.leela_s</td>
<td>4.55</td>
<td></td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>15.6</td>
<td></td>
</tr>
<tr>
<td>657.xz_s</td>
<td>23.9</td>
<td></td>
</tr>
</tbody>
</table>

---

**Hardware**

CPU Name: Intel Xeon Gold 6148  
Max MHz: 3700  
Nominal: 2400  
Enabled: 80 cores, 4 chips, 2 threads/core  
Orderable: 1, 2, 4 (chip(s)  
Cache L1: 32 KB I + 32 KB D on chip per core  
L2: 1 MB I+D on chip per core  
L3: 27.5 MB I+D on chip per chip  
Other: None  
Memory: 384 GB (24 x 16 GB 1Rx4 PC4-2933Y-R, running at 2666)  
Storage: 1 x 480 GB SATA SSD  
Other: None

**Software**

OS: CentOS Linux release 8.3.2011  
Kernel 4.18.0-240.el8.x86_64  
Compiler: C/C++: Version 19.1.2.254 of Intel C/C++ Compiler for Linux Build 20200623;  
Fortran: Version 19.1.2.254 of Intel Fortran Compiler for Linux Build 20200623;  
Parallel: Yes  
Firmware: Version 3.4 released Nov-2020  
File System: xfs  
System State: Run level 3 (multi user)  
Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other: jemalloc memory allocator V5.0.1  
Power Management: BIOS set to prefer performance at the cost of additional power usage.
### 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>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbench_s</td>
<td>160</td>
<td>279</td>
<td>6.37</td>
<td>278</td>
<td>6.38</td>
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<td>160</td>
<td>243</td>
<td>7.29</td>
<td></td>
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<td>7.28</td>
</tr>
<tr>
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<td>396</td>
<td>10.0</td>
<td>403</td>
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<td>409</td>
<td>9.73</td>
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<td>406</td>
<td>9.82</td>
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<td>405</td>
<td>9.82</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>160</td>
<td>270</td>
<td>17.5</td>
<td>266</td>
<td>17.8</td>
<td>267</td>
<td>17.7</td>
<td>160</td>
<td>270</td>
<td>17.5</td>
<td></td>
<td>266</td>
<td>17.8</td>
</tr>
<tr>
<td>623.xalanchmk_s</td>
<td>160</td>
<td>110</td>
<td>12.9</td>
<td>110</td>
<td>12.9</td>
<td>109</td>
<td>13.0</td>
<td>160</td>
<td>110</td>
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<td></td>
<td>110</td>
<td>12.9</td>
</tr>
<tr>
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<td>160</td>
<td>116</td>
<td>15.1</td>
<td>117</td>
<td>15.1</td>
<td>117</td>
<td>15.1</td>
<td>160</td>
<td>113</td>
<td>15.6</td>
<td></td>
<td>114</td>
<td>15.5</td>
</tr>
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<td>631.deepsjeng_s</td>
<td>160</td>
<td>262</td>
<td>5.47</td>
<td>262</td>
<td>5.47</td>
<td>262</td>
<td>5.47</td>
<td>160</td>
<td>262</td>
<td>5.47</td>
<td></td>
<td>262</td>
<td>5.47</td>
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<tr>
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<td>160</td>
<td>189</td>
<td>15.5</td>
<td>189</td>
<td>15.6</td>
<td>189</td>
<td>15.6</td>
<td>160</td>
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<td>23.9</td>
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<td>258</td>
<td>23.9</td>
<td></td>
<td>259</td>
<td>23.9</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 19.1.2.254 Build 20200623 Compiler for Linux

The correct version of Fortran compiler is: Version 19.1.2.254 Build 20200623 Compiler for Linux

### 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:

- KMP_AFFINITY = "granularity=fine,scatter"
- LD_LIBRARY_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-64"
- MALLOC_CONF = "retain:true"
- OMP_STACKSIZE = "192M"

### General Notes

Binaries compiled on a system with 2x Intel Cascade Lake 4214R 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
```

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

**Tyrone Systems**
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Tyrone Camarero QS400TU-224R4
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<table>
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**SPEC CPU®2017 License:** 006042  
**Test Date:** Feb-2021  
**Test Sponsor:** Netweb Pte Ltd  
**Tested by:** Tyrone Systems  
**Hardware Availability:** Aug-2020  
**Software Availability:** Dec-2020

**General Notes (Continued)**

Yes: 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 RedHat Enterprise 7.5, 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  
runtime on localhost.localdomain Sun Feb 21 01:03:24 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 6148 CPU @ 2.40GHz
4 "physical id"s (chips)
160 "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 : 20
siblings : 40
physical 0: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
physical 1: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
physical 2: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
physical 3: cores 0 1 2 3 4 8 9 10 11 12 16 17 18 19 20 24 25 26 27 28
```

From lscpu:
```
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
```

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

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero QS400TU-224R4
(2.40 GHz, Intel Xeon Gold 6148)

SPECspeed®2017_int_base = 10.7
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CPU2017 License: 006042
Test Sponsor: Netweb Pte Ltd
Tested by: Tyrone Systems

SPECspeed®2017_int_base = 10.7
SPECspeed®2017_int_peak = 10.8

Platform Notes (Continued)

CPU(s): 160
On-line CPU(s) list: 0-159
Thread(s) per core: 2
Core(s) per socket: 20
Socket(s): 4
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Gold 6148 CPU @ 2.40GHz
Stepping: 4
CPU MHz: 1014.279
CPU max MHz: 3700.0000
CPU min MHz: 1000.0000
BogoMIPS: 4800.00
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 28160K
NUMA node0 CPU(s): 0-19, 80-99
NUMA node1 CPU(s): 20-39, 100-119
NUMA node2 CPU(s): 40-59, 120-139
NUMA node3 CPU(s): 60-79, 140-159
Flags: fpu vme de pse ts cmov fxsr mmx sse lmx 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 3nowprefetch cpuid_fault epb cat_l3 dcp_l3
invpcid_single pti intel_pdp ssbd mba ibrs ibpb stibp tpr_shadow vmmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 3mst invpcid rtm cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl xsaveopt xsaves xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbb_total cqm_mbb_local dtlbmcvms mrmv ds_cpl

/proc/cpuinfo cache data

 cache size : 28160 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 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 80 81 82 83 84 85 86 87
88 89 90 91 92 93 94 95 96 97 98 99
node 0 size: 90855 MB
node 0 free: 63891 MB
node 1 cpus: 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 100 101 102

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

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

### Platform Notes (Continued)

103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119
node 1 size: 92768 MB
node 1 free: 72365 MB
node 2 cpus: 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139
node 2 size: 93101 MB
node 2 free: 73713 MB
node 3 cpus: 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159
node 3 size: 92128 MB
node 3 free: 74666 MB
node distances:
  0:  10  21  21  21
  1:  21  10  21  21
  2:  21  21  10  21
  3:  21  21  21  10

From /proc/meminfo
  MemTotal: 394580636 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

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

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

## Test Details

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

<table>
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<tbody>
<tr>
<td>SPECspeed®2017_int_peak</td>
<td>10.8</td>
</tr>
</tbody>
</table>

**Platform Notes (Continued)**

x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

- **CVE-2018-12207 (iTLB Multihit):**  
  - KVM: Mitigation: Split huge pages  
  - Mitigation: PTE Inversion; VMX: conditional cache flushes, SMT vulnerable

- **CVE-2018-3620 (L1 Terminal Fault):**  
  - Mitigation: PTE Inversion; VMX: conditional cache flushes, SMT vulnerable

Microarchitectural Data Sampling:

- **CVE-2017-5754 (Meltdown):**  
  - Mitigation: PTI

- **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: Full generic retpoline, IBPB: conditional, IBRS_FW, STIBP: conditional, RSB filling

- **CVE-2020-0543 (Special Register Buffer Data Sampling):** Not affected

- **CVE-2019-11135 (TSX Asynchronous Abort):**  
  - Mitigation: Clear CPU buffers; SMT vulnerable

**Run-Level:** 3 Mar 19 16:16

**SPEC is set to:** /home/cpu2017

<table>
<thead>
<tr>
<th>Filesystem</th>
<th>Type</th>
<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dev/mapper/cl-home</td>
<td>xfs</td>
<td>372G</td>
<td>94G</td>
<td>279G</td>
<td>26%</td>
<td>/home</td>
</tr>
</tbody>
</table>

From /sys/devices/virtual/dmi/id

**Vendor:** Tyrone Systems  
**Product:** Tyrone Camarero DS400TU-224R4  
**Product Family:** SMC X11  
**Serial:** 123456789

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 NO DIMM NO DIMM
- 24x Samsung M393A2K40DB2-CVF 16 GB 1 rank 2933, configured at 2666

**BIOS:**

- **BIOS Vendor:** American Megatrends Inc.

(Continued on next page)
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SPECspeed®2017_int_base = 10.7
SPECspeed®2017_int_peak = 10.8

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

Platform Notes (Continued)

BIOS Version: 3.4
BIOS Date: 11/04/2020
BIOS Revision: 5.14

(End of data from sysinfo program)
Sysinfo incorrectly parsed dmidecode output. Configured memory speed is 2933.

Compiler Version Notes

==============================================================================
C       | 600.perlbench_s(base) 602.gcc_s(base, peak) 605.mcf_s(base, peak)
| 625.x264_s(base, peak) 657.xz_s(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.
icc (NextGen): command line warning #10006: ignoring unknown option
'-i_version=19.1.2.254' [-Woption-ignored]
------------------------------------------------------------------------------

==============================================================================
C       | 600.perlbench_s(peak)
------------------------------------------------------------------------------
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,
Version 19.1.2.254 Build 20200623
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------

==============================================================================
C       | 600.perlbench_s(base) 602.gcc_s(base, peak) 605.mcf_s(base, peak)
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icc (NextGen): command line warning #10006: ignoring unknown option
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==============================================================================
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------------------------------------------------------------------------------
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------------------------------------------------------------------------------

(Continued on next page)
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Tyrone Camarero QS400TU-224R4
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SPECSpeed®2017_int_base = 10.7
SPECSpeed®2017_int_peak = 10.8

Compiler Version Notes (Continued)

==============================================================================
| C++    | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak) |
|        | 631.deepsjeng_s(base, peak) 641.leela_s(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.
icpc (NextGen): command line warning #10006: ignoring unknown option
"-i_version=19.1.2.254" [-Woption-ignored]

==============================================================================
| Fortran | 648.exchange2_s(base, peak) |
==============================================================================

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.1.2.254 Build 20200623
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Base Portability Flags

600.perlbench_s: -DSPEC_LP64 -DSPEC_LINUX_X64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LP64 -DSPEC_LINUX
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -DSPEC_LP64
SPEC CPU®2017 Integer Speed Result

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(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero QS400TU-224R4
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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

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
-qopt-mem-layout-trans=4 -fopenmp -DSPEC_OPENMP
-L/usr/local/je5.0.1-64/lib -ljemalloc

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 -qopt-mem-layout-trans=4
-L/usr/local/IntelCompiler19/compilers_and_libraries_2020.2.254/linux/compiler/lib/intel64_lin
-lqkmalloc

Fortran benchmarks:
-m64 -Wl,-plugin-opt=-x86-branches-within-32B-boundaries -xCORE-AVX512
-O3 -ipo -no-prec-div -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte
-mbranches-within-32B-boundaries

Peak Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Peak Portability Flags

600.perlbench_s: -DSPEC_LP64 -DSPEC_LINUX_X64
602.gcc_s: -DSPEC_LP64(*) -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LP64 -DSPEC_LINUX
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64

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

Tyrone Systems  
(Test Sponsor: Netweb Pte Ltd)  
Tyrone Camarero QS400TU-224R4  
(2.40 GHz, Intel Xeon Gold 6148)

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base</th>
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**CPU2017 License:** 006042  
**Test Sponsor:** Netweb Pte Ltd  
**Tested by:** Tyrone Systems  
**Test Date:** Feb-2021  
**Hardware Availability:** Aug-2020  
**Software Availability:** Dec-2020

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**Peak Portability Flags (Continued)**

648.exchange2_s: -DSPEC_LP64
657.xz_s: -DSPEC_LP64

(*) Indicates a portability flag that was found in a non-portability variable.

---

**Peak Optimization Flags**

**C benchmarks:**

600.perlbench_s: -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/je5.0.1-64/lib -ljemalloc

602.gcc_s: -m64 -qnextgen -std=c11  
-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 -qopt-mem-layout-trans=4  
-L/usr/local/je5.0.1-64/lib -ljemalloc

605.mcf_s: basepeak = yes

625.x264_s: -m64 -qnextgen -std=c11  
-Wl, -plugin-opt=-x86-branches-within-32B-boundaries  
-Wl, -z, muldefs -xCORE-AVX512 -flto -O3 -ffast-math  
-qopt-mem-layout-trans=4 -fno-alias  
-L/usr/local/je5.0.1-64/lib -ljemalloc

657.xz_s: basepeak = yes

**C++ benchmarks:**

620.omnetpp_s: basepeak = yes

623.xalancbmk_s: basepeak = yes

631.deepsjeng_s: basepeak = yes

641.leela_s: basepeak = yes

**Fortran benchmarks:**

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

**Tyrone Systems**  
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**Peak Optimization Flags (Continued)**

648.exchange2_s: 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-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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