## SPEC CPU® 2017 Floating Point Speed Result

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)  
**Tyrone Camarero SD100A2G-210**  
(2.60 GHz, Intel Xeon Gold 6348)  

**SPECspeed® 2017_fp_base = 186**  
**SPECspeed® 2017_fp_peak = 187**

<table>
<thead>
<tr>
<th>Threads</th>
<th>SPECspeed® 2017_fp_base</th>
<th>SPECspeed® 2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s 56</td>
<td>257</td>
<td>586</td>
</tr>
<tr>
<td>607.cactuBSSN_s 56</td>
<td>118</td>
<td>56</td>
</tr>
<tr>
<td>619.lbm_s 56</td>
<td>158</td>
<td>91.6</td>
</tr>
<tr>
<td>621.wrf_s 56</td>
<td>164</td>
<td>87.8</td>
</tr>
<tr>
<td>627.cam4_s 56</td>
<td>151</td>
<td>78.3</td>
</tr>
<tr>
<td>628.pop2_s 56</td>
<td>407</td>
<td>458</td>
</tr>
<tr>
<td>638.imagick_s 56</td>
<td>192</td>
<td>201</td>
</tr>
<tr>
<td>644.nab_s 56</td>
<td>112</td>
<td>56</td>
</tr>
<tr>
<td>649.fotonik3d_s 56</td>
<td>407</td>
<td>458</td>
</tr>
<tr>
<td>654.roms_s 56</td>
<td>201</td>
<td>56</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  
- **Memory:** 256 GB (7 x 16 GB 1Rx4 PC4-3200AA-R; 9 x 16 GB 2Rx8 PC4-3200AA-R)  
- **Storage:** 1 x 256 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++  
  Compiler Build 20201113 for Linux;  
  Fortran: Version 2021.1 of Intel Fortran Compiler  
  Classic Build 20201112 for Linux;  
  C/C++: Version 2021.1 of Intel C/C++ Compiler  
  Classic Build 20201112 for Linux;  
- **Parallel:** Yes  
- **Firmware:** Version 1.1 released Apr-2021  
- **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>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>56</td>
<td>99.4</td>
<td>593</td>
<td>100</td>
<td>588</td>
<td>99.8</td>
<td>591</td>
<td>56</td>
<td>101</td>
<td>587</td>
<td>101</td>
<td>584</td>
<td>101</td>
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<tr>
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<td>66.0</td>
<td>252</td>
<td>64.9</td>
<td>257</td>
<td>64.9</td>
<td>257</td>
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<tr>
<td>619.libm_s</td>
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<td>83.6</td>
<td>158</td>
<td>83.6</td>
<td>158</td>
<td>83.6</td>
<td>158</td>
<td>56</td>
<td>83.6</td>
<td>158</td>
<td>83.6</td>
<td>158</td>
<td>83.6</td>
<td>158</td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>56</td>
<td>58.5</td>
<td>151</td>
<td>58.2</td>
<td>152</td>
<td>59.1</td>
<td>150</td>
<td>56</td>
<td>58.5</td>
<td>151</td>
<td>58.2</td>
<td>152</td>
<td>59.1</td>
<td>150</td>
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<td>627.cam4_s</td>
<td>56</td>
<td>152</td>
<td>78.3</td>
<td>152</td>
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<td>152</td>
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<td>152</td>
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<td>78.3</td>
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<tr>
<td>628.pop2_s</td>
<td>56</td>
<td>74.8</td>
<td>193</td>
<td>75.2</td>
<td>192</td>
<td>75.0</td>
<td>192</td>
<td>56</td>
<td>74.8</td>
<td>193</td>
<td>75.2</td>
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<td>75.0</td>
<td>192</td>
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<td>644.nab_s</td>
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<td>42.9</td>
<td>407</td>
<td>43.0</td>
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<td>56</td>
<td>42.9</td>
<td>407</td>
<td>43.0</td>
<td>406</td>
<td>112</td>
<td>38.4</td>
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<td>649.fotonik3d_s</td>
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<td>86.4</td>
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<td>99.6</td>
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<td>108</td>
<td>84.2</td>
<td>104</td>
<td>87.6</td>
<td>98.8</td>
<td>92.3</td>
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<tr>
<td>654.roms_s</td>
<td>56</td>
<td>77.9</td>
<td>202</td>
<td>78.9</td>
<td>200</td>
<td>78.5</td>
<td>201</td>
<td>56</td>
<td>77.9</td>
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SPECspeed®2017_fp_base = 186
SPECspeed®2017_fp_peak = 187

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

### 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,compact,1,0"
LD_LIBRARY_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-64"
MALLOCONF = "retain: true"
OMP_STACKSIZE = "192M"

### 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

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.
jemalloc, a general purpose malloc implementation
  built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

(Continued on next page)
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CPU2017 License: 006042
Test Sponsor: Netweb Pte Ltd
Tested by: Tyrone Systems

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

General Notes (Continued)

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 982a61ec0915b55891ef0e16a6aca64d
running on localhost.localdomain Wed Jul 28 17:57:54 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
On-line CPU(s) list: 0-111
Thread(s) per core: 2
Core(s) per socket: 28
Socket(s): 2
NUMA node(s): 4
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

(Continued on next page)
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<tr>
<td>SPECspeed®2017_fp_peak</td>
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Test Date: Jul-2021
Hardware Availability: Apr-2021
Software Availability: Jun-2021

Platform Notes (Continued)

BIOS Model name: Intel(R) Xeon(R) Gold 6348 CPU @ 2.60GHz
Stepping: 6
CPU MHz: 1570.577
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: 43008K
NUMA node0 CPU(s): 0-13,56-69
NUMA node1 CPU(s): 14-27,70-83
NUMA node2 CPU(s): 28-41,84-97
NUMA node3 CPU(s): 42-55,98-111
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 tm2 pbe syscall nx pdpe1gb rdtscp
lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc tm2
stealth nr 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 abalanced hmm 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 abalanced hmm 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 abalanced hmm 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 abalanced hmm 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 abalanced hmm 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
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aes xsave avx f16c rdrand lahf_lm abalanced hmm 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 abalanced hmm 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 abalanced hmm 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 abalanced hmm 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 abalanced hmm 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 abalanced hmm 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 abalanced hmm 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 abalanced hmm aperfmperf
pni pclmulqdq dtes64

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 56 57 58 59 60 61 62 63 64 65 66 67 68 69
node 0 size: 64095 MB
node 0 free: 39041 MB
node 1 cpus: 14 15 16 17 18 19 20 21 22 23 24 25 26 27 70 71 72 73 74 75 76 77 78 79 80
81 82 83
node 1 size: 64468 MB
node 1 free: 44660 MB
node 2 cpus: 28 29 30 31 32 33 34 35 36 37 38 39 40 41 84 85 86 87 88 89 90 91 92 93 94
95 96 97
node 2 size: 64505 MB
node 2 free: 46848 MB
node 3 cpus: 42 43 44 45 46 47 48 49 50 51 52 53 54 55 98 99 100 101 102 103 104 105

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Platform Notes (Continued)

106 107 108 109 110 111
node 3 size: 64503 MB
node 3 free: 47065 MB
node distances:
node 0 1 2 3
0: 10 11 20 20
1: 11 10 20 20
2: 20 20 10 11
3: 20 20 11 10

From /proc/meminfo
MemTotal: 263755296 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

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Platform Notes (Continued)

CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2017-5753 (Spectre variant 1):
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 Jul 27 08:14
SPEC is set to: /home/cpu2017

Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/cl-home xfs 163G 78G 86G 48% /home

From /sys/devices/virtual/dmi/id
Vendor: Tyrone Systems
Product: Tyrone Camarero SDI100A2G-210
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:
7x Samsung M393A2K40DB3-CWE 16 GB 1 rank 3200
9x Samsung M393A2K43DB3-CWE 16 GB 2 rank 3200

BIOS:
BIOS Vendor: American Megatrends International, LLC.
BIOS Version: 1.1
BIOS Date: 04/21/2021
BIOS Revision: 5.22

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C | 619.libm_s(base, peak) 638.imagick_s(base, peak)
644.nab_s(base)

==============================================================================

Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)

(Continued on next page)
Compiler Version Notes (Continued)

Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

64, Version 2021.1 Build 20201112_000000

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

==============================================================================
C               | 644.nab_s(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.

==============================================================================
C               | 619.lbm_s(base, peak) 638.imagick_s(base, peak)
 | 644.nab_s(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++, C, Fortran | 607.cactuBSSN_s(base, peak)
==============================================================================

Intel(R) C++ Intel(R) 64 Compiler Classic for applications running on Intel(R) 64,
Version 2021.1 Build 20201112_000000
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-----------------------------------------------------------------------------

Fortran         | 603.bwaves_s(base, peak) 649.fotonik3d_s(base, peak)
 | 654.roms_s(base, peak)
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Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

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Fortran, C
621.wrf_s(base, peak) 627.cam4_s(base, peak)
628.pop2_s(base, peak)
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Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on
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Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R)
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Base Compiler Invocation

C benchmarks:
icc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
ifort icc

Benchmarks using Fortran, C, and C++:
icpc icc ifort

Base Portability Flags

603.bwaves_s: -DSPEC_LP64
607.cactuBSSN_s: -DSPEC_LP64
619.lbm_s: -DSPEC_LP64
621.wrf_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
627.cam4_s: -DSPEC_LP64 -DSPEC_CASE_FLAG
628.pop2_s: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
   -assume byterecl
638.imagick_s: -DSPEC_LP64
644.nab_s: -DSPEC_LP64
649.fotonik3d_s: -DSPEC_LP64

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

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)
Tyrone Camarero SDI100A2G-210
(2.60 GHz, Intel Xeon Gold 6348)

SPECspeed®2017_fp_base = 186
SPECspeed®2017_fp_peak = 187

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 Portability Flags (Continued)

654.roms_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-m64 -std=c11 -xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp -DSPEC_OPENMP
-mbranches-within-32B-boundaries

Fortran benchmarks:
-m64 -Wl,-z,muldefs -DSPEC_OPENMP -xCORE-AVX512 -ipo -O3
-no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4 -qopenmp -nostandard-realloc-lhs
-mbranches-within-32B-boundaries -L/usr/local/je5.0.1-64/lib -ljemalloc

Benchmarks using both Fortran and C:
-m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp
-DSPEC_OPENMP -mbranches-within-32B-boundaries -nostandard-realloc-lhs
-L/usr/local/je5.0.1-64/lib -ljemalloc

Benchmarks using Fortran, C, and C++:
-m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4 -qopenmp
-DSPEC_OPENMP -mbranches-within-32B-boundaries -nostandard-realloc-lhs
-L/usr/local/je5.0.1-64/lib -ljemalloc

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

644.nab_s: icx

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
ifort icc

Benchmarks using Fortran, C, and C++:
icpc icc ifort
Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

619.lbm_s: basepeak = yes

638.imagick_s: basepeak = yes

644.nab_s: -m64 -Wl,-z,muldefs -xCORE-AVX512 -Ofast -ffast-math
-fflt -mfpmath=sse -funroll-loops -fopenmp
-DSPEC_OPENMP -qopt-mem-layout-trans=4
-fimf-accuracy-bits=14:sqrt
-mbranches-within-32B-boundaries
-l/usr/local/je5.0.1-64/lib -ljemalloc

Fortran benchmarks:

603.bwaves_s: -m64 -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2)
-DSPEC_SUPPRESS_OPENMP -DSPEC_OPENMP -ipo -xCORE-AVX512
-o3 -no-prec-div -qopt-prefetch -ffinite-math-only
-qopt-mem-layout-trans=4 -qopenmp -nostandard-realloc-lhs
-mbranches-within-32B-boundaries
-l/usr/local/je5.0.1-64/lib -ljemalloc

649.fotonik3d_s: Same as 603.bwaves_s

654.roms_s: basepeak = yes

Benchmarks using both Fortran and C:

621.wrf_s: -m64 -std=c11 -Wl,-z,muldefs -prof-gen(pass 1)
-prof-use(pass 2) -ipo -xCORE-AVX512 -o3 -no-prec-div
-qopt-prefetch -ffinite-math-only -qopt-mem-layout-trans=4
-DSPEC_SUPPRESS_OPENMP -qopenmp -DSPEC_OPENMP
-mbranches-within-32B-boundaries -nostandard-realloc-lhs
-l/usr/local/je5.0.1-64/lib -ljemalloc

627.cam4_s: basepeak = yes

628.pop2_s: basepeak = yes

(Continued on next page)
Peak Optimization Flags (Continued)

Benchmarks using Fortran, C, and C++:

607.cactuBSSN_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-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

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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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