SPEC CPU®2017 Floating Point Rate Result

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374
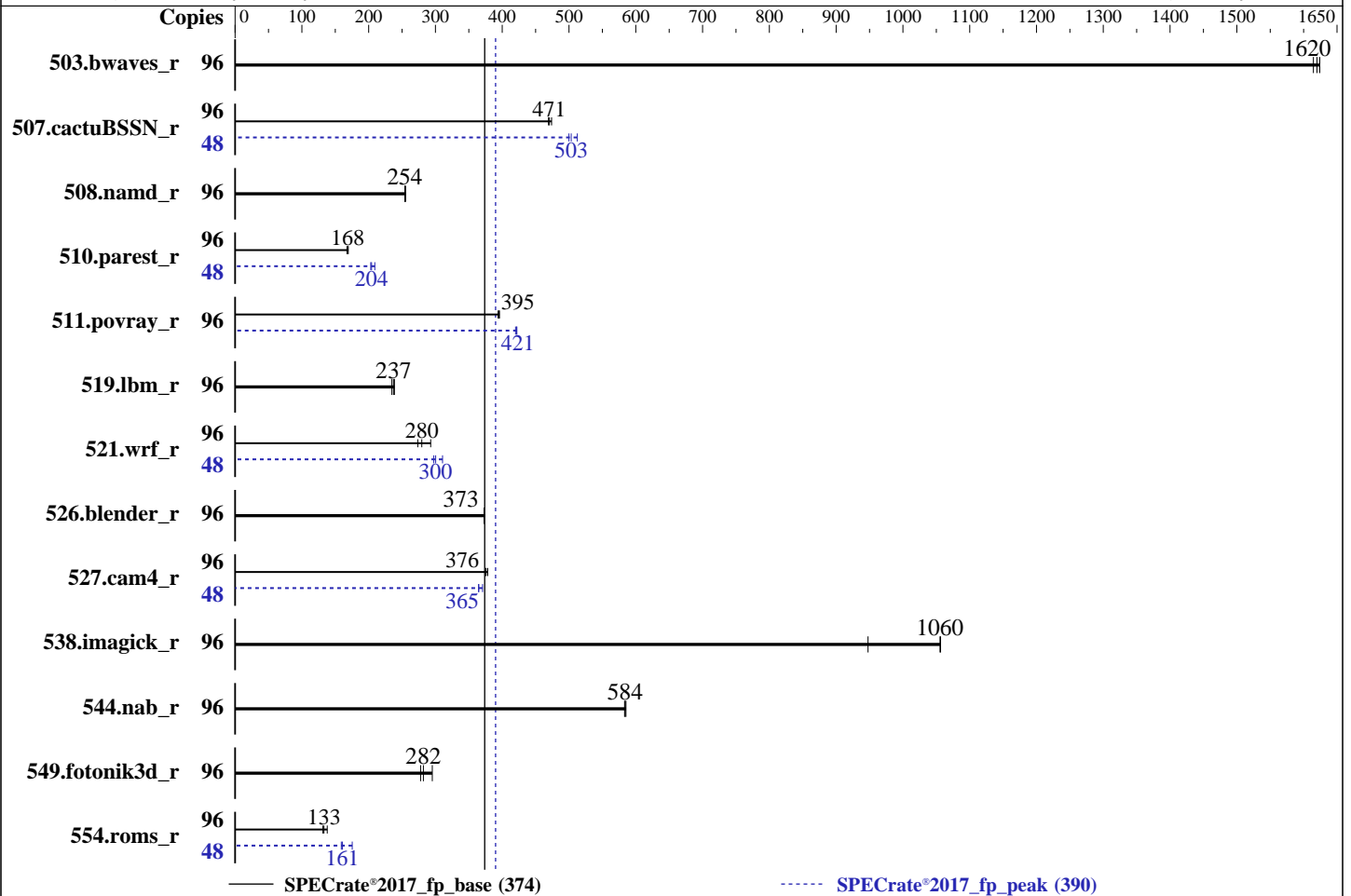
SPECrate®2017_fp_peak = 390

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

Test Date: Aug-2022
Hardware Availability: Apr-2021
Software Availability: May-2022

Benchmark	Copies	Base	Peak
503.bwaves_r	96	1620	
507.cactuBSSN_r	96 / 48	471	503
508.namd_r	96	254	
510.parest_r	96 / 48	168	204
511.povray_r	96	395	421
519.lbm_r	96	237	
521.wrf_r	96 / 48	280	300
526.blender_r	96	373	
527.cam4_r	96 / 48	376	365
538.imagick_r	96	1060	
544.nab_r	96	584	
549.fotonik3d_r	96	282	
554.roms_r	96 / 48	133	161

SPECrate®2017_fp_base (374)   SPECrate®2017_fp_peak (390)

Hardware

CPU Name: Intel Xeon Gold 6342
Max MHz: 3500
Nominal: 2800
Enabled: 48 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: 36 MB I+D on chip per chip
Other: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC4-3200AA-R)
Storage: 1 x 512 GB NVMe SSD
Other: None

Software

OS: Red Hat Enterprise Linux release 8.5 (Ootpa)
4.18.0-348.el8.x86_64
Compiler: C/C++: Version 2022.1 of Intel oneAPI DPC++/C++
Compiler for Linux;
Fortran: Version 2022.1 of Intel Fortran Compiler
for Linux;
Parallel: No
Firmware: Version PEGC0020 released Aug-2022
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.

SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374

SPECrate®2017_fp_peak = 390

CPU2017 License: 006042	**Test Date:**	Aug-2022
Test Sponsor: Netweb Pte Ltd	**Hardware Availability:**	Apr-2021
Tested by: Tyrone Systems	**Software Availability:**	May-2022

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	96	593	1620	**594**	**1620**	596	1610	96	593	1620	**594**	**1620**	596	1610
507.cactuBSSN_r	96	256	474	**258**	**471**	259	469	48	122	500	**121**	**503**	119	512
508.namd_r	96	357	255	359	254	**359**	**254**	96	357	255	359	254	**359**	**254**
510.parest_r	96	1482	169	**1491**	**168**	1499	168	48	**614**	**204**	618	203	600	209
511.povray_r	96	566	396	**567**	**395**	569	394	96	**532**	**421**	534	420	531	422
519.lbm_r	96	424	239	**426**	**237**	431	235	96	424	239	**426**	**237**	431	235
521.wrf_r	96	734	293	**769**	**280**	786	274	48	**358**	**300**	361	298	346	311
526.blender_r	96	392	373	**392**	**373**	392	373	96	392	373	**392**	**373**	392	373
527.cam4_r	96	444	378	**447**	**376**	448	375	48	230	365	**230**	**365**	227	371
538.imagick_r	96	226	1060	**226**	**1060**	252	948	96	226	1060	**226**	**1060**	252	948
544.nab_r	96	276	585	**277**	**584**	277	583	96	276	585	**277**	**584**	277	583
549.fotonik3d_r	96	1267	295	**1327**	**282**	1347	278	96	1267	295	**1327**	**282**	1347	278
554.roms_r	96	1106	138	**1146**	**133**	1160	132	48	480	159	**474**	**161**	435	175
SPECrate®2017_fp_base =		**374**												
SPECrate®2017_fp_peak =		**390**												

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/je5.0.1-64"
MALLOC_CONF = "retain:true"

General Notes

Binaries compiled on a system with 2x Intel Xeon Platinum 8280M CPU + 384GB RAM memory using Red Hat Enterprise Linux 8.4
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374

SPECrate®2017_fp_peak = 390

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

Test Date: Aug-2022
Hardware Availability: Apr-2021
Software Availability: May-2022

General Notes (Continued)

```
  sync; echo 3>          /proc/sys/vm/drop_caches
  runcpu command invoked through numactl i.e.:
  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.
```
  jemalloc, a general purpose malloc implementation
  built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5
  sources available from jemalloc.net or https://github.com/jemalloc/jemalloc/releases
```

Platform Notes

```
BIOS Settings:
Power Technology = Custom
ENERGY_PERF_BIAS_CFG mode = Performance
KTI Prefetch = Enable
LLC Dead Line Alloc = Disable
Hyper-Threading = Enabled

 Sysinfo program /home/cpu2017/bin/sysinfo
 Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
 running on Tyronespec Wed Aug 31 22:07:00 2022

 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 6342 CPU @ 2.80GHz
       2  "physical id"s (chips)
       96 "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 : 24
       siblings  : 48
       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
       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

 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):              96
```

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374

SPECrate®2017_fp_peak = 390

CPU2017 License: 006042		**Test Date:**	Aug-2022
Test Sponsor:	Netweb Pte Ltd	**Hardware Availability:**	Apr-2021
Tested by:	Tyrone Systems	**Software Availability:**	May-2022

Platform Notes (Continued)

```
      On-line CPU(s) list: 0-95
      Thread(s) per core:  2
      Core(s) per socket:  24
      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 6342 CPU @ 2.80GHz
      BIOS Model name:     Intel(R) Xeon(R) Gold 6342 CPU @ 2.80GHz
      Stepping:            6
      CPU MHz:             2800.000
      CPU max MHz:         3500.0000
      CPU min MHz:         800.0000
      BogoMIPS:            5600.00
      Virtualization:      VT-x
      L1d cache:           48K
      L1i cache:           32K
      L2 cache:            1280K
      L3 cache:            36864K
      NUMA node0 CPU(s):   0-23,48-71
      NUMA node1 CPU(s):   24-47,72-95
      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 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 3dnowprefetch cpuid_fault epb cat_l3 invpcid_single
    intel_ppin ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept
    vpid ept_ad fsgsbase tsc_adjust sgx bmi1 hle avx2 smep bmi2 erms invpcid cqm rdt_a
    avx512f avx512dq rdseed adx smap avx512ifma clflushopt clwb intel_pt avx512cd sha_ni
    avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total
    cqm_mbm_local split_lock_detect wbnoinvd dtherm ida arat pln pts hwp hwp_act_window
    hwp_epp hwp_pkg_req avx512vbmi umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq
    avx512_vnni avx512_bitalg tme avx512_vpopcntdq la57 rdpid sgx_lc fsrm md_clear
    pconfig flush_l1d arch_capabilities

 /proc/cpuinfo cache data
    cache size : 36864 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 48 49 50 51
   52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
   node 0 size: 515639 MB
```

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374

SPECrate®2017_fp_peak = 390

CPU2017 License: 006042   **Test Date:** Aug-2022
Test Sponsor: Netweb Pte Ltd   **Hardware Availability:** Apr-2021
Tested by: Tyrone Systems   **Software Availability:** May-2022

Platform Notes (Continued)

```
   node 0 free: 491814 MB
   node 1 cpus: 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 72
   73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95
   node 1 size: 516082 MB
   node 1 free: 496634 MB
   node distances:
   node   0   1
     0:  10  20
     1:  20  10


From /proc/meminfo
   MemTotal:       1056483680 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*
   os-release:
      NAME="Red Hat Enterprise Linux"
      VERSION="8.5 (Ootpa)"
      ID="rhel"
      ID_LIKE="fedora"
      VERSION_ID="8.5"
      PLATFORM_ID="platform:el8"
      PRETTY_NAME="Red Hat Enterprise Linux 8.5 (Ootpa)"
      ANSI_COLOR="0;31"
   redhat-release: Red Hat Enterprise Linux release 8.5 (Ootpa)
   system-release: Red Hat Enterprise Linux release 8.5 (Ootpa)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:8::baseos

uname -a:
   Linux Tyronespec 4.18.0-348.el8.x86_64 #1 SMP Mon Oct 4 12:17:22 EDT 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
CVE-2018-3639 (Speculative Store Bypass):        Mitigation: Speculative Store
                                                 Bypass disabled via prctl and
```

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374

SPECrate®2017_fp_peak = 390

CPU2017 License: 006042		**Test Date:**	Aug-2022
Test Sponsor:	Netweb Pte Ltd	**Hardware Availability:**	Apr-2021
Tested by:	Tyrone Systems	**Software Availability:**	May-2022

Platform Notes (Continued)

```
                                              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 Aug 31 12:10


 SPEC is set to: /home/cpu2017
    Filesystem              Type  Size  Used Avail Use% Mounted on
    /dev/mapper/rhel-home xfs   402G  102G  301G  26% /home


 From /sys/devices/virtual/dmi/id
    Vendor:          Tyrone Systems
    Product:         Tyrone Camarero TDI100C3R-212
    Product Family: Family
    Serial:          2X22002203


 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 M393A8G40AB2-CWE 64 GB 2 rank 3200


 BIOS:
    BIOS Vendor:        American Megatrends International, LLC.
    BIOS Version:       PEGC0020
    BIOS Date:          08/12/2022
    BIOS Revision:      5.22


 (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
 C                  | 519.lbm_r(base, peak) 538.imagick_r(base, peak)
                    | 544.nab_r(base, peak)
------------------------------------------------------------------------------
 Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
   Version 2022.1.0 Build 20220316
 Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------
```

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374

SPECrate®2017_fp_peak = 390

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

Test Date: Aug-2022
Hardware Availability: Apr-2021
Software Availability: May-2022

Compiler Version Notes (Continued)

```
==============================================================================
C++                | 508.namd_r(base, peak) 510.parest_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
C++, C             | 511.povray_r(base, peak) 526.blender_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
C++, C, Fortran | 507.cactuBSSN_r(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
  2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
Fortran            | 503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak)
                   | 554.roms_r(base, peak)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
  2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
------------------------------------------------------------------------------


==============================================================================
Fortran, C         | 521.wrf_r(base, peak) 527.cam4_r(base, peak)
------------------------------------------------------------------------------
Intel(R) Fortran Compiler for applications running on Intel(R) 64, Version
```

(Continued on next page)

SPEC CPU®2017 Floating Point Rate Result

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374

SPECrate®2017_fp_peak = 390

CPU2017 License: 006042		**Test Date:**	Aug-2022
Test Sponsor:	Netweb Pte Ltd	**Hardware Availability:**	Apr-2021
Tested by:	Tyrone Systems	**Software Availability:**	May-2022

Compiler Version Notes (Continued)

```
  2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,
  Version 2022.1.0 Build 20220316
Copyright (C) 1985-2022 Intel Corporation. All rights reserved.
-----------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx

Fortran benchmarks:
ifx

Benchmarks using both Fortran and C:
ifx icx

Benchmarks using both C and C++:
icpx icx

Benchmarks using Fortran, C, and C++:
icpx icx ifx

Base Portability Flags

   503.bwaves_r: -DSPEC_LP64
   507.cactuBSSN_r: -DSPEC_LP64
   508.namd_r: -DSPEC_LP64
   510.parest_r: -DSPEC_LP64
   511.povray_r: -DSPEC_LP64
   519.lbm_r: -DSPEC_LP64
   521.wrf_r: -DSPEC_LP64 -DSPEC_CASE_FLAG -convert big_endian
   526.blender_r: -DSPEC_LP64 -DSPEC_LINUX -funsigned-char
   527.cam4_r: -DSPEC_LP64 -DSPEC_CASE_FLAG
   538.imagick_r: -DSPEC_LP64
   544.nab_r: -DSPEC_LP64
   549.fotonik3d_r: -DSPEC_LP64
   554.roms_r: -DSPEC_LP64

Copyright 2017-2022 Standard Performance Evaluation Corporation

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374

SPECrate®2017_fp_peak = 390

CPU2017 License: 006042

Test Sponsor: Netweb Pte Ltd

Tested by: Tyrone Systems

Test Date: Aug-2022

Hardware Availability: Apr-2021

Software Availability: May-2022

Base Optimization Flags

C benchmarks:
```
-w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

C++ benchmarks:
```
-w -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Fortran benchmarks:
```
-w -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math -flto
-mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both Fortran and C:
```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both C and C++:
```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using Fortran, C, and C++:
```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Peak Compiler Invocation

C benchmarks:
```
icx
```

C++ benchmarks:
```
icpx
```

Fortran benchmarks:
```
ifx
```

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)

https://www.spec.org/

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

SPECrate®2017_fp_base = 374

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_peak = 390

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

Test Date: Aug-2022
Hardware Availability: Apr-2021
Software Availability: May-2022

Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
```
ifx icx
```

Benchmarks using both C and C++:
```
icpx icx
```

Benchmarks using Fortran, C, and C++:
```
icpx icx ifx
```

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

519.lbm_r: `basepeak = yes`

538.imagick_r: `basepeak = yes`

544.nab_r: `basepeak = yes`

C++ benchmarks:

508.namd_r: `basepeak = yes`

510.parest_r: `-w -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -ljemalloc -L/usr/local/jemalloc64-5.0.1/lib`

Fortran benchmarks:

503.bwaves_r: `basepeak = yes`

549.fotonik3d_r: `basepeak = yes`

554.roms_r: `-w -m64 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte -auto -ljemalloc`

(Continued on next page)

Tyrone Systems
(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero TDI100C3R-212
(2.80 GHz,Intel Xeon Gold 6342)

SPECrate®2017_fp_base = 374

SPECrate®2017_fp_peak = 390

CPU2017 License: 006042		**Test Date:**	Aug-2022
Test Sponsor:	Netweb Pte Ltd	**Hardware Availability:**	Apr-2021
Tested by:	Tyrone Systems	**Software Availability:**	May-2022

Peak Optimization Flags (Continued)

554.roms_r (continued):
```
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both Fortran and C:
```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

Benchmarks using both C and C++:

511.povray_r: `-w -m64 -std=c11 -Wl,-z,muldefs`
`-fprofile-generate`(pass 1)
`-fprofile-use=default.profdata`(pass 2) `-xCORE-AVX2 -Ofast`
`-ffast-math -flto -mfpmath=sse -funroll-loops`
`-qopt-mem-layout-trans=4 -ljemalloc`
`-L/usr/local/jemalloc64-5.0.1/lib`

526.blender_r: `basepeak = yes`

Benchmarks using Fortran, C, and C++:
```
-w -m64 -std=c11 -Wl,-z,muldefs -xCORE-AVX2 -Ofast -ffast-math
-flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
-nostandard-realloc-lhs -align array32byte -auto -ljemalloc
-L/usr/local/jemalloc64-5.0.1/lib
```

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Intel-ic2022-official-linux64_revA.html
http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-ICX-revA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Intel-ic2022-official-linux64_revA.xml
http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-ICX-revA.xml

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 2022-08-31 12:37:00-0400.
Report generated on 2022-09-27 17:15:13 by CPU2017 PDF formatter v6442.
Originally published on 2022-09-27.