



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

## Tyrone Systems

(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL  
(2.90 GHz, Intel Xeon Gold 6226R)

SPECspeed®2017\_fp\_base = 126

SPECspeed®2017\_fp\_peak = 128

CPU2017 License: 006042

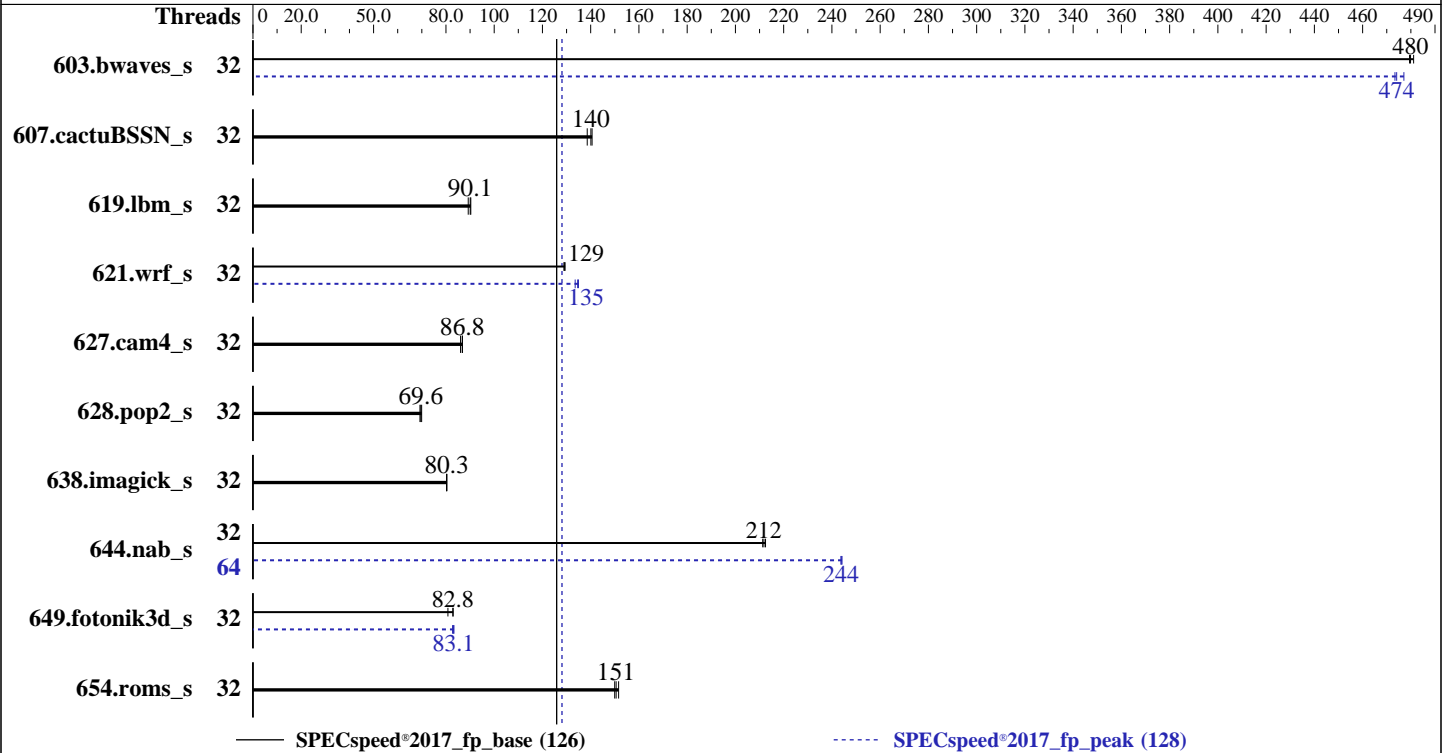
Test Sponsor: Netweb Pte Ltd

Tested by: Tyrone Systems

Test Date: Aug-2021

Hardware Availability: Feb-2020

Software Availability: Jun-2021



### Hardware

CPU Name: Intel Xeon Gold 6226R  
 Max MHz: 3900  
 Nominal: 2900  
 Enabled: 32 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 Chips  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 22 MB I+D on chip per chip  
 Other: None  
 Memory: 384 GB (12 x 32 GB 2Rx4 PC4-2933P-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++ 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 V8.104 released Jul-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.



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**

(Test Sponsor: Netweb Pte Ltd)

Tyrone Camarero DIT400TR-28RL  
(2.90 GHz, Intel Xeon Gold 6226R)

SPECspeed®2017\_fp\_base = 126

SPECspeed®2017\_fp\_peak = 128

CPU2017 License: 006042

Test Sponsor: Netweb Pte Ltd

Tested by: Tyrone Systems

Test Date: Aug-2021

Hardware Availability: Feb-2020

Software Availability: Jun-2021

## Results Table

Benchmark	Base						Peak							
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
603.bwaves_s	32	123	481	<b><u>123</u></b>	<b><u>480</u></b>	123	479	32	<b><u>124</u></b>	<b><u>474</u></b>	125	473	124	477
607.cactuBSSN_s	32	<b><u>119</u></b>	<b><u>140</u></b>	119	141	120	139	32	<b><u>119</u></b>	<b><u>140</u></b>	119	141	120	139
619.lbm_s	32	58.7	89.2	58.0	90.3	<b><u>58.2</u></b>	<b><u>90.1</u></b>	32	58.7	89.2	58.0	90.3	<b><u>58.2</u></b>	<b><u>90.1</u></b>
621.wrf_s	32	103	129	102	129	<b><u>102</u></b>	<b><u>129</u></b>	32	98.0	135	99.0	134	<b><u>98.3</u></b>	<b><u>135</u></b>
627.cam4_s	32	<b><u>102</u></b>	<b><u>86.8</u></b>	103	86.1	102	86.8	32	<b><u>102</u></b>	<b><u>86.8</u></b>	103	86.1	102	86.8
628.pop2_s	32	172	69.2	170	69.9	<b><u>171</u></b>	<b><u>69.6</u></b>	32	172	69.2	170	69.9	<b><u>171</u></b>	<b><u>69.6</u></b>
638.imagick_s	32	<b><u>180</u></b>	<b><u>80.3</u></b>	179	80.4	180	80.2	32	<b><u>180</u></b>	<b><u>80.3</u></b>	179	80.4	180	80.2
644.nab_s	32	82.7	211	82.2	212	<b><u>82.5</u></b>	<b><u>212</u></b>	64	<b><u>71.7</u></b>	<b><u>244</u></b>	71.7	244	71.6	244
649.fotonik3d_s	32	110	83.0	113	80.8	<b><u>110</u></b>	<b><u>82.8</u></b>	32	110	82.7	109	83.3	<b><u>110</u></b>	<b><u>83.1</u></b>
654.roms_s	32	104	152	<b><u>105</u></b>	<b><u>151</u></b>	105	150	32	104	152	<b><u>105</u></b>	<b><u>151</u></b>	105	150

SPECspeed®2017\_fp\_base = **126**

SPECspeed®2017\_fp\_peak = **128**

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:  
KMP\_AFFINITY = "granularity=fine,compact,1,0"  
LD\_LIBRARY\_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-64"  
MALLOC\_CONF = "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  
runcpu command invoked through numactl i.e.:  
numactl --interleave=all runcpu <etc>

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**  
 (Test Sponsor: Netweb Pte Ltd)  
**Tyrone Camarero DIT400TR-28RL**  
 (2.90 GHz, Intel Xeon Gold 6226R)

SPECspeed®2017\_fp\_base = 126

SPECspeed®2017\_fp\_peak = 128

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

**Test Date:** Aug-2021  
**Hardware Availability:** Feb-2020  
**Software Availability:** Jun-2021

## General Notes (Continued)

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 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 spec Thu Aug 19 06:45:40 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

physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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): 64

On-line CPU(s) list: 0-63

Thread(s) per core: 2

Core(s) per socket: 16

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**

(Test Sponsor: Netweb Pte Ltd)

**Tyrone Camarero DIT400TR-28RL**  
(2.90 GHz, Intel Xeon Gold 6226R)

SPECspeed®2017\_fp\_base = 126

SPECspeed®2017\_fp\_peak = 128

**CPU2017 License:** 006042

**Test Sponsor:** Netweb Pte Ltd

**Tested by:** Tyrone Systems

**Test Date:** Aug-2021

**Hardware Availability:** Feb-2020

**Software Availability:** Jun-2021

## Platform Notes (Continued)

```

Socket(s):                2
NUMA node(s):            2
Vendor ID:               GenuineIntel
BIOS Vendor ID:         Intel(R) Corporation
CPU family:              6
Model:                   85
Model name:              Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz
BIOS Model name:        Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz
Stepping:                7
CPU MHz:                 1568.730
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):      0-15,32-47
NUMA node1 CPU(s):      16-31,48-63
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
aperfmpperf 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 fl6c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3
invpcid_single intel_ppin ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi
flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms
invpcid cqm mpx rdt_a avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt
avx512cd avx512bw avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc
cqm_mbm_total cqm_mbm_local dtherm ida arat pln pts hwp hwp_act_window hwp_epp
hwp_pkg_req pku ospke avx512_vnni md_clear flush_lld 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.

```

available: 2 nodes (0-1)
node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 32 33 34 35 36 37 38 39 40 41 42 43
44 45 46 47
node 0 size: 192825 MB
node 0 free: 168228 MB
node 1 cpus: 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 48 49 50 51 52 53 54 55 56
57 58 59 60 61 62 63
node 1 size: 193528 MB
node 1 free: 168267 MB

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)  
Tyrone Camarero DIT400TR-28RL  
(2.90 GHz, Intel Xeon Gold 6226R)

SPECspeed®2017\_fp\_base = 126  
SPECspeed®2017\_fp\_peak = 128

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

**Test Date:** Aug-2021  
**Hardware Availability:** Feb-2020  
**Software Availability:** Jun-2021

## Platform Notes (Continued)

node distances:

```
node  0  1
  0:  10  21
  1:  21  10
```

From /proc/meminfo

```
MemTotal:      395626140 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 spec 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):	KVM: Mitigation: Split huge pages
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 seccomp
CVE-2017-5753 (Spectre variant 1):	Mitigation: usercopy/swapgs barriers and __user pointer

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)  
**Tyrone Camarero DIT400TR-28RL**  
(2.90 GHz, Intel Xeon Gold 6226R)

**SPECspeed®2017\_fp\_base = 126**

**SPECspeed®2017\_fp\_peak = 128**

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

**Test Date:** Aug-2021  
**Hardware Availability:** Feb-2020  
**Software Availability:** Jun-2021

## Platform Notes (Continued)

CVE-2017-5715 (Spectre variant 2): sanitization  
Mitigation: Enhanced IBRS, IBPB:  
conditional, RSB filling  
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected  
CVE-2019-11135 (TSX Asynchronous Abort): Mitigation: TSX disabled

run-level 3 Aug 18 05:12

SPEC is set to: /home/cpu2017  
Filesystem Type Size Used Avail Use% Mounted on  
/dev/mapper/cl-home xfs 372G 198G 174G 54% /home

From /sys/devices/virtual/dmi/id  
Vendor: Tyrone Systems  
Product: Tyrone Camarero DIT400TR-28RL  
Product Family: empty  
Serial: empty

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:  
12x Samsung M393A4K40CB2-CVF 32 GB 2 rank 2933

BIOS:  
BIOS Vendor: American Megatrends Inc.  
BIOS Version: V8.104  
BIOS Date: 07/27/2021  
BIOS Revision: 5.14  
Firmware Revision: 6.1

(End of data from sysinfo program)

## Compiler Version Notes

```
=====
C          | 619.lbm_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)
64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.
=====
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)  
**Tyrone Camarero DIT400TR-28RL**  
(2.90 GHz, Intel Xeon Gold 6226R)

**SPECspeed®2017\_fp\_base = 126**  
**SPECspeed®2017\_fp\_peak = 128**

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

**Test Date:** Aug-2021  
**Hardware Availability:** Feb-2020  
**Software Availability:** Jun-2021

## Compiler Version Notes (Continued)

C | 644.nab\_s(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.  
-----

=====  
C | 619.lbm\_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)  
64, Version 2021.1 Build 20201112\_000000  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.  
-----

=====  
C | 644.nab\_s(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.  
-----

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

=====  
Fortran | 603.bwaves\_s(base, peak) 649.fotonik3d\_s(base, peak)  
| 654.roms\_s(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.  
-----

(Continued on next page)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)  
**Tyrone Camarero DIT400TR-28RL**  
(2.90 GHz, Intel Xeon Gold 6226R)

SPECspeed®2017\_fp\_base = 126

SPECspeed®2017\_fp\_peak = 128

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

**Test Date:** Aug-2021  
**Hardware Availability:** Feb-2020  
**Software Availability:** Jun-2021

## Compiler Version Notes (Continued)

```
=====
Fortran, C      | 621.wrf_s(base, peak) 627.cam4_s(base, peak)
                  | 628.pop2_s(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.
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.
=====
```

## 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
654.roms_s: -DSPEC_LP64
```





# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**

(Test Sponsor: Netweb Pte Ltd)

**Tyrone Camarero DIT400TR-28RL**  
(2.90 GHz, Intel Xeon Gold 6226R)

SPECspeed®2017\_fp\_base = 126

SPECspeed®2017\_fp\_peak = 128

**CPU2017 License:** 006042

**Test Sponsor:** Netweb Pte Ltd

**Tested by:** Tyrone Systems

**Test Date:** Aug-2021

**Hardware Availability:** Feb-2020

**Software Availability:** Jun-2021

## 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
```



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**  
(Test Sponsor: Netweb Pte Ltd)  
Tyrone Camarero DIT400TR-28RL  
(2.90 GHz, Intel Xeon Gold 6226R)

SPECspeed®2017\_fp\_base = 126

SPECspeed®2017\_fp\_peak = 128

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

**Test Date:** Aug-2021  
**Hardware Availability:** Feb-2020  
**Software Availability:** Jun-2021

## 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  
-flto -mfpmath=sse -funroll-loops -fiopenmp  
-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)



# SPEC CPU®2017 Floating Point Speed Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

**Tyrone Systems**

(Test Sponsor: Netweb Pte Ltd)

**Tyrone Camarero DIT400TR-28RL**  
(2.90 GHz, Intel Xeon Gold 6226R)

**SPECspeed®2017\_fp\_base = 126**

**SPECspeed®2017\_fp\_peak = 128**

**CPU2017 License:** 006042

**Test Sponsor:** Netweb Pte Ltd

**Tested by:** Tyrone Systems

**Test Date:** Aug-2021

**Hardware Availability:** Feb-2020

**Software Availability:** Jun-2021

## 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/Intel-ic2021-official-linux64\\_revA.html](http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.html)

<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/Intel-ic2021-official-linux64_revA.xml)

<http://www.spec.org/cpu2017/flags/Tyrone-Platform-Settings-V1.2-CLX-revI.xml>

SPEC CPU and SPECspeed 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](mailto:info@spec.org).

Tested with SPEC CPU®2017 v1.1.8 on 2021-08-19 06:45:39-0400.

Report generated on 2021-09-20 13:58:23 by CPU2017 PDF formatter v6442.

Originally published on 2021-09-20.