



# SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

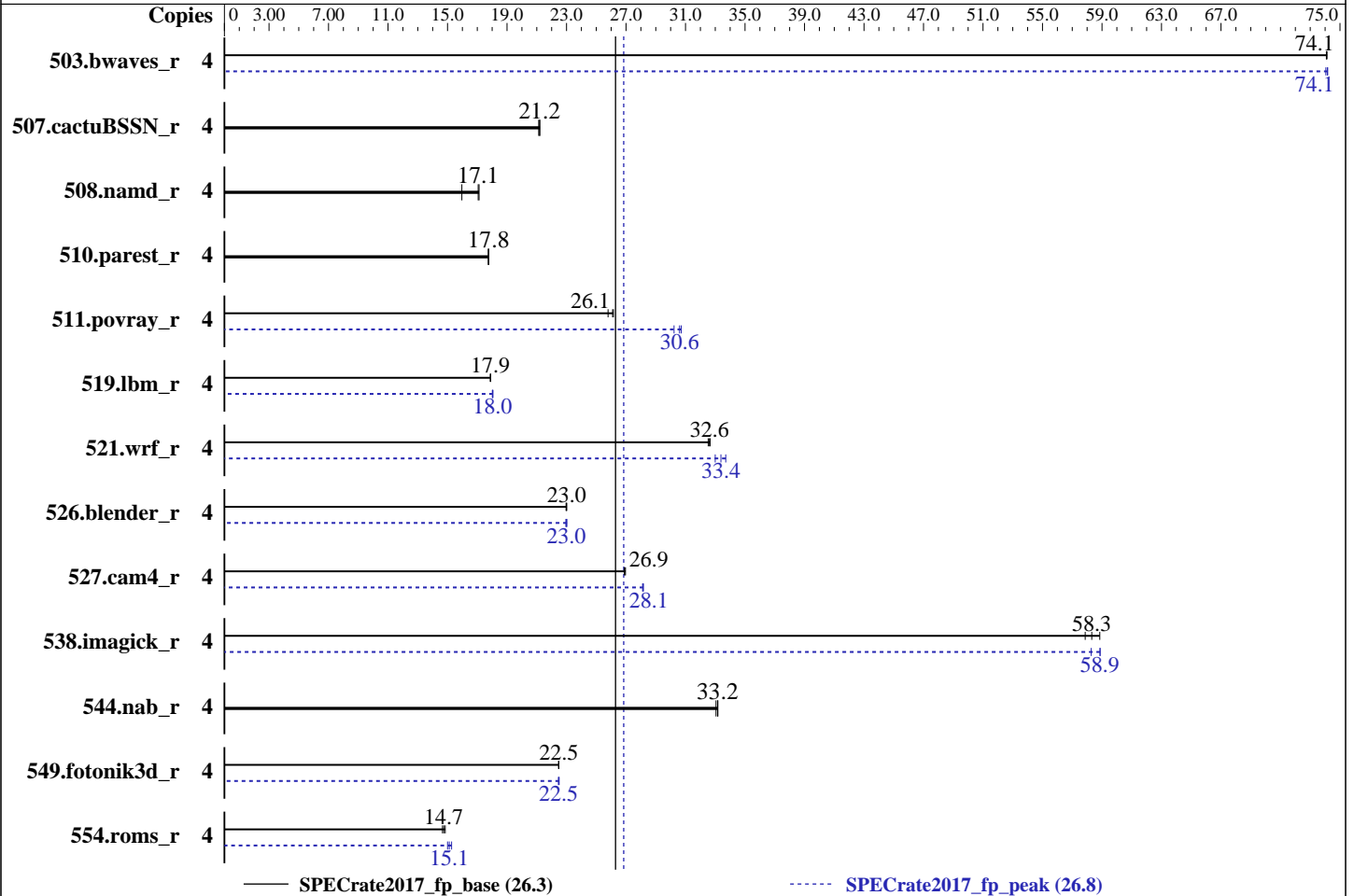
SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

CPU2017 License: 001176  
Test Sponsor: Supermicro  
Tested by: Supermicro

Test Date: May-2019  
Hardware Availability: Nov-2018  
Software Availability: Nov-2018



### Hardware

CPU Name: Intel Xeon E-2104G  
Max MHz.: 3200  
Nominal: 3200  
Enabled: 4 cores, 1 chip  
Orderable: 1 chip  
Cache L1: 32 KB I + 32 KB D on chip per core  
L2: 256 KB I+D on chip per core  
L3: 8 MB I+D on chip per chip  
Other: None  
Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2666V-E)  
Storage: 1 x 200 GB SATA III SSD  
Other: None

### Software

OS: SUSE Linux Enterprise Server 12 SP3 (x86\_64)  
Kernel 4.4.114-94.11-default  
Compiler: C/C++: Version 19.0.1.144 of Intel C/C++ Compiler for Linux;  
Fortran: Version 19.0.1.144 of Intel Fortran Compiler for Linux  
Parallel: No  
Firmware: Version 1.0a released Feb-2019  
File System: xfs  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other: None



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

CPU2017 License: 001176  
Test Sponsor: Supermicro  
Tested by: Supermicro

Test Date: May-2019  
Hardware Availability: Nov-2018  
Software Availability: Nov-2018

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	4	541	74.1	<b>541</b>	<b>74.1</b>	541	74.1	4	<b>541</b>	<b>74.1</b>	542	74.0	541	74.2
507.cactuBSSN_r	4	240	21.1	239	21.2	<b>239</b>	<b>21.2</b>	4	240	21.1	239	21.2	<b>239</b>	<b>21.2</b>
508.namd_r	4	222	17.1	<b>223</b>	<b>17.1</b>	238	16.0	4	222	17.1	<b>223</b>	<b>17.1</b>	238	16.0
510.parest_r	4	589	17.8	<b>589</b>	<b>17.8</b>	590	17.7	4	589	17.8	<b>589</b>	<b>17.8</b>	590	17.7
511.povray_r	4	362	25.8	357	26.2	<b>358</b>	<b>26.1</b>	4	304	30.7	<b>305</b>	<b>30.6</b>	309	30.2
519.lbm_r	4	236	17.9	236	17.9	<b>236</b>	<b>17.9</b>	4	234	18.1	234	18.0	<b>234</b>	<b>18.0</b>
521.wrf_r	4	275	32.5	274	32.7	<b>275</b>	<b>32.6</b>	4	<b>268</b>	<b>33.4</b>	266	33.7	272	33.0
526.blender_r	4	<b>265</b>	<b>23.0</b>	265	23.0	265	23.0	4	<b>265</b>	<b>23.0</b>	265	23.0	265	23.0
527.cam4_r	4	260	26.9	<b>260</b>	<b>26.9</b>	259	27.0	4	248	28.2	<b>249</b>	<b>28.1</b>	249	28.1
538.imagick_r	4	<b>171</b>	<b>58.3</b>	172	57.9	169	58.9	4	<b>169</b>	<b>58.9</b>	171	58.3	169	58.9
544.nab_r	4	<b>203</b>	<b>33.2</b>	203	33.2	204	33.1	4	<b>203</b>	<b>33.2</b>	203	33.2	204	33.1
549.fotonik3d_r	4	693	22.5	<b>693</b>	<b>22.5</b>	694	22.5	4	<b>694</b>	<b>22.5</b>	693	22.5	694	22.5
554.roms_r	4	<b>431</b>	<b>14.7</b>	434	14.7	428	14.8	4	<b>420</b>	<b>15.1</b>	424	15.0	416	15.3

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

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

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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"

## General Notes

Environment variables set by runcpu before the start of the run:  
LD\_LIBRARY\_PATH = "/home/cpu2017/lib/ia32:/home/cpu2017/lib/intel64"

Binaries compiled on a system with 1x Intel Core i9-7900X CPU + 32GB RAM  
memory using Redhat Enterprise Linux 7.5  
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-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2019  
**Hardware Availability:** Nov-2018  
**Software Availability:** Nov-2018

### General Notes (Continued)

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.

### Platform Notes

Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9  
running on linux-65nv Thu May 30 08:38:39 2019

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) E-2104G CPU @ 3.20GHz  
1 "physical id"s (chips)  
4 "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 : 4  
siblings : 4  
physical 0: cores 0 1 2 3

From lscpu:  
Architecture: x86\_64  
CPU op-mode(s): 32-bit, 64-bit  
Byte Order: Little Endian  
CPU(s): 4  
On-line CPU(s) list: 0-3  
Thread(s) per core: 1  
Core(s) per socket: 4  
Socket(s): 1  
NUMA node(s): 1  
Vendor ID: GenuineIntel  
CPU family: 6  
Model: 158  
Model name: Intel(R) Xeon(R) E-2104G CPU @ 3.20GHz  
Stepping: 10  
CPU MHz: 3200.067  
CPU max MHz: 3200.0000  
CPU min MHz: 800.0000  
BogoMIPS: 6383.98  
Virtualization: VT-x  
Lld cache: 32K

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2019  
**Hardware Availability:** Nov-2018  
**Software Availability:** Nov-2018

### Platform Notes (Continued)

L1i cache: 32K  
L2 cache: 256K  
L3 cache: 8192K  
NUMA node0 CPU(s): 0-3

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 aperfmperf eagerfpu pni pclmulqdq dtes64 monitor ds\_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4\_1 sse4\_2 x2apic movbe popcnt tsc\_deadline\_timer aes xsave avx f16c rdrand lahf\_lm abm 3dnowprefetch arat epb invpcid\_single pln pts dtherm hwp hwp\_notify hwp\_act\_window hwp\_epp intel\_pt rsb\_ctxsw spec\_ctrl retpoline kaiser tpr\_shadow vnmi flexpriority ept vpid fsgsbase tsc\_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm mpx rdseed adx smap clflushopt xsaveopt xsavec xgetbv1

```
/proc/cpuinfo cache data
cache size : 8192 KB
```

```
From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
physical chip.
available: 1 nodes (0)
node 0 cpus: 0 1 2 3
node 0 size: 64334 MB
node 0 free: 55769 MB
node distances:
node 0
0: 10
```

```
From /proc/meminfo
MemTotal: 65878064 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

```
From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 3
# This file is deprecated and will be removed in a future service pack or release.
# Please check /etc/os-release for details about this release.
os-release:
NAME="SLES"
VERSION="12-SP3"
VERSION_ID="12.3"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP3"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp3"
```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2019  
**Hardware Availability:** Nov-2018  
**Software Availability:** Nov-2018

### Platform Notes (Continued)

```
uname -a:
Linux linux-65nv 4.4.114-94.11-default #1 SMP Thu Feb 1 19:28:26 UTC 2018 (4309ff9)
x86_64 x86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

```
CVE-2017-5754 (Meltdown):      Mitigation: PTI
CVE-2017-5753 (Spectre variant 1): Mitigation: Barriers
CVE-2017-5715 (Spectre variant 2): Mitigation: IBRS+IBPB
```

```
run-level 3 May 30 03:14
```

SPEC is set to: /home/cpu2017

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       xfs   145G   21G  124G  15% /home
```

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.

BIOS American Megatrends Inc. 1.0a 02/14/2019

Memory:

4x Micron 18ADF2G72AZ-2G6H1R 16 GB 2 rank 2667

(End of data from sysinfo program)

### Compiler Version Notes

```
=====  
CC 519.lbm_r(base) 538.imagick_r(base, peak) 544.nab_r(base, peak)  
-----
```

```
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
-----
```

```
=====  
CC 519.lbm_r(peak)  
-----
```

```
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
-----  
=====
```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2019  
**Hardware Availability:** Nov-2018  
**Software Availability:** Nov-2018

### Compiler Version Notes (Continued)

CXXC 508.namd\_r(base) 510.parest\_r(base, peak)

-----  
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
-----

=====  
CXXC 508.namd\_r(peak)

-----  
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
-----

=====  
CC 511.povray\_r(base) 526.blender\_r(base, peak)

-----  
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
-----

=====  
CC 511.povray\_r(peak)

-----  
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
-----

=====  
FC 507.cactuBSSN\_r(base, peak)

-----  
Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2019  
**Hardware Availability:** Nov-2018  
**Software Availability:** Nov-2018

### Compiler Version Notes (Continued)

64, Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====  
FC 503.bwaves\_r(base, peak) 549.fotonik3d\_r(base, peak) 554.roms\_r(base)

-----  
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)  
64, Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====  
FC 554.roms\_r(peak)

-----  
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)  
64, Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====  
CC 521.wrf\_r(base) 527.cam4\_r(base)

-----  
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)  
64, Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====  
CC 521.wrf\_r(peak) 527.cam4\_r(peak)

-----  
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)  
64, Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.  
Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.1.144 Build 20181018  
Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

### Base Compiler Invocation

C benchmarks:  
icc -m64 -std=c11

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2019  
**Hardware Availability:** Nov-2018  
**Software Availability:** Nov-2018

## Base Compiler Invocation (Continued)

C++ benchmarks:

```
icpc -m64
```

Fortran benchmarks:

```
ifort -m64
```

Benchmarks using both Fortran and C:

```
ifort -m64 icc -m64 -std=c11
```

Benchmarks using both C and C++:

```
icpc -m64 icc -m64 -std=c11
```

Benchmarks using Fortran, C, and C++:

```
icpc -m64 icc -m64 -std=c11 ifort -m64
```

## 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
```

## Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4
```

(Continued on next page)





# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2019  
**Hardware Availability:** Nov-2018  
**Software Availability:** Nov-2018

## Base Optimization Flags (Continued)

Fortran benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs  
-align array32byte
```

Benchmarks using both Fortran and C:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs  
-align array32byte
```

Benchmarks using both C and C++:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4
```

Benchmarks using Fortran, C, and C++:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4 -auto -nostandard-realloc-lhs  
-align array32byte
```

## Peak Compiler Invocation

C benchmarks:

```
icc -m64 -std=c11
```

C++ benchmarks:

```
icpc -m64
```

Fortran benchmarks:

```
ifort -m64
```

Benchmarks using both Fortran and C:

```
ifort -m64 icc -m64 -std=c11
```

Benchmarks using both C and C++:

```
icpc -m64 icc -m64 -std=c11
```

Benchmarks using Fortran, C, and C++:

```
icpc -m64 icc -m64 -std=c11 ifort -m64
```



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2019  
**Hardware Availability:** Nov-2018  
**Software Availability:** Nov-2018

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

```
519.lbm_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4
```

```
538.imagick_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4
```

```
544.nab_r: basepeak = yes
```

C++ benchmarks:

```
508.namd_r: basepeak = yes
```

```
510.parest_r: basepeak = yes
```

Fortran benchmarks:

```
503.bwaves_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4 -auto  
-nonstandard-realloc-lhs -align array32byte
```

```
549.fotonik3d_r: Same as 503.bwaves_r
```

```
554.roms_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4 -auto -nonstandard-realloc-lhs  
-align array32byte
```

Benchmarks using both Fortran and C:

```
-prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=4 -auto -nonstandard-realloc-lhs  
-align array32byte
```

Benchmarks using both C and C++:

```
511.povray_r: -prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only
```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperWorkstation 5039C-I (X11SCL-F , Intel Xeon E-2104G)

SPECrate2017\_fp\_base = 26.3

SPECrate2017\_fp\_peak = 26.8

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** May-2019  
**Hardware Availability:** Nov-2018  
**Software Availability:** Nov-2018

## Peak Optimization Flags (Continued)

511.povray\_r (continued):

-qopt-mem-layout-trans=4

526.blender\_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch

-ffinite-math-only -qopt-mem-layout-trans=4

Benchmarks using Fortran, C, and C++:

507.cactuBSSN\_r: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2019-04-02.html>

<http://www.spec.org/cpu2017/flags/Default-Platform-Flags.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2019-04-02.xml>

<http://www.spec.org/cpu2017/flags/Default-Platform-Flags.xml>

SPEC is a registered trademark 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 CPU2017 v1.0.5 on 2019-05-29 20:38:38-0400.

Report generated on 2019-06-25 19:01:35 by CPU2017 PDF formatter v6067.

Originally published on 2019-06-25.