



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECrate®2017\_fp\_base = 190

### Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

CPU2017 License: 3358

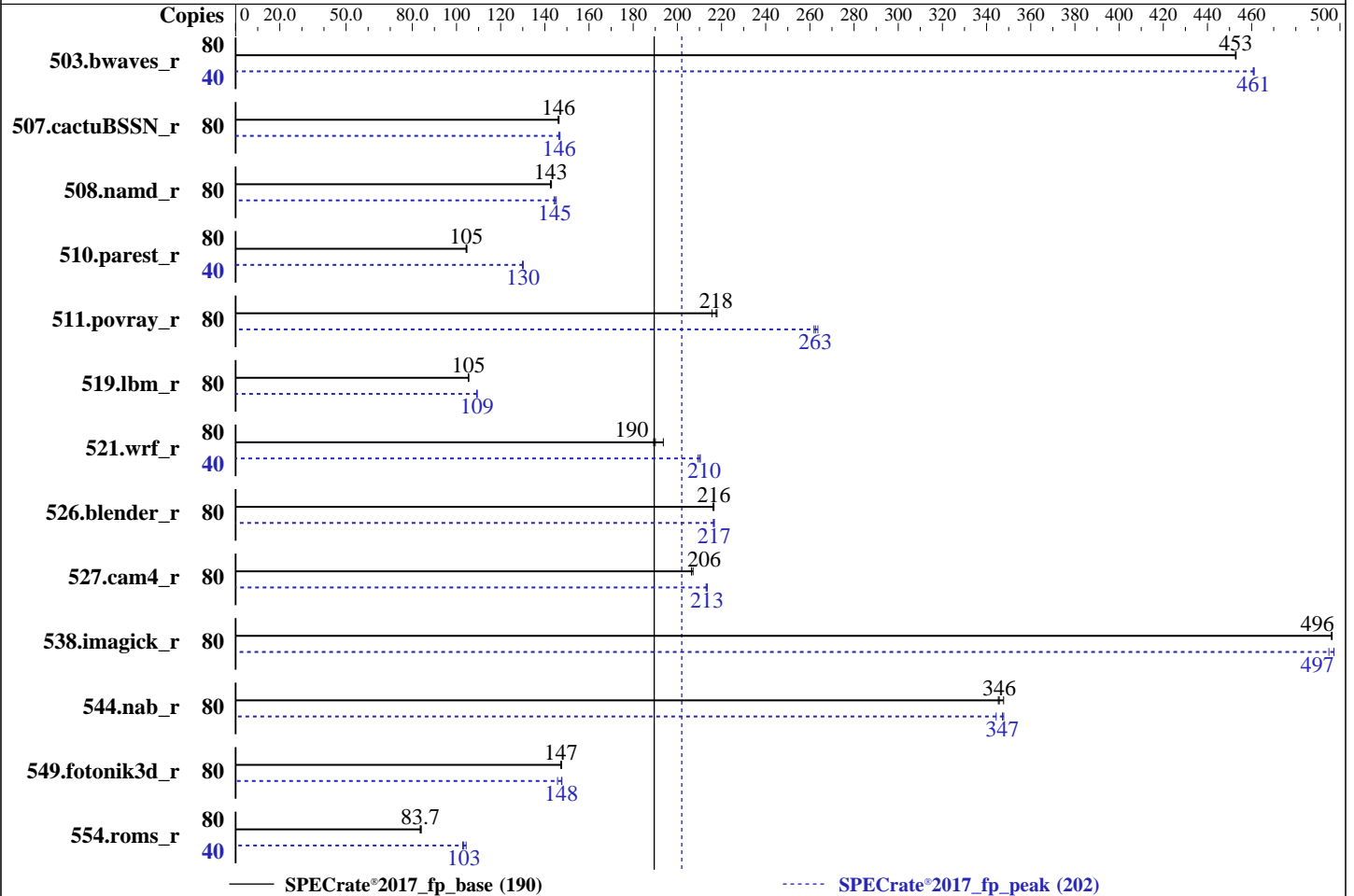
Test Sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test Date: Jan-2020

Hardware Availability: Feb-2020

Software Availability: May-2019



### Hardware

CPU Name: Intel Xeon Gold 5218R  
 Max MHz: 4000  
 Nominal: 2100  
 Enabled: 40 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: 27.5 MB I+D on chip per chip  
 Other: None  
 Memory: 768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R, running at 2666)  
 Storage: 1 x 1 TB SATA SSD  
 Other: None

### Software

OS: SUSE Linux Enterprise Server 12 SP4 4.12.14-94.41-default  
 Compiler: C/C++: Version 19.0.4.227 of Intel C/C++ Compiler Build 20190416 for Linux;  
 Fortran: Version 19.0.4.227 of Intel Fortran Compiler Build 20190416 for Linux  
 Parallel: No  
 Firmware: Version 4.1.5 released May-2019  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other: None  
 Power Management: BIOS and OS set to prefer performance at the cost of additional power usage.



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECrate®2017\_fp\_base = 190

Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

CPU2017 License: 3358

Test Date: Jan-2020

Test Sponsor: Inspur Corporation

Hardware Availability: Feb-2020

Tested by: Inspur Corporation

Software Availability: May-2019

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	80	1771	453	<u>1771</u>	<u>453</u>	1772	453	40	870	461	871	461	<u>870</u>	<u>461</u>
507.cactuBSSN_r	80	<b>693</b>	<b>146</b>	693	146	692	146	80	690	147	<b>691</b>	<b>146</b>	692	146
508.namd_r	80	533	143	<u>533</u>	<u>143</u>	531	143	80	523	145	527	144	<u>526</u>	<u>145</u>
510.parest_r	80	1998	105	2006	104	<u>2002</u>	<u>105</u>	40	806	130	804	130	<u>804</u>	<u>130</u>
511.povray_r	80	<b>859</b>	<b>218</b>	866	216	857	218	80	709	264	713	262	<u>712</u>	<u>263</u>
519.lbm_r	80	800	105	799	106	<u>800</u>	<u>105</u>	80	772	109	<u>771</u>	<u>109</u>	771	109
521.wrf_r	80	925	194	<u>943</u>	<u>190</u>	947	189	40	<b>426</b>	<b>210</b>	428	209	426	210
526.blender_r	80	<b>563</b>	<b>216</b>	564	216	563	217	80	563	216	<u>562</u>	<u>217</u>	562	217
527.cam4_r	80	678	206	676	207	<u>678</u>	<u>206</u>	80	<b>656</b>	<b>213</b>	657	213	655	213
538.imagick_r	80	<b>401</b>	<b>496</b>	401	496	401	496	80	402	495	<b>400</b>	<b>497</b>	400	497
544.nab_r	80	<b>389</b>	<b>346</b>	390	345	387	348	80	387	348	<b>388</b>	<b>347</b>	391	344
549.fotonik3d_r	80	<u>2115</u>	<u>147</u>	2112	148	2117	147	80	2110	148	2139	146	<u>2113</u>	<u>148</u>
554.roms_r	80	1520	83.6	<u>1519</u>	<u>83.7</u>	1512	84.1	40	618	103	609	104	<u>615</u>	<u>103</u>

SPECrate®2017\_fp\_base = 190

SPECrate®2017\_fp\_peak = 202

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"

## General Notes

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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECrate®2017\_fp\_base = 190

### Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

**CPU2017 License:** 3358

**Test Sponsor:** Inspur Corporation

**Tested by:** Inspur Corporation

**Test Date:** Jan-2020

**Hardware Availability:** Feb-2020

**Software Availability:** May-2019

## General Notes (Continued)

runcpu command invoked through numactl i.e.:  
numactl --interleave=all runcpu <etc>

NA: 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.

## Platform Notes

BIOS and OS configuration:

SCALING\_GOVERNOR set to Performance

Hardware Prefetch set to Disable

VT Support set to Disable

CLE Support set to Disable

IMC (Integrated memory controller) Interleaving set to 1-way

Sub NUMA Cluster (SNC) set to Enable

Sysinfo program /home/CPU2017/bin/sysinfo

Rev: r6365 of 2019-08-21 295195f888a3d7edble6e46a485a0011

running on linux-szuo Fri Jan 17 11:46:40 2020

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 5218R CPU @ 2.10GHz

2 "physical id"s (chips)

80 "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

From lscpu:

Architecture: x86\_64

CPU op-mode(s): 32-bit, 64-bit

Byte Order: Little Endian

CPU(s): 80

On-line CPU(s) list: 0-79

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECrate®2017\_fp\_base = 190

### Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

**CPU2017 License:** 3358  
**Test Sponsor:** Inspur Corporation  
**Tested by:** Inspur Corporation

**Test Date:** Jan-2020  
**Hardware Availability:** Feb-2020  
**Software Availability:** May-2019

### Platform Notes (Continued)

```

Thread(s) per core:      2
Core(s) per socket:     20
Socket(s):               2
NUMA node(s):           4
Vendor ID:               GenuineIntel
CPU family:              6
Model:                   85
Model name:              Intel(R) Xeon(R) Gold 5218R CPU @ 2.10GHz
Stepping:                7
CPU MHz:                 2100.000
CPU max MHz:             4000.0000
CPU min MHz:             800.0000
BogoMIPS:                4200.00
Virtualization:         VT-x
L1d cache:               32K
L1i cache:               32K
L2 cache:                1024K
L3 cache:                28160K
NUMA node0 CPU(s):      0-2,5,6,10-12,15,16,40-42,45,46,50-52,55,56
NUMA node1 CPU(s):      3,4,7-9,13,14,17-19,43,44,47-49,53,54,57-59
NUMA node2 CPU(s):      20-22,25,26,30-32,35,36,60-62,65,66,70-72,75,76
NUMA node3 CPU(s):      23,24,27-29,33,34,37-39,63,64,67-69,73,74,77-79
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 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 cdp_l3 invpcid_single
intel_ppin ssbd mba ibrs ibpb stibp tpr_shadow vnmi flexpriority ept vpid fsgsbase
tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm 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 pku ospke avx512_vnni flush_lld arch_capabilities

```

```
/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 5 6 10 11 12 15 16 40 41 42 45 46 50 51 52 55 56
node 0 size: 192045 MB
node 0 free: 179219 MB
node 1 cpus: 3 4 7 8 9 13 14 17 18 19 43 44 47 48 49 53 54 57 58 59
node 1 size: 193530 MB
node 1 free: 185024 MB
node 2 cpus: 20 21 22 25 26 30 31 32 35 36 60 61 62 65 66 70 71 72 75 76

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECrate®2017\_fp\_base = 190

### Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

**CPU2017 License:** 3358  
**Test Sponsor:** Inspur Corporation  
**Tested by:** Inspur Corporation

**Test Date:** Jan-2020  
**Hardware Availability:** Feb-2020  
**Software Availability:** May-2019

### Platform Notes (Continued)

```

node 2 size: 193501 MB
node 2 free: 185278 MB
node 3 cpus: 23 24 27 28 29 33 34 37 38 39 63 64 67 68 69 73 74 77 78 79
node 3 size: 193316 MB
node 3 free: 185104 MB
node distances:
node 0 1 2 3
0: 10 11 21 21
1: 11 10 21 21
2: 21 21 10 11
3: 21 21 11 10

From /proc/meminfo
MemTotal: 790931004 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP4

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 4
# 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-SP4"
VERSION_ID="12.4"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP4"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp4"

uname -a:
Linux linux-szuo 4.12.14-94.41-default #1 SMP Wed Oct 31 12:25:04 UTC 2018 (3090901)
x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: No status reported
CVE-2017-5754 (Meltdown): Not affected
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled
via prctl and seccomp

```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECrate®2017\_fp\_base = 190

Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

**CPU2017 License:** 3358  
**Test Sponsor:** Inspur Corporation  
**Tested by:** Inspur Corporation

**Test Date:** Jan-2020  
**Hardware Availability:** Feb-2020  
**Software Availability:** May-2019

### Platform Notes (Continued)

CVE-2017-5753 (Spectre variant 1): Mitigation: \_\_user pointer sanitization  
CVE-2017-5715 (Spectre variant 2): Mitigation: Indirect Branch Restricted Speculation, IBPB, IBRS\_FW

run-level 3 Jan 17 01:31 last=5

SPEC is set to: /home/CPU2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sdall	xfs	882G	55G	827G	7%	/home

From /sys/devices/virtual/dmi/id

BIOS: American Megatrends Inc. 4.1.5 05/21/2019  
Vendor: Inspur  
Product: NF5280M5  
Serial: 219247003

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 Hynix HMAA4GR7AJR8N-WM 32 GB 2 rank 2933, configured at 2666

(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) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

```
=====
C++       | 508.namd_r(base, peak) 510.parest_r(base, peak)
-----
```

Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

```
=====
C++, C    | 511.povray_r(base, peak) 526.blender_r(base, peak)
-----
```

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

## Inspur Corporation

SPECrate®2017\_fp\_base = 190

Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

**CPU2017 License:** 3358

**Test Sponsor:** Inspur Corporation

**Tested by:** Inspur Corporation

**Test Date:** Jan-2020

**Hardware Availability:** Feb-2020

**Software Availability:** May-2019

### Compiler Version Notes (Continued)

-----

Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,  
 Version 19.0.4.227 Build 20190416  
 Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
 Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
 Version 19.0.4.227 Build 20190416  
 Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

-----

=====  
 C++, C, Fortran | 507.cactuBSSN\_r(base, peak)

-----

Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64,  
 Version 19.0.4.227 Build 20190416  
 Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
 Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
 Version 19.0.4.227 Build 20190416  
 Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
 Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)  
 64, Version 19.0.4.227 Build 20190416  
 Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

-----

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

-----

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)  
 64, Version 19.0.4.227 Build 20190416  
 Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

-----

=====  
 Fortran, C | 521.wrf\_r(base, peak) 527.cam4\_r(base, peak)

-----

Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R)  
 64, Version 19.0.4.227 Build 20190416  
 Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
 Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
 Version 19.0.4.227 Build 20190416  
 Copyright (C) 1985-2019 Intel Corporation. All rights reserved.

-----



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Inspur Corporation

SPECrate®2017\_fp\_base = 190

Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

CPU2017 License: 3358

Test Sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test Date: Jan-2020

Hardware Availability: Feb-2020

Software Availability: May-2019

## Base 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
```

## 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
```

(Continued on next page)





# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Inspur Corporation

SPECrate®2017\_fp\_base = 190

Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

CPU2017 License: 3358

Test Sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test Date: Jan-2020

Hardware Availability: Feb-2020

Software Availability: May-2019

## Base Optimization Flags (Continued)

C++ benchmarks (continued):

```
-qopt-mem-layout-trans=4
```

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 CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Inspur Corporation

SPECrate®2017\_fp\_base = 190

Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

CPU2017 License: 3358

Test Sponsor: Inspur Corporation

Tested by: Inspur Corporation

Test Date: Jan-2020

Hardware Availability: Feb-2020

Software Availability: May-2019

## 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: Same as 538.imagick\_r

C++ benchmarks:

508.namd\_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

510.parest\_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=4

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

(Continued on next page)



# SPEC CPU®2017 Floating Point Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

Inspur Corporation

SPECrate®2017\_fp\_base = 190

Inspur NF5180M5 (Intel Xeon Gold 5218R)

SPECrate®2017\_fp\_peak = 202

**CPU2017 License:** 3358

**Test Sponsor:** Inspur Corporation

**Tested by:** Inspur Corporation

**Test Date:** Jan-2020

**Hardware Availability:** Feb-2020

**Software Availability:** May-2019

## Peak Optimization Flags (Continued)

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  
-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++:

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

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

<http://www.spec.org/cpu2017/flags/Intel-ic19.0u1-official-linux64.2019-07-09.html>

<http://www.spec.org/cpu2017/flags/Inspur-Platform-Settings-V1.5-CAS.html>

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

<http://www.spec.org/cpu2017/flags/Intel-ic19.0u1-official-linux64.2019-07-09.xml>

<http://www.spec.org/cpu2017/flags/Inspur-Platform-Settings-V1.5-CAS.xml>

SPEC CPU and SPECrate 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 v1.1.0 on 2020-01-17 11:46:39-0500.

Report generated on 2020-03-10 19:29:57 by CPU2017 PDF formatter v6255.

Originally published on 2020-03-09.