



# SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

Huawei CH121 V5 (Intel Xeon Gold 5120)

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

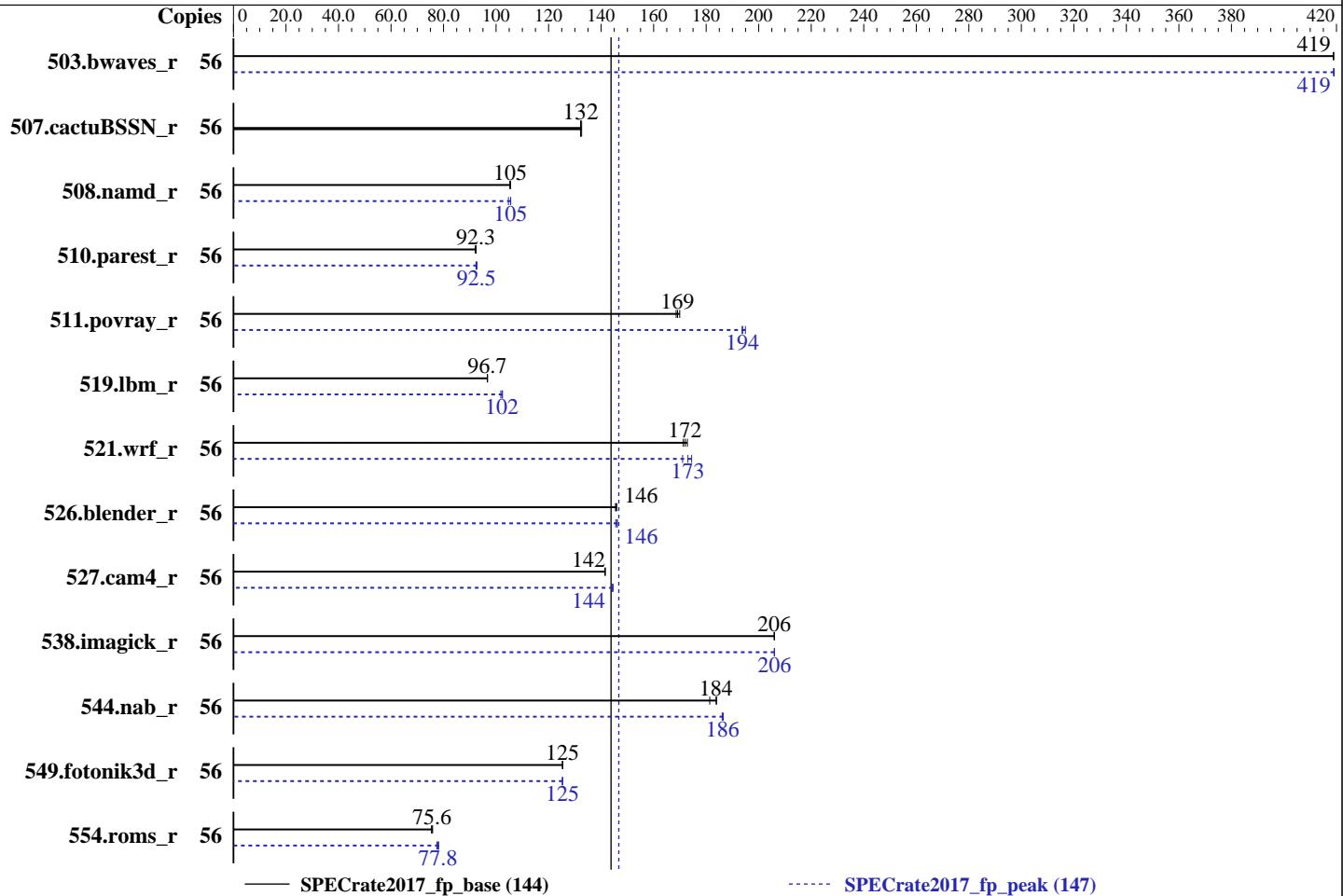
SPECrate2017\_fp\_base = 144

SPECrate2017\_fp\_peak = 147

Test Date: Jan-2018

Hardware Availability: Jul-2017

Software Availability: Sep-2017



— SPECrate2017\_fp\_base (144)

----- SPECrate2017\_fp\_peak (147)

## Hardware

CPU Name: Intel Xeon Gold 5120  
 Max MHz.: 3200  
 Nominal: 2200  
 Enabled: 28 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: 19.25 MB I+D on chip per chip  
 Other: None  
 Memory: 384 GB (24 x 16 GB 2Rx8 PC4-2666V-R, running at 2400)  
 Storage: 1 x 1200 GB SAS, 10000 RPM  
 Other: None

## Software

OS: SUSE Linux Enterprise Server 12 SP2 (x86\_64)  
 4.4.21-69-default  
 Compiler: C/C++: Version 18.0.0.128 of Intel C/C++  
 Compiler for Linux;  
 Fortran: Version 18.0.0.128 of Intel Fortran  
 Compiler for Linux  
 Parallel: No  
 Firmware: Version 0.31 Released Sep-2017  
 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 2017-2018 Standard Performance Evaluation Corporation

Huawei

Huawei CH121 V5 (Intel Xeon Gold 5120)

**SPECrate2017\_fp\_base = 144**

**SPECrate2017\_fp\_peak = 147**

CPU2017 License: 3175

Test Date: Jan-2018

Test Sponsor: Huawei

Hardware Availability: Jul-2017

Tested by: Huawei

Software Availability: Sep-2017

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	56	<b>1341</b>	<b>419</b>	1340	419	1341	419	56	1340	419	<b>1340</b>	<b>419</b>	1341	419
507.cactuBSSN_r	56	536	132	<b>536</b>	<b>132</b>	535	133	56	536	132	<b>536</b>	<b>132</b>	535	133
508.namd_r	56	<b>504</b>	<b>105</b>	505	105	504	105	56	<b>504</b>	<b>105</b>	508	105	504	106
510.parest_r	56	1592	92.0	<b>1587</b>	<b>92.3</b>	1586	92.3	56	<b>1584</b>	<b>92.5</b>	1586	92.3	1580	92.7
511.povray_r	56	<b>773</b>	<b>169</b>	776	169	769	170	56	675	194	671	195	<b>674</b>	<b>194</b>
519.lbm_r	56	<b>610</b>	<b>96.7</b>	611	96.7	610	96.7	56	<b>577</b>	<b>102</b>	576	102	580	102
521.wrf_r	56	726	173	732	171	<b>729</b>	<b>172</b>	56	733	171	<b>725</b>	<b>173</b>	719	174
526.blender_r	56	585	146	<b>585</b>	<b>146</b>	586	145	56	583	146	<b>584</b>	<b>146</b>	586	146
527.cam4_r	56	692	142	692	141	<b>692</b>	<b>142</b>	56	<b>678</b>	<b>144</b>	678	144	678	144
538.imagick_r	56	<b>676</b>	<b>206</b>	676	206	676	206	56	676	206	<b>676</b>	<b>206</b>	676	206
544.nab_r	56	520	181	<b>513</b>	<b>184</b>	512	184	56	<b>506</b>	<b>186</b>	505	186	506	186
549.fotonik3d_r	56	<b>1741</b>	<b>125</b>	1743	125	1741	125	56	1743	125	1741	125	<b>1742</b>	<b>125</b>
554.roms_r	56	<b>1177</b>	<b>75.6</b>	1180	75.4	1173	75.8	56	1148	77.5	1139	78.1	<b>1144</b>	<b>77.8</b>

**SPECrate2017\_fp\_base = 144**

**SPECrate2017\_fp\_peak = 147**

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"

## General Notes

Environment variables set by runcpu before the start of the run:

LD\_LIBRARY\_PATH = "/spec2017/lib/ia32:/spec2017/lib/intel64:/spec2017/je5.0.1-32:/spec2017/je5.0.1-64"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM memory using Redhat Enterprise Linux 7.4

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>

No: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017\_fp\_base = 144

Huawei CH121 V5 (Intel Xeon Gold 5120)

SPECrate2017\_fp\_peak = 147

CPU2017 License: 3175

Test Date: Jan-2018

Test Sponsor: Huawei

Hardware Availability: Jul-2017

Tested by: Huawei

Software Availability: Sep-2017

## General Notes (Continued)

is mitigated in the system as tested and documented.

No: 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.

No: 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.

This benchmark result is intended to provide perspective on past performance using the historical hardware and/or software described on this result page.

The system as described on this result page was formerly generally available. At the time of this publication, it may not be shipping, and/or may not be supported, and/or may fail to meet other tests of General Availability described in the SPEC OSG Policy document, <http://www.spec.org/osg/policy.html>

This measured result may not be representative of the result that would be measured were this benchmark run with hardware and software available as of the publication date.

## Platform Notes

BIOS configuration:

Power Policy Set to Performance

SNC Set to Enabled

IMC Interleaving Set to 1 way Interleave

XPT Prefetch Set to Enabled

Sysinfo program /spec2017/bin/sysinfo

Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f

running on linux-hyq4 Sat Jan 20 11:30:45 2018

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 5120 CPU @ 2.20GHz

2 "physical id"s (chips)

56 "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 : 14

siblings : 28

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

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

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

**SPECrate2017\_fp\_base = 144**

Huawei CH121 V5 (Intel Xeon Gold 5120)

**SPECrate2017\_fp\_peak = 147**

CPU2017 License: 3175

Test Date: Jan-2018

Test Sponsor: Huawei

Hardware Availability: Jul-2017

Tested by: Huawei

Software Availability: Sep-2017

## Platform Notes (Continued)

```
From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 56
On-line CPU(s) list: 0-55
Thread(s) per core: 2
Core(s) per socket: 14
Socket(s): 2
NUMA node(s): 4
Vendor ID: GenuineIntel
CPU family: 6
Model: 85
Model name: Intel(R) Xeon(R) Gold 5120 CPU @ 2.20GHz
Stepping: 4
CPU MHz: 2200.100
BogoMIPS: 4400.20
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 19712K
NUMA node0 CPU(s): 0-3,7-9,28-31,35-37
NUMA node1 CPU(s): 4-6,10-13,32-34,38-41
NUMA node2 CPU(s): 14-17,21-23,42-45,49-51
NUMA node3 CPU(s): 18-20,24-27,46-48,52-55
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 xttopology nonstop_tsc
aperfmperf eagerfpu 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 3dnnowprefetch ida arat epb pln pts dtherm intel_pt
tpr_shadow vnmi flexpriority ept vpid fsgsbase tsc_adjust bmil hle avx2 smep bmi2
erms invpcid rtm cqm mpx avx512f avx512dq rdseed adx smap clflushopt clwb avx512cd
avx512bw avx512vl xsaveopt xgetbv1 cqm_llc cqm_occup_llc
```

```
/proc/cpuinfo cache data
cache size : 19712 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 3 7 8 9 28 29 30 31 35 36 37
node 0 size: 94737 MB
node 0 free: 93879 MB
node 1 cpus: 4 5 6 10 11 12 13 32 33 34 38 39 40 41
node 1 size: 96760 MB
```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017\_fp\_base = 144

Huawei CH121 V5 (Intel Xeon Gold 5120)

SPECrate2017\_fp\_peak = 147

CPU2017 License: 3175

Test Date: Jan-2018

Test Sponsor: Huawei

Hardware Availability: Jul-2017

Tested by: Huawei

Software Availability: Sep-2017

## Platform Notes (Continued)

```
node 1 free: 96045 MB
node 2 cpus: 14 15 16 17 21 22 23 42 43 44 45 49 50 51
node 2 size: 96760 MB
node 2 free: 96011 MB
node 3 cpus: 18 19 20 24 25 26 27 46 47 48 52 53 54 55
node 3 size: 96652 MB
node 3 free: 95908 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:           394148168 kB
HugePages_Total:        0
Hugepagesize:         2048 kB

From /etc/*release* /etc/*version*
SuSE-release:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 2
  # 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-SP2"
  VERSION_ID="12.2"
  PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
  ID="sles"
  ANSI_COLOR="0;32"
  CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
Linux linux-hyq4 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016 (9464f67)
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 18 21:13

SPEC is set to: /spec2017
Filesystem      Type  Size  Used Avail Use% Mounted on
 /dev/sda2        xfs   828G   57G  772G    7% /
```

Additional information from dmidecode follows. WARNING: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017\_fp\_base = 144

Huawei CH121 V5 (Intel Xeon Gold 5120)

SPECrate2017\_fp\_peak = 147

CPU2017 License: 3175

Test Date: Jan-2018

Test Sponsor: Huawei

Hardware Availability: Jul-2017

Tested by: Huawei

Software Availability: Sep-2017

## Platform Notes (Continued)

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 INSYDE Corp. 0.31 09/29/2017

Memory:

24x Samsung M393A2K43BB1-CTD 16 GB 2 rank 2666, configured at 2400

(End of data from sysinfo program)

## Compiler Version Notes

=====

CC 519.lbm\_r(base) 538.imagick\_r(base, peak) 544.nab\_r(base)

=====

-----

icc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

-----

=====

CC 519.lbm\_r(peak) 544.nab\_r(peak)

=====

-----

icc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

-----

=====

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

=====

-----

icpc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

-----

=====

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

=====

-----

icpc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

-----

=====

CC 511.povray\_r(base) 526.blender\_r(base)

=====

-----

icpc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

-----

icc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

-----

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017\_fp\_base = 144

Huawei CH121 V5 (Intel Xeon Gold 5120)

SPECrate2017\_fp\_peak = 147

CPU2017 License: 3175

Test Date: Jan-2018

Test Sponsor: Huawei

Hardware Availability: Jul-2017

Tested by: Huawei

Software Availability: Sep-2017

## Compiler Version Notes (Continued)

=====

CC 511.povray\_r(peak) 526.blender\_r(peak)

=====

icpc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
icc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====

FC 507.cactubSSN\_r(base)

icpc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
icc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
ifort (IFORT) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====

FC 507.cactubSSN\_r(peak)

icpc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
icc (ICC) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.  
ifort (IFORT) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====

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

ifort (IFORT) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====

FC 554.roms\_r(peak)

ifort (IFORT) 18.0.0 20170811  
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.

=====

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017\_fp\_base = 144

Huawei CH121 V5 (Intel Xeon Gold 5120)

SPECrate2017\_fp\_peak = 147

CPU2017 License: 3175

Test Date: Jan-2018

Test Sponsor: Huawei

Hardware Availability: Jul-2017

Tested by: Huawei

Software Availability: Sep-2017

## Compiler Version Notes (Continued)

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

```
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
```

=====

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

```
ifort (IFORT) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
icc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation. All rights reserved.
```

## Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

ifort icc

Benchmarks using both C and C++:

icpc icc

Benchmarks using Fortran, C, and C++:

icpc icc ifort

## Base Portability Flags

503.bwaves\_r: -DSPEC\_LP64  
507.cactusBSSN\_r: -DSPEC\_LP64  
508.namd\_r: -DSPEC\_LP64  
510.parest\_r: -DSPEC\_LP64

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017\_fp\_base = 144

Huawei CH121 V5 (Intel Xeon Gold 5120)

SPECrate2017\_fp\_peak = 147

CPU2017 License: 3175

Test Date: Jan-2018

Test Sponsor: Huawei

Hardware Availability: Jul-2017

Tested by: Huawei

Software Availability: Sep-2017

## Base Portability Flags (Continued)

```
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=3
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3
```

Fortran benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3 -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=3 -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=3
```

Benchmarks using Fortran, C, and C++:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3 -nostandard-realloc-lhs -align array32byte
```

## Base Other Flags

C benchmarks:

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

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017\_fp\_base = 144

Huawei CH121 V5 (Intel Xeon Gold 5120)

SPECrate2017\_fp\_peak = 147

CPU2017 License: 3175

Test Date: Jan-2018

Test Sponsor: Huawei

Hardware Availability: Jul-2017

Tested by: Huawei

Software Availability: Sep-2017

## Base Other Flags (Continued)

C++ benchmarks:

-m64

Fortran benchmarks:

-m64

Benchmarks using both Fortran and C:

-m64 -std=c11

Benchmarks using both C and C++:

-m64 -std=c11

Benchmarks using Fortran, C, and C++:

-m64 -std=c11

## Peak Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

ifort icc

Benchmarks using both C and C++:

icpcicc

Benchmarks using Fortran, C, and C++:

icpciccifort

## Peak Portability Flags

Same as Base Portability Flags



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

Huawei CH121 V5 (Intel Xeon Gold 5120)

SPECrate2017\_fp\_base = 144

SPECrate2017\_fp\_peak = 147

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: Jan-2018

Hardware Availability: Jul-2017

Software Availability: Sep-2017

## 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=3
```

```
538.imagick_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=3
```

544.nab\_r: Same as 519.lbm\_r

C++ benchmarks:

```
-prof-gen(pass 1) -prof-use(pass 2) -ipo -xCORE-AVX2 -O3  
-no-prec-div -qopt-prefetch -ffinite-math-only  
-qopt-mem-layout-trans=3
```

Fortran benchmarks:

```
503.bwaves_r: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch  
-ffinite-math-only -qopt-mem-layout-trans=3  
-nostandard-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=3 -nostandard-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=3 -nostandard-realloc-lhs -align array32byte
```

Benchmarks using both C 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=3
```

Benchmarks using Fortran, C, and C++:

507.cactuBSSN\_r: basepeak = yes



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

Huawei CH121 V5 (Intel Xeon Gold 5120)

SPECrate2017\_fp\_base = 144

SPECrate2017\_fp\_peak = 147

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: Jan-2018

Hardware Availability: Jul-2017

Software Availability: Sep-2017

## Peak Other Flags

C benchmarks:

-m64 -std=c11

C++ benchmarks:

-m64

Fortran benchmarks:

-m64

Benchmarks using both Fortran and C:

-m64 -std=c11

Benchmarks using both C and C++:

-m64 -std=c11

Benchmarks using Fortran, C, and C++:

-m64 -std=c11

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.html>

<http://www.spec.org/cpu2017/flags/Huawei-Platform-Settings-SKL-V1.7.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.xml>

<http://www.spec.org/cpu2017/flags/Huawei-Platform-Settings-SKL-V1.7.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 v1.0.2 on 2018-01-19 22:30:44-0500.

Report generated on 2018-10-31 16:44:03 by CPU2017 PDF formatter v6067.

Originally published on 2018-02-27.