



SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

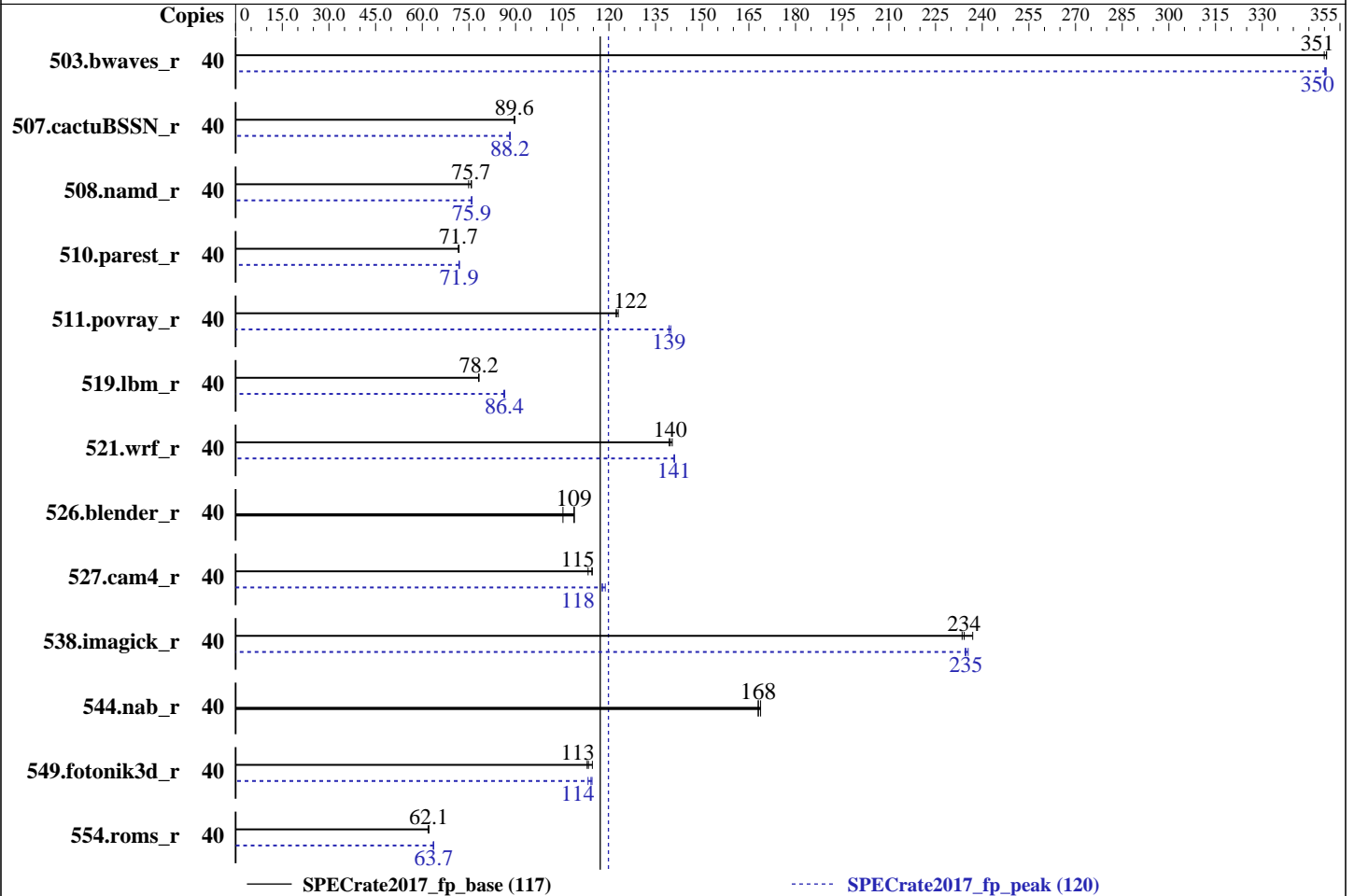
Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018



Hardware

CPU Name: Intel Xeon Silver 4114
 Max MHz.: 3000
 Nominal: 2200
 Enabled: 20 cores, 2 chips, 2 threads/core
 Orderable: 1, 2 chip(s)
 Cache L1: 32 KB I + 32 KB D on chip per core
 L2: 1 MB I+D on chip per core
 L3: 13.75 MB I+D on chip per chip
 Other: None
 Memory: 384 GB (12 x 32 GB 2Rx4 PC4-2666V-R, running at 2400)
 Storage: 1 x 240 GB SATA SSD
 Other: None

Software

OS: SUSE Linux Enterprise Server 12 (x86_64) SP3
 Kernel 4.4.120-94.17-default
 Compiler: C/C++: Version 18.0.3.222 of Intel C/C++ Compiler for Linux;
 Fortran: Version 18.0.3.222 of Intel Fortran Compiler for Linux
 Parallel: No
 Firmware: Version 0905 released Mar-2018
 File System: btrfs
 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

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	40	1146	350	1144	351	1144	351	40	1145	350	1146	350	1144	351
507.cactuBSSN_r	40	565	89.6	565	89.6	564	89.7	40	574	88.2	574	88.2	574	88.2
508.namd_r	40	501	75.8	502	75.7	507	74.9	40	501	75.9	500	76.0	501	75.8
510.parest_r	40	1457	71.8	1459	71.7	1461	71.6	40	1457	71.8	1456	71.9	1455	71.9
511.povray_r	40	764	122	759	123	763	122	40	670	139	670	139	668	140
519.lbm_r	40	540	78.1	539	78.2	539	78.2	40	489	86.2	487	86.5	488	86.4
521.wrf_r	40	643	139	638	140	641	140	40	635	141	636	141	636	141
526.blender_r	40	579	105	559	109	560	109	40	579	105	559	109	560	109
527.cam4_r	40	610	115	611	115	617	113	40	593	118	589	119	594	118
538.imagick_r	40	426	234	420	237	425	234	40	424	235	422	235	424	235
544.nab_r	40	401	168	401	168	399	169	40	401	168	401	168	399	169
549.fotonik3d_r	40	1359	115	1375	113	1380	113	40	1365	114	1361	115	1376	113
554.roms_r	40	1027	61.9	1024	62.1	1024	62.1	40	998	63.7	998	63.7	1001	63.5

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

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>
```

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

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-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

BIOS Configuration:

SNC = Enabled

IMC interleaving = 1 way

Patrol Scrub = Disabled

VT-d = Disabled

ENERGY_PERF_BIAS_CFG mode = Performance

HyperThreading = Enabled

Sysinfo program /spec2017/bin/sysinfo

Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9

running on linux-pmm5 Fri Jun 15 20:40:27 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) Silver 4114 CPU @ 2.20GHz

2 "physical id"s (chips)

40 "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 : 10

siblings : 20

physical 0: cores 0 1 2 3 4 8 9 10 11 12

physical 1: cores 0 1 2 3 4 8 9 10 11 12

From lscpu:

Architecture: x86_64

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

Byte Order: Little Endian

CPU(s): 40

On-line CPU(s) list: 0-39

Thread(s) per core: 2

Core(s) per socket: 10

Socket(s): 2

NUMA node(s): 2

Vendor ID: GenuineIntel

CPU family: 6

Model: 85

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

Platform Notes (Continued)

```

Model name: Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz
Stepping: 4
CPU MHz: 2201.000
CPU max MHz: 2201.0000
CPU min MHz: 800.0000
BogoMIPS: 4532.15
Virtualization: VT-x
L1d cache: 32K
L1i cache: 32K
L2 cache: 1024K
L3 cache: 14080K
NUMA node0 CPU(s): 0-9,20-29
NUMA node1 CPU(s): 10-19,30-39
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
aperfmpperf eagerfpu 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 ida arat epb invpcid_single pln pts
dtherm intel_pt rsb_ctxsw spec_ctrl stibp retpoline kaiser tpr_shadow vnmi
flexpriority ept vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm
cqm mpx avx512f avx512dq rdseed adx smap clflushopt clwb avx512cd avx512bw avx512vl
xsaveopt xsavec xgetbv1 cqm_llc cqm_occup_llc pku ospke

```

```

/proc/cpuinfo cache data
cache size : 14080 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 20 21 22 23 24 25 26 27 28 29
node 0 size: 192066 MB
node 0 free: 178604 MB
node 1 cpus: 10 11 12 13 14 15 16 17 18 19 30 31 32 33 34 35 36 37 38 39
node 1 size: 193516 MB
node 1 free: 182728 MB
node distances:
node  0  1
  0:  10  21
  1:  21  10

```

```

From /proc/meminfo
MemTotal: 394836784 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

```

```

From /etc/*release* /etc/*version*

```

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

Platform Notes (Continued)

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"

uname -a:

Linux linux-pmm5 4.4.120-94.17-default #1 SMP Wed Mar 14 17:23:00 UTC 2018 (cf3a7bb)
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: __user pointer sanitization

CVE-2017-5715 (Spectre variant 2): Mitigation: IBRS+IBPB

run-level 3 Jun 15 09:24

SPEC is set to: /spec2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	btrfs	203G	136G	67G	68%	/

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. 0905 03/19/2018

Memory:

12x Samsung M393A4K40BB2-CTD 32 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, peak)
=====

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

Compiler Version Notes (Continued)

icc (ICC) 18.0.3 20180410

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

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

icc (ICC) 18.0.3 20180410

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====
CXXC 508.namd_r(base) 510.parest_r(base)

icc (ICC) 18.0.3 20180410

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====
CXXC 508.namd_r(peak) 510.parest_r(peak)

icc (ICC) 18.0.3 20180410

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====
CC 511.povray_r(base) 526.blender_r(base, peak)

icc (ICC) 18.0.3 20180410

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

icc (ICC) 18.0.3 20180410

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====
CC 511.povray_r(peak)

icc (ICC) 18.0.3 20180410

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

icc (ICC) 18.0.3 20180410

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====
FC 507.cactuBSSN_r(base)

icc (ICC) 18.0.3 20180410

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

Compiler Version Notes (Continued)

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
 icc (ICC) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
 ifort (IFORT) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====

FC 507.cactuBSSN_r(peak)

icpc (ICC) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
 icc (ICC) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
 ifort (IFORT) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====

FC 503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak) 554.roms_r(base)

ifort (IFORT) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====

FC 554.roms_r(peak)

ifort (IFORT) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====

CC 521.wrf_r(base) 527.cam4_r(base)

ifort (IFORT) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
 icc (ICC) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

=====

CC 521.wrf_r(peak) 527.cam4_r(peak)

ifort (IFORT) 18.0.3 20180410
 Copyright (C) 1985-2018 Intel Corporation. All rights reserved.
 icc (ICC) 18.0.3 20180410

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

Compiler Version Notes (Continued)

Copyright (C) 1985-2018 Intel Corporation. All rights reserved.

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



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

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
```

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

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-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=3

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

544.nab_r: basepeak = yes

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
-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=3 -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=3 -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
-qopt-mem-layout-trans=3

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS RS720Q-E9(Z11PH-D12) Server System
(2.20 GHz, Intel Xeon Silver 4114)

SPECrate2017_fp_base = 117

SPECrate2017_fp_peak = 120

CPU2017 License: 9016

Test Sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test Date: Jun-2018

Hardware Availability: Mar-2018

Software Availability: Mar-2018

Peak Optimization Flags (Continued)

526.blender_r: basepeak = yes

Benchmarks using Fortran, 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 -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/ASUSTekPlatform-Settings-z11-V2.0-revD.html>

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-12-21.html>

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

<http://www.spec.org/cpu2017/flags/ASUSTekPlatform-Settings-z11-V2.0-revD.xml>

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-12-21.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.

Tested with SPEC CPU2017 v1.0.5 on 2018-06-15 08:40:27-0400.

Report generated on 2019-03-08 20:56:27 by CPU2017 PDF formatter v6067.

Originally published on 2018-09-18.