



# SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

## Hewlett Packard Enterprise

(Test Sponsor: HPE)

### ProLiant ML110 Gen10

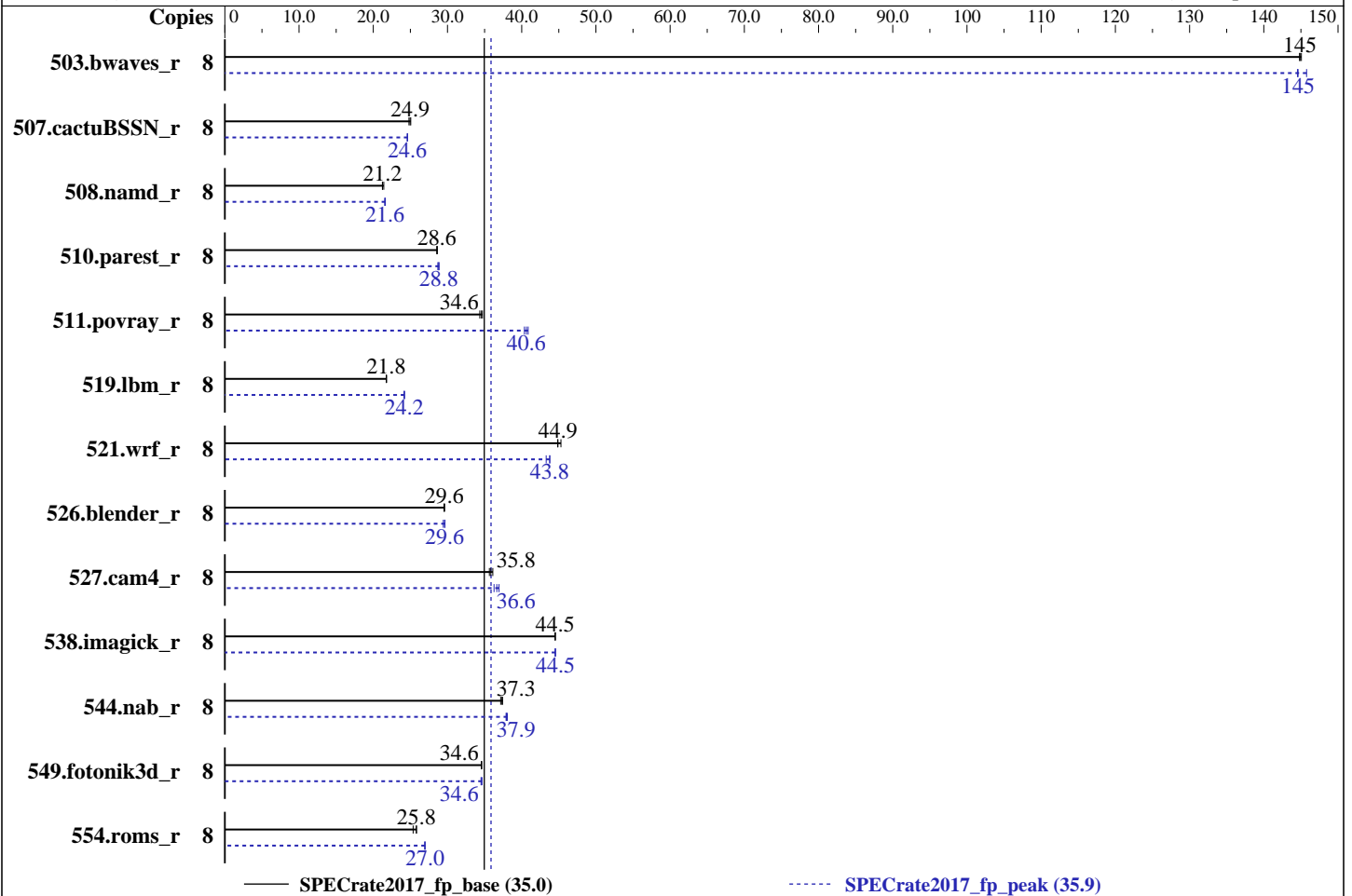
(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

CPU2017 License: 3  
Test Sponsor: HPE  
Tested by: HPE

Test Date: Nov-2017  
Hardware Availability: Oct-2017  
Software Availability: Sep-2017



### Hardware

CPU Name: Intel Xeon Gold 5122  
Max MHz.: 3700  
Nominal: 3600  
Enabled: 4 cores, 1 chip, 2 threads/core  
Orderable: 1 chip  
Cache L1: 32 KB I + 32 KB D on chip per core  
L2: 1 MB I+D on chip per core  
L3: 16.5 MB I+D on chip per chip  
Other: None  
Memory: 96 GB (6 x 16 GB 2Rx8 PC4-2666V-R)  
Storage: 1 x 480 GB SATA SSD, RAID 0  
Other: None

### Software

OS: SUSE Linux Enterprise Server 12 (x86\_64) SP3  
Kernel 4.4.73-5-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: HPE BIOS Version U33 released Nov-2017 (U33 11/14/2017)  
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

Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant ML110 Gen10

(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

CPU2017 License: 3  
Test Sponsor: HPE  
Tested by: HPE

Test Date: Nov-2017  
Hardware Availability: Oct-2017  
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	8	<b>554</b>	<b>145</b>	554	145	553	145	8	555	145	<b>555</b>	<b>145</b>	550	146
507.cactuBSSN_r	8	<b>406</b>	<b>24.9</b>	408	24.8	404	25.0	8	412	24.6	411	24.6	<b>412</b>	<b>24.6</b>
508.namd_r	8	358	21.2	<b>358</b>	<b>21.2</b>	355	21.4	8	<b>352</b>	<b>21.6</b>	353	21.6	351	21.6
510.parest_r	8	731	28.6	<b>732</b>	<b>28.6</b>	732	28.6	8	729	28.7	<b>727</b>	<b>28.8</b>	725	28.9
511.povray_r	8	<b>540</b>	<b>34.6</b>	538	34.7	544	34.4	8	463	40.4	<b>460</b>	<b>40.6</b>	457	40.9
519.lbm_r	8	<b>387</b>	<b>21.8</b>	388	21.7	387	21.8	8	349	24.1	348	24.2	<b>349</b>	<b>24.2</b>
521.wrf_r	8	396	45.3	400	44.9	<b>399</b>	<b>44.9</b>	8	414	43.3	409	43.8	<b>409</b>	<b>43.8</b>
526.blender_r	8	412	29.5	<b>412</b>	<b>29.6</b>	411	29.6	8	<b>412</b>	<b>29.6</b>	414	29.4	411	29.7
527.cam4_r	8	388	36.1	<b>390</b>	<b>35.8</b>	393	35.6	8	<b>382</b>	<b>36.6</b>	379	36.9	386	36.3
538.imagick_r	8	447	44.5	447	44.5	<b>447</b>	<b>44.5</b>	8	<b>447</b>	<b>44.5</b>	447	44.5	447	44.5
544.nab_r	8	362	37.2	360	37.4	<b>361</b>	<b>37.3</b>	8	355	37.9	<b>355</b>	<b>37.9</b>	354	38.1
549.fotonik3d_r	8	901	34.6	<b>901</b>	<b>34.6</b>	902	34.6	8	903	34.5	<b>901</b>	<b>34.6</b>	900	34.6
554.roms_r	8	501	25.4	<b>493</b>	<b>25.8</b>	492	25.8	8	471	27.0	472	26.9	<b>471</b>	<b>27.0</b>

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

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"
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>
irqbalance disabled with "service irqbalance stop"
tuned profile set with "tuned-adm profile throughput-performance"
VM Dirty ratio was set to 40 using "echo 40 > /proc/sys/vm/dirty_ratio"
Numa balancing was disabled using "echo 0 > /proc/sys/kernel/numa_balancing"
```

## General Notes

Environment variables set by runcpu before the start of the run:  
LD\_LIBRARY\_PATH = "/home/cpu2017/lib/ia32:/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-32:/home/cpu2017/je5.0.1-64"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML110 Gen10

(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Nov-2017

Hardware Availability: Oct-2017

Software Availability: Sep-2017

## General Notes (Continued)

memory using Redhat Enterprise Linux 7.4

## Platform Notes

BIOS Configuration:

```

Thermal Configuration set to Maximum Cooling
LLC Prefetch set to Enabled
LLC Dead Line Allocation set to Disabled
Memory Patrol Scrubbing set to Disabled
Workload Profile set to General Throughput Compute
Minimum Processor Idle Power Core C-State set to C1E
Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
running on mll10nsr Sat Nov 18 07:45:59 2017

```

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 5122 CPU @ 3.60GHz
 1 "physical id"s (chips)
 8 "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 : 8
physical 0: cores 2 3 4 9

```

From lscpu:

```

Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:             Little Endian
CPU(s):                 8
On-line CPU(s) list:   0-7
Thread(s) per core:    2
Core(s) per socket:    4
Socket(s):              1
NUMA node(s):          2
Vendor ID:              GenuineIntel
CPU family:             6
Model:                  85
Model name:             Intel(R) Xeon(R) Gold 5122 CPU @ 3.60GHz
Stepping:               4
CPU MHz:                3591.598
BogoMIPS:               7183.19

```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML110 Gen10

(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

**CPU2017 License:** 3  
**Test Sponsor:** HPE  
**Tested by:** HPE

**Test Date:** Nov-2017  
**Hardware Availability:** Oct-2017  
**Software Availability:** Sep-2017

## Platform Notes (Continued)

```

Virtualization:      VT-x
L1d cache:          32K
L1i cache:          32K
L2 cache:           1024K
L3 cache:           16896K
NUMA node0 CPU(s):  0,1,4,5
NUMA node1 CPU(s):  2,3,6,7
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 sse3 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 pln pts dtherm intel_pt
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 : 16896 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 4 5
node 0 size: 47968 MB
node 0 free: 39798 MB
node 1 cpus: 2 3 6 7
node 1 size: 48382 MB
node 1 free: 35952 MB
node distances:
node  0  1
 0:  10  21
 1:  21  10

```

```

From /proc/meminfo
MemTotal:      98663972 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:

```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant ML110 Gen10**

(3.60 GHz, Intel Xeon Gold 5122)

**SPECrate2017\_fp\_base = 35.0**

**SPECrate2017\_fp\_peak = 35.9**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Sep-2017

## Platform Notes (Continued)

```

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 ml110nsr 4.4.73-5-default #1 SMP Tue Jul 4 15:33:39 UTC 2017 (b7ce4e4) x86_64
x86_64 x86_64 GNU/Linux

```

run-level 3 Nov 17 06:28

SPEC is set to: /home/cpu2017

```

Filesystem      Type      Size      Used Avail Use% Mounted on
/dev/sdb4        xfs       405G      45G   361G  11% /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 HPE U33 11/14/2017

Memory:

6x UNKNOWN NOT AVAILABLE 16 GB 2 rank 2666

(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)

```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

**ProLiant ML110 Gen10**

(3.60 GHz, Intel Xeon Gold 5122)

**SPECrate2017\_fp\_base = 35.0**

**SPECrate2017\_fp\_peak = 35.9**

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Sep-2017

## Compiler Version Notes (Continued)

```
-----
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.
-----
```

```
=====
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
-----
```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML110 Gen10

(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Sep-2017

## Compiler Version Notes (Continued)

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.

=====  
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

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML110 Gen10

(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Sep-2017

## Base Compiler Invocation (Continued)

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.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=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

(Continued on next page)





# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML110 Gen10

(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Sep-2017

## Base Optimization Flags (Continued)

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
```

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
```

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML110 Gen10

(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Sep-2017

## Peak Compiler Invocation (Continued)

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

## 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: 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  
-nonstandard-realloc-lhs -align array32byte

549.fotonik3d\_r: Same as 503.bwaves\_r

(Continued on next page)



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML110 Gen10

(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Sep-2017

## Peak Optimization Flags (Continued)

```
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++:

```
-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
```

## 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-linux64.2017-10-19.html>

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revG.html>



# SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

ProLiant ML110 Gen10

(3.60 GHz, Intel Xeon Gold 5122)

SPECrate2017\_fp\_base = 35.0

SPECrate2017\_fp\_peak = 35.9

**CPU2017 License:** 3

**Test Sponsor:** HPE

**Tested by:** HPE

**Test Date:** Nov-2017

**Hardware Availability:** Oct-2017

**Software Availability:** Sep-2017

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

<http://www.spec.org/cpu2017/flags/Intel-ic18.0-official-linux64.2017-10-19.xml>

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revG.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 2017-11-18 07:45:59-0500.

Report generated on 2018-10-31 15:00:20 by CPU2017 PDF formatter v6067.

Originally published on 2017-12-12.