SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

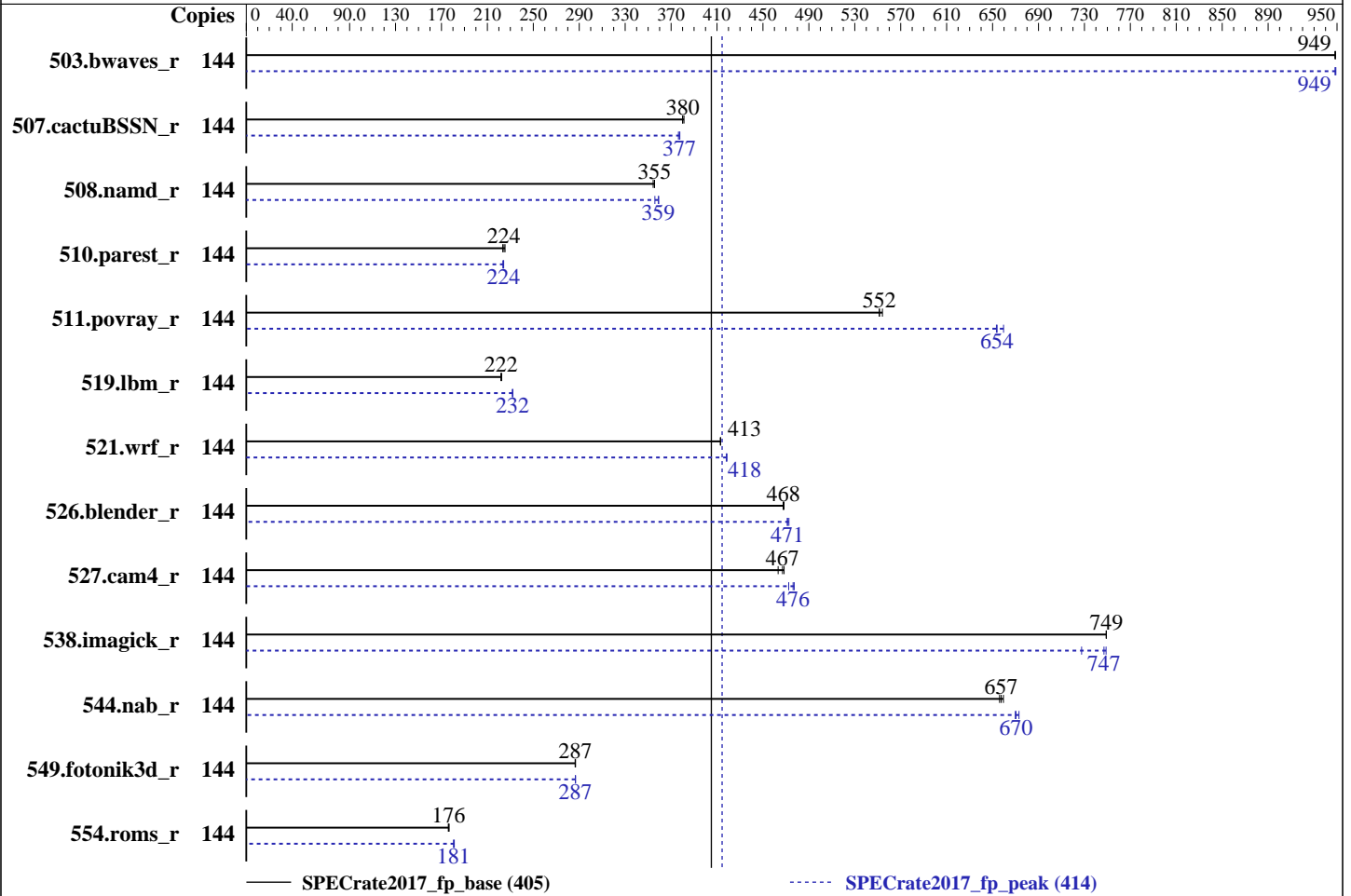SPECrate2017_fp_peak = 414

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: May-2018

Hardware Availability: May-2018

Software Availability: Mar-2018

Copies

Benchmark	Copies	base	peak
503.bwaves_r	144	949	949
507.cactuBSSN_r	144	380	377
508.namd_r	144	355	359
510.parest_r	144	224	224
511.povray_r	144	552	654
519.lbm_r	144	222	232
521.wrf_r	144	413	418
526.blender_r	144	468	471
527.cam4_r	144	467	476
538.imagick_r	144	749	747
544.nab_r	144	657	670
549.fotonik3d_r	144	287	287
554.roms_r	144	176	181

—— SPECrate2017_fp_base (405)   ----- SPECrate2017_fp_peak (414)

Hardware

CPU Name: Intel Xeon Gold 6154
 Max MHz.: 3700
 Nominal: 3000
Enabled: 72 cores, 4 chips, 2 threads/core
Orderable: 2,4 chips
Cache L1: 32 KB I + 32 KB D on chip per core
 L2: 1 MB I+D on chip per core
 L3: 24.75 MB I+D on chip per chip
 Other: None
Memory: 1536 GB (48 x 32 GB 2Rx4 PC4-2666V-R)
Storage: 1 x 900 GB SAS HDD 10K RPM, RAID 0
Other: None

Software

OS: SUSE Linux Enterprise Server 12 SP2
 4.4.120-92.70-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 0.84 released Mar-2018
File System: ext4
System State: Run level 5 (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 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: May-2018

Hardware Availability: May-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	144	1523	948	1522	949	**1522**	**949**	144	**1522**	**949**	1522	949	1523	948
507.cactuBSSN_r	144	478	381	**480**	**380**	480	380	144	**483**	**377**	483	378	484	376
508.namd_r	144	386	354	**385**	**355**	385	356	144	**381**	**359**	381	359	384	356
510.parest_r	144	1671	225	1686	223	**1678**	**224**	144	1686	223	**1681**	**224**	1680	224
511.povray_r	144	607	554	610	551	**610**	**552**	144	510	660	515	653	**514**	**654**
519.lbm_r	144	**683**	**222**	682	222	684	222	144	654	232	654	232	**654**	**232**
521.wrf_r	144	781	413	**781**	**413**	781	413	144	771	419	771	418	**771**	**418**
526.blender_r	144	468	468	469	468	**469**	**468**	144	465	471	**465**	**471**	464	473
527.cam4_r	144	**539**	**467**	538	468	544	463	144	**529**	**476**	533	472	528	477
538.imagick_r	144	**478**	**749**	478	749	478	749	144	**479**	**747**	492	728	478	749
544.nab_r	144	368	659	**369**	**657**	369	656	144	362	670	**362**	**670**	360	673
549.fotonik3d_r	144	**1959**	**287**	1959	286	1957	287	144	**1957**	**287**	1958	287	1957	287
554.roms_r	144	1295	177	**1299**	**176**	1300	176	144	**1267**	**181**	1267	181	1263	181

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

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"
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
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>

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)

https://www.spec.org/

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base =   405

SPECrate2017_fp_peak =   414

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: May-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

General Notes (Continued)

Yes: 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 configuration:
 Sub NUMA Cluster (SNC) set to enabled
 IMC (Integrated memory controller) Interleaving set to 1 way interleave
 Xtended Prediction Table (XPT) Prefetch set to Enable
 Memory Patrol Scrub set to Disable
 Last Level Cache (LLC) Prefetch set to Disable
 Sysinfo program /home/cpu2017/bin/sysinfo
 Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
 running on linux-oyf8 Wed Jun 20 06:25:14 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 6154 CPU @ 3.00GHz
       4  "physical id"s (chips)
       144 "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 : 18
       siblings  : 36
       physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
       physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
       physical 2: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
       physical 3: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27

 From lscpu:
       Architecture:         x86_64
       CPU op-mode(s):       32-bit, 64-bit
       Byte Order:           Little Endian
       CPU(s):               144
       On-line CPU(s) list:  0-143
       Thread(s) per core:   2
       Core(s) per socket:   18
       Socket(s):            4
```

(Continued on next page)

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: May-2018

Hardware Availability: May-2018

Software Availability: Mar-2018

Platform Notes (Continued)

```
    NUMA node(s):          8
    Vendor ID:             GenuineIntel
    CPU family:            6
    Model:                 85
    Model name:            Intel(R) Xeon(R) Gold 6154 CPU @ 3.00GHz
    Stepping:              4
    CPU MHz:               3001.000
    CPU max MHz:           3001.0000
    CPU min MHz:           1200.0000
    BogoMIPS:              5999.86
    Virtualization:        VT-x
    L1d cache:             32K
    L1i cache:             32K
    L2 cache:              1024K
    L3 cache:              25344K
    NUMA node0 CPU(s):     0-2,5,6,9,10,14,15,72-74,77,78,81,82,86,87
    NUMA node1 CPU(s):     3,4,7,8,11-13,16,17,75,76,79,80,83-85,88,89
    NUMA node2 CPU(s):     18-20,23,24,27,28,32,33,90-92,95,96,99,100,104,105
    NUMA node3 CPU(s):     21,22,25,26,29-31,34,35,93,94,97,98,101-103,106,107
    NUMA node4 CPU(s):     36-38,41,42,45,46,50,51,108-110,113,114,117,118,122,123
    NUMA node5 CPU(s):     39,40,43,44,47-49,52,53,111,112,115,116,119-121,124,125
    NUMA node6 CPU(s):     54-56,59,60,63,64,68,69,126-128,131,132,135,136,140,141
    NUMA node7 CPU(s):     57,58,61,62,65-67,70,71,129,130,133,134,137-139,142,143
    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 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

 /proc/cpuinfo cache data
    cache size : 25344 KB

 From numactl --hardware  WARNING: a numactl 'node' might or might not correspond to a
 physical chip.
    available: 8 nodes (0-7)
    node 0 cpus: 0 1 2 5 6 9 10 14 15 72 73 74 77 78 81 82 86 87
    node 0 size: 191756 MB
    node 0 free: 190285 MB
    node 1 cpus: 3 4 7 8 11 12 13 16 17 75 76 79 80 83 84 85 88 89
    node 1 size: 193524 MB
    node 1 free: 192983 MB
    node 2 cpus: 18 19 20 23 24 27 28 32 33 90 91 92 95 96 99 100 104 105
```

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: May-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

Platform Notes (Continued)

```
   node 2 size: 193524 MB
   node 2 free: 192919 MB
   node 3 cpus: 21 22 25 26 29 30 31 34 35 93 94 97 98 101 102 103 106 107
   node 3 size: 193524 MB
   node 3 free: 192904 MB
   node 4 cpus: 36 37 38 41 42 45 46 50 51 108 109 110 113 114 117 118 122 123
   node 4 size: 193524 MB
   node 4 free: 193046 MB
   node 5 cpus: 39 40 43 44 47 48 49 52 53 111 112 115 116 119 120 121 124 125
   node 5 size: 193524 MB
   node 5 free: 192935 MB
   node 6 cpus: 54 55 56 59 60 63 64 68 69 126 127 128 131 132 135 136 140 141
   node 6 size: 193524 MB
   node 6 free: 193127 MB
   node 7 cpus: 57 58 61 62 65 66 67 70 71 129 130 133 134 137 138 139 142 143
   node 7 size: 193367 MB
   node 7 free: 192955 MB
   node distances:
   node   0   1   2   3   4   5   6   7
     0:  10  20  20  20  20  20  20  20
     1:  20  10  20  20  20  20  20  20
     2:  20  20  10  20  20  20  20  20
     3:  20  20  20  10  20  20  20  20
     4:  20  20  20  20  10  20  20  20
     5:  20  20  20  20  20  10  20  20
     6:  20  20  20  20  20  20  10  20
     7:  20  20  20  20  20  20  20  10

 From /proc/meminfo
   MemTotal:       1583380320 kB
   HugePages_Total:        0
   Hugepagesize:        2048 kB

 /usr/bin/lsb_release -d
   SUSE Linux Enterprise Server 12 SP2

 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"
```

(Continued on next page)

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base =   405

SPECrate2017_fp_peak =   414

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: May-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

Platform Notes (Continued)

```
        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-oyf8 4.4.120-92.70-default #1 SMP Wed Mar 14 15:59:43 UTC 2018 (52a83de)
    x86_64 x86_64 x86_64 GNU/Linux

 run-level 5 Jun 19 11:46

 SPEC is set to: /home/cpu2017
    Filesystem      Type    Size  Used Avail Use% Mounted on
    /dev/sda4       btrfs   736G   23G  712G   4% /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 INSYDE Corp. 0.84 03/26/2018
    Memory:
     48x Samsung M393A4K40BB2-CTD 32 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)
------------------------------------------------------------------------------
icpc (ICC) 18.0.0 20170811
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
```

(Continued on next page)

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: May-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

Compiler Version Notes (Continued)

```
--------------------------------------------------------------------------------

================================================================================
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
Copyright (C) 1985-2017 Intel Corporation.  All rights reserved.
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

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: May-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

Compiler Version Notes (Continued)

```
--------------------------------------------------------------------------

==========================================================================
 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

Fortran benchmarks:
ifort

(Continued on next page)

Page 8   Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

Base 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
```

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
```

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
```

(Continued on next page)

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

CPU2017 License: 3175　　　　　　　　　　　　　　**Test Date:** May-2018
Test Sponsor: Huawei　　　　　　　　　　　　　　**Hardware Availability:** May-2018
Tested by: Huawei　　　　　　　　　　　　　　　　**Software Availability:** Mar-2018

Base Optimization Flags (Continued)

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
```

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base =   405

SPECrate2017_fp_peak =   414

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: May-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

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`
`-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`

(Continued on next page)

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

CPU2017 License: 3175
Test Sponsor: Huawei
Tested by: Huawei

Test Date: May-2018
Hardware Availability: May-2018
Software Availability: Mar-2018

Peak Optimization Flags (Continued)

554.roms_r (continued):
```
-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.html
http://www.spec.org/cpu2017/flags/Huawei-Platform-Settings-SKL-V1.7.html

SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

Huawei 2488H V5 (Intel Xeon Gold 6154)

SPECrate2017_fp_base = 405

SPECrate2017_fp_peak = 414

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: May-2018

Hardware Availability: May-2018

Software Availability: Mar-2018

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

For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU2017 v1.0.2 on 2018-06-19 18:25:13-0400.
Report generated on 2018-10-31 18:32:05 by CPU2017 PDF formatter v6067.
Originally published on 2018-08-07.