



SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

CPU2017 License: 3175

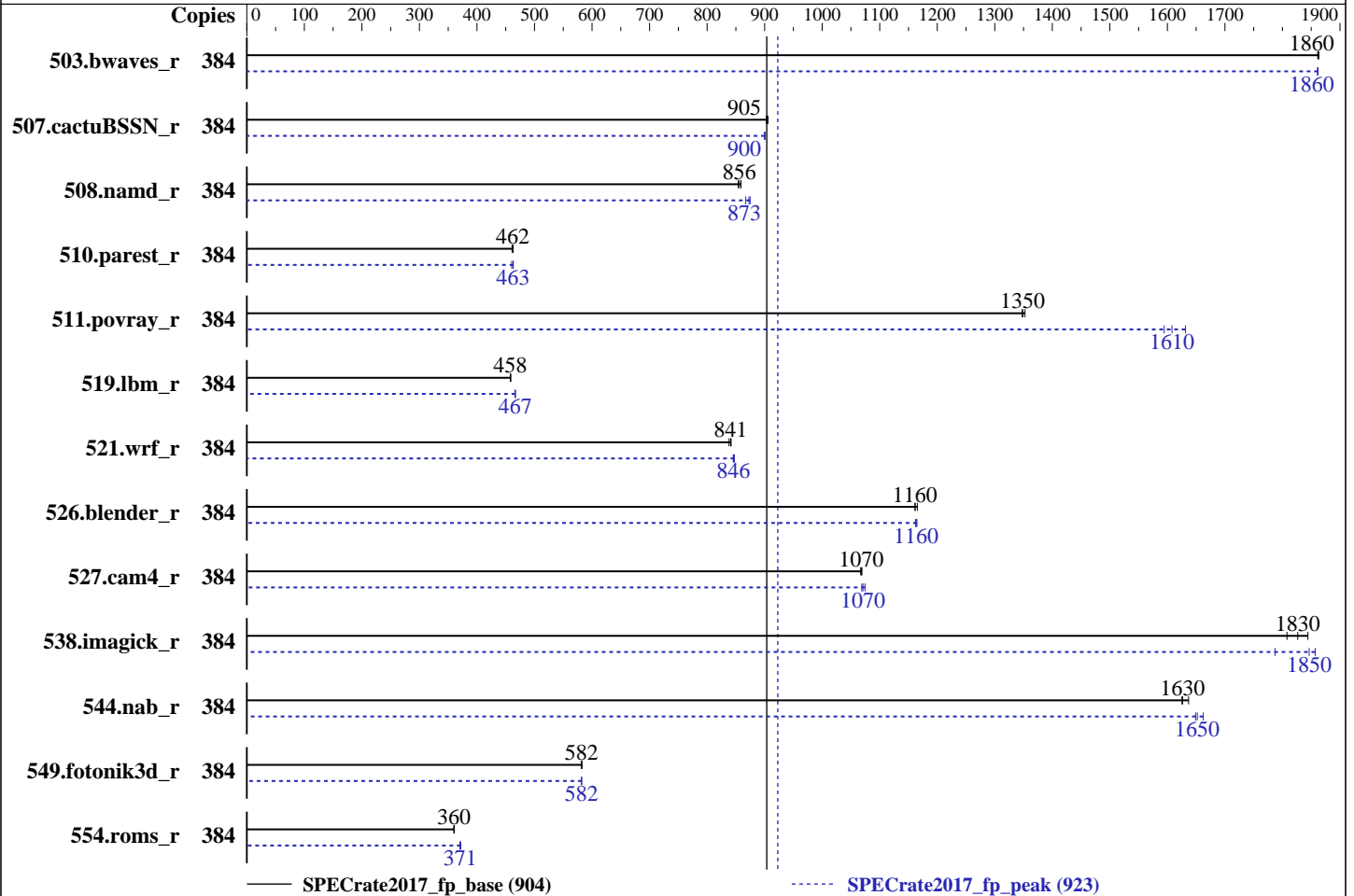
Test Sponsor: Huawei

Tested by: Huawei

Test Date: Jun-2018

Hardware Availability: Jul-2018

Software Availability: Mar-2018



Hardware

CPU Name: Intel Xeon Platinum 8168
 Max MHz.: 3700
 Nominal: 2700
 Enabled: 192 cores, 8 chips, 2 threads/core
 Orderable: 2,4,6,8 chips
 Cache L1: 32 KB I + 32 KB D on chip per core
 L2: 1 MB I+D on chip per core
 L3: 33 MB I+D on chip per chip
 Other: None
 Memory: 1536 GB (48 x 32 GB 2Rx4 PC4-2666V-R)
 Storage: 2 x 900 GB SAS HDD 10K RPM, RAID 0
 Other: None

Software

OS: SUSE Linux Enterprise Server for SAP Applications
 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 8.92 released May-2018
 File System: btrfs
 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

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-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	384	2069	1860	2067	1860	<u>2067</u>	<u>1860</u>	384	<u>2069</u>	<u>1860</u>	2069	1860	2068	1860
507.cactuBSSN_r	384	537	906	538	903	<u>537</u>	<u>905</u>	384	<u>540</u>	<u>900</u>	540	900	540	900
508.namd_r	384	425	859	427	854	<u>426</u>	<u>856</u>	384	421	867	417	875	<u>418</u>	<u>873</u>
510.parest_r	384	<u>2173</u>	<u>462</u>	2171	463	2179	461	384	2169	463	2182	460	<u>2171</u>	<u>463</u>
511.povray_r	384	663	1350	665	1350	<u>665</u>	<u>1350</u>	384	562	1590	550	1630	<u>558</u>	<u>1610</u>
519.lbm_r	384	<u>884</u>	<u>458</u>	882	459	884	458	384	867	467	<u>867</u>	<u>467</u>	869	466
521.wrf_r	384	<u>1023</u>	<u>841</u>	1022	842	1026	838	384	1017	845	1015	847	<u>1017</u>	<u>846</u>
526.blender_r	384	504	1160	502	1170	<u>504</u>	<u>1160</u>	384	502	1160	503	1160	<u>503</u>	<u>1160</u>
527.cam4_r	384	<u>629</u>	<u>1070</u>	628	1070	630	1070	384	628	1070	625	1070	<u>627</u>	<u>1070</u>
538.imagick_r	384	518	1840	528	1810	<u>523</u>	<u>1830</u>	384	<u>517</u>	<u>1850</u>	514	1860	534	1790
544.nab_r	384	395	1640	<u>397</u>	<u>1630</u>	398	1630	384	389	1660	<u>391</u>	<u>1650</u>	392	1650
549.fotonik3d_r	384	<u>2571</u>	<u>582</u>	2571	582	2572	582	384	2574	581	2571	582	<u>2573</u>	<u>582</u>
554.roms_r	384	1695	360	1694	360	<u>1694</u>	<u>360</u>	384	<u>1646</u>	<u>371</u>	1642	372	1648	370

SPECrate2017_fp_base = 904

SPECrate2017_fp_peak = 923

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)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-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-0mnb Thu Jul 19 02:36:14 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) Platinum 8168 CPU @ 2.70GHz
 8 "physical id"s (chips)
384 "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 : 24
siblings  : 48
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
physical 2: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
physical 3: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
physical 4: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
physical 5: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
physical 6: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
physical 7: cores 0 1 2 3 4 5 8 9 10 11 12 13 16 17 18 19 20 21 24 25 26 27 28 29
```

From lscpu:

```
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
CPU(s):                384
On-line CPU(s) list:   0-383
```

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-2018
Software Availability: Mar-2018

Platform Notes (Continued)

```

Thread(s) per core:      2
Core(s) per socket:     24
Socket(s):               8
NUMA node(s):           16
Vendor ID:               GenuineIntel
CPU family:              6
Model:                   85
Model name:              Intel(R) Xeon(R) Platinum 8168 CPU @ 2.70GHz
Stepping:                4
CPU MHz:                 2701.000
CPU max MHz:             2701.0000
CPU min MHz:             1200.0000
BogoMIPS:                5399.98
Virtualization:         VT-x
L1d cache:               32K
L1i cache:               32K
L2 cache:                1024K
L3 cache:                33792K
NUMA node0 CPU(s):      0-2,6-8,12-14,18-20,192-194,198-200,204-206,210-212
NUMA node1 CPU(s):      3-5,9-11,15-17,21-23,195-197,201-203,207-209,213-215
NUMA node2 CPU(s):      24-26,30-32,36-38,42-44,216-218,222-224,228-230,234-236
NUMA node3 CPU(s):      27-29,33-35,39-41,45-47,219-221,225-227,231-233,237-239
NUMA node4 CPU(s):      48-50,54-56,60-62,66-68,240-242,246-248,252-254,258-260
NUMA node5 CPU(s):      51-53,57-59,63-65,69-71,243-245,249-251,255-257,261-263
NUMA node6 CPU(s):      72-74,78-80,84-86,90-92,264-266,270-272,276-278,282-284
NUMA node7 CPU(s):      75-77,81-83,87-89,93-95,267-269,273-275,279-281,285-287
NUMA node8 CPU(s):      96-98,102-104,108-110,114-116,288-290,294-296,300-302,306-308
NUMA node9 CPU(s):      99-101,105-107,111-113,117-119,291-293,297-299,303-305,309-311
NUMA node10 CPU(s):     120-122,126-128,132-134,138-140,312-314,318-320,324-326,330-332
NUMA node11 CPU(s):     123-125,129-131,135-137,141-143,315-317,321-323,327-329,333-335
NUMA node12 CPU(s):     144-146,150-152,156-158,162-164,336-338,342-344,348-350,354-356
NUMA node13 CPU(s):     147-149,153-155,159-161,165-167,339-341,345-347,351-353,357-359
NUMA node14 CPU(s):     168-170,174-176,180-182,186-188,360-362,366-368,372-374,378-380
NUMA node15 CPU(s):     171-173,177-179,183-185,189-191,363-365,369-371,375-377,381-383
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
aperfperf eagerfpu pni pclmulqdq dtes64 ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
xtpr pdcm pcid dca 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

```

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-2018
Software Availability: Mar-2018

Platform Notes (Continued)

```
intel_pt rsb_ctxsw spec_ctrl stibp retpoline kaiser tpr_shadow vnmi flexpriority ept
vpid fsgsbase tsc_adjust bml 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 : 33792 KB
```

```
From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
physical chip.
available: 16 nodes (0-15)
node 0 cpus: 0 1 2 6 7 8 12 13 14 18 19 20 192 193 194 198 199 200 204 205 206 210 211
212
node 0 size: 95025 MB
node 0 free: 93677 MB
node 1 cpus: 3 4 5 9 10 11 15 16 17 21 22 23 195 196 197 201 202 203 207 208 209 213
214 215
node 1 size: 96762 MB
node 1 free: 96205 MB
node 2 cpus: 24 25 26 30 31 32 36 37 38 42 43 44 216 217 218 222 223 224 228 229 230
234 235 236
node 2 size: 96762 MB
node 2 free: 96264 MB
node 3 cpus: 27 28 29 33 34 35 39 40 41 45 46 47 219 220 221 225 226 227 231 232 233
237 238 239
node 3 size: 96762 MB
node 3 free: 96066 MB
node 4 cpus: 48 49 50 54 55 56 60 61 62 66 67 68 240 241 242 246 247 248 252 253 254
258 259 260
node 4 size: 96762 MB
node 4 free: 96262 MB
node 5 cpus: 51 52 53 57 58 59 63 64 65 69 70 71 243 244 245 249 250 251 255 256 257
261 262 263
node 5 size: 96762 MB
node 5 free: 96309 MB
node 6 cpus: 72 73 74 78 79 80 84 85 86 90 91 92 264 265 266 270 271 272 276 277 278
282 283 284
node 6 size: 96762 MB
node 6 free: 96307 MB
node 7 cpus: 75 76 77 81 82 83 87 88 89 93 94 95 267 268 269 273 274 275 279 280 281
285 286 287
node 7 size: 96762 MB
node 7 free: 96309 MB
node 8 cpus: 96 97 98 102 103 104 108 109 110 114 115 116 288 289 290 294 295 296 300
301 302 306 307 308
node 8 size: 96762 MB
node 8 free: 96207 MB
```

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-2018
Software Availability: Mar-2018

Platform Notes (Continued)

```

node 9 cpus: 99 100 101 105 106 107 111 112 113 117 118 119 291 292 293 297 298 299 303
304 305 309 310 311
node 9 size: 96762 MB
node 9 free: 96335 MB
node 10 cpus: 120 121 122 126 127 128 132 133 134 138 139 140 312 313 314 318 319 320
324 325 326 330 331 332
node 10 size: 96762 MB
node 10 free: 96266 MB
node 11 cpus: 123 124 125 129 130 131 135 136 137 141 142 143 315 316 317 321 322 323
327 328 329 333 334 335
node 11 size: 96762 MB
node 11 free: 96319 MB
node 12 cpus: 144 145 146 150 151 152 156 157 158 162 163 164 336 337 338 342 343 344
348 349 350 354 355 356
node 12 size: 96762 MB
node 12 free: 96272 MB
node 13 cpus: 147 148 149 153 154 155 159 160 161 165 166 167 339 340 341 345 346 347
351 352 353 357 358 359
node 13 size: 96762 MB
node 13 free: 96312 MB
node 14 cpus: 168 169 170 174 175 176 180 181 182 186 187 188 360 361 362 366 367 368
372 373 374 378 379 380
node 14 size: 96762 MB
node 14 free: 96314 MB
node 15 cpus: 171 172 173 177 178 179 183 184 185 189 190 191 363 364 365 369 370 371
375 376 377 381 382 383
node 15 size: 96605 MB
node 15 free: 96182 MB
node distances:
node  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15
0:  10 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
1:  20 10 20 20 20 20 20 20 20 20 20 20 20 20 20 20
2:  20 20 10 20 20 20 20 20 20 20 20 20 20 20 20 20
3:  20 20 20 10 20 20 20 20 20 20 20 20 20 20 20 20
4:  20 20 20 20 10 20 20 20 20 20 20 20 20 20 20 20
5:  20 20 20 20 20 10 20 20 20 20 20 20 20 20 20 20
6:  20 20 20 20 20 20 10 20 20 20 20 20 20 20 20 20
7:  20 20 20 20 20 20 20 10 20 20 20 20 20 20 20 20
8:  20 20 20 20 20 20 20 20 10 20 20 20 20 20 20 20
9:  20 20 20 20 20 20 20 20 20 10 20 20 20 20 20 20
10: 20 20 20 20 20 20 20 20 20 20 10 20 20 20 20 20
11: 20 20 20 20 20 20 20 20 20 20 20 10 20 20 20 20
12: 20 20 20 20 20 20 20 20 20 20 20 20 10 20 20 20
13: 20 20 20 20 20 20 20 20 20 20 20 20 20 10 20 20
14: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 10 20
15: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 10

```

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-2018
Software Availability: Mar-2018

Platform Notes (Continued)

```

From /proc/meminfo
  MemTotal:      1583410940 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"
    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-0mnb 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 Jul 18 17:03

SPEC is set to: /home/cpu2017
  Filesystem      Type      Size      Used Avail Use% Mounted on
  /dev/sda4       btrfs    1.5T      23G  1.5T   2% /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. 8.92 05/02/2018
  Memory:
    48x NO DIMM NO DIMM
    48x Samsung M393A4K40BB2-CTD 32 GB 2 rank 2666

(End of data from sysinfo program)

```



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-2018
Software Availability: Mar-2018

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.

=====
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.

=====

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-2018
Software Availability: Mar-2018

Compiler Version Notes (Continued)

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.

=====
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)

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-2018
Software Availability: Mar-2018

Compiler Version Notes (Continued)

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.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 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: Jun-2018

Hardware Availability: Jul-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

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



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-2018
Software Availability: Mar-2018

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++:

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:

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

CPU2017 License: 3175

Test Sponsor: Huawei

Tested by: Huawei

Test Date: Jun-2018

Hardware Availability: Jul-2018

Software Availability: Mar-2018

Peak Optimization Flags (Continued)

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++:

-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

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2018 Standard Performance Evaluation Corporation

Huawei

SPECrate2017_fp_base = 904

Huawei 9008 V5 (Intel Xeon Platinum 8168)

SPECrate2017_fp_peak = 923

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

Test Date: Jun-2018
Hardware Availability: Jul-2018
Software Availability: Mar-2018

Peak Other Flags (Continued)

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.

Tested with SPEC CPU2017 v1.0.2 on 2018-07-18 14:36:14-0400.

Report generated on 2018-10-31 18:12:27 by CPU2017 PDF formatter v6067.

Originally published on 2018-09-04.