**SPEC® CFP2006 Result**

**Huawei**

Huawei RH2288H V3 (Intel Xeon E5-2667 v4)

<table>
<thead>
<tr>
<th>SPECfp®2006 =</th>
<th>NC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp_base2006 =</td>
<td>NC</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 3175  
**Test date:** Mar-2016  
**Test sponsor:** Huawei  
**Tested by:** Huawei

**Hardware Availability:** Mar-2016  
**Software Availability:** Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by [SPEC CPU rule 1.3.2](http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2) and the SPEC Open Systems Group policy on [general availability](https://www.spec.org/osg/policy.html#AppendixC).

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Status</th>
</tr>
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<tbody>
<tr>
<td>410.bwaves</td>
<td>Non-Compliant</td>
</tr>
<tr>
<td>416.gamess</td>
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</tr>
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<tr>
<td>453.povray</td>
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<tr>
<td>454.calculix</td>
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</tr>
<tr>
<td>459.GemsFDTD</td>
<td>Non-Compliant</td>
</tr>
<tr>
<td>465.tonto</td>
<td>Non-Compliant</td>
</tr>
<tr>
<td>470.lbm</td>
<td>Non-Compliant</td>
</tr>
<tr>
<td>481.wrf</td>
<td>Non-Compliant</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>Non-Compliant</td>
</tr>
</tbody>
</table>
Honda

Honda Civic (1.5 Turbo) SPECc2016 = SPECc2016_base2016 = NC

CPU2016 license: 3075
Test date: Mar-2016
Test sponsor: Honda
Hardware Availability: Mar-2016
Tested by: Honda
Software Availability: Mar-2016

Honda has determined that this result is not in compliance with the SPEC CPU2016 run and reporting rules. Specifically, the memory was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name: Intel Xeon E5-2667 v4</td>
<td>Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo) 3.10.0-123.el7.x86_64</td>
</tr>
<tr>
<td>CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz</td>
<td>Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux; Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux</td>
</tr>
<tr>
<td>CPU MHz: 3200</td>
<td>Auto Parallel: Yes</td>
</tr>
<tr>
<td>FPU: Integrated</td>
<td>File System: ext4</td>
</tr>
<tr>
<td>CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip</td>
<td>System State: Run level 3 (multi-user)</td>
</tr>
<tr>
<td>CPU(s) orderable: 1.2 chip</td>
<td>Base Pointers: 64-bit</td>
</tr>
<tr>
<td>Primary Cache: 32 KB L1 + 32 KB D on chip per core</td>
<td>Peak Pointers: 32/64-bit</td>
</tr>
<tr>
<td>Secondary Cache: 256 KB L1+D on chip per core</td>
<td>Other Software: None</td>
</tr>
<tr>
<td>L3 Cache: 25 MB L1+D on chip per chip</td>
<td>Other Hardware: None</td>
</tr>
<tr>
<td>Other Cache: None</td>
<td>Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R)</td>
</tr>
<tr>
<td>Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R)</td>
<td>Disk Subsystem: 1 x 1 T SATA, 7200 RPM</td>
</tr>
<tr>
<td>Disk Subsystem: 1 x 1 T SATA, 7200 RPM</td>
<td>Other Hardware: None</td>
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## SPEC CFP2006 Result

**Huawei**

Huawei RH2288H V3 (Intel Xeon E5-2667 v4)  

**SPECfp2006** = NC  
**SPECfp_base2006** = NC

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<td>Hardware Availability: Mar-2016</td>
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### Results Table

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<thead>
<tr>
<th>Benchmark</th>
<th>Base</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Seconds</td>
<td>Ratio</td>
</tr>
<tr>
<td>410.bwaves</td>
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<td>NC</td>
<td>NC</td>
</tr>
</tbody>
</table>

### Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

### Platform Notes

BIOS configuration:
- Set Power Efficiency Mode to Custom
- Set Snoop Mode to HS mode
- Set Patrol Scrub to Disable
- Set Hyper-Threading to Disable

Sysinfo program /speccpu/spec16/config/sysinfo.rev6914  
$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1  

Continued on next page
Huawei RH2288H V3 (Intel Xeon E5-2667 v4)

SPECfp2006 = NC
SPECfp_base2006 = NC

CPU2006 license: 3175
Test date: Mar-2016
Test sponsor: Huawei
Hardware Availability: Mar-2016
Tested by: Huawei
Software Availability: Mar-2016

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Platform Notes (Continued)

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5-2667 v4 @ 3.20GHz
  2 "physical id" (chips)
  16 "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 : 8
siblings : 8
physical 0: cores 0 3 4 8 10 11 12
physical 1: cores 0 3 4 8 10 11 12
cache size : 25600 KB

From /proc/meminfo
MemTotal: 26357176 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release*/etc/*version*
NAME="Red Hat Enterprise Linux Server"
VERSION="7.0 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.0"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server

uname -a:
Linux localhost.localdomain 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57 EDT 2014 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 30 14:10
SPEC is set to: /speccpu/spec16

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SPEC CFP2006 Result

Huawei

Huawei RH2288H V3 (Intel Xeon E5-2667 v4)

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CPU2006 license: 3175  Test date: Mar-2016
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available as required by the SPEC CPU run and reporting rules.

Platform Notes (Continued)

Filesystem     Type  Size  Used  Avail  Use%  Mounted on
/dev/sda2      ext4  865G  70G   752G  9%   /

Additional information from dmidecode:

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 since there are frequent changes to
hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Insyde Corp. 3.09 02/22/2016
Memory:
8x NO DIMM NO DIMM 3 rank
8x Samsung M393A2G40EB1-CRC 16 GB 1 rank 2400 MHz
8x Samsung M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/speccpu/spec16/libs/32:/speccpu/spec16/libs/64:/speccpu/spec16/sh"
OMP_NUM_THREADS = "16"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB
memory using RedHat EL 7.1
Transparent Huge Pages enabled with:
  echo always /sys/kernel/mm/transparent_hugepage/enabled
runcp command invoked through numactl 1.e.:
  numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
icc   -m64

C++ benchmarks:
icpc  -m64

Fortran benchmarks:
ifort -m64
SPEC CFP2006 Result

Huawei

Huawei RH2288H V3 (Intel Xeon E5-2667 v4)

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Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.games: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64 -nofor_main
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

Fortran benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias
Huawei RH2288H V3 (Intel Xeon E5-2667 v4)

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### Peak Compiler Invocation

**C benchmarks:**
- `icc -m64`

**C++ benchmarks:**
- `icpc -m64`

**Fortran benchmarks:**
- `ifort -m64`

**Benchmarks using both Fortran and C:**
- `icc -m64 ifort -m64`

### Peak Portability Flags

Same as Base Portability Flags

### Peak Optimization Flags

**C benchmarks:**
- `433.milc`: basepeak = yes
- `470.lbm`: basepeak = yes
- `482.sphinx3`: basepeak = yes

**C++ benchmarks:**
- `444.namd`: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2) -03(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -prof-use(pass 2) -fno-alias -auto-ilp32
- `447.dealII`: basepeak = yes
- `450.soplex`: basepeak = yes
- `453.povray`: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2) -03(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4

Non-Compliant
Huawei RH2288H V3 (Intel Xeon E5-2667 v4)

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the memory was not available as required by SPEC CPU rule 1.3.2 and the SPEC Open Systems Group policy on general availability.

Peak Optimization Flags (Continued)

Fortran benchmarks:

453.povray (continued):
-ansii-alias

410.bwaves: basepeak = yes
416.games: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipopass 2 -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes

459.GemsFDTD: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipopass 2 -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipopass 2 -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -inline-cALLOC
-special-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes
481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.html
Huawei RH2288H V3 (Intel Xeon E5-2667 v4)

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You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-BDW-V1.0.xml

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

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