Huawei CH222 V3 (Intel Xeon E5-2660 v4)

SPECfp®2006 = NC
SPECfp_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
Test date: Mar-2016
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 <a href="http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2">SPEC CPU rule 1.3.2</a> and the SPEC Open Systems Group policy on <a href="https://www.spec.org/osg/policy.html#AppendixC">general availability</a>.

410.bwaves
416.gamess
433.milc
434.zeusmp
435.gromacs
436.cactusADM
437.leslie3d
444.namd
447.dealII
450.soplex
453.povray
454.calculix
459.GemsFDTD
465.tonto
481.wrf
482.sphinx3

Non-Compliant
Huawei CH222 V3 (Intel Xeon E5-2660 v4)

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

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**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.**
Huawei

Huawei CH222 V3 (Intel Xeon E5-2660 v4)

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Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base Seconds</th>
<th>Ratio</th>
<th>Peak Seconds</th>
<th>Ratio</th>
</tr>
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<tr>
<td>410.bwaves</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
</tr>
<tr>
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<td>NC</td>
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</tr>
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<td>481.wrf</td>
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<td>NC</td>
<td>NC</td>
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<td>482.sphinx3</td>
<td>NC</td>
<td>NC</td>
<td>NC</td>
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</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

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

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Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
No Compliant
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)

Environment variables set by runspec before the start of the run:
- KMP_AFFINITY = "granularity=fine,compact,1,0"
- LD_LIBRARY_PATH = "/speccpu/spec16/lib/32:/speccpu/spec16/lib/64:/speccpu/spec16/sh"
- OMP_NUM_THREADS = "28"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

General Notes

The results have been measured on a Huawei CH121 V3 model

Base Compiler Invocation

C benchmarks:
- icc -m64

C++ benchmarks:
- icpc -m64

Continued on next page
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 <a href="http://spec.org/cpu2006/Docs/runrules.html#rule_1.3.2">SPEC CPU rule 1.3.2</a> and the SPEC Open Systems Group policy on <a href="https://www.spec.org/osg/policy.html#AppendixC">general availability</a>.

### Base Compiler Invocation (Continued)

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

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

### Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -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
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
```
SPEC CFP2006 Result

Huawei
Huawei CH222 V3 (Intel Xeon E5-2660 v4)

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
- -xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
- -ansi-alias

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) -O3(pass 2) -no-prec-div(pass 2)
- -par-num-threads=1(pass 1) -prof-use(pass 2) -fno-alias
- -auto-ilp32

Continued on next page
Huawei

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)

447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.povray: -xCORE-AVX2 (pass 2) -prof-gen:threadsafe (pass 1)
                        -ipo (pass 2) -O3 (pass 2) -no-prec-div (pass 2)
                        -par-num-threads=1 (pass 1) -prof-use (pass 2) -unroll4
                        -ansi-alias

Fortran benchmarks:
410.bwaves: basepeak = yes
416.gamess: -xCORE-AVX2 (pass 2) -prof-gen:threadsafe (pass 1)
                       -ipo (pass 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)
                        -ipo (pass 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)
                        -ipo (pass 2) -O3 (pass 2) -no-prec-div (pass 2)
                        -par-num-threads=1 (pass 1) -prof-use (pass 2) -inline-call
                        -opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:
435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes
454.calculix: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

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Peak Optimization Flags (Continued)

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

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 other inquiries, please contact webmaster@spec.org.

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