### SPEC® CFP2006 Result

**Huawei**

Huawei BH620, Intel Xeon L5630

<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 sponsor:** Huawei
- **Tested by:** Huawei
- **Test date:** May-2011
- **Hardware Availability:** May-2011
- **Software Availability:** Jan-2011

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was customized in a manner that did not meet SPEC's requirements for documented and supported systems.

<table>
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<tr>
<th>Benchmark</th>
<th>Result</th>
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<tbody>
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<tr>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name: Intel Xeon L5630</td>
<td>Operating System: SUSE Linux Enterprise Server 11 SP1 (x86_64), Kernel 2.6.32.12-0.7-default</td>
</tr>
<tr>
<td>CPU Characteristics: Intel Turbo Boost Technology up to 2.40 GHz</td>
<td>Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64, Version 12.0 Update 3</td>
</tr>
<tr>
<td>CPU MHz: 2133</td>
<td>Auto Parallel: Yes</td>
</tr>
<tr>
<td>FPU: Integrated</td>
<td>System: ext3</td>
</tr>
<tr>
<td>CPU(s) enabled: 8 cores, 2 chips, 4 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 I + 32 KB D on chip per core</td>
<td>Peak Pointers: 32/64-bit</td>
</tr>
<tr>
<td>Secondary Cache: 256 KB I+D on chip per core</td>
<td>Other Software: None</td>
</tr>
<tr>
<td>L3 Cache: 12 MB I+D on chip per chip</td>
<td></td>
</tr>
<tr>
<td>Other Cache: None</td>
<td></td>
</tr>
<tr>
<td>Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)</td>
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</tr>
<tr>
<td>Disk Subsystem: 1 x 300 GB SAS, 15K RPM</td>
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<tr>
<td>Other Hardware: None</td>
<td></td>
</tr>
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Non-Compliant
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</table>

Operating System Notes:

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
'echo 900 > /proc/sys/vm/nr_hugepages'
'export HUGETLB_MORECORE=yes'
'export LD_PRELOAD=/usr/lib64/libhugetlbfs.so'
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Platform Notes
Data Reuse Optimization disabled in BIOS Setup.
Intel HT technology Disabled in BIOS Setup.

General Notes
Binaries compiled on RHEL5.5
OMP_NUM_THREADS set to number of CPU cores

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

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

Base Portability Flags

-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 -nofor_main
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64

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Base Portability Flags (Continued)

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:
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xSSE4.2 -ipo -O3 -no-prec-div -static -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
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### Peak Portability Flags
Same as Base Portability Flags

### Peak Optimization Flags

#### C benchmarks:
- 433.mlct: -xSSE4.2 -prof-gen(pass 2) -ipo(pass 2) -O3(pass 2)
- no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
- -ansi-alias
- 470.lbm: basepeak = yes
- 482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias
- parallel

#### C++ benchmarks:
- 444.namd: -xSSE4.2 -prof-gen(pass 2) -ipo(pass 2) -O3(pass 2)
- no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
- auto-ilp32
- 47.deall: basepeak = yes
- 450.soplex: basepeak = yes
- 462.sphinx: -xSSE4.2 -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
- no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
- B/usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

#### Fortran benchmarks:
- 410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -parallel
- -static
- 416.gamess: -xSSE4.2 -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
- no-prec-div(pass 2) -prof-use(pass 2) -unroll2
- inline-level=0 -scalar-rep- -static

Continued on next page
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Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inlivelv=010 -prof-preetch -parallel
-B /usr/share/libhugetlbfs -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

465.tonto: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll4
-B /usr/share/libhugetlbfs -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

435.gromacs: -xsse4.2 -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias
436.cactusADM: basepeak = yes
454.calculix: -xsse4.2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias
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-ic12.0-linux64-revB.html
http://www.spec.org/cpu2006/flags/HUAWEI-platform-linux64-revB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml
http://www.spec.org/cpu2006/flags/HUAWEI-platform-linux64-revB.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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