Dell Inc.

PowerEdge R710 (Intel Xeon X5570, 2.93 GHz)

**CPU2006 license:** 55
**Test sponsor:** Dell Inc.
**Tested by:** Dell Inc.

**Hardware**

- **CPU Name:** Intel Xeon X5570
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.33 GHz
- **CPU MHz:** 2933
- **FPU:** Integrated
- **CPU(s) enabled:** 8 cores, 2 chips, 4 cores/chip, 2 threads/core
- **CPU(s) orderable:** 1,2 chips
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 256 KB I+D on chip per core

**Software**

- **Operating System:** SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
- **Compiler:** Intel C++ and Fortran Compiler Professional 11.0 for Linux
- **Build:** 20090131 Package ID: l_cproc_p_11.0.080, l_cprofs_p_11.0.080
- **Auto Parallel:** No
- **File System:** ReiserFS
- **System State:** Run level 3 (multi-user)

**Test date:** Jun-2009
**Hardware Availability:** Mar-2009
**Software Availability:** Feb-2009

- **SPECfp®_rate2006 = 199**
- **SPECfp_rate_base2006 = 191**

### SPECfp Benchmarks

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**Continued on next page**
## SPEC CFP2006 Result

**Dell Inc.**

PowerEdge R710 (Intel Xeon X5570, 2.93 GHz)

**SPECfp_rate2006 = 199**

**SPECfp_rate_base2006 = 191**

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**Results Table**

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

### Submit Notes

The config file option 'submit' was used. numactl was used to bind copies to the cores

### Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

### Base Compiler Invocation

C benchmarks: `icc`

Continued on next page
**SPEC CFP2006 Result**

Dell Inc.

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SPECfp_rate2006 = 199

SPECfp_rate_base2006 = 191

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

**Base Compiler Invocation (Continued)**

C++ benchmarks:
- icpc

Fortran benchmarks:
- ifort

Benchmarks using both Fortran and C:
- icc ifort

**Base Portability Flags**

410.bwaves: -DSPEC_CPU_LP64
416.gamest: -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 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
453.povray: -DSPEC_CPU_LP64 -nofor_main
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFD: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
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

C++ benchmarks:
- -xSSE4.2 -ipo -O3 -no-prec-div -static

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

Benchmarks using both Fortran and C:
- -xSSE4.2 -ipo -O3 -no-prec-div -static
Dell Inc.
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SPECfp_rate_base2006 = 191

CPU2006 license: 55
Test sponsor: Dell Inc.
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Peak Compiler Invocation

C benchmarks (except as noted below):
  icc
  482.sphinx3: icc -m32

C++ benchmarks (except as noted below):
  icpc
  450.soplex: icpc -m32

Fortran benchmarks:
  ifort

Benchmarks using both Fortran and C:
  icc ifort

Peak 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
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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

Peak Optimization Flags

C benchmarks:
  433.milc: basepeak = yes
  470.lbm: -xSSE4.2 -ipo -03 -no-prec-div -static -opt-prefetch -auto-ilp32
  482.sphinx3: -xSSE4.2 -ipo -03 -no-prec-div -static -unroll2

Continued on next page
Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass l) -ipo(pass 2) -03(pass 2)  
   -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
   -fno-alias -auto-ilkp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass l) -ipo(pass 2) -03(pass 2)  
   -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
   -unroll2 -ansi-alias -scalar-rep-

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass l) -ipo(pass 2) -03(pass 2)  
   -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
   -opt-malloc-options=3

453.povray: -xSSE4.2(pass 2) -prof-gen(pass l) -ipo(pass 2) -03(pass 2)  
   -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
   -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -03 -no-prec-div -static -opt-prefetch

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass l) -ipo(pass 2) -03(pass 2)  
   -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
   -unroll2 -Obo -ansi-alias -scalar-rep-

434.zeusmp: -xSSE4.2(pass 2) -prof-gen(pass l) -ipo(pass 2) -03(pass 2)  
   -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)

437.leslie3d: basepeak = yes

459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass l) -ipo(pass 2) -03(pass 2)  
   -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
   -unroll2 -Obo -opt-prefetch

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass l) -ipo(pass 2) -03(pass 2)  
   -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
   -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass l) -ipo(pass 2) -03(pass 2)  
   -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
   -opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: -xSSE4.2 -ipo -03 -no-prec-div -static -auto-ilp32

Continued on next page
**SPEC CFP2006 Result**

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PowerEdge R710 (Intel Xeon X5570, 2.93 GHz)

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**CPU2006 license:** 55  
**Test sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test date:** Jun-2009  
**Hardware Availability:** Mar-2009  
**Software Availability:** Feb-2009

**Peak Optimization Flags (Continued)**

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at  

You can also download the XML flags source by saving the following link:  
http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.xml

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

Tested with SPEC CPU2006 v1.1.  
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