SPEC® CFP2006 Result

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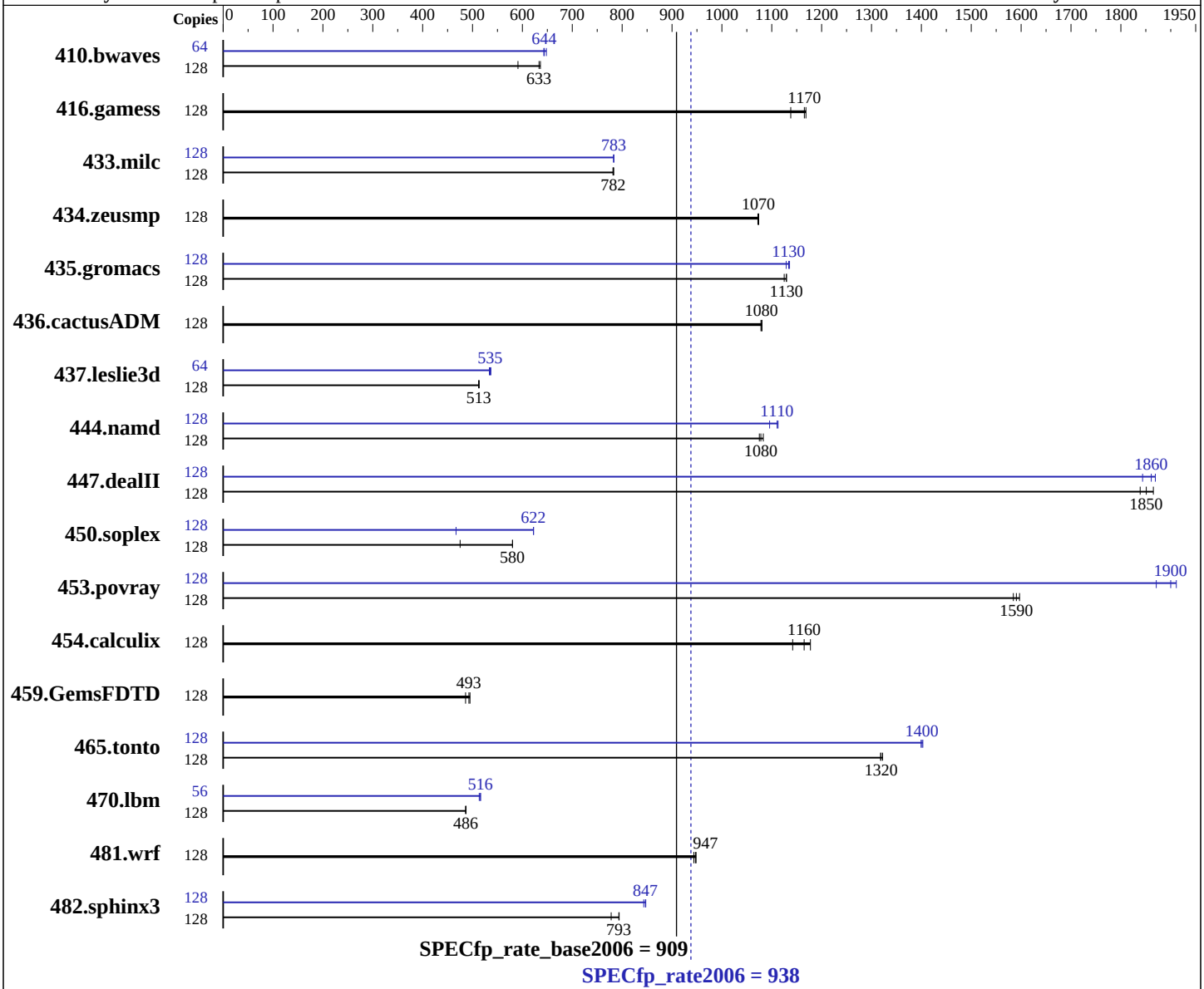
Inspur Corporation
TS850

SPECfp®_rate2006 = 938

SPECfp_rate_base2006 = 909

CPU2006 license: 3358
Test sponsor: Inspur Corporation
Tested by: Inspur Corporation

Test date: Sep-2010
Hardware Availability: Apr-2010
Software Availability: Feb-2010



Hardware

CPU Name:	Intel Xeon X7560
CPU Characteristics:	Intel Turbo Boost Technology up to 2.67 GHz
CPU MHz:	2267
FPU:	Integrated
CPU(s) enabled:	64 cores, 8 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	4,6,8 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core

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Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
Compiler:	Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064
Auto Parallel:	No
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit

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L3 Cache: 24 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (64 x 4 GB 4Rx8 PC3-8500R-7,ECC)
Disk Subsystem: 2 x 300 GB (SAS, 10000 RPM, RAID0)
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V8.1
Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	128	2943	591	2735	636	**2747**	**633**	64	1342	648	1353	643	**1351**	**644**
416.gamess	128	2202	1140	**2151**	**1170**	2145	1170	128	2202	1140	**2151**	**1170**	2145	1170
433.milc	128	1500	783	1503	782	**1502**	**782**	128	1500	783	1501	783	**1501**	**783**
434.zeusmp	128	1086	1070	1085	1070	**1085**	**1070**	128	1086	1070	1085	1070	**1085**	**1070**
435.gromacs	128	812	1120	809	1130	**809**	**1130**	128	**806**	**1130**	805	1140	810	1130
436.cactusADM	128	1416	1080	1419	1080	**1417**	**1080**	128	1416	1080	1419	1080	**1417**	**1080**
437.leslie3d	128	2344	513	2349	512	**2346**	**513**	64	1121	537	**1124**	**535**	1127	534
444.namd	128	955	1080	948	1080	**952**	**1080**	128	937	1100	923	1110	**924**	**1110**
447.dealII	128	796	1840	**791**	**1850**	785	1870	128	**787**	**1860**	794	1840	783	1870
450.soplex	128	2247	475	1840	580	**1840**	**580**	128	2286	467	1715	622	**1716**	**622**
453.povray	128	430	1580	426	1600	**428**	**1590**	128	356	1910	**358**	**1900**	364	1870
454.calculix	128	**906**	**1160**	897	1180	925	1140	128	**906**	**1160**	897	1180	925	1140
459.GemsFDTD	128	**2756**	**493**	2744	495	2794	486	128	**2756**	**493**	2744	495	2794	486
465.tonto	128	956	1320	**955**	**1320**	952	1320	128	898	1400	900	1400	**899**	**1400**
470.lbm	128	**3616**	**486**	3618	486	3611	487	56	1499	513	1491	516	**1491**	**516**
481.wrf	128	1515	944	**1510**	**947**	1508	948	128	1515	944	**1510**	**947**	1508	948
482.sphinx3	128	3207	778	**3144**	**793**	3142	794	128	2958	843	2944	847	**2947**	**847**

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
```

Platform Notes

```
Turbo Mode enabled
```

General Notes

```
'ulimit -s unlimited' was used to set the stack size to unlimited prior to run
```

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

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:
```
-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
```

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):
icpc -m64

450.soplex: icpc -m32

Fortran benchmarks:
ifort -m64

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

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
447.dealII: -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

Peak Optimization Flags

C benchmarks:

433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-fno-alias -opt-prefetch

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-opt-malloc-options=3 -ansi-alias -auto-ilp32

Continued on next page

Peak Optimization Flags (Continued)

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -fno-alias -auto-ilp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(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 1) -ipo(pass 2) -O3(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 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -unroll4 -auto -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.xml

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For other inquiries, please contact webmaster@spec.org.

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