



SPEC® CFP2006 Result

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Supermicro

(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor E5335, 2.00 GHz)

SPECfp®_rate2006 = 56.8

SPECfp_rate_base2006 = 53.4

CPU2006 license: 13

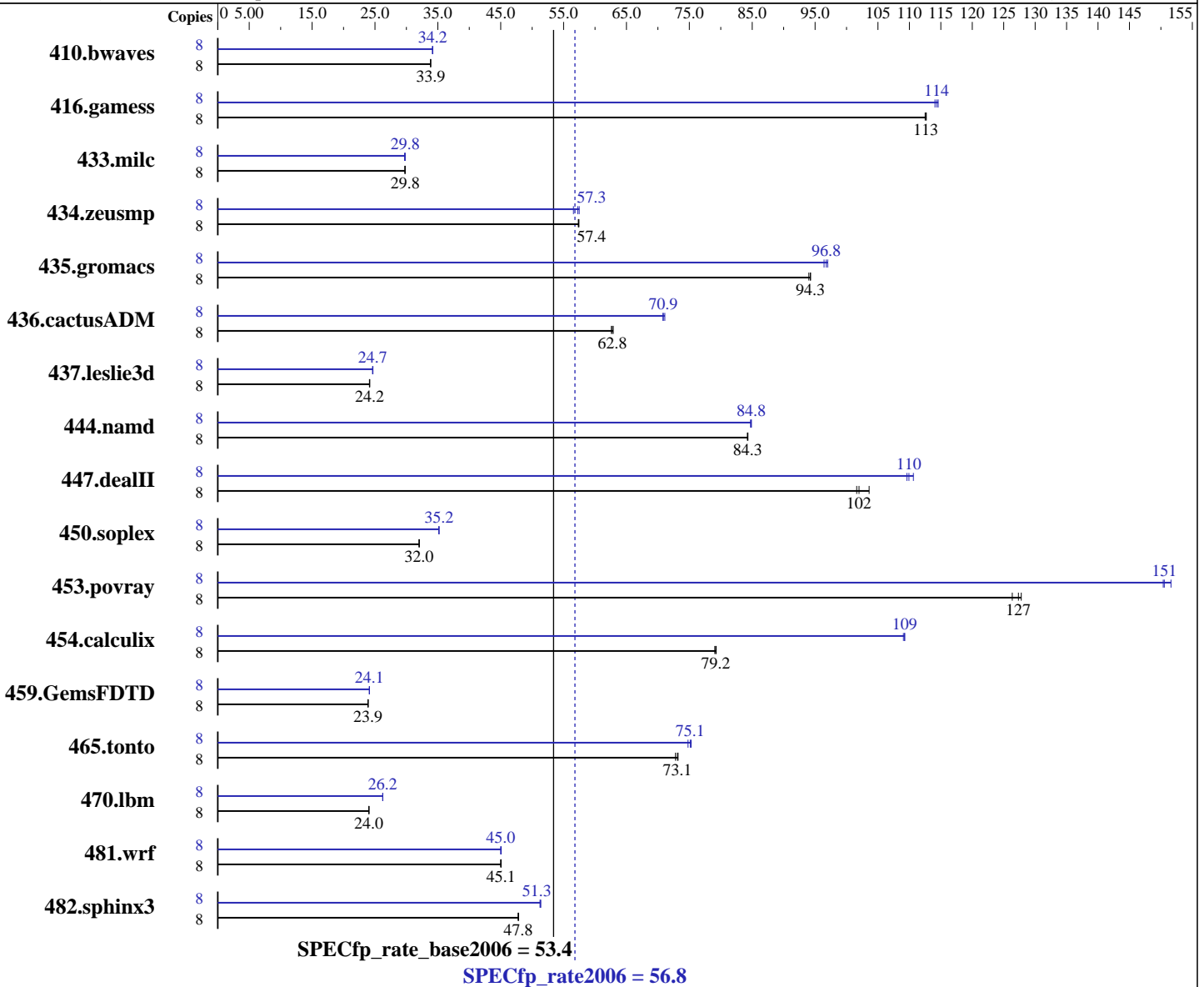
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Aug-2007

Hardware Availability: Jul-2007

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E5335
 CPU Characteristics: Quad Core, 2.00 GHz
 CPU MHz: 2000
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10 SP1, Kernel linux-cbgn 2.6.16.43-0.5-smp for x86_64
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 Build 20070725
 Auto Parallel: No
 File System: ReiserFS
 System State: Multi-user, run level 3
 Base Pointers: 64-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8 * 2GB Samsung DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: Seagate, SCSI, 73GB, 10Krpm, 1 disk only
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Binutils 2.17.50.0.15

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3212	33.8	3211	33.9	3212	33.9	8	3183	34.2	3181	34.2	3182	34.2
416.gamess	8	1391	113	1390	113	1392	113	8	1370	114	1367	115	1373	114
433.milc	8	2465	29.8	2464	29.8	2468	29.8	8	2472	29.7	2465	29.8	2465	29.8
434.zeusmp	8	1268	57.4	1270	57.3	1267	57.4	8	1266	57.5	1271	57.3	1287	56.6
435.gromacs	8	606	94.3	606	94.3	608	94.0	8	590	96.8	592	96.4	589	97.0
436.cactusADM	8	1527	62.6	1520	62.9	1523	62.8	8	1349	70.9	1350	70.8	1345	71.1
437.leslie3d	8	3112	24.2	3118	24.1	3113	24.2	8	3055	24.6	3050	24.7	3047	24.7
444.namd	8	761	84.3	762	84.2	761	84.3	8	756	84.8	757	84.7	756	84.9
447.dealII	8	901	102	897	102	883	104	8	833	110	835	110	827	111
450.soplex	8	2082	32.0	2082	32.0	2084	32.0	8	1896	35.2	1896	35.2	1898	35.2
453.povray	8	333	128	337	126	334	127	8	283	150	281	152	283	151
454.calculix	8	835	79.0	833	79.2	833	79.3	8	605	109	604	109	604	109
459.GemsFDTD	8	3547	23.9	3553	23.9	3553	23.9	8	3521	24.1	3520	24.1	3519	24.1
465.tonto	8	1081	72.8	1077	73.1	1075	73.2	8	1048	75.1	1053	74.8	1045	75.3
470.lbm	8	4573	24.0	4573	24.0	4573	24.0	8	4189	26.2	4189	26.2	4189	26.2
481.wrf	8	1983	45.1	1987	45.0	1983	45.1	8	1985	45.0	1986	45.0	1982	45.1
482.sphinx3	8	3264	47.8	3262	47.8	3259	47.8	8	3042	51.2	3035	51.4	3039	51.3

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

General Notes

Bios settings:
Hardware Prefetcher: Disabled
Adjacent Sector Prefetch: Disabled
All benchmarks compiled in 64-bit mode except 437.leslie3d, 450.soplex, 470.lbm and 482.sphinx3, for peak, are compiled in 32-bit mode
The taskset command was used to bind processes to cores

Base Compiler Invocation

C benchmarks:
icc

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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.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:
-fast

C++ benchmarks:
-fast

Fortran benchmarks:
-fast

Benchmarks using both Fortran and C:
-fast



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Peak Compiler Invocation

C benchmarks (except as noted below):

```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

433.milc: icc

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

Fortran benchmarks (except as noted below):

ifort

```
437.leslie3d: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

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
444.namd: -DSPEC_CPU_LP64
447.deallI: -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
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

```
433.milc: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32
```

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Peak Optimization Flags (Continued)

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-scalar-rep- -prefetch -opt-malloc-options=3

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-prefetch -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -auto-ilp32



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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.32.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.32.xml>

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