SPEC® CFP2006 Result

ASUSTeK Computer Inc.

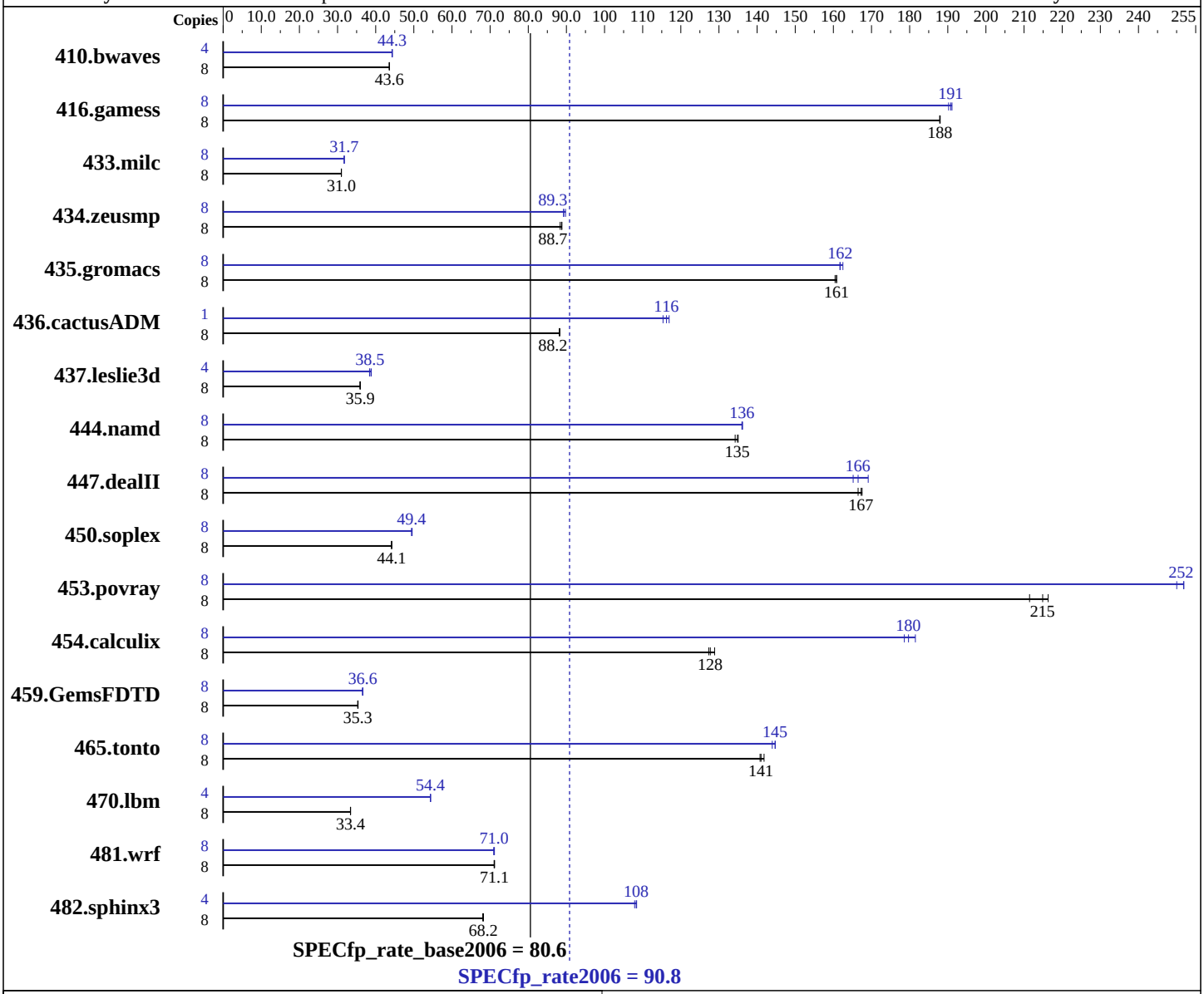
ASUS DSEB-DG Server Motherboard (Intel XEON X5482)

SPECfp®_rate2006 = 90.8

SPECfp_rate_base2006 = 80.6

CPU2006 license: 001034
Test sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

Test date: Aug-2008
Hardware Availability: Feb-2008
Software Availability: Feb-2008



Hardware

CPU Name:	Intel Xeon X5482
CPU Characteristics:	1600 MHz Bus Speed
CPU MHz:	3200
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:	12 MB I+D on chip per chip, 6 MB shared / 2 cores

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Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ and Fortran Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008, l_fc_p_10.1.008
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Multi-user, run level 3
Base Pointers:	64-bit

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Hardware (Continued)

L3 Cache: None
Other Cache: None
Memory: 32 GB (8 X 4GB PC2-6400F, CL5, FBDIMM)
Disk Subsystem: Seagate ST3500830AS 500GB SATAII, 7200RPM
Other Hardware: None

Software (Continued)

Peak Pointers: 32/64-bit
Other Software: binutils-2.17.50

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	2495	43.6	2495	43.6	**2495**	**43.6**	4	1228	44.3	**1227**	**44.3**	1225	44.4
416.gamess	8	834	188	833	188	**833**	**188**	8	**821**	**191**	820	191	823	190
433.milc	8	**2369**	**31.0**	2371	31.0	2368	31.0	8	**2313**	**31.7**	2314	31.7	2313	31.8
434.zeusmp	8	**820**	**88.7**	820	88.8	824	88.4	8	**815**	**89.3**	811	89.8	815	89.3
435.gromacs	8	355	161	**355**	**161**	356	160	8	352	163	353	162	**353**	**162**
436.cactusADM	8	1085	88.1	1083	88.3	**1084**	**88.2**	1	102	117	104	115	**103**	**116**
437.leslie3d	8	2091	36.0	**2093**	**35.9**	2096	35.9	4	980	38.4	968	38.8	**977**	**38.5**
444.namd	8	478	134	475	135	**476**	**135**	8	471	136	472	136	**472**	**136**
447.dealII	8	**547**	**167**	550	166	546	168	8	541	169	554	165	**550**	**166**
450.soplex	8	1509	44.2	**1511**	**44.1**	1511	44.1	8	1346	49.6	1350	49.4	**1350**	**49.4**
453.povray	8	201	211	**198**	**215**	197	216	8	169	252	**169**	**252**	170	250
454.calculix	8	518	127	512	129	**517**	**128**	8	**367**	**180**	364	182	370	179
459.GemsFDTD	8	2407	35.3	2399	35.4	**2402**	**35.3**	8	2316	36.7	**2316**	**36.6**	2325	36.5
465.tonto	8	555	142	559	141	**558**	**141**	8	**544**	**145**	544	145	547	144
470.lbm	8	3294	33.4	**3291**	**33.4**	3290	33.4	4	1011	54.4	1011	54.3	**1011**	**54.4**
481.wrf	8	**1256**	**71.1**	1256	71.2	1258	71.0	8	1260	70.9	**1258**	**71.0**	1256	71.1
482.sphinx3	8	**2286**	**68.2**	2285	68.2	2291	68.1	4	**720**	**108**	723	108	719	108

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
 OMP_NUM_THREADS set to number of cores
 KMP_AFFINITY set to physical,0
 KMP_STACKSIZE set to 200M
```

General Notes

```
 All benchmarks compiled in 64-bit mode except 450.soplex,
 470.lbm and 482.sphinx3, at peak, are compiled in 32-bit mode
```

Base Compiler Invocation

C benchmarks:
icc

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

Peak Compiler Invocation

C benchmarks (except as noted below):
`/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib -I/opt/intel/cc/10.1.008/include`

433.milc: `icc`

C++ benchmarks (except as noted below):
`icpc`

450.soplex: `/opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib -I/opt/intel/cc/10.1.008/include`

Fortran benchmarks (except as noted below):
`ifort`

437.leslie3d: `/opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib -I/opt/intel/fc/10.1.008/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.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`
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`

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

Continued on next page

Peak Optimization Flags (Continued)

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 -parallel -auto-ilp32`

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

481.wrf: `-fast -auto-ilp32`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic10.1-fp-linux64-revC.20090713.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic10.1-fp-linux64-revC.20090713.xml`

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

Tested with SPEC CPU2006 v1.0.
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