SPEC® CFP2006 Result

ASUSTeK Computer Inc.

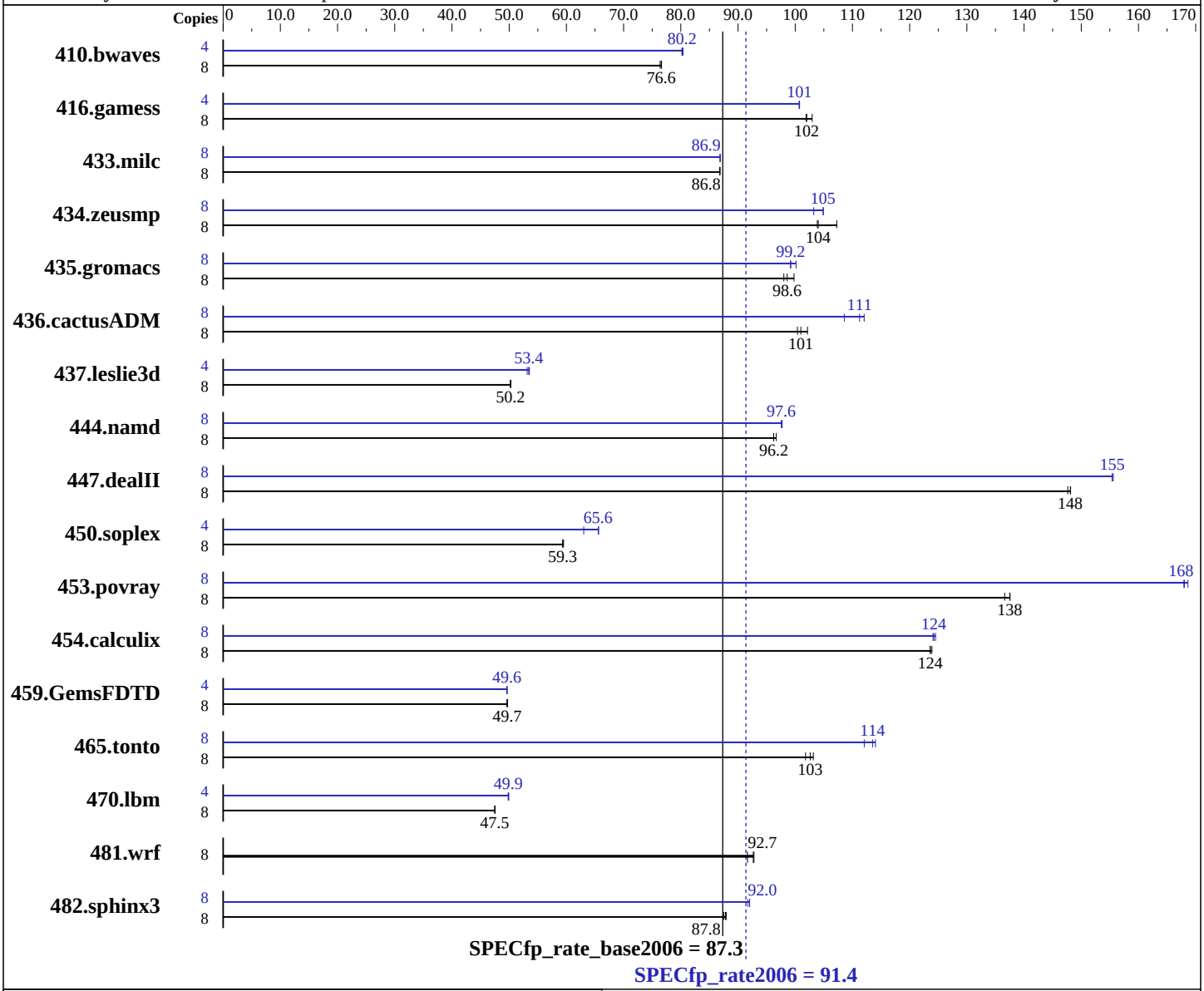
ASUS TS100-E6 (P7F-X) server system (Intel Xeon X3470)

SPECfp®_rate2006 = 91.4

SPECfp_rate_base2006 = 87.3

CPU2006 license: 9016
Test sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

Test date: Dec-2009
Hardware Availability: Oct-2009
Software Availability: Jul-2009



Hardware

CPU Name:	Intel Xeon X3470
CPU Characteristics:	Intel Turbo Boost Technology up to 3.6 GHz
CPU MHz:	2933
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
Compiler:	Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20090511 Package ID: l_cproc_p_11.1.040, l_cprof_p_11.1.040
Auto Parallel:	No
File System:	ReiserFS
System State:	Run level 3 (multi-user)

Continued on next page

SPEC CFP2006 Result

ASUSTeK Computer Inc.

ASUS TS100-E6 (P7F-X) server system (Intel Xeon X3470)

SPECfp_rate2006 = 91.4

SPECfp_rate_base2006 = 87.3

CPU2006 license: 9016
Test sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

Test date: Dec-2009
Hardware Availability: Oct-2009
Software Availability: Jul-2009

L3 Cache:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	16 GB (4 x 4 GB PC3-10600R, CL=9)
Disk Subsystem:	1 x 250 GB SATAII, 7200RPM
Other Hardware:	None

Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	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	8	1423	76.4	1419	76.6	**1420**	**76.6**	4	678	80.2	676	80.4	**677**	**80.2**
416.gamess	8	1537	102	**1536**	**102**	1521	103	4	**777**	**101**	777	101	778	101
433.milc	8	846	86.8	**846**	**86.8**	846	86.8	8	**845**	**86.9**	845	86.9	845	86.9
434.zeusmp	8	**700**	**104**	701	104	679	107	8	705	103	694	105	**694**	**105**
435.gromacs	8	572	99.8	583	98.0	**579**	**98.6**	8	570	100	**576**	**99.2**	576	99.2
436.cactusADM	8	**947**	**101**	952	100	936	102	8	880	109	**859**	**111**	853	112
437.leslie3d	8	1495	50.3	1498	50.2	**1497**	**50.2**	4	708	53.1	702	53.5	**704**	**53.4**
444.namd	8	**667**	**96.2**	667	96.2	664	96.7	8	657	97.7	657	97.6	**657**	**97.6**
447.dealII	8	618	148	620	148	**618**	**148**	8	588	156	589	155	**589**	**155**
450.soplex	8	1121	59.5	1125	59.3	**1124**	**59.3**	4	529	63.0	508	65.6	**509**	**65.6**
453.povray	8	**309**	**138**	312	137	309	138	8	252	169	**253**	**168**	253	168
454.calculix	8	533	124	**534**	**124**	534	124	8	530	125	**531**	**124**	532	124
459.GemsFDTD	8	1711	49.6	1708	49.7	**1709**	**49.7**	4	856	49.6	**855**	**49.6**	854	49.7
465.tonto	8	**767**	**103**	763	103	773	102	8	**693**	**114**	690	114	702	112
470.lbm	8	2315	47.5	2314	47.5	**2315**	**47.5**	4	1103	49.8	**1102**	**49.9**	1101	49.9
481.wrf	8	963	92.8	975	91.6	**964**	**92.7**	8	963	92.8	975	91.6	**964**	**92.7**
482.sphinx3	8	1781	87.5	1773	87.9	**1776**	**87.8**	8	1700	91.7	**1694**	**92.0**	1694	92.0

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
```

Component Notes

```
Tested system case compliance with ATX spec
300W PS2 80 Plus Power Supply
System was configured with XGI Volari Z9s VGA (on board VGA)
```

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 -opt-prefetch

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

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

Benchmarks using both Fortran and C:
-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

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 (except as noted below):
`ifort -m64`

437.leslie3d: `ifort -m32`

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`
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`

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-prefetch -opt-malloc-options=3 -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: -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 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: -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)

437.leslie3d: -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 -opt-prefetch

459.GemsFDTD: -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 -Ob0 -opt-prefetch

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

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

Continued on next page

Peak Optimization Flags (Continued)

436.cactusADM: `-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 -opt-prefetch -auto-ilp32`

454.calculix: `-xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32`

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-fp-linux64-revF.html`

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

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 06:41:47 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 13 January 2010.