SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

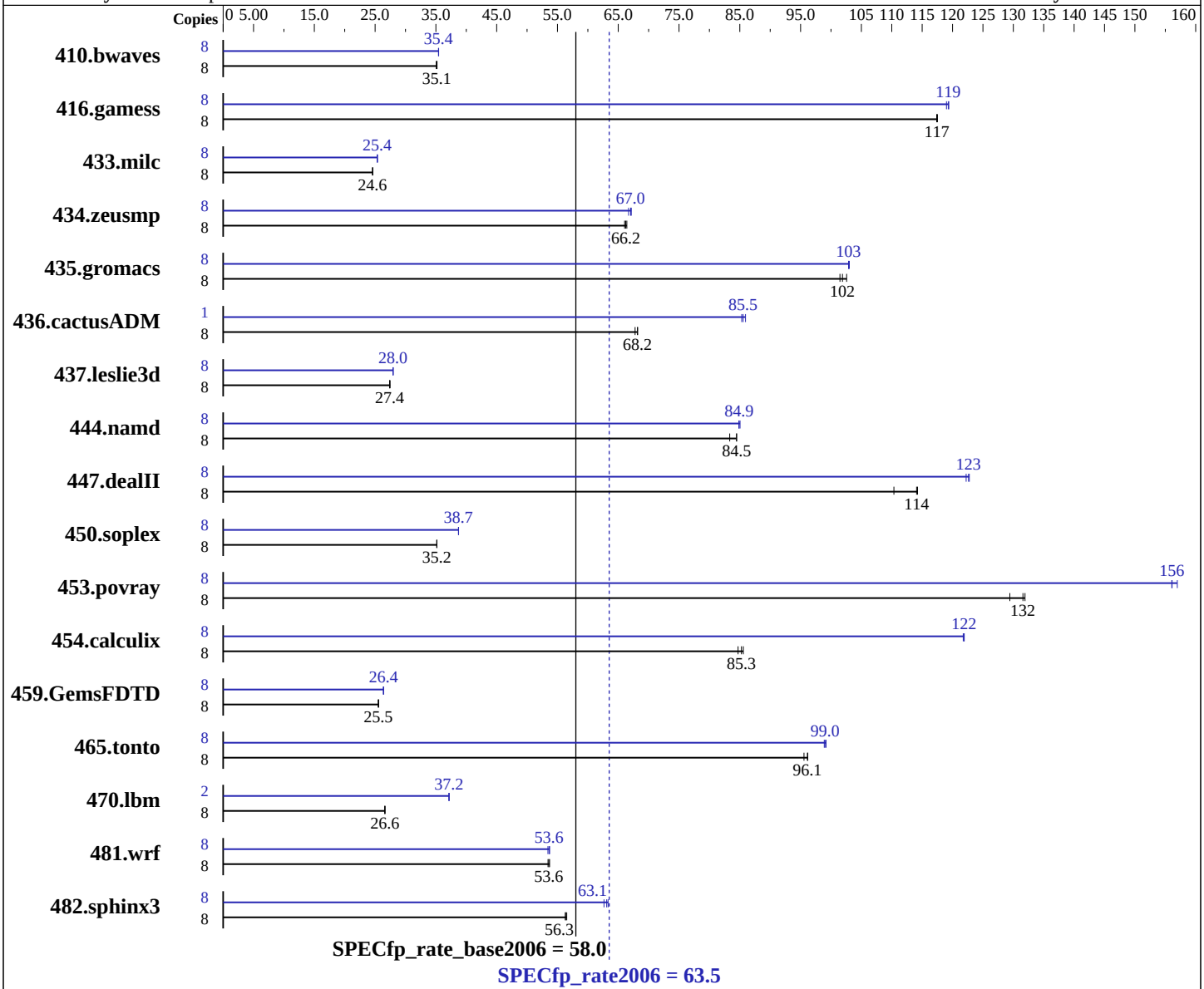
Supermicro Motherborad X7DB3

SPECfp®_rate2006 = 63.5

SPECfp_rate_base2006 = 58.0

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Oct-2007
Hardware Availability: Nov-2007
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon E5405
CPU Characteristics:	Quad Core, 2.00GHz
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:	12 MB I+D on chip per chip, 6 MB shared / 2 cores

Continued on next page

Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) SP1, kernel 2.6.16.46-0.12-default
Compiler:	Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070725
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Multi-user, run level 3
Base Pointers:	64-bit

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro Motherborad X7DB3

SPECfp_rate2006 = 63.5

SPECfp_rate_base2006 = 58.0

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Oct-2007
Hardware Availability: Nov-2007
Software Availability: Nov-2007

L3 Cache: None
Other Cache: None
Memory: 16 GB (8 * 2 GB PC2-5300 FBDIMM, CL-5-5-5, ECC)
Disk Subsystem: 500GB SATA, 7200RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	**3095**	**35.1**	3090	35.2	3101	35.1	8	3069	35.4	3066	35.5	**3068**	**35.4**
416.gamess	8	1333	118	**1334**	**117**	1334	117	8	1316	119	**1313**	**119**	1312	119
433.milc	8	**2987**	**24.6**	2985	24.6	2987	24.6	8	2896	25.4	2894	25.4	**2896**	**25.4**
434.zeusmp	8	**1099**	**66.2**	1096	66.4	1102	66.0	8	1084	67.1	1091	66.7	**1086**	**67.0**
435.gromacs	8	**561**	**102**	563	101	557	103	8	**555**	**103**	554	103	555	103
436.cactusADM	8	1402	68.2	1411	67.8	**1403**	**68.2**	1	**140**	**85.5**	139	85.9	140	85.3
437.leslie3d	8	2738	27.5	**2745**	**27.4**	2746	27.4	8	**2690**	**28.0**	2689	28.0	2691	27.9
444.namd	8	770	83.3	**760**	**84.5**	760	84.5	8	**756**	**84.9**	754	85.0	756	84.8
447.dealII	8	829	110	**802**	**114**	801	114	8	**746**	**123**	746	123	749	122
450.soplex	8	**1898**	**35.2**	1898	35.1	1897	35.2	8	**1723**	**38.7**	1724	38.7	1723	38.7
453.povray	8	329	129	**323**	**132**	323	132	8	273	156	**273**	**156**	271	157
454.calculix	8	771	85.6	**774**	**85.3**	779	84.7	8	541	122	**541**	**122**	542	122
459.GemsFDTD	8	**3325**	**25.5**	3325	25.5	3317	25.6	8	3214	26.4	**3218**	**26.4**	3220	26.4
465.tonto	8	**819**	**96.1**	818	96.2	824	95.6	8	794	99.2	**795**	**99.0**	796	98.9
470.lbm	8	4128	26.6	**4129**	**26.6**	4136	26.6	2	739	37.2	740	37.2	**739**	**37.2**
481.wrf	8	**1668**	**53.6**	1672	53.4	1664	53.7	8	**1666**	**53.6**	1672	53.4	1664	53.7
482.sphinx3	8	2769	56.3	**2768**	**56.3**	2758	56.5	8	**2471**	**63.1**	2462	63.3	2488	62.7

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

General Notes

```
Tested systems can be used with CSE-825TQ-R700LPV case,
To ensure system stability, a 550W (minimum) ATX power supply
[4-pin (+12V), 8-pin (+12V) and 24-pin are required]
Product description located as of
http://www.supermicro.com/products/motherboard/Xeon1333/5000/X7DB3.cfm
The system bus runs at 1333 MHz
taskset was used to bind processes to cores except for 436.cactusADM at peak
```

Base Compiler Invocation

C benchmarks:
icc

Continued on next page

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

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.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`

Continued on next page

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 -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-intel64-linux-flags.20090714.22.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.20090714.22.xml

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.0.1.
Report generated on Tue Jul 22 13:35:16 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 28 November 2007.