SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

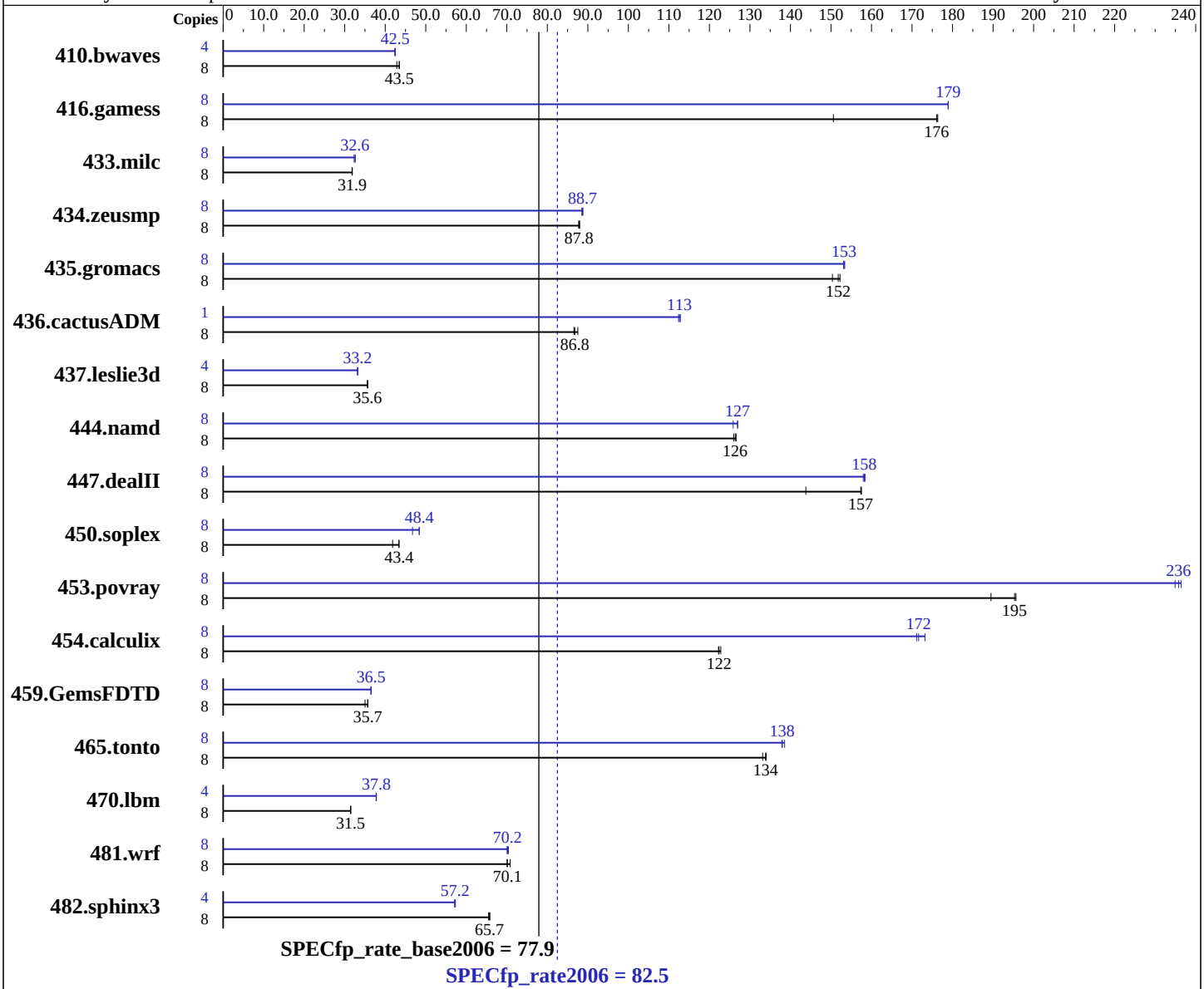
Supermicro
Motherboard X7DWN+

SPECfp®_rate2006 = 82.5

SPECfp_rate_base2006 = 77.9

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 E5472
CPU Characteristics:	Quad Core, 3.00GHz
CPU MHz:	3000
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:	Default
Base Pointers:	64-bit

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro Motherboard X7DWN+

SPECfp_rate2006 = 82.5

SPECfp_rate_base2006 = 77.9

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 (16 X 1GB ECC PC2-6400, CL5, FBDIMM)
Disk Subsystem: Westren Digital WD5000YS 500GB SATA2, 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	**2502**	**43.5**	2501	43.5	2537	42.8	4	1284	42.3	**1279**	**42.5**	1278	42.5
416.gamess	8	888	176	**890**	**176**	1040	151	8	**875**	**179**	876	179	875	179
433.milc	8	2309	31.8	**2305**	**31.9**	2305	31.9	8	2273	32.3	**2256**	**32.6**	2254	32.6
434.zeusmp	8	830	87.7	**829**	**87.8**	827	88.0	8	823	88.5	820	88.8	**821**	**88.7**
435.gromacs	8	380	150	**376**	**152**	375	152	8	373	153	372	153	**373**	**153**
436.cactusADM	8	1092	87.5	1104	86.6	**1102**	**86.8**	1	106	112	106	113	**106**	**113**
437.leslie3d	8	2112	35.6	**2111**	**35.6**	2109	35.7	4	1134	33.2	1132	33.2	**1133**	**33.2**
444.namd	8	509	126	507	127	**508**	**126**	8	510	126	**505**	**127**	505	127
447.dealII	8	636	144	**582**	**157**	581	158	8	578	158	579	158	**578**	**158**
450.soplex	8	1595	41.8	**1538**	**43.4**	1538	43.4	8	1428	46.7	1379	48.4	**1379**	**48.4**
453.povray	8	225	189	218	196	**218**	**195**	8	181	235	180	236	**180**	**236**
454.calculix	8	537	123	540	122	**539**	**122**	8	**385**	**172**	381	173	386	171
459.GemsFDTD	8	2424	35.0	**2380**	**35.7**	2377	35.7	8	2328	36.5	**2326**	**36.5**	2323	36.5
465.tonto	8	591	133	**588**	**134**	588	134	8	571	138	**570**	**138**	568	139
470.lbm	8	**3495**	**31.5**	3495	31.4	3490	31.5	4	1454	37.8	1457	37.7	**1454**	**37.8**
481.wrf	8	1262	70.8	**1274**	**70.1**	1276	70.1	8	1269	70.4	1275	70.1	**1273**	**70.2**
482.sphinx3	8	2380	65.5	**2372**	**65.7**	2369	65.8	4	**1362**	**57.2**	1365	57.1	1360	57.3

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/Xeon1333/5400/X7DWN+.cfm
The system bus runs at 1600 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.
Report generated on Tue Jul 22 13:36:43 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 28 November 2007.