



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

### SPECfp<sup>®</sup>\_rate2006 = 91.3

Motherboard X8SIT-F (Intel Xeon X3470, 2.93 GHz)

### SPECfp\_rate\_base2006 = 88.5

CPU2006 license: 001176

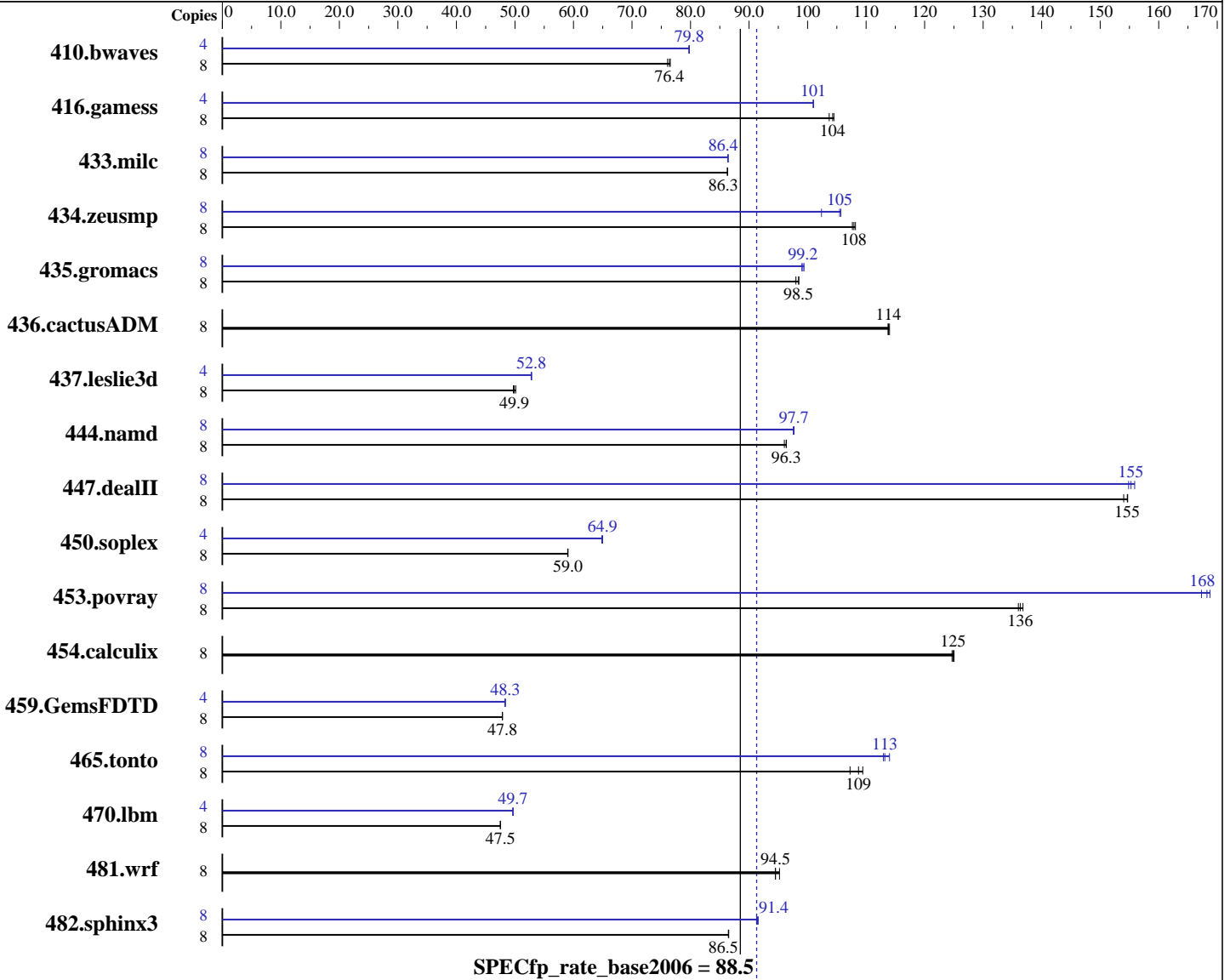
Test date: Feb-2010

Test sponsor: Supermicro

Hardware Availability: Mar-2010

Tested by: Supermicro

Software Availability: Oct-2009



### Hardware

CPU Name: Intel Xeon X3470  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 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 20091012 Package ID: l\_cproc\_p\_11.1.059, l\_cprof\_p\_11.1.059  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

SPECfp\_rate2006 = **91.3**

Motherboard X8SIT-F (Intel Xeon X3470, 2.93 GHz)

SPECfp\_rate\_base2006 = **88.5**

CPU2006 license: 001176

Test date: Feb-2010

Test sponsor: Supermicro

Hardware Availability: Mar-2010

Tested by: Supermicro

Software Availability: Oct-2009

L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 16 GB (4 x 4GB DDR3-1333 RDIMM, ECC, CL9)  
Disk Subsystem: 1 x 160 GB SATA II, 7200 RPM  
Other Hardware: None

Base Pointers: 64-bit  
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	1429	76.1	<b><u>1423</u></b>	<b><u>76.4</u></b>	1420	76.5	4	682	79.7	681	79.8	<b><u>681</u></b>	<b><u>79.8</u></b>
416.gamess	8	<b><u>1502</u></b>	<b><u>104</u></b>	1510	104	1499	104	4	<b><u>776</u></b>	<b><u>101</u></b>	776	101	775	101
433.milc	8	850	86.4	851	86.3	<b><u>851</u></b>	<b><u>86.3</u></b>	8	<b><u>850</u></b>	<b><u>86.4</u></b>	850	86.4	850	86.4
434.zeusmp	8	673	108	<b><u>675</u></b>	<b><u>108</u></b>	676	108	8	689	106	711	102	<b><u>690</u></b>	<b><u>105</u></b>
435.gromacs	8	583	98.0	<b><u>580</u></b>	<b><u>98.5</u></b>	580	98.5	8	575	99.4	577	99.0	<b><u>576</u></b>	<b><u>99.2</u></b>
436.cactusADM	8	<b><u>840</u></b>	<b><u>114</u></b>	840	114	839	114	8	<b><u>840</u></b>	<b><u>114</u></b>	840	114	839	114
437.leslie3d	8	1500	50.1	1512	49.7	<b><u>1507</u></b>	<b><u>49.9</u></b>	4	<b><u>712</u></b>	<b><u>52.8</u></b>	713	52.8	711	52.9
444.namd	8	<b><u>666</u></b>	<b><u>96.3</u></b>	668	96.0	666	96.4	8	657	97.7	658	97.6	<b><u>657</u></b>	<b><u>97.7</u></b>
447.dealII	8	592	155	<b><u>592</u></b>	<b><u>155</u></b>	594	154	8	<b><u>589</u></b>	<b><u>155</u></b>	587	156	591	155
450.soplex	8	<b><u>1130</u></b>	<b><u>59.0</u></b>	1131	59.0	1130	59.1	4	<b><u>514</u></b>	<b><u>64.9</u></b>	513	65.0	514	64.8
453.povray	8	<b><u>312</u></b>	<b><u>136</u></b>	313	136	311	137	8	254	167	252	169	<b><u>253</u></b>	<b><u>168</u></b>
454.calculix	8	528	125	529	125	<b><u>528</u></b>	<b><u>125</u></b>	8	528	125	529	125	<b><u>528</u></b>	<b><u>125</u></b>
459.GemsFDTD	8	<b><u>1774</u></b>	<b><u>47.8</u></b>	1773	47.9	1774	47.8	4	878	48.4	<b><u>878</u></b>	<b><u>48.3</u></b>	878	48.3
465.tonto	8	719	109	<b><u>724</u></b>	<b><u>109</u></b>	734	107	8	691	114	<b><u>695</u></b>	<b><u>113</u></b>	697	113
470.lbm	8	2314	47.5	2312	47.5	<b><u>2313</u></b>	<b><u>47.5</u></b>	4	1106	49.7	1107	49.6	<b><u>1107</u></b>	<b><u>49.7</u></b>
481.wrf	8	939	95.2	946	94.5	<b><u>945</u></b>	<b><u>94.5</u></b>	8	939	95.2	946	94.5	<b><u>945</u></b>	<b><u>94.5</u></b>
482.sphinx3	8	1802	86.5	1803	86.5	<b><u>1802</u></b>	<b><u>86.5</u></b>	8	1703	91.6	1708	91.3	<b><u>1705</u></b>	<b><u>91.4</u></b>

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

## Operating System Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run

## Platform Notes

Fan speed set to Full Speed in BIOS Setup.  
As tested, the system used a Supermicro  
PWS-665-PQ power supply, SNK-P0046P heatsink,  
and FAN-0077L cooling fan.



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Supermicro**

**SPECfp\_rate2006 = 91.3**

Motherboard X8SIT-F (Intel Xeon X3470, 2.93 GHz)

**SPECfp\_rate\_base2006 = 88.5**

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

**Test date:** Feb-2010  
**Hardware Availability:** Mar-2010  
**Software Availability:** Oct-2009

## General Notes

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

## 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

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

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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Supermicro**

**SPECfp\_rate2006 = 91.3**

Motherboard X8SIT-F (Intel Xeon X3470, 2.93 GHz)

**SPECfp\_rate\_base2006 = 88.5**

**CPU2006 license:** 001176

**Test date:** Feb-2010

**Test sponsor:** Supermicro

**Hardware Availability:** Mar-2010

**Tested by:** Supermicro

**Software Availability:** Oct-2009

## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

`-xSSE4.2 -ipo -O3 -no-prec-div -static`

## 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:

`ifort -m64`

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`  
 437.leslie3d: `-DSPEC_CPU_LP64`  
 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`  
 470.lbm: `-DSPEC_CPU_LP64`  
 481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`

## Peak Optimization Flags

C benchmarks:

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SPECfp\_rate2006 = 91.3

Motherboard X8SIT-F (Intel Xeon X3470, 2.93 GHz)

SPECfp\_rate\_base2006 = 88.5

CPU2006 license: 001176

Test date: Feb-2010

Test sponsor: Supermicro

Hardware Availability: Mar-2010

Tested by: Supermicro

Software Availability: Oct-2009

## Peak Optimization Flags (Continued)

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 -opt-prefetch

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-malloc-options=3 -ansi-alias -auto-ilp32

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

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 -inline-calloc -opt-malloc-options=3

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SPECfp\_rate2006 = 91.3

Motherboard X8SIT-F (Intel Xeon X3470, 2.93 GHz)

SPECfp\_rate\_base2006 = 88.5

CPU2006 license: 001176

Test date: Feb-2010

Test sponsor: Supermicro

Hardware Availability: Mar-2010

Tested by: Supermicro

Software Availability: Oct-2009

## Peak Optimization Flags (Continued)

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

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-revE.20100202.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-revE.20100202.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.  
Report generated on Wed Jul 23 08:03:51 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 4 May 2010.