



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

SPECfp<sup>®</sup>\_rate2006 = 87.1

Motherboard X8SIL (Intel Xeon X3460, 2.80 GHz)

SPECfp\_rate\_base2006 = 83.9

CPU2006 license: 001176

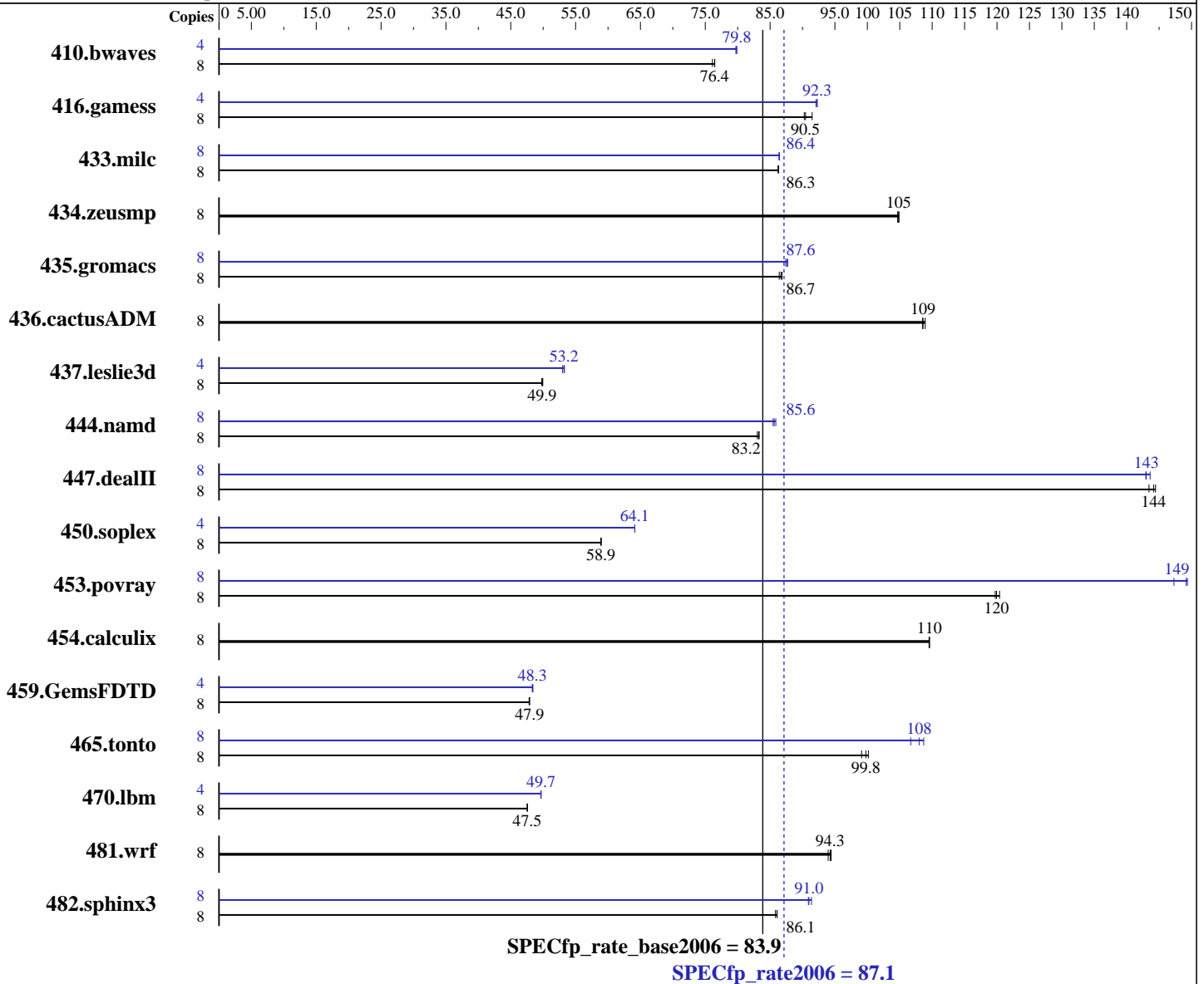
Test date: Mar-2011

Test sponsor: Supermicro

Hardware Availability: Jan-2010

Tested by: Supermicro

Software Availability: Jan-2010



### Hardware

CPU Name: Intel Xeon X3460  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz  
 CPU MHz: 2800  
 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 20091130 Package ID: l\_cproc\_p\_11.1.064, l\_cprof\_p\_11.1.064  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

SPECfp\_rate2006 = 87.1

Motherboard X8SIL (Intel Xeon X3460, 2.80 GHz)

SPECfp\_rate\_base2006 = 83.9

CPU2006 license: 001176

Test date: Mar-2011

Test sponsor: Supermicro

Hardware Availability: Jan-2010

Tested by: Supermicro

Software Availability: Jan-2010

L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 16 GB (4 x 4 GB 2Rx8 PC3-10600R-9, ECC)  
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	<u>1422</u>	<u>76.4</u>	1429	76.1	1422	76.5	4	682	79.7	681	79.9	<u>681</u>	<u>79.8</u>
416.gamess	8	<u>1731</u>	<u>90.5</u>	1735	90.3	1712	91.5	4	<u>849</u>	<u>92.3</u>	849	92.3	851	92.1
433.milc	8	852	86.2	<u>851</u>	<u>86.3</u>	851	86.3	8	850	86.4	850	86.4	<u>850</u>	<u>86.4</u>
434.zeusmp	8	<u>694</u>	<u>105</u>	696	105	694	105	8	<u>694</u>	<u>105</u>	696	105	694	105
435.gromacs	8	661	86.4	<u>659</u>	<u>86.7</u>	658	86.8	8	653	87.4	651	87.7	<u>652</u>	<u>87.6</u>
436.cactusADM	8	<u>880</u>	<u>109</u>	878	109	881	109	8	<u>880</u>	<u>109</u>	878	109	881	109
437.leslie3d	8	1510	49.8	<u>1508</u>	<u>49.9</u>	1506	49.9	4	<u>707</u>	<u>53.2</u>	706	53.3	710	53.0
444.namd	8	770	83.3	<u>771</u>	<u>83.2</u>	773	83.0	8	751	85.5	<u>749</u>	<u>85.6</u>	747	85.9
447.dealII	8	638	143	<u>635</u>	<u>144</u>	634	144	8	637	144	640	143	<u>640</u>	<u>143</u>
450.soplex	8	<u>1133</u>	<u>58.9</u>	1132	59.0	1133	58.9	4	520	64.1	<u>520</u>	<u>64.1</u>	520	64.1
453.povray	8	355	120	354	120	<u>355</u>	<u>120</u>	8	289	147	<u>285</u>	<u>149</u>	285	149
454.calculix	8	602	110	603	110	<u>602</u>	<u>110</u>	8	602	110	603	110	<u>602</u>	<u>110</u>
459.GemsFDTD	8	<u>1772</u>	<u>47.9</u>	1772	47.9	1775	47.8	4	<u>878</u>	<u>48.3</u>	878	48.3	876	48.4
465.tonto	8	<u>789</u>	<u>99.8</u>	794	99.1	786	100	8	<u>729</u>	<u>108</u>	738	107	724	109
470.lbm	8	2312	47.5	<u>2312</u>	<u>47.5</u>	2311	47.6	4	1106	49.7	1107	49.7	<u>1107</u>	<u>49.7</u>
481.wrf	8	946	94.4	951	94.0	<u>948</u>	<u>94.3</u>	8	946	94.4	951	94.0	<u>948</u>	<u>94.3</u>
482.sphinx3	8	1817	85.8	1811	86.1	<u>1812</u>	<u>86.1</u>	8	1706	91.4	1715	90.9	<u>1713</u>	<u>91.0</u>

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 CSE-111T-560CB chassis.  
The system includes a PWS-562-1H power supply, SNK-P0046P heatsink,  
and 3 FAN-0106L4 cooling fans.



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SPECfp\_rate2006 = 87.1

Motherboard X8SIL (Intel Xeon X3460, 2.80 GHz)

SPECfp\_rate\_base2006 = 83.9

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

Test date: Mar-2011  
Hardware Availability: Jan-2010  
Software Availability: Jan-2010

## 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 = 87.1

Motherboard X8SIL (Intel Xeon X3460, 2.80 GHz)

SPECfp\_rate\_base2006 = 83.9

CPU2006 license: 001176

Test date: Mar-2011

Test sponsor: Supermicro

Hardware Availability: Jan-2010

Tested by: Supermicro

Software Availability: Jan-2010

## 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 = 87.1

Motherboard X8SIL (Intel Xeon X3460, 2.80 GHz)

SPECfp\_rate\_base2006 = 83.9

CPU2006 license: 001176

Test date: Mar-2011

Test sponsor: Supermicro

Hardware Availability: Jan-2010

Tested by: Supermicro

Software Availability: Jan-2010

## 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: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static

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

### Benchmarks using both Fortran and C:

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SPECfp\_rate2006 = 87.1

Motherboard X8SIL (Intel Xeon X3460, 2.80 GHz)

SPECfp\_rate\_base2006 = 83.9

CPU2006 license: 001176

Test date: Mar-2011

Test sponsor: Supermicro

Hardware Availability: Jan-2010

Tested by: Supermicro

Software Availability: Jan-2010

## Peak Optimization Flags (Continued)

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-linux64-revE.20100316.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.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 17:54:24 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 7 June 2011.