



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor X5460,  
3.16 GHz)

SPECfp<sup>®</sup>\_rate2006 = 79.0

SPECfp\_rate\_base2006 = 70.8

CPU2006 license: 13

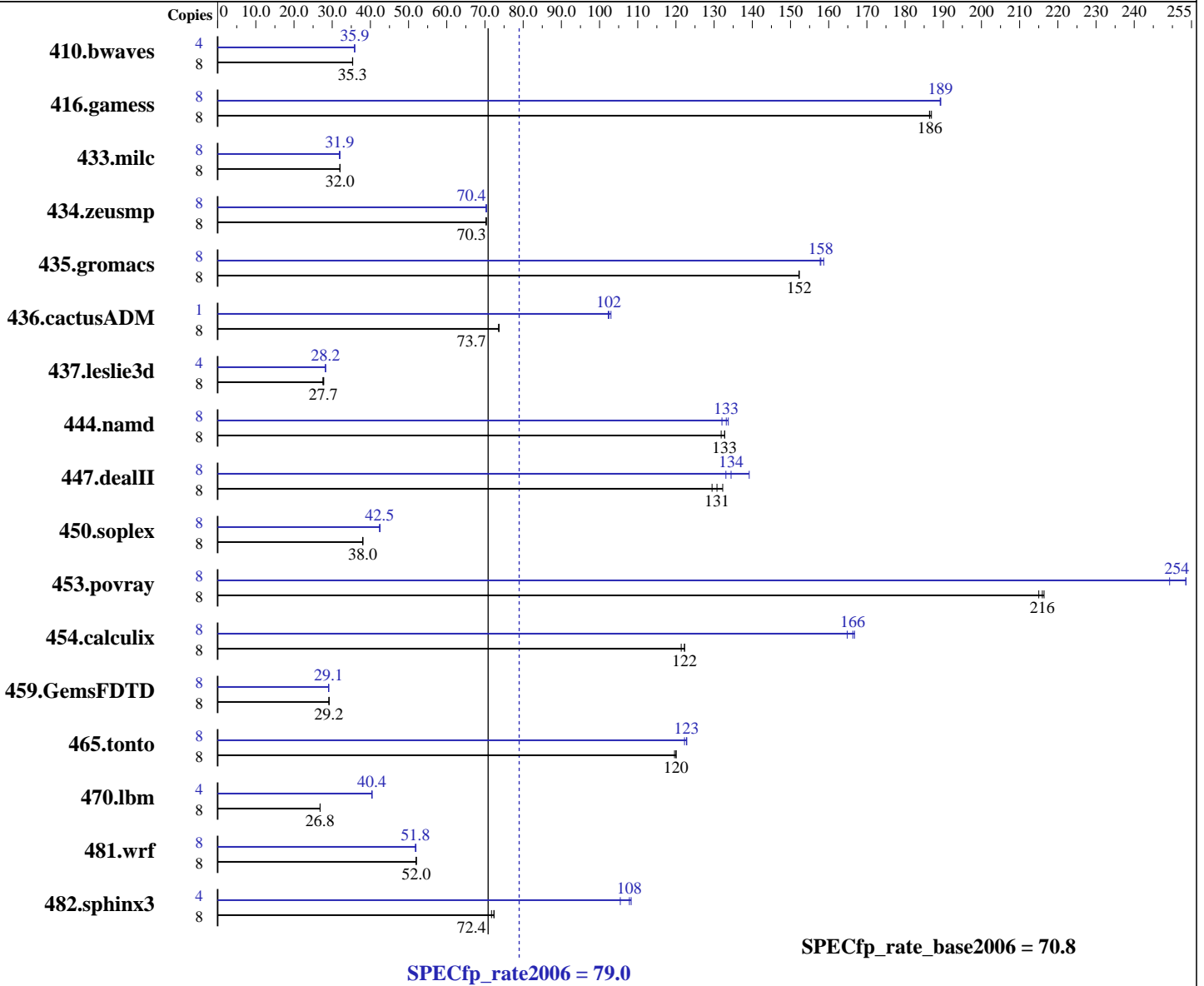
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon X5460  
 CPU Characteristics: Quad Core, 3.16 GHz  
 CPU MHz: 3166  
 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: 64-Bit SUSE LINUX Enterprise Server 10 SP1 RC1, Kernel  
 linux-cbgn 2.6.16.43-0.5-smp for x86\_64  
 Compiler: Intel C++ and Fortran Compiler 10.1 for Linux  
 Build 20070913 Package ID: l\_cc\_p\_10.1.008, l\_fc\_p\_10.1.008  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Multi-user, run level 3

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor X5460,  
3.16  
GHz)

SPECfp\_rate2006 = 79.0

SPECfp\_rate\_base2006 = 70.8

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007

L3 Cache: None  
Other Cache: None  
Memory: 16 GB (8 \* 2GB DDR2 5300F, 2 rank,  
CL5-5-5, ECC)  
Disk Subsystem: 1x73GB Seagate ST37330LC SCSI 10K RPM  
Other Hardware: None

Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other Software: Binutils 2.17.50.0.15

## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
410.bwaves	8	3073	35.4	<b>3077</b>	<b>35.3</b>	3078	35.3	4	<b>1516</b>	<b>35.9</b>	1516	35.8	1514	35.9		
416.gamess	8	838	187	840	186	<b>840</b>	<b>186</b>	8	828	189	<b>828</b>	<b>189</b>	827	189		
433.milc	8	2294	32.0	<b>2293</b>	<b>32.0</b>	2291	32.1	8	<b>2299</b>	<b>31.9</b>	2293	32.0	2304	31.9		
434.zeusmp	8	1036	70.2	1034	70.4	<b>1035</b>	<b>70.3</b>	8	1034	70.4	1036	70.3	<b>1034</b>	<b>70.4</b>		
435.gromacs	8	<b>375</b>	<b>152</b>	375	152	375	152	8	362	158	<b>362</b>	<b>158</b>	360	159		
436.cactusADM	8	1297	73.7	1300	73.6	<b>1298</b>	<b>73.7</b>	1	116	103	117	102	<b>117</b>	<b>102</b>		
437.leslie3d	8	2729	27.6	2706	27.8	<b>2715</b>	<b>27.7</b>	4	<b>1331</b>	<b>28.2</b>	1331	28.2	1332	28.2		
444.namd	8	487	132	<b>483</b>	<b>133</b>	483	133	8	480	134	486	132	<b>482</b>	<b>133</b>		
447.dealII	8	692	132	<b>700</b>	<b>131</b>	707	129	8	688	133	<b>681</b>	<b>134</b>	658	139		
450.soplex	8	1758	38.0	<b>1754</b>	<b>38.0</b>	1754	38.0	8	1574	42.4	1569	42.5	<b>1571</b>	<b>42.5</b>		
453.povray	8	198	215	197	216	<b>197</b>	<b>216</b>	8	168	254	171	249	<b>168</b>	<b>254</b>		
454.calculix	8	540	122	<b>540</b>	<b>122</b>	544	121	8	396	167	<b>397</b>	<b>166</b>	400	165		
459.GemsFDTD	8	2907	29.2	2913	29.1	<b>2910</b>	<b>29.2</b>	8	<b>2921</b>	<b>29.1</b>	2923	29.0	2916	29.1		
465.tonto	8	656	120	<b>656</b>	<b>120</b>	658	120	8	644	122	641	123	<b>641</b>	<b>123</b>		
470.lbm	8	4098	26.8	<b>4096</b>	<b>26.8</b>	4096	26.8	4	1360	40.4	1361	40.4	<b>1360</b>	<b>40.4</b>		
481.wrf	8	1718	52.0	1720	52.0	<b>1718</b>	<b>52.0</b>	8	1725	51.8	<b>1724</b>	<b>51.8</b>	1721	51.9		
482.sphinx3	8	2155	72.4	2174	71.7	<b>2155</b>	<b>72.4</b>	4	720	108	<b>723</b>	<b>108</b>	739	105		

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

## General Notes

Bios settings:

Hardware Prefetcher: Disabled

Adjacent Sector Prefetch: Disabled

All benchmarks compiled in 64-bit mode except 437.leslie3d, 450.soplex

470.lbm and 482.sphinx3, at peak, are compiled in 32-bit mode

The taskset utility was used to bind processes to cores

## Base Compiler Invocation

C benchmarks:

icc

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor X5460,  
3.16  
GHz)

SPECfp\_rate2006 = 79.0

SPECfp\_rate\_base2006 = 70.8

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007

## 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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor X5460,  
3.16  
GHz)

SPECfp\_rate2006 = 79.0

SPECfp\_rate\_base2006 = 70.8

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib  
-I/opt/intel/cc/10.1.008/include
```

433.milc: icc

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib  
-I/opt/intel/cc/10.1.008/include
```

Fortran benchmarks (except as noted below):

ifort

```
437.leslie3d: /opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib  
-I/opt/intel/fc/10.1.008/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.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  
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
```

```
470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-scalar-rep- -prefetch -opt-malloc-options=3
```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor X5460,  
3.16  
GHz)

SPECfp\_rate2006 = 79.0

SPECfp\_rate\_base2006 = 70.8

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007

## Peak Optimization Flags (Continued)

482.sphinx3: -fast -unroll2

### C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias  
-auto-ilp32

447.dealIII: -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.20090714.06.html>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor X5460,  
3.16  
GHz)

**SPECfp\_rate2006 = 79.0**

**SPECfp\_rate\_base2006 = 70.8**

**CPU2006 license:** 13

**Test sponsor:** Intel Corporation

**Tested by:** Intel Corporation

**Test date:** Nov-2007

**Hardware Availability:** Nov-2007

**Software Availability:** Nov-2007

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.20090714.06.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 v1.0.  
Report generated on Tue Jul 22 13:38:57 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 17 December 2007.