



# SPEC® CFP2006 Result

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## Fujitsu Siemens Computers

### SPECfp®\_rate2006 = 74.0

### PRIMERGY BX620 S4, Intel Xeon L5430, 2.66 GHz

### SPECfp\_rate\_base2006 = 68.5

CPU2006 license: 22

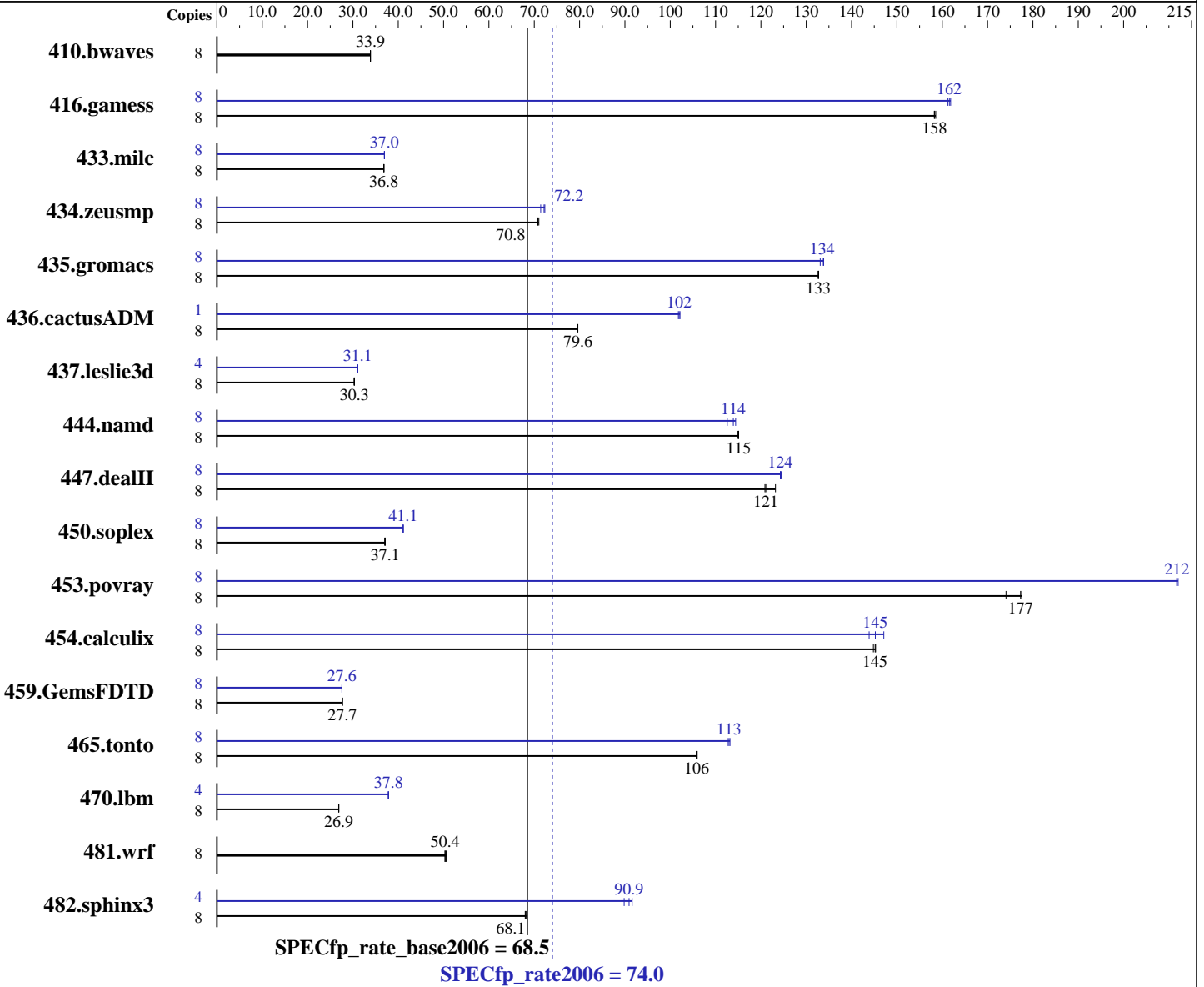
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Oct-2008

Hardware Availability: Oct-2008

Software Availability: Nov-2008



#### Hardware

CPU Name: Intel Xeon L5430  
 CPU Characteristics: 1333 MHz system bus  
 CPU MHz: 2667  
 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

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#### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP2, Kernel 2.6.16.60-0.21-smp  
 Compiler: Intel C++ and Fortran Compiler 11.0 for Linux Build 20080730 Package ID: l\_cproc\_b\_11.0.042, l\_fproc\_b\_11.0.042  
 Auto Parallel: Yes  
 File System: ext3  
 System State: Multi-User Run Level 3  
 Base Pointers: 64-bit

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L3 Cache: None  
Other Cache: None  
Memory: 16 GB (8x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1x SATA, 120 GB, 5400 rpm  
Other Hardware: None

Peak Pointers: 32/64-bit  
Other Software: Binutils 2.18.50.0.7.20080502

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3212	33.8	<b><u>3211</u></b>	<b><u>33.9</u></b>	3209	33.9	8	3212	33.8	<b><u>3211</u></b>	<b><u>33.9</u></b>	3209	33.9
416.gamess	8	990	158	988	159	<b><u>989</u></b>	<b><u>158</u></b>	8	972	161	968	162	<b><u>970</u></b>	<b><u>162</u></b>
433.milc	8	1993	36.8	1994	36.8	<b><u>1994</u></b>	<b><u>36.8</u></b>	8	1987	37.0	<b><u>1987</u></b>	<b><u>37.0</u></b>	1987	37.0
434.zeusmp	8	1028	70.8	<b><u>1028</u></b>	<b><u>70.8</u></b>	1025	71.0	8	<b><u>1009</u></b>	<b><u>72.2</u></b>	1019	71.4	1006	72.3
435.gromacs	8	431	133	<b><u>431</u></b>	<b><u>133</u></b>	430	133	8	<b><u>428</u></b>	<b><u>134</u></b>	427	134	429	133
436.cactusADM	8	1201	79.6	1201	79.6	<b><u>1201</u></b>	<b><u>79.6</u></b>	1	117	102	117	102	<b><u>117</u></b>	<b><u>102</u></b>
437.leslie3d	8	2479	30.3	<b><u>2479</u></b>	<b><u>30.3</u></b>	2487	30.2	4	1210	31.1	<b><u>1211</u></b>	<b><u>31.1</u></b>	1213	31.0
444.namd	8	558	115	<b><u>558</u></b>	<b><u>115</u></b>	557	115	8	<b><u>563</u></b>	<b><u>114</u></b>	570	113	561	114
447.dealII	8	743	123	757	121	<b><u>756</u></b>	<b><u>121</u></b>	8	<b><u>736</u></b>	<b><u>124</u></b>	735	124	736	124
450.soplex	8	1797	37.1	1803	37.0	<b><u>1798</u></b>	<b><u>37.1</u></b>	8	1625	41.1	1623	41.1	<b><u>1623</u></b>	<b><u>41.1</u></b>
453.povray	8	<b><u>240</u></b>	<b><u>177</u></b>	240	178	245	174	8	<b><u>201</u></b>	<b><u>212</u></b>	201	212	201	212
454.calculix	8	<b><u>455</u></b>	<b><u>145</u></b>	454	145	456	145	8	459	144	<b><u>454</u></b>	<b><u>145</u></b>	449	147
459.GemsFDTD	8	<b><u>3067</u></b>	<b><u>27.7</u></b>	3069	27.7	3067	27.7	8	3076	27.6	3077	27.6	<b><u>3077</u></b>	<b><u>27.6</u></b>
465.tonto	8	<b><u>744</u></b>	<b><u>106</u></b>	745	106	743	106	8	696	113	699	113	<b><u>697</u></b>	<b><u>113</u></b>
470.lbm	8	4093	26.9	<b><u>4090</u></b>	<b><u>26.9</u></b>	4087	26.9	4	<b><u>1452</u></b>	<b><u>37.8</u></b>	1454	37.8	1452	37.9
481.wrf	8	<b><u>1775</u></b>	<b><u>50.4</u></b>	1776	50.3	1767	50.6	8	<b><u>1775</u></b>	<b><u>50.4</u></b>	1776	50.3	1767	50.6
482.sphinx3	8	2284	68.3	<b><u>2290</u></b>	<b><u>68.1</u></b>	2293	68.0	4	868	89.8	<b><u>858</u></b>	<b><u>90.9</u></b>	851	91.6

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.  
taskset has been used to bind processes to cores except  
for 436.cactusADM peak

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run  
OMP\_NUM\_THREADS set to number of cores (default)  
KMP\_AFFINITY set to "physical,0"  
KMP\_STACKSIZE set to 64M



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**CPU2006 license:** 22

**Test date:** Oct-2008

**Test sponsor:** Fujitsu Siemens Computers

**Hardware Availability:** Oct-2008

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## Platform Notes

BIOS configuration:  
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

## General Notes

For information about Fujitsu Siemens Computers please see:  
<http://www.fujitsu-siemens.com>

## Base Compiler Invocation

C benchmarks:  
icc

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.deallI: -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

```



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## Base Optimization Flags

C benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Fortran benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

482.sphinx3: /opt/intel/Compiler/11.0/042/bin/ia32/icc  
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib  
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

C++ benchmarks (except as noted below):

icpc

450.soplex: /opt/intel/Compiler/11.0/042/bin/ia32/icpc  
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib  
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /opt/intel/Compiler/11.0/042/bin/ia32/ifort  
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib  
-I/opt/intel/Compiler/11.0/042/ipp/ia32/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

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## Peak Portability Flags (Continued)

```

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
470.lbm: -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) -xSSE4.1 -ipo -O3
         -no-prec-div -static -fno-alias

```

```

470.lbm: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
         -auto-ilp32

```

```

482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

```

C++ benchmarks:

```

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
         -no-prec-div -static -fno-alias -auto-ilp32

```

```

447.deallI: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
         -no-prec-div -static -unroll2 -ansi-alias -scalar-rep-

```

```

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
         -no-prec-div -static -opt-malloc-options=3

```

```

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
         -no-prec-div -static -unroll4 -ansi-alias

```

Fortran benchmarks:

```

410.bwaves: basepeak = yes

```

```

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
         -no-prec-div -static -unroll2 -Ob0 -ansi-alias
         -scalar-rep-

```

```

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
         -no-prec-div -static

```

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## Peak Optimization Flags (Continued)

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -opt-malloc-options=3 -opt-prefetch

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -Ob0 -opt-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -opt-prefetch -auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -opt-prefetch -parallel  
-auto-ilp32

454.calculix: -xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32

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-ic11.0-fp-linux64-revA.20090713.18.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090713.18.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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