



# SPEC® CFP2006 Result

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## Fujitsu Siemens Computers

**SPECfp®2006 = 23.9**

CELSIUS R650, Intel Xeon X5260, 3.33 GHz

**SPECfp\_base2006 = 20.5**

CPU2006 license: 22

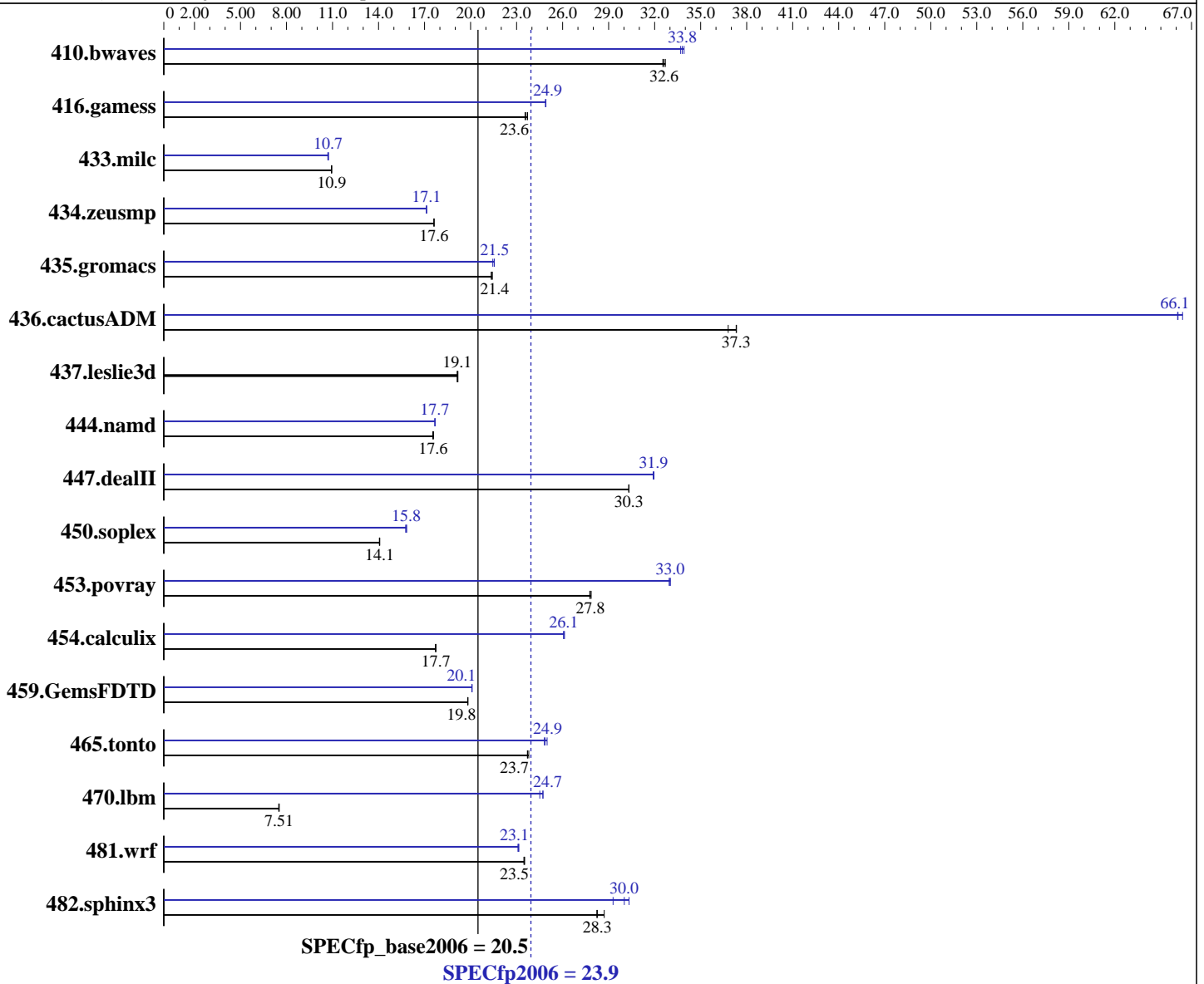
Test date: Jan-2008

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Jan-2008

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon X5260  
 CPU Characteristics: 3333  
 CPU MHz: 3333  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 6 MB I+D on chip per chip

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### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP1, Kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64, version 10.1, Build 20070913  
 Auto Parallel: Yes  
 File System: ext3  
 System State: Multi-User, Run Level 3  
 Base Pointers: 64-bit  
 Peak Pointers: 32/64-bit

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## Hardware (Continued)

L3 Cache: None  
Other Cache: None  
Memory: 8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1 x SATA II, 400 GB, 7200 rpm  
Other Hardware: None

## Software (Continued)

Other Software: binutils-2.17.50.0.5-0.1.x86\_64

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	418	32.5	<b>417</b>	<b>32.6</b>	416	32.7	403	33.7	<b>402</b>	<b>33.8</b>	401	33.9
416.gamess	826	23.7	<b>829</b>	<b>23.6</b>	831	23.5	786	24.9	<b>786</b>	<b>24.9</b>	787	24.9
433.milc	<b>839</b>	<b>10.9</b>	839	10.9	840	10.9	<b>856</b>	<b>10.7</b>	855	10.7	858	10.7
434.zeusmp	516	17.6	517	17.6	<b>517</b>	<b>17.6</b>	532	17.1	<b>531</b>	<b>17.1</b>	531	17.1
435.gromacs	<b>334</b>	<b>21.4</b>	335	21.3	334	21.4	331	21.5	333	21.4	<b>331</b>	<b>21.5</b>
436.cactusADM	320	37.3	<b>320</b>	<b>37.3</b>	325	36.8	180	66.4	<b>181</b>	<b>66.1</b>	181	66.1
437.leslie3d	491	19.1	490	19.2	<b>491</b>	<b>19.1</b>	491	19.1	490	19.2	<b>491</b>	<b>19.1</b>
444.namd	<b>457</b>	<b>17.6</b>	457	17.5	456	17.6	454	17.7	454	17.7	<b>454</b>	<b>17.7</b>
447.dealII	377	30.3	<b>377</b>	<b>30.3</b>	377	30.3	358	32.0	<b>358</b>	<b>31.9</b>	359	31.9
450.soplex	<b>593</b>	<b>14.1</b>	592	14.1	593	14.1	<b>527</b>	<b>15.8</b>	527	15.8	529	15.8
453.povray	191	27.9	<b>191</b>	<b>27.8</b>	192	27.8	<b>161</b>	<b>33.0</b>	161	32.9	161	33.0
454.calculix	466	17.7	465	17.7	<b>465</b>	<b>17.7</b>	316	26.1	<b>316</b>	<b>26.1</b>	317	26.1
459.GemsFDTD	535	19.8	<b>535</b>	<b>19.8</b>	535	19.8	528	20.1	528	20.1	<b>528</b>	<b>20.1</b>
465.tonto	414	23.8	<b>415</b>	<b>23.7</b>	415	23.7	394	25.0	<b>396</b>	<b>24.9</b>	397	24.8
470.lbm	<b>1828</b>	<b>7.51</b>	1827	7.52	1834	7.49	556	24.7	<b>556</b>	<b>24.7</b>	561	24.5
481.wrf	476	23.5	475	23.5	<b>475</b>	<b>23.5</b>	<b>483</b>	<b>23.1</b>	483	23.1	484	23.1
482.sphinx3	679	28.7	<b>690</b>	<b>28.3</b>	690	28.2	643	30.3	<b>649</b>	<b>30.0</b>	665	29.3

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

## 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)

## Platform Notes

BIOS configuration:  
Enhanced Speedstep Technology = Disable  
Hardware Prefetch = Enable, Adjacent Sector Prefetch = Enable  
SnoopFilter = Disable



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## General Notes

All binaries were built with 64-bit Intel compiler except:  
450.soplex, 470.lbm and 482.sphinx3 in peak were built with  
32-bit Intel compiler by changing the path for include and library files.

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

## 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:

-fast -parallel

C++ benchmarks:

-fast -parallel

Fortran benchmarks:

-fast -parallel

Benchmarks using both Fortran and C:

-fast -parallel

## 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:

ifort

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  
437.leslie3d: -DSPEC\_CPU\_LP64  
444.namd: -DSPEC\_CPU\_LP64  
447.dealII: -DSPEC\_CPU\_LP64  
453.povray: -DSPEC\_CPU\_LP64  
454.calculix: -DSPEC\_CPU\_LP64 -nofor\_main

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## Peak Portability Flags (Continued)

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

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 -parallel

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: basepeak = yes

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0  
-prefetch -parallel

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

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## Peak Optimization Flags (Continued)

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 -parallel -prefetch -auto-ilp32

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090714.00.html>

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

<http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090714.00.xml>

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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.  
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