



# SPEC® CFP2006 Result

Copyright ©2007 Standard Performance Evaluation Corporation

## Fujitsu Siemens Computers

### SPECfp®2006 = 19.8

### CELSIUS R550, Intel Xeon E5410 processor

### SPECfp\_base2006 = 16.7

CPU2006 license: 22

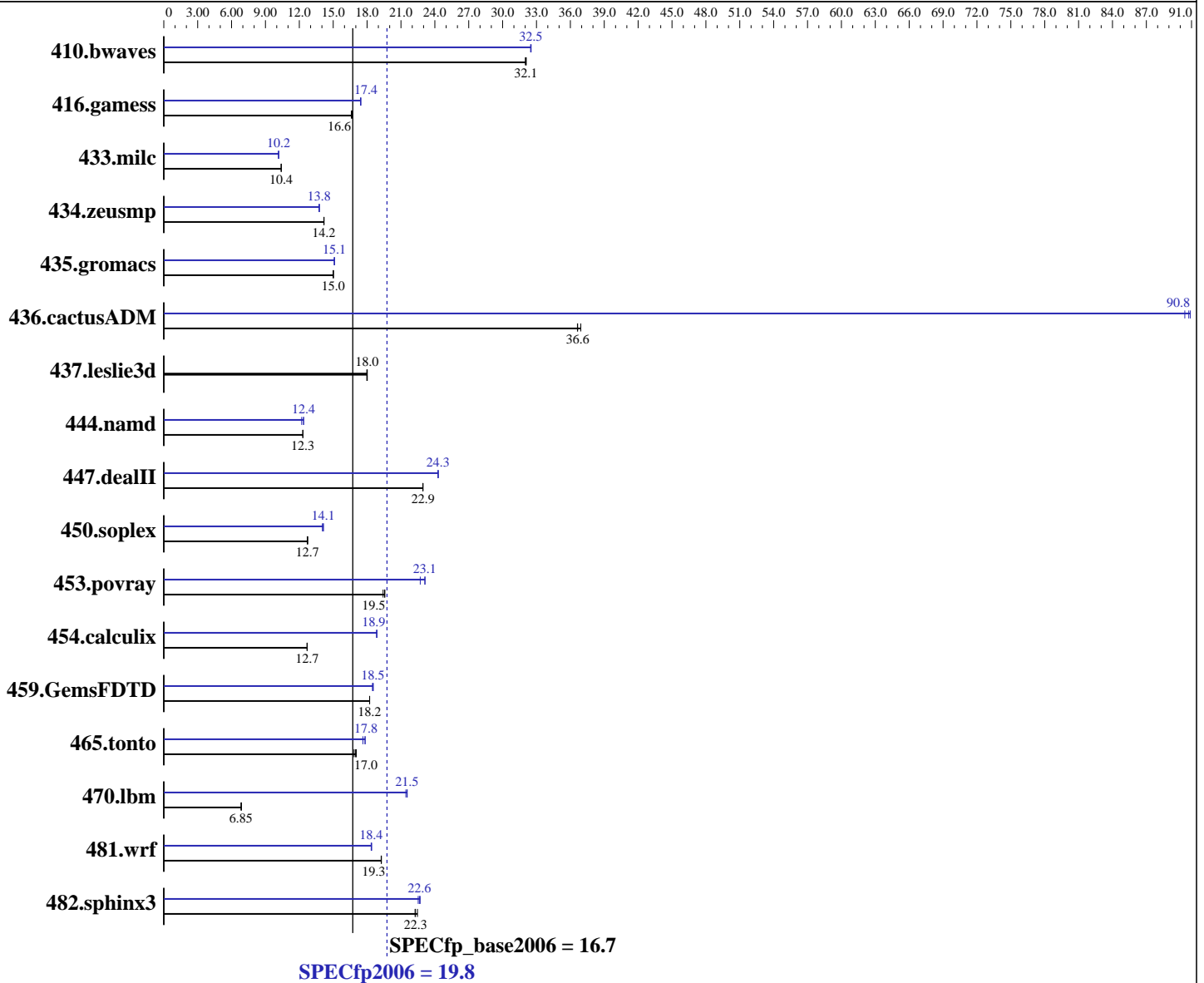
Test date: Nov-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Nov-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2007



#### Hardware

CPU Name: Intel Xeon E5410  
 CPU Characteristics:  
 CPU MHz: 2333  
 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: 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

Continued on next page



# SPEC CFP2006 Result

Copyright ©2007 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp2006 = 19.8

CELSIUS R550, Intel Xeon E5410 processor

SPECfp\_base2006 = 16.7

CPU2006 license: 22

Test date: Nov-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Nov-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2007

## Hardware (Continued)

L3 Cache: None  
Other Cache: None  
Memory: 8 GB (4x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1x 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	424	32.1	<b><u>424</u></b>	<b><u>32.1</u></b>	425	32.0	418	32.5	<b><u>418</u></b>	<b><u>32.5</u></b>	418	32.5
416.gamess	1174	16.7	1179	16.6	<b><u>1177</u></b>	<b><u>16.6</u></b>	1123	17.4	<b><u>1123</u></b>	<b><u>17.4</u></b>	1124	17.4
433.milc	882	10.4	883	10.4	<b><u>883</u></b>	<b><u>10.4</u></b>	904	10.2	<b><u>903</u></b>	<b><u>10.2</u></b>	902	10.2
434.zeusmp	642	14.2	642	14.2	<b><u>642</u></b>	<b><u>14.2</u></b>	<b><u>661</u></b>	<b><u>13.8</u></b>	660	13.8	662	13.8
435.gromacs	475	15.0	476	15.0	<b><u>476</u></b>	<b><u>15.0</u></b>	<b><u>473</u></b>	<b><u>15.1</u></b>	473	15.1	472	15.1
436.cactusADM	326	36.6	<b><u>326</u></b>	<b><u>36.6</u></b>	324	36.9	131	90.9	132	90.4	<b><u>132</u></b>	<b><u>90.8</u></b>
437.leslie3d	522	18.0	<b><u>522</u></b>	<b><u>18.0</u></b>	523	18.0	522	18.0	<b><u>522</u></b>	<b><u>18.0</u></b>	523	18.0
444.namd	651	12.3	<b><u>651</u></b>	<b><u>12.3</u></b>	651	12.3	648	12.4	657	12.2	<b><u>648</u></b>	<b><u>12.4</u></b>
447.dealII	<b><u>499</u></b>	<b><u>22.9</u></b>	499	22.9	498	22.9	471	24.3	<b><u>471</u></b>	<b><u>24.3</u></b>	471	24.3
450.soplex	654	12.7	657	12.7	<b><u>655</u></b>	<b><u>12.7</u></b>	590	14.1	594	14.0	<b><u>590</u></b>	<b><u>14.1</u></b>
453.povray	<b><u>272</u></b>	<b><u>19.5</u></b>	272	19.6	274	19.4	230	23.1	<b><u>230</u></b>	<b><u>23.1</u></b>	234	22.7
454.calculix	<b><u>650</u></b>	<b><u>12.7</u></b>	649	12.7	651	12.7	437	18.9	438	18.8	<b><u>437</u></b>	<b><u>18.9</u></b>
459.GemsFDTD	582	18.2	<b><u>582</u></b>	<b><u>18.2</u></b>	582	18.2	574	18.5	572	18.6	<b><u>573</u></b>	<b><u>18.5</u></b>
465.tonto	577	17.0	584	16.9	<b><u>579</u></b>	<b><u>17.0</u></b>	552	17.8	<b><u>552</u></b>	<b><u>17.8</u></b>	558	17.6
470.lbm	1998	6.88	2007	6.85	<b><u>2007</u></b>	<b><u>6.85</u></b>	638	21.6	<b><u>638</u></b>	<b><u>21.5</u></b>	641	21.4
481.wrf	<b><u>580</u></b>	<b><u>19.3</u></b>	580	19.2	580	19.3	<b><u>608</u></b>	<b><u>18.4</u></b>	607	18.4	608	18.4
482.sphinx3	868	22.5	876	22.2	<b><u>875</u></b>	<b><u>22.3</u></b>	859	22.7	<b><u>861</u></b>	<b><u>22.6</u></b>	865	22.5

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

## Platform Notes

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



# SPEC CFP2006 Result

Copyright ©2007 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp2006 = 19.8

CELSIUS R550, Intel Xeon E5410 processor

SPECfp\_base2006 = 16.7

CPU2006 license: 22

Test date: Nov-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Nov-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2007

## 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

```



# SPEC CFP2006 Result

Copyright ©2007 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp2006 = 19.8

CELSIUS R550, Intel Xeon E5410 processor

SPECfp\_base2006 = 16.7

CPU2006 license: 22

Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007

## 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

Continued on next page



# SPEC CFP2006 Result

Copyright ©2007 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp2006 = 19.8

CELSIUS R550, Intel Xeon E5410 processor

SPECfp\_base2006 = 16.7

CPU2006 license: 22

Test date: Nov-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Nov-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2007

## 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:

Continued on next page



# SPEC CFP2006 Result

Copyright ©2007 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp2006 = 19.8

CELSIUS R550, Intel Xeon E5410 processor

SPECfp\_base2006 = 16.7

CPU2006 license: 22

Test date: Nov-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Nov-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2007

## 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/Intel-ic10.1-FP-intel64-linux-flags.20071226.html>

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.20071226.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 Wed Jan 23 17:04:20 2008 by SPEC CPU2006 PS/PDF formatter v5614.