



# SPEC® CFP2006 Result

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## Fujitsu Siemens Computers

**SPECfp®2006 = 20.6**

## CELSIUS M460, Intel Core 2 Quad Q9450

**SPECfp\_base2006 = 19.2**

CPU2006 license: 22

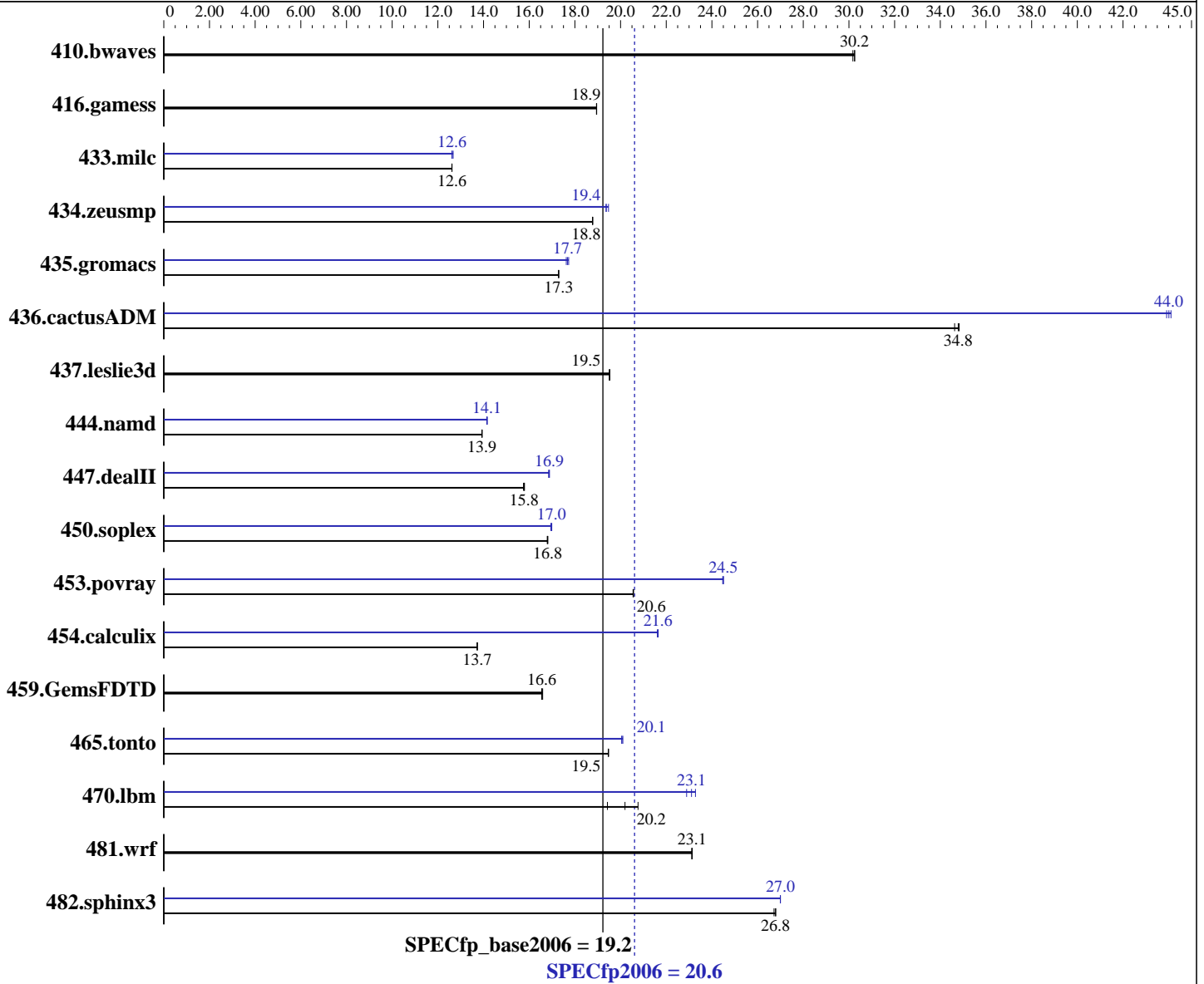
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Mar-2008

Hardware Availability: Mar-2008

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Core 2 Quad Q9450  
 CPU Characteristics:  
 CPU MHz: 2667  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip  
 CPU(s) orderable: 1 chip  
 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: Windows Vista Ultimate, 64 bit Version

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## Hardware (Continued)

L3 Cache: None  
 Other Cache: None  
 Memory: 4 GB (4x1 GB PC2-6400 CL6 SDRAM)  
 Disk Subsystem: 1 x 400 GB SATA 7200 RPM  
 Other Hardware: None

## Software (Continued)

Compiler: Intel C++ Compiler for applications running on Intel 64, Version 10.1, Build 20070913  
 Intel Visual Fortran Compiler for applications running on Intel 64, Version 10.1, Build 20070913  
 Microsoft Visual Studio 2005 with SP1 (for libraries)  
 Auto Parallel: Yes  
 File System: NTFS  
 System State: Default  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other Software: MicroQuill SmartHeap Library 8.0 (64 bit)

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<b>449</b>	<b>30.2</b>	450	30.2	449	30.3	<b>449</b>	<b>30.2</b>	450	30.2	449	30.3
416.gamess	1033	18.9	<b>1033</b>	<b>18.9</b>	1033	19.0	1033	18.9	<b>1033</b>	<b>18.9</b>	1033	19.0
433.milc	727	12.6	<b>728</b>	<b>12.6</b>	728	12.6	725	12.7	728	12.6	<b>727</b>	<b>12.6</b>
434.zeusmp	485	18.8	<b>485</b>	<b>18.8</b>	485	18.8	467	19.5	470	19.4	<b>470</b>	<b>19.4</b>
435.gromacs	413	17.3	413	17.3	<b>413</b>	<b>17.3</b>	403	17.7	405	17.6	<b>404</b>	<b>17.7</b>
436.cactusADM	343	34.8	345	34.6	<b>344</b>	<b>34.8</b>	272	43.9	271	44.1	<b>272</b>	<b>44.0</b>
437.leslie3d	482	19.5	481	19.5	<b>482</b>	<b>19.5</b>	482	19.5	481	19.5	<b>482</b>	<b>19.5</b>
444.namd	576	13.9	576	13.9	<b>576</b>	<b>13.9</b>	566	14.2	<b>567</b>	<b>14.1</b>	567	14.1
447.dealII	726	15.7	<b>725</b>	<b>15.8</b>	724	15.8	678	16.9	679	16.8	<b>678</b>	<b>16.9</b>
450.soplex	497	16.8	<b>496</b>	<b>16.8</b>	496	16.8	<b>491</b>	<b>17.0</b>	492	16.9	491	17.0
453.povray	259	20.5	259	20.6	<b>259</b>	<b>20.6</b>	217	24.5	217	24.5	<b>217</b>	<b>24.5</b>
454.calculix	601	13.7	601	13.7	<b>601</b>	<b>13.7</b>	<b>381</b>	<b>21.6</b>	382	21.6	381	21.6
459.GemsFDTD	641	16.5	640	16.6	<b>641</b>	<b>16.6</b>	641	16.5	640	16.6	<b>641</b>	<b>16.6</b>
465.tonto	<b>506</b>	<b>19.5</b>	505	19.5	506	19.5	490	20.1	<b>491</b>	<b>20.1</b>	491	20.1
470.lbm	662	20.8	<b>680</b>	<b>20.2</b>	707	19.4	590	23.3	<b>595</b>	<b>23.1</b>	600	22.9
481.wrf	483	23.1	483	23.1	<b>483</b>	<b>23.1</b>	483	23.1	483	23.1	<b>483</b>	<b>23.1</b>
482.sphinx3	<b>728</b>	<b>26.8</b>	729	26.7	727	26.8	722	27.0	722	27.0	<b>722</b>	<b>27.0</b>

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

## Platform Notes

BIOS default settings have been used.



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## General Notes

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

## Compiler Invocation

C benchmarks:  
icl -Qvc8 -Qc99

C++ benchmarks:  
icl -Qvc8

Fortran benchmarks:  
ifort

Benchmarks using both Fortran and C:  
icl -Qvc8 -Qc99 ifort

## Portability Flags

410.bwaves: -DSPEC\_CPU\_P64  
416.gamess: -DSPEC\_CPU\_P64  
433.milc: -DSPEC\_CPU\_P64  
434.zeusmp: -DSPEC\_CPU\_P64  
435.gromacs: -DSPEC\_CPU\_P64  
436.cactusADM: -DSPEC\_CPU\_P64 -Qlowercase /assume:underscore  
437.leslie3d: -DSPEC\_CPU\_P64  
444.namd: -DSPEC\_CPU\_P64 /TP  
447.dealII: -DSPEC\_CPU\_P64 -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
450.soplex: -DSPEC\_CPU\_P64  
453.povray: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WINDOWS\_ICL  
454.calculix: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_NOZMODIFIER -Qlowercase  
459.GemsFDTD: -DSPEC\_CPU\_P64  
465.tonto: -DSPEC\_CPU\_P64  
470.lbm: -DSPEC\_CPU\_P64  
481.wrf: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WINDOWS\_ICL  
482.sphinx3: -DSPEC\_CPU\_P64

## Base Optimization Flags

C benchmarks:  
-fast -Qparallel -F1000000000 libguide40.lib

C++ benchmarks:  
-fast -Qparallel -Qcxx-features -F1000000000 libguide40.lib  
shlW64M.lib -link -FORCE:MULTIPLE

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## Base Optimization Flags (Continued)

Fortran benchmarks:

-fast -Qparallel -F1000000000 libguide40.lib

Benchmarks using both Fortran and C:

-fast -Qparallel -F1000000000 libguide40.lib

## Peak Optimization Flags

C benchmarks:

433.milc: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -F1000000000 libguide40.lib

470.lbm: -fast -Qunroll2 -Qscalar-rep- -Qprefetch -F1000000000 libguide40.lib

482.sphinx3: -fast -Qunroll2 -F1000000000 libguide40.lib

C++ benchmarks:

444.namd: -fast -Qcxx-features -Oa -F1000000000 libguide40.lib shlw64M.lib -link -FORCE:MULTIPLE

447.dealII: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qcxx-features -F1000000000 libguide40.lib shlw64M.lib -link -FORCE:MULTIPLE

450.soplex: Same as 447.dealII

453.povray: Same as 447.dealII

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: -O2 -Qunroll10 -QxT -Qscalar-rep- -Qprec-div- -F1000000000 libguide40.lib

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -fast -Qunroll14 -Qauto -F1000000000 libguide40.lib

Benchmarks using both Fortran and C:

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## Peak Optimization Flags (Continued)

435.gromacs: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -F1000000000 libguide40.lib

436.cactusADM: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qparallel -Qprefetch -Qunroll2 -F1000000000 libguide40.lib

454.calculix: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qunroll-aggressive -F1000000000 libguide40.lib

481.wrf: basepeak = yes

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090713.03.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.03.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090713.03.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.03.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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