SPEC® CFP2006 Result

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Fujitsu Siemens Computers

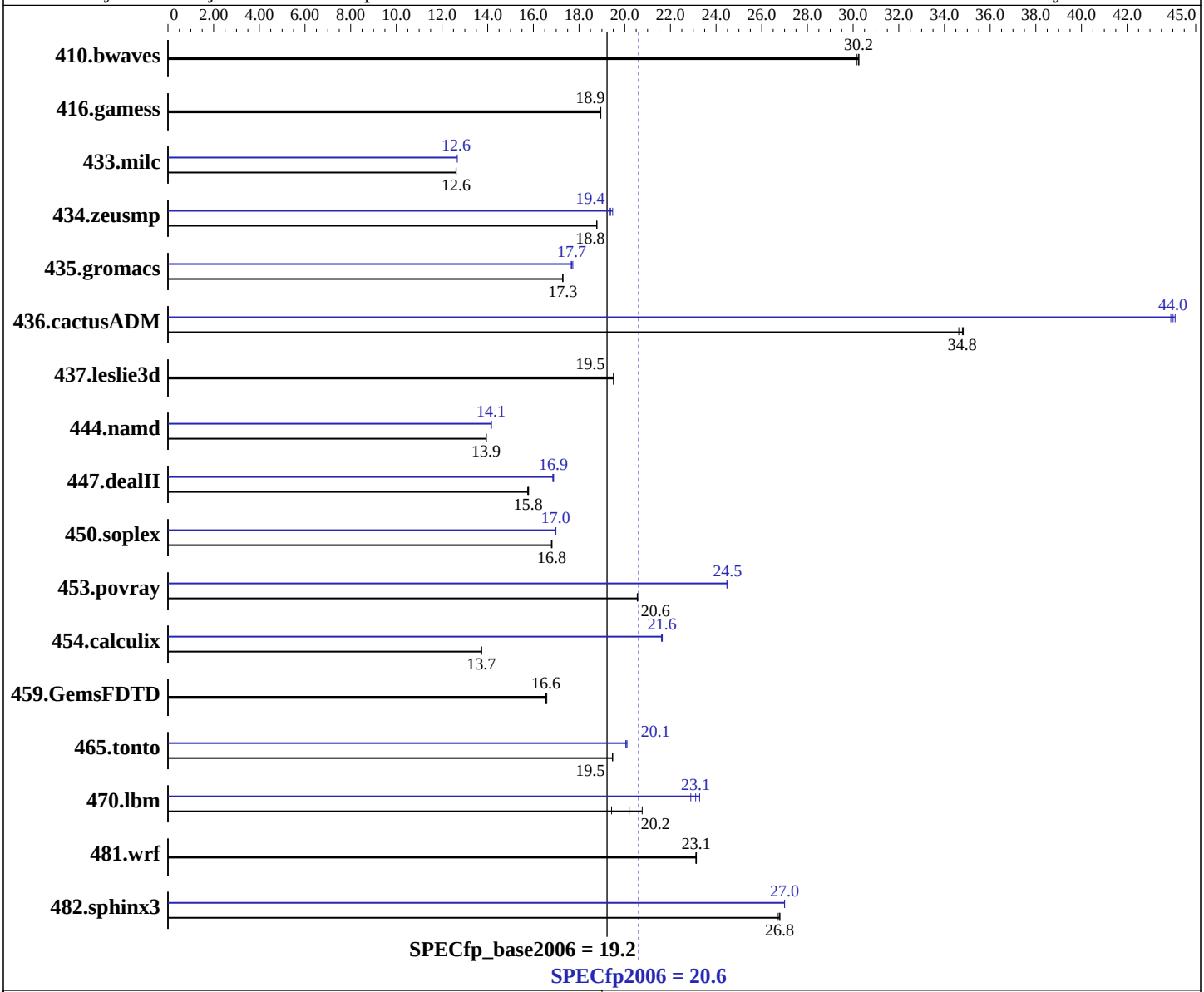
CELSIUS M460, Intel Core 2 Quad Q9450

SPECfp®2006 = 20.6

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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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

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

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.
```

General Notes

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

Base Compiler Invocation

C benchmarks:
```
icl -Qvc8 -Qc99
```

C++ benchmarks:
```
icl -Qvc8
```

Fortran benchmarks:
```
ifort
```

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

Base 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 Compiler Invocation

C benchmarks:
`icl -Qvc8 -Qc99`

C++ benchmarks:
`icl -Qvc8`

Fortran benchmarks:
`ifort`

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

Peak Portability Flags

`Same as Base Portability Flags`

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`

Continued on next page

Peak Optimization Flags (Continued)

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 -Qunroll0 -QxT -Qscalar-rep- -Qprec-div- -F1000000000 libguide40.lib

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -fast -Qunroll4 -Qauto -F1000000000 libguide40.lib

Benchmarks using both Fortran and C:

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

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.03.xml

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For other inquiries, please contact webmaster@spec.org.

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