SPEC® CFP2006 Result

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Fujitsu Siemens Computers

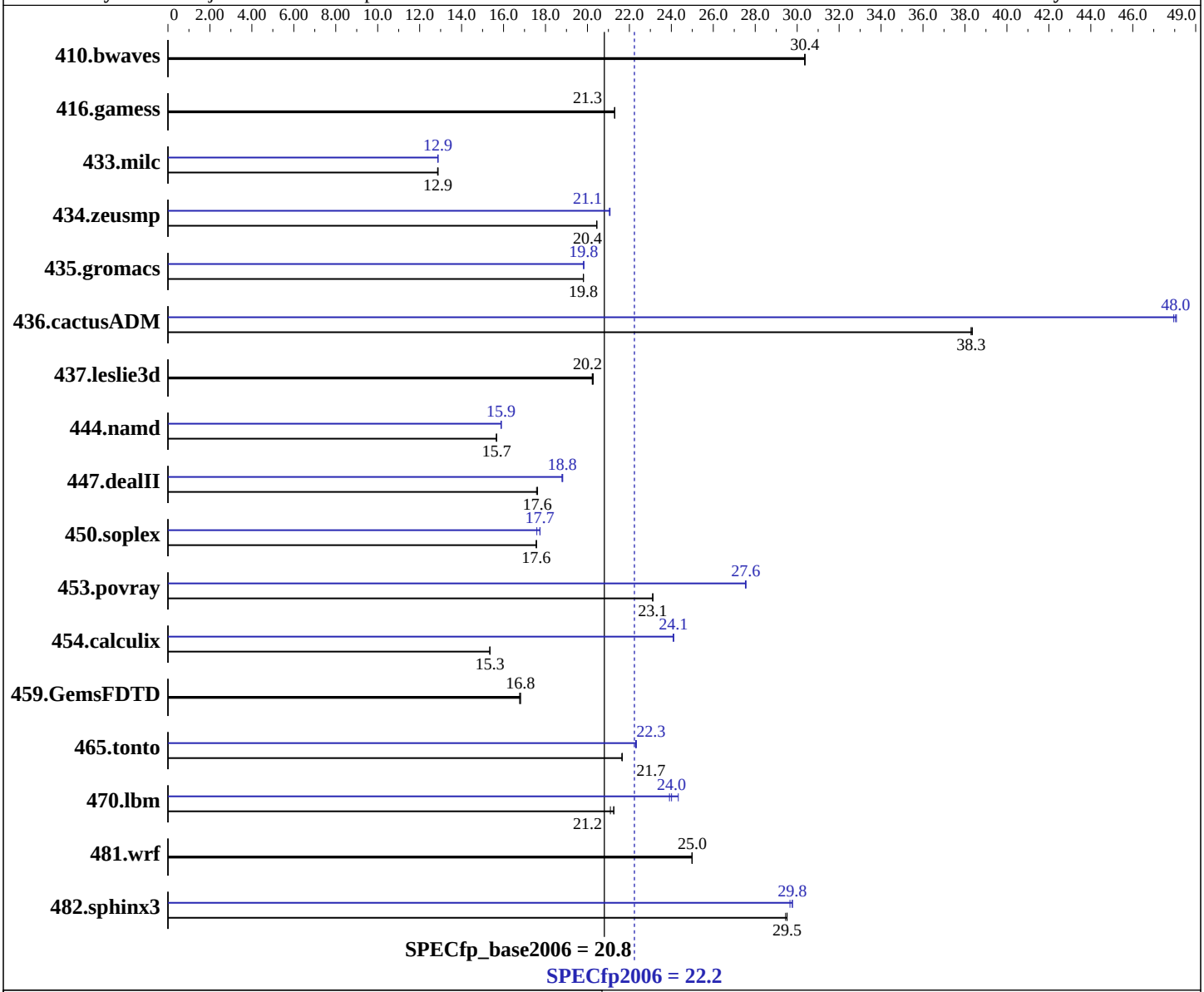
CELSIUS M460, Intel Core 2 Extreme QX9650

SPECfp®2006 = 22.2

SPECfp_base2006 = 20.8

CPU2006 license: 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

Test date: Feb-2008
Hardware Availability: Mar-2008
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Core 2 Extreme QX9650
CPU Characteristics:	
CPU MHz:	3000
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	**448**	**30.4**	448	30.4	447	30.4	**448**	**30.4**	448	30.4	447	30.4
416.gamess	919	21.3	**919**	**21.3**	919	21.3	919	21.3	**919**	**21.3**	919	21.3
433.milc	713	12.9	**713**	**12.9**	714	12.9	**713**	**12.9**	713	12.9	713	12.9
434.zeusmp	445	20.4	**445**	**20.4**	445	20.4	**432**	**21.1**	432	21.1	432	21.1
435.gromacs	361	19.8	**360**	**19.8**	360	19.8	**360**	**19.8**	360	19.8	360	19.8
436.cactusADM	312	38.4	**312**	**38.3**	312	38.3	249	48.0	249	48.1	**249**	**48.0**
437.leslie3d	**464**	**20.2**	465	20.2	464	20.3	**464**	**20.2**	465	20.2	464	20.3
444.namd	512	15.7	512	15.7	**512**	**15.7**	505	15.9	505	15.9	**505**	**15.9**
447.dealII	651	17.6	**650**	**17.6**	649	17.6	608	18.8	609	18.8	**608**	**18.8**
450.soplex	475	17.6	**475**	**17.6**	475	17.6	474	17.6	**470**	**17.7**	470	17.7
453.povray	230	23.1	230	23.1	**230**	**23.1**	**193**	**27.6**	193	27.6	193	27.5
454.calculix	537	15.4	**537**	**15.3**	538	15.3	**342**	**24.1**	342	24.1	342	24.1
459.GemsFDTD	633	16.8	631	16.8	**631**	**16.8**	633	16.8	631	16.8	**631**	**16.8**
465.tonto	**454**	**21.7**	455	21.6	454	21.7	441	22.3	441	22.3	**441**	**22.3**
470.lbm	651	21.1	**647**	**21.2**	646	21.3	575	23.9	**572**	**24.0**	565	24.3
481.wrf	**447**	**25.0**	447	25.0	447	25.0	**447**	**25.0**	447	25.0	447	25.0
482.sphinx3	660	29.5	662	29.4	**660**	**29.5**	657	29.7	655	29.8	**655**	**29.8**

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`

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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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