SPEC® CFP2006 Result

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Fujitsu Siemens Computers

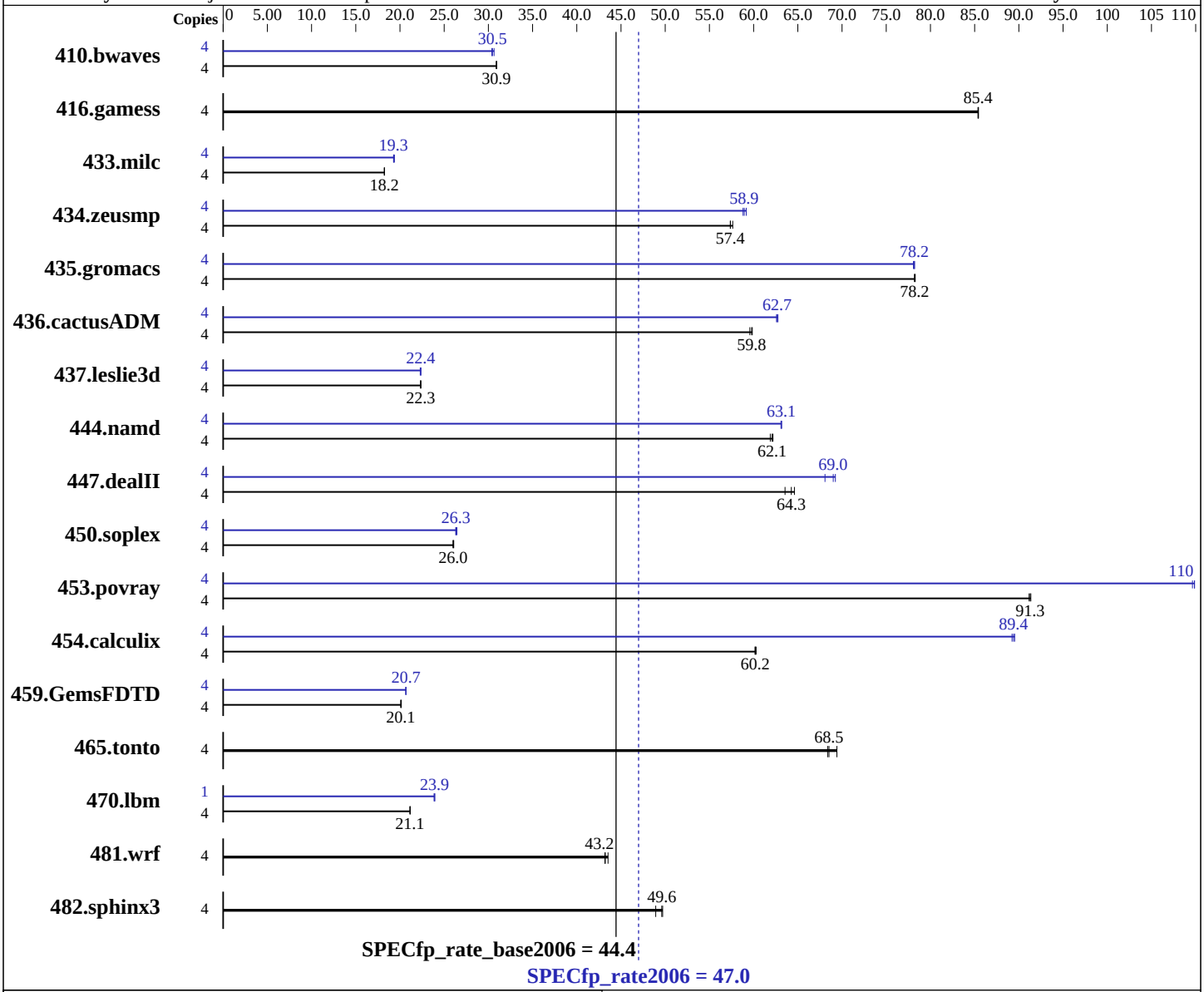
CELSIUS M460, Intel Core 2 Extreme QX9650

SPECfp®_rate2006 = 47.0

SPECfp_rate_base2006 = 44.4

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: No
File System: NTFS
System State: Default
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: SmartHeap Library Version 8.0 (64 bit) from http://www.microquill.com/

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1760	30.9	1757	30.9	**1759**	**30.9**	4	1774	30.6	1789	30.4	**1784**	**30.5**
416.gamess	4	**917**	**85.4**	917	85.4	917	85.4	4	**917**	**85.4**	917	85.4	917	85.4
433.milc	4	**2013**	**18.2**	2013	18.2	2013	18.2	4	1905	19.3	**1904**	**19.3**	1896	19.4
434.zeusmp	4	635	57.4	632	57.6	**634**	**57.4**	4	619	58.8	615	59.2	**618**	**58.9**
435.gromacs	4	365	78.2	**365**	**78.2**	365	78.3	4	365	78.2	366	78.1	**365**	**78.2**
436.cactusADM	4	802	59.6	799	59.9	**800**	**59.8**	4	764	62.6	**763**	**62.7**	762	62.7
437.leslie3d	4	1681	22.4	**1684**	**22.3**	1684	22.3	4	1687	22.3	**1682**	**22.4**	1681	22.4
444.namd	4	**517**	**62.1**	516	62.2	518	61.9	4	508	63.1	508	63.2	**508**	**63.1**
447.dealII	4	720	63.6	708	64.6	**712**	**64.3**	4	672	68.1	**663**	**69.0**	661	69.2
450.soplex	4	1279	26.1	**1282**	**26.0**	1283	26.0	4	**1267**	**26.3**	1268	26.3	1262	26.4
453.povray	4	233	91.4	**233**	**91.3**	233	91.2	4	194	110	194	110	**194**	**110**
454.calculix	4	**548**	**60.2**	549	60.2	547	60.3	4	370	89.2	**369**	**89.4**	369	89.5
459.GemsFDTD	4	2112	20.1	2106	20.2	**2111**	**20.1**	4	2053	20.7	**2053**	**20.7**	2054	20.7
465.tonto	4	567	69.4	576	68.4	**574**	**68.5**	4	567	69.4	576	68.4	**574**	**68.5**
470.lbm	4	**2600**	**21.1**	2598	21.2	2601	21.1	1	576	23.9	574	23.9	**574**	**23.9**
481.wrf	4	**1034**	**43.2**	1026	43.5	1035	43.2	4	**1034**	**43.2**	1026	43.5	1035	43.2
482.sphinx3	4	**1571**	**49.6**	1568	49.7	1593	48.9	4	**1571**	**49.6**	1568	49.7	1593	48.9

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 -F950000000 shlW64M.lib
```

C++ benchmarks:
```
-fast -Qcxx-features -F950000000 shlW64M.lib
```

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Base Optimization Flags (Continued)

Fortran benchmarks:
`-fast -F950000000`

Benchmarks using both Fortran and C:
`-fast -F950000000`

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 -F950000000`

470.lbm: `-fast -Qunroll2 -Qscalar-rep- -Qprefetch -F950000000`

482.sphinx3: `basepeak = yes`

C++ benchmarks:

444.namd: `-fast -Oa -F950000000 shlW64M.lib`

447.dealII: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qcxx-features -F950000000`

450.soplex: `Same as 447.dealII`

Continued on next page

Peak Optimization Flags (Continued)

453.povray: `Same as 447.dealII`

Fortran benchmarks:

410.bwaves: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -F950000000`

416.gamess: `basepeak = yes`

434.zeusmp: `-QxT -O2 -Qprec-div- -Qunroll0 -Qscalar-rep- -F950000000`

437.leslie3d: `Same as 410.bwaves`

459.GemsFDTD: `-fast -Qunroll2 -Ob0 -Qprefetch -F950000000`

465.tonto: `basepeak = yes`

Benchmarks using both Fortran and C:

435.gromacs: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -F950000000`

436.cactusADM: `-fast -Qunroll2 -Qprefetch -F950000000`

454.calculix: `-fast -Qunroll-aggressive -F950000000`

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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