SPEC® CFP2006 Result
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Fujitsu Siemens Computers

SPECfp®_rate2006 =   32.1

CELSIUS M460, Intel Core 2 Duo E8400
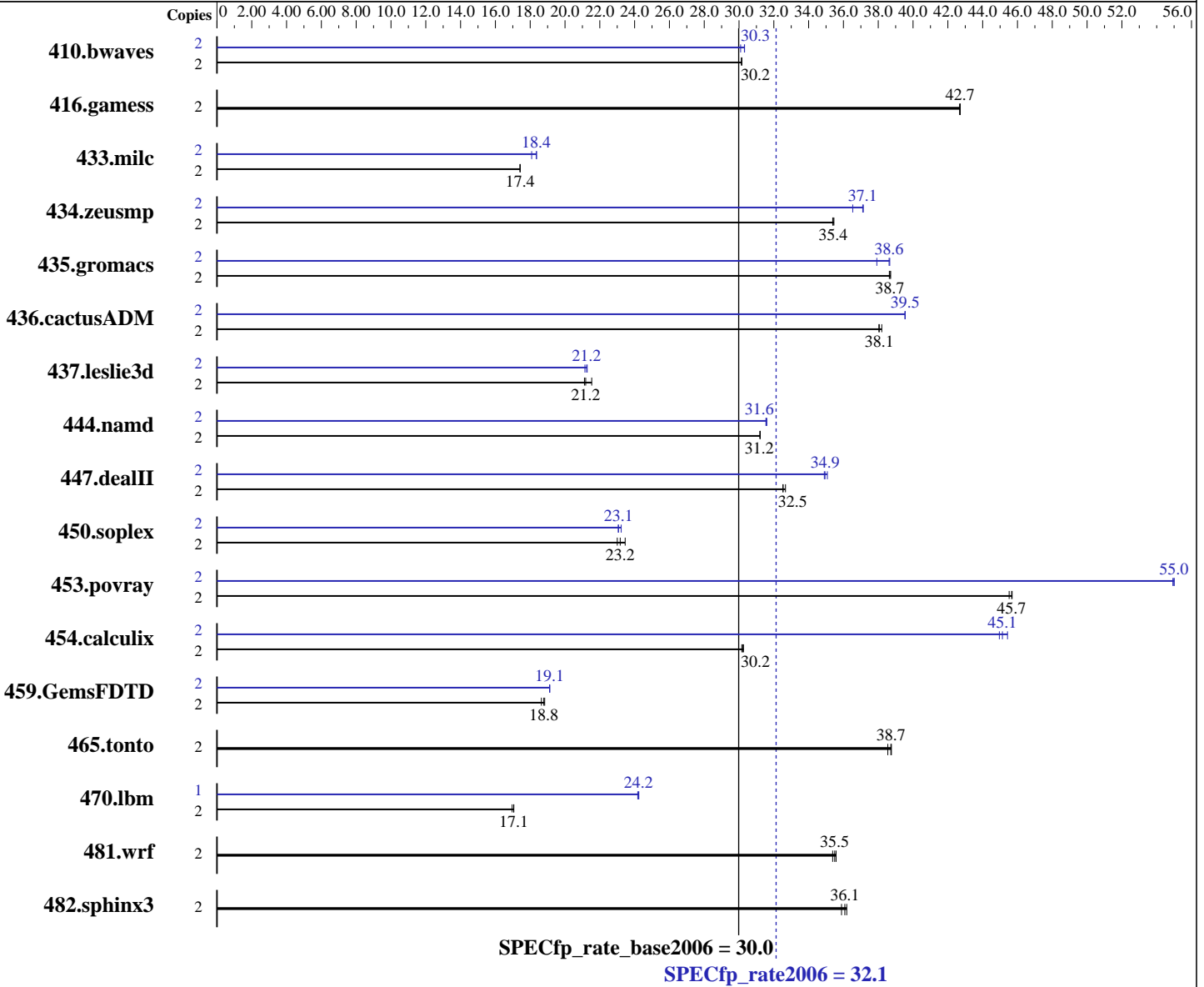
SPECfp_rate_base2006 = 30.0

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

Copies 0 2.00 4.00 6.00 8.00 10.0 12.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0 46.0 48.0 50.0 52.0 56.0

Benchmark	Copies	Value
410.bwaves	2	30.3
	2	30.2
416.gamess	2	42.7
433.milc	2	18.4
	2	17.4
434.zeusmp	2	37.1
	2	35.4
435.gromacs	2	38.6
	2	38.7
436.cactusADM	2	39.5
	2	38.1
437.leslie3d	2	21.2
	2	21.2
444.namd	2	31.6
	2	31.2
447.dealII	2	34.9
	2	32.5
450.soplex	2	23.1
	2	23.2
453.povray	2	55.0
	2	45.7
454.calculix	2	45.1
	2	30.2
459.GemsFDTD	2	19.1
	2	18.8
465.tonto	2	38.7
470.lbm	1	24.2
	2	17.1
481.wrf	2	35.5
482.sphinx3	2	36.1

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Hardware

CPU Name: Intel Core 2 Duo E8400
CPU Characteristics:
CPU MHz: 3000
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
CPU(s) orderable: 1 chip
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 6 MB I+D on chip per chip

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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	2	**901**	**30.2**	902	30.1	901	30.2	2	903	30.1	896	30.3	**897**	**30.3**
416.gamess	2	918	42.7	917	42.7	**917**	**42.7**	2	918	42.7	917	42.7	**917**	**42.7**
433.milc	2	1054	17.4	1054	17.4	**1054**	**17.4**	2	1015	18.1	1000	18.4	**1000**	**18.4**
434.zeusmp	2	514	35.4	513	35.5	**514**	**35.4**	2	498	36.5	**490**	**37.1**	490	37.1
435.gromacs	2	370	38.6	**369**	**38.7**	369	38.7	2	377	37.9	**370**	**38.6**	369	38.7
436.cactusADM	2	626	38.2	**628**	**38.1**	628	38.0	2	604	39.6	**604**	**39.5**	605	39.5
437.leslie3d	2	873	21.5	**887**	**21.2**	890	21.1	2	884	21.3	889	21.1	**885**	**21.2**
444.namd	2	514	31.2	514	31.2	**514**	**31.2**	2	**508**	**31.6**	508	31.6	508	31.5
447.dealII	2	700	32.7	703	32.5	**703**	**32.5**	2	**655**	**34.9**	652	35.1	656	34.9
450.soplex	2	725	23.0	**720**	**23.2**	711	23.5	2	723	23.1	**723**	**23.1**	718	23.2
453.povray	2	233	45.7	234	45.5	**233**	**45.7**	2	194	54.9	**194**	**55.0**	193	55.0
454.calculix	2	545	30.3	**546**	**30.2**	547	30.2	2	363	45.4	**366**	**45.1**	367	45.0
459.GemsFDTD	2	**1130**	**18.8**	1127	18.8	1138	18.6	2	**1110**	**19.1**	1110	19.1	1109	19.1
465.tonto	2	508	38.8	**508**	**38.7**	511	38.5	2	508	38.8	**508**	**38.7**	511	38.5
470.lbm	2	**1611**	**17.1**	1611	17.1	1620	17.0	1	568	24.2	**567**	**24.2**	567	24.2
481.wrf	2	**629**	**35.5**	628	35.6	631	35.4	2	**629**	**35.5**	628	35.6	631	35.4
482.sphinx3	2	**1080**	**36.1**	1077	36.2	1086	35.9	2	**1080**	**36.1**	1077	36.2	1086	35.9

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.

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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
```

Continued on next page

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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`

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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`

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
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