SPEC® CFP2006 Result
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Fujitsu Siemens Computers

CELSIUS M460, Intel Core 2 Duo E8600 processor

$SPECfp^{®}2006 =$ 23.1

$SPECfp\_base2006 =$ 21.6
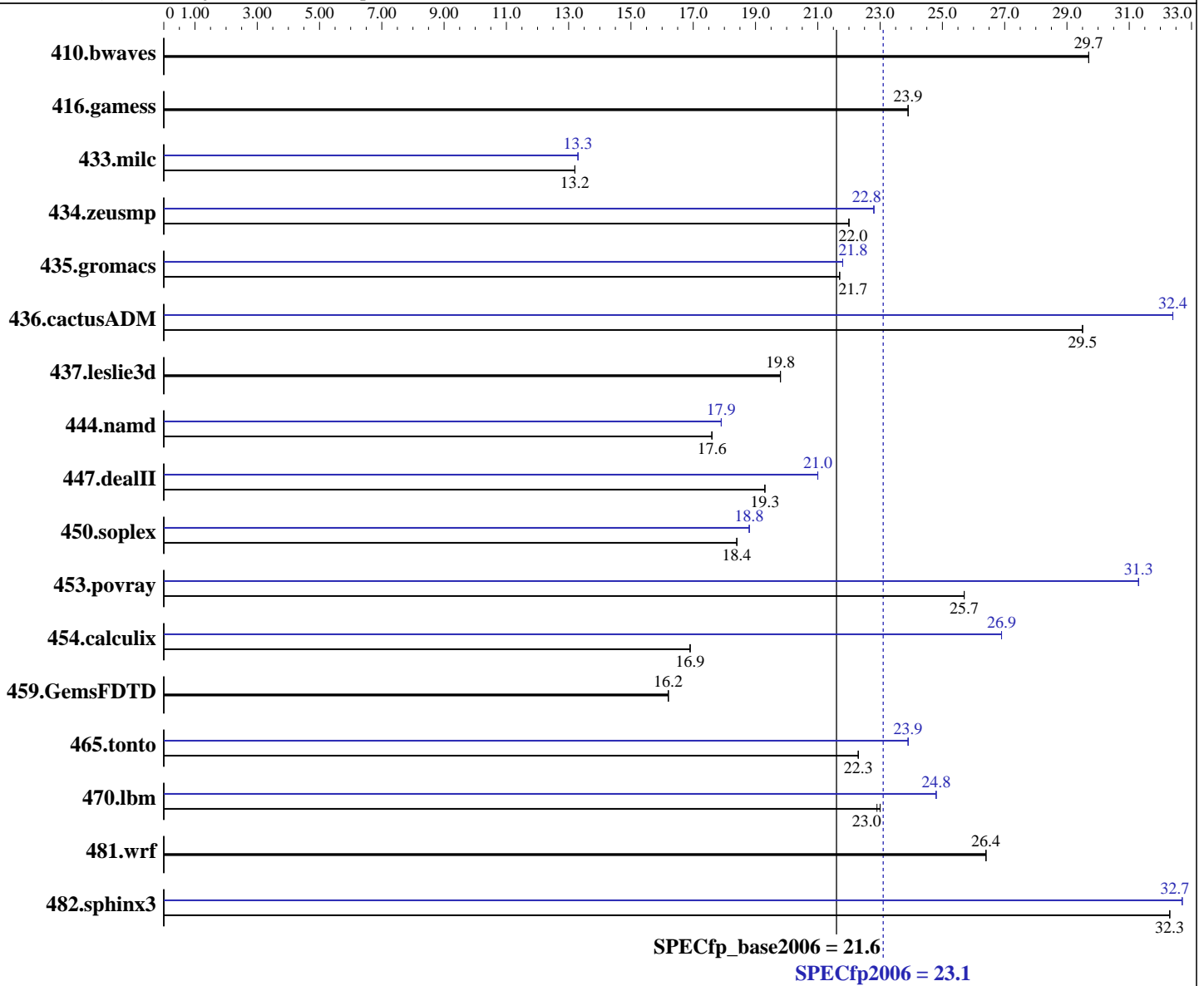
CPU2006 license: 22

Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Oct-2008

Hardware Availability: Sep-2008

Software Availability: Feb-2008

Benchmark	Result
410.bwaves	29.7
416.gamess	23.9
433.milc	13.3 / 13.2
434.zeusmp	22.8 / 22.0
435.gromacs	21.8 / 21.7
436.cactusADM	32.4 / 29.5
437.leslie3d	19.8
444.namd	17.9 / 17.6
447.dealII	21.0 / 19.3
450.soplex	18.8 / 18.4
453.povray	31.3 / 25.7
454.calculix	26.9 / 16.9
459.GemsFDTD	16.2
465.tonto	23.9 / 22.3
470.lbm	24.8 / 23.0
481.wrf	26.4
482.sphinx3	32.7 / 32.3

SPECfp_base2006 = 21.6

SPECfp2006 = 23.1

Hardware
CPU Name: Intel Core 2 Duo E8600
CPU Characteristics:
CPU MHz: 3333
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

Continued on next page

Software
Operating System: Windows Vista Ultimate (x64)

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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 20080212 Intel Visual Fortran Compiler for applications running on Intel 64, Version 10.1, Build 20080212 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	**457**	**29.7**	457	29.7	457	29.7	**457**	**29.7**	457	29.7	457	29.7
416.gamess	819	23.9	**819**	**23.9**	819	23.9	819	23.9	**819**	**23.9**	819	23.9
433.milc	694	13.2	**695**	**13.2**	696	13.2	**692**	**13.3**	692	13.3	691	13.3
434.zeusmp	414	22.0	414	22.0	**414**	**22.0**	400	22.8	399	22.8	**399**	**22.8**
435.gromacs	330	21.7	330	21.7	**330**	**21.7**	328	21.8	328	21.8	**328**	**21.8**
436.cactusADM	405	29.5	**406**	**29.5**	406	29.5	369	32.4	369	32.4	**369**	**32.4**
437.leslie3d	475	19.8	**476**	**19.8**	476	19.8	475	19.8	**476**	**19.8**	476	19.8
444.namd	456	17.6	**456**	**17.6**	456	17.6	449	17.9	**449**	**17.9**	449	17.9
447.dealII	593	19.3	**593**	**19.3**	593	19.3	**545**	**21.0**	545	21.0	546	21.0
450.soplex	**453**	**18.4**	453	18.4	453	18.4	445	18.8	**445**	**18.8**	445	18.8
453.povray	207	25.7	**207**	**25.7**	207	25.7	170	31.3	170	31.3	**170**	**31.3**
454.calculix	**489**	**16.9**	488	16.9	489	16.9	307	26.9	307	26.9	**307**	**26.9**
459.GemsFDTD	**654**	**16.2**	654	16.2	654	16.2	**654**	**16.2**	654	16.2	654	16.2
465.tonto	441	22.3	441	22.3	**441**	**22.3**	**412**	**23.9**	412	23.9	412	23.9
470.lbm	598	23.0	**599**	**23.0**	599	22.9	554	24.8	**554**	**24.8**	554	24.8
481.wrf	423	26.4	**423**	**26.4**	423	26.4	423	26.4	**423**	**26.4**	423	26.4
482.sphinx3	603	32.3	603	32.3	**603**	**32.3**	596	32.7	595	32.7	**595**	**32.7**

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

Operating System Notes

    Screen Saver was disabled
    Power scheme was set to Always On, modified to Turnoff monitor: Never.

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CPU2006 license: 22	**Test date:**	Oct-2008
Test sponsor: Fujitsu Siemens Computers	**Hardware Availability:**	Sep-2008
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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

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Base Optimization Flags (Continued)

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

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`

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Peak Optimization Flags (Continued)

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 -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.20090713.00.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090713.00.xml`

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

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