# SPEC® CFP2006 Result

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## Fujitsu Siemens Computers

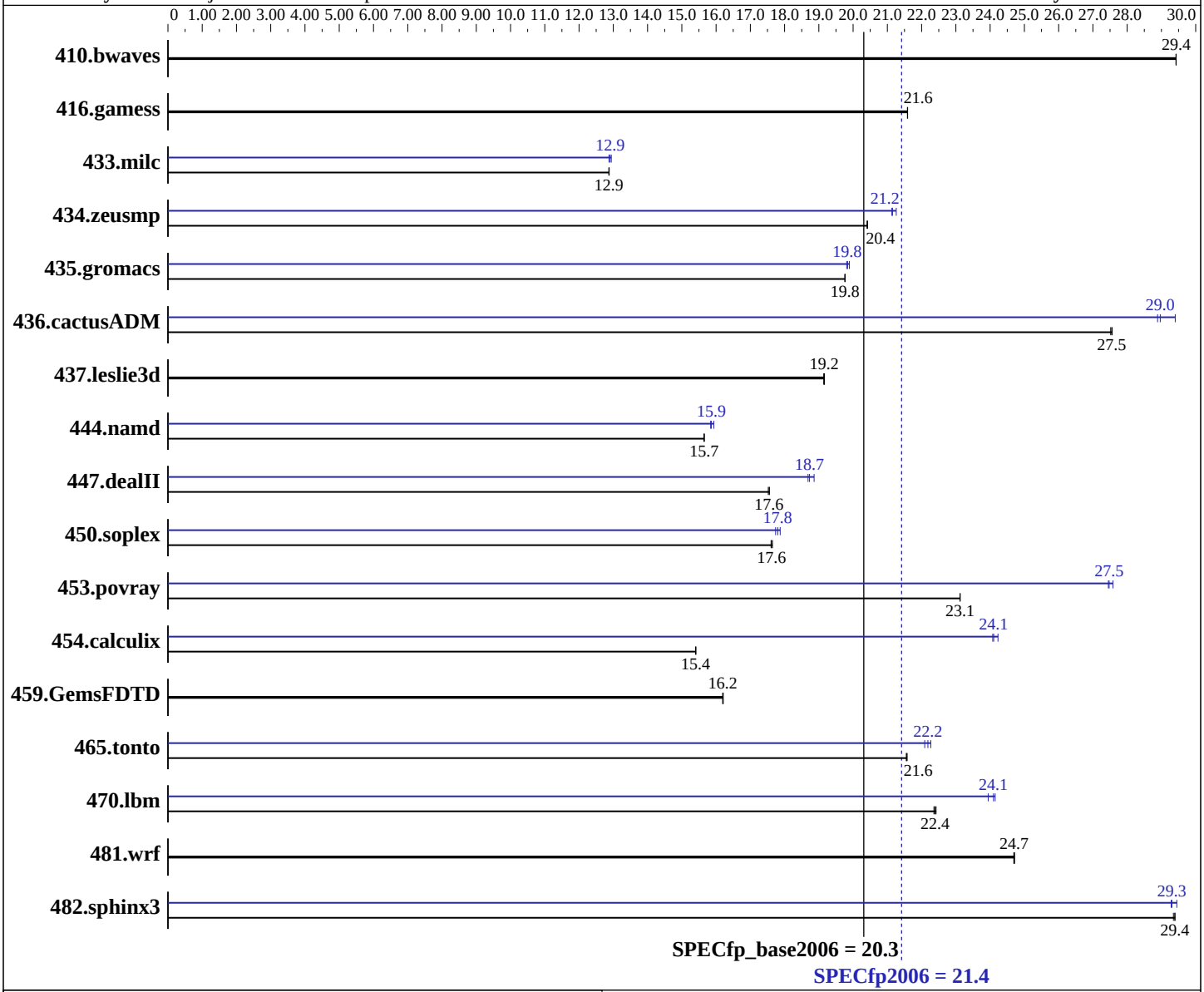
## CELSIUS M460, Intel Core 2 Duo E8400

SPECfp®2006 = 21.4

SPECfp_base2006 = 20.3

**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 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: 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 | 462 | 29.4 | **462** | **29.4** | 462 | 29.4 | 462 | 29.4 | **462** | **29.4** | 462 | 29.4 |
| 416.gamess | 907 | 21.6 | **907** | **21.6** | 907 | 21.6 | 907 | 21.6 | **907** | **21.6** | 907 | 21.6 |
| 433.milc | 713 | 12.9 | **713** | **12.9** | 713 | 12.9 | 709 | 12.9 | **711** | **12.9** | 713 | 12.9 |
| 434.zeusmp | 446 | 20.4 | 446 | 20.4 | **446** | **20.4** | 428 | 21.3 | **430** | **21.2** | 431 | 21.1 |
| 435.gromacs | 361 | 19.8 | **361** | **19.8** | 361 | 19.8 | 359 | 19.9 | 360 | 19.8 | **360** | **19.8** |
| 436.cactusADM | 434 | 27.6 | 434 | 27.5 | **434** | **27.5** | 406 | 29.4 | **413** | **29.0** | 414 | 28.9 |
| 437.leslie3d | 491 | 19.2 | 491 | 19.1 | **491** | **19.2** | 491 | 19.2 | 491 | 19.1 | **491** | **19.2** |
| 444.namd | 512 | 15.7 | **512** | **15.7** | 512 | 15.7 | 503 | 15.9 | 506 | 15.8 | **506** | **15.9** |
| 447.dealII | 653 | 17.5 | 652 | 17.6 | **652** | **17.6** | 607 | 18.9 | 612 | 18.7 | **611** | **18.7** |
| 450.soplex | 474 | 17.6 | 473 | 17.6 | **473** | **17.6** | 467 | 17.9 | 470 | 17.7 | **469** | **17.8** |
| 453.povray | 230 | 23.1 | **230** | **23.1** | 230 | 23.1 | 193 | 27.6 | 194 | 27.5 | **194** | **27.5** |
| 454.calculix | 535 | 15.4 | 536 | 15.4 | **536** | **15.4** | 341 | 24.2 | 343 | 24.1 | **342** | **24.1** |
| 459.GemsFDTD | 655 | 16.2 | **655** | **16.2** | 655 | 16.2 | 655 | 16.2 | **655** | **16.2** | 655 | 16.2 |
| 465.tonto | 456 | 21.6 | **456** | **21.6** | 456 | 21.6 | 442 | 22.3 | 445 | 22.1 | **444** | **22.2** |
| 470.lbm | **614** | **22.4** | 615 | 22.4 | 613 | 22.4 | 569 | 24.1 | 574 | 23.9 | **570** | **24.1** |
| 481.wrf | **452** | **24.7** | 452 | 24.7 | 452 | 24.7 | **452** | **24.7** | 452 | 24.7 | 452 | 24.7 |
| 482.sphinx3 | 663 | 29.4 | 664 | 29.4 | **663** | **29.4** | 662 | 29.4 | **665** | **29.3** | 666 | 29.3 |

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

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