# SPEC® CFP2006 Result

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## Fujitsu Siemens Computers

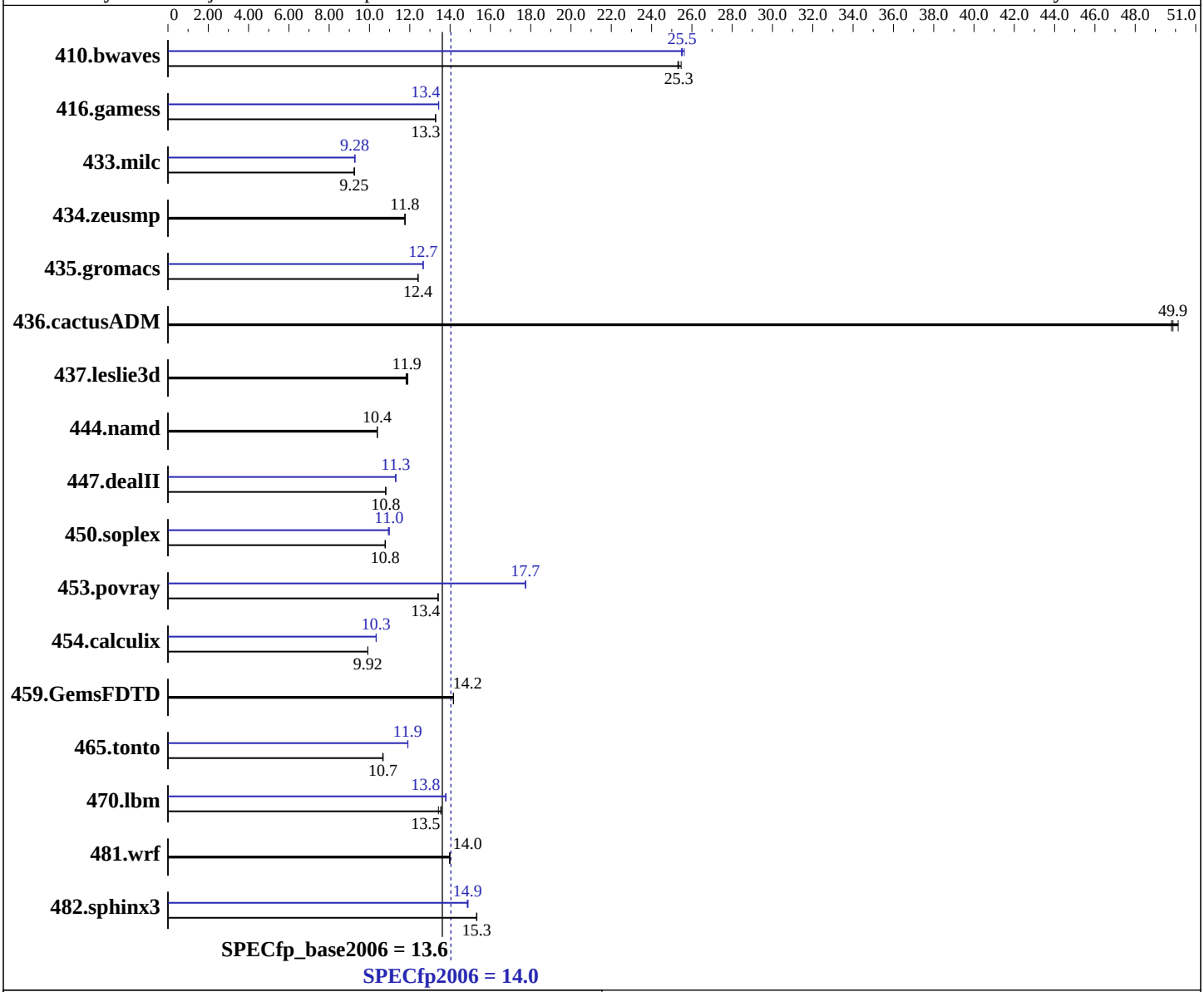
## CELSIUS R540, Intel Xeon processor E5335

SPECfp®2006 = 14.0

SPECfp_base2006 = 13.6

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

**Test date:** Feb-2007
**Hardware Availability:** Nov-2006
**Software Availability:** Nov-2006




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5335 |
| CPU Characteristics: | E5335 |
| CPU MHz: | 2000 |
| FPU: | Integrated |
| CPU(s) enabled: | 8 cores, 2 chips, 4 cores/chip |
| CPU(s) orderable: | 1,2 chips |
| Primary Cache: | 32 KB I + 32 KB D on chip per core |
| Secondary Cache: | 8 MB I+D on chip per chip, 4 MB shared / 2 cores |

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### Software

| | |
|---|---|
| Operating System: | Windows XP, 64 bit Edition |
| Compiler: | Intel C++ Compiler for EM64T-based applications - version 9.1, Build 20061104<br>Intel Fortran Compiler for EM64T-based applications - version 9.1, Build 20061104<br>Microsoft Visual Studio 2005 (for libraries) |
| Auto Parallel: | Yes |
| File System: | NTFS |

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L3 Cache: None
Other Cache: None
Memory: 8 GB (4x2 GB DDR2 5300F, 2 rank, CL5-5-5,with ECC)
Disk Subsystem: SATA II 7200 rpm
Other Hardware: None

System State: Default
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: None

## Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | **536** | **25.3** | 537 | 25.3 | 534 | 25.5 | 530 | 25.6 | **533** | **25.5** | 533 | 25.5 |
| 416.gamess | **1475** | **13.3** | 1475 | 13.3 | 1475 | 13.3 | 1457 | 13.4 | **1457** | **13.4** | 1457 | 13.4 |
| 433.milc | 992 | 9.26 | **993** | **9.25** | 993 | 9.24 | 990 | 9.27 | 989 | 9.28 | **990** | **9.28** |
| 434.zeusmp | 774 | 11.8 | **774** | **11.8** | 774 | 11.8 | 774 | 11.8 | **774** | **11.8** | 774 | 11.8 |
| 435.gromacs | 575 | 12.4 | **575** | **12.4** | 575 | 12.4 | 564 | 12.7 | **564** | **12.7** | 564 | 12.7 |
| 436.cactusADM | 238 | 50.1 | 240 | 49.8 | **240** | **49.9** | 238 | 50.1 | 240 | 49.8 | **240** | **49.9** |
| 437.leslie3d | **792** | **11.9** | 790 | 11.9 | 795 | 11.8 | **792** | **11.9** | 790 | 11.9 | 795 | 11.8 |
| 444.namd | 772 | 10.4 | **772** | **10.4** | 772 | 10.4 | 772 | 10.4 | **772** | **10.4** | 772 | 10.4 |
| 447.dealII | 1059 | 10.8 | **1059** | **10.8** | 1059 | 10.8 | 1012 | 11.3 | 1012 | 11.3 | **1012** | **11.3** |
| 450.soplex | 773 | 10.8 | **773** | **10.8** | 774 | 10.8 | 760 | 11.0 | **760** | **11.0** | 763 | 10.9 |
| 453.povray | 397 | 13.4 | **397** | **13.4** | 397 | 13.4 | 300 | 17.7 | **300** | **17.7** | 300 | 17.7 |
| 454.calculix | 832 | 9.92 | **832** | **9.92** | 832 | 9.92 | **798** | **10.3** | 799 | 10.3 | 798 | 10.3 |
| 459.GemsFDTD | **749** | **14.2** | 748 | 14.2 | 749 | 14.2 | **749** | **14.2** | 748 | 14.2 | 749 | 14.2 |
| 465.tonto | **922** | **10.7** | 922 | 10.7 | 923 | 10.7 | **827** | **11.9** | 827 | 11.9 | 826 | 11.9 |
| 470.lbm | 1024 | 13.4 | 1014 | 13.5 | **1014** | **13.5** | 997 | 13.8 | 996 | 13.8 | **997** | **13.8** |
| 481.wrf | 799 | 14.0 | 799 | 14.0 | **799** | **14.0** | 799 | 14.0 | 799 | 14.0 | **799** | **14.0** |
| 482.sphinx3 | 1273 | 15.3 | **1272** | **15.3** | 1271 | 15.3 | 1309 | 14.9 | **1311** | **14.9** | 1312 | 14.9 |

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, except:
Snoop Filter Enabled
Adjacent Cache Line Prefetch Enabled
```

## General Notes

```
For information about Fujitsu Siemens Computers in your country please see:
http://www.fujitsu-siemens.com/countries
```

# 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: -D_Complex= -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -D_Complex= -DSPEC_CPU_P64
436.cactusADM: -D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -D_Complex= -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -D_Complex= -DSPEC_CPU_P64

# Base Optimization Flags

C benchmarks:
```
-fast -Qparallel -F950000000
```

C++ benchmarks:
```
-fast -Qparallel -Qcxx-features -F950000000
```

Fortran benchmarks:
```
-fast -Qparallel -F950000000
```

Continued on next page

## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
`-fast -Qparallel -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:
`-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -F950000000`

C++ benchmarks:

444.namd: `basepeak = yes`

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

450.soplex: `Same as 447.dealII`

453.povray: `Same as 447.dealII`

Fortran benchmarks:

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

416.gamess: `-fast -F950000000`

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# Peak Optimization Flags (Continued)

434.zeusmp: `basepeak = yes`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `basepeak = yes`

465.tonto: `Same as 410.bwaves`

Benchmarks using both Fortran and C:

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

436.cactusADM: `basepeak = yes`

454.calculix: `Same as 435.gromacs`

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.20090715.20.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.20.xml`


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