# SPEC® CFP2006 Result



## Fujitsu Siemens Computers

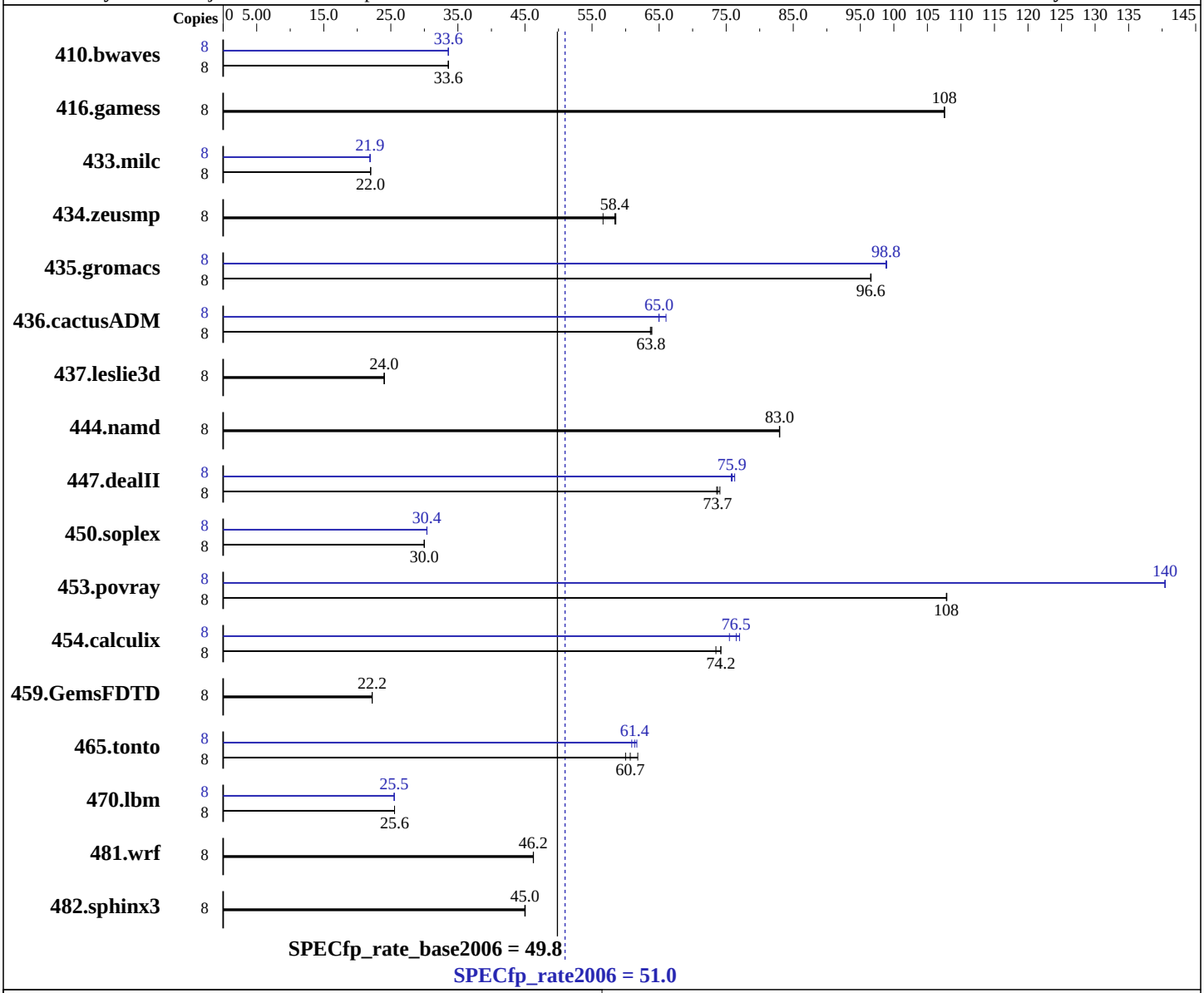
## CELSIUS R640, Intel Xeon E5335 processor

SPECfp®_rate2006 = 51.0

SPECfp_rate_base2006 = 49.8

**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: | No |
| File System: | NTFS |

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| | |
|---|---|
| L3 Cache: | None |
| Other Cache: | None |
| Memory: | 16 GB (8x2 GB DDR2 5300F, 2 rank, CL5-5-5, 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 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 8 | **3238** | **33.6** | 3239 | 33.6 | 3235 | 33.6 | 8 | **3236** | **33.6** | 3241 | 33.5 | 3236 | 33.6 |
| 416.gamess | 8 | 1457 | 108 | 1456 | 108 | **1456** | **108** | 8 | 1457 | 108 | 1456 | 108 | **1456** | **108** |
| 433.milc | 8 | 3341 | 22.0 | **3340** | **22.0** | 3340 | 22.0 | 8 | 3349 | 21.9 | **3352** | **21.9** | 3356 | 21.9 |
| 434.zeusmp | 8 | **1247** | **58.4** | 1285 | 56.6 | 1243 | 58.6 | 8 | **1247** | **58.4** | 1285 | 56.6 | 1243 | 58.6 |
| 435.gromacs | 8 | 591 | 96.6 | 592 | 96.5 | **591** | **96.6** | 8 | 577 | 98.9 | 578 | 98.8 | **578** | **98.8** |
| 436.cactusADM | 8 | **1498** | **63.8** | 1496 | 63.9 | 1501 | 63.7 | 8 | **1471** | **65.0** | 1448 | 66.0 | 1472 | 65.0 |
| 437.leslie3d | 8 | **3131** | **24.0** | 3130 | 24.0 | 3131 | 24.0 | 8 | **3131** | **24.0** | 3130 | 24.0 | 3131 | 24.0 |
| 444.namd | 8 | 773 | 83.0 | **773** | **83.0** | 774 | 82.9 | 8 | 773 | 83.0 | **773** | **83.0** | 774 | 82.9 |
| 447.dealII | 8 | 1236 | 74.1 | 1244 | 73.6 | **1242** | **73.7** | 8 | 1200 | 76.3 | 1208 | 75.8 | **1206** | **75.9** |
| 450.soplex | 8 | 2226 | 30.0 | **2225** | **30.0** | 2224 | 30.0 | 8 | 2195 | 30.4 | 2197 | 30.4 | **2196** | **30.4** |
| 453.povray | 8 | **395** | **108** | 395 | 108 | 394 | 108 | 8 | 303 | 140 | **303** | **140** | 303 | 140 |
| 454.calculix | 8 | **890** | **74.2** | 889 | 74.2 | 898 | 73.5 | 8 | 857 | 77.0 | 874 | 75.5 | **863** | **76.5** |
| 459.GemsFDTD | 8 | 3822 | 22.2 | 3817 | 22.2 | **3822** | **22.2** | 8 | 3822 | 22.2 | 3817 | 22.2 | **3822** | **22.2** |
| 465.tonto | 8 | 1312 | 60.0 | 1273 | 61.8 | **1297** | **60.7** | 8 | 1292 | 60.9 | 1276 | 61.7 | **1283** | **61.4** |
| 470.lbm | 8 | 4302 | 25.6 | **4301** | **25.6** | 4301 | 25.6 | 8 | 4309 | 25.5 | 4310 | 25.5 | **4309** | **25.5** |
| 481.wrf | 8 | **1932** | **46.2** | 1932 | 46.2 | 1931 | 46.3 | 8 | **1932** | **46.2** | 1932 | 46.2 | 1931 | 46.3 |
| 482.sphinx3 | 8 | **3465** | **45.0** | 3461 | 45.0 | 3466 | 45.0 | 8 | **3465** | **45.0** | 3461 | 45.0 | 3466 | 45.0 |

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:
High Bandwith Option Enabled
```

## General Notes

```
 'start /b /wait /affinity' command is used to bind CPU(s) to processes


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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 -F950000000

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

Fortran benchmarks:
-fast -F950000000

Continued on next page

## Base Optimization Flags (Continued)

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: `Same as 433.milc`

482.sphinx3: `basepeak = yes`

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:

Continued on next page

# Peak Optimization Flags (Continued)

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

416.gamess: `basepeak = yes`

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: `Same as 435.gromacs`

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.20090714.20.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.20.xml`



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

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