# SPEC® CFP2006 Result
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## Fujitsu Siemens Computers

PRIMERGY TX300 S3, Intel Xeon processor 5130, 2.0 GHz

$SPECfp^®\_rate2006 = \quad 37.3$

$SPECfp\_rate\_base2006 = \quad 36.1$
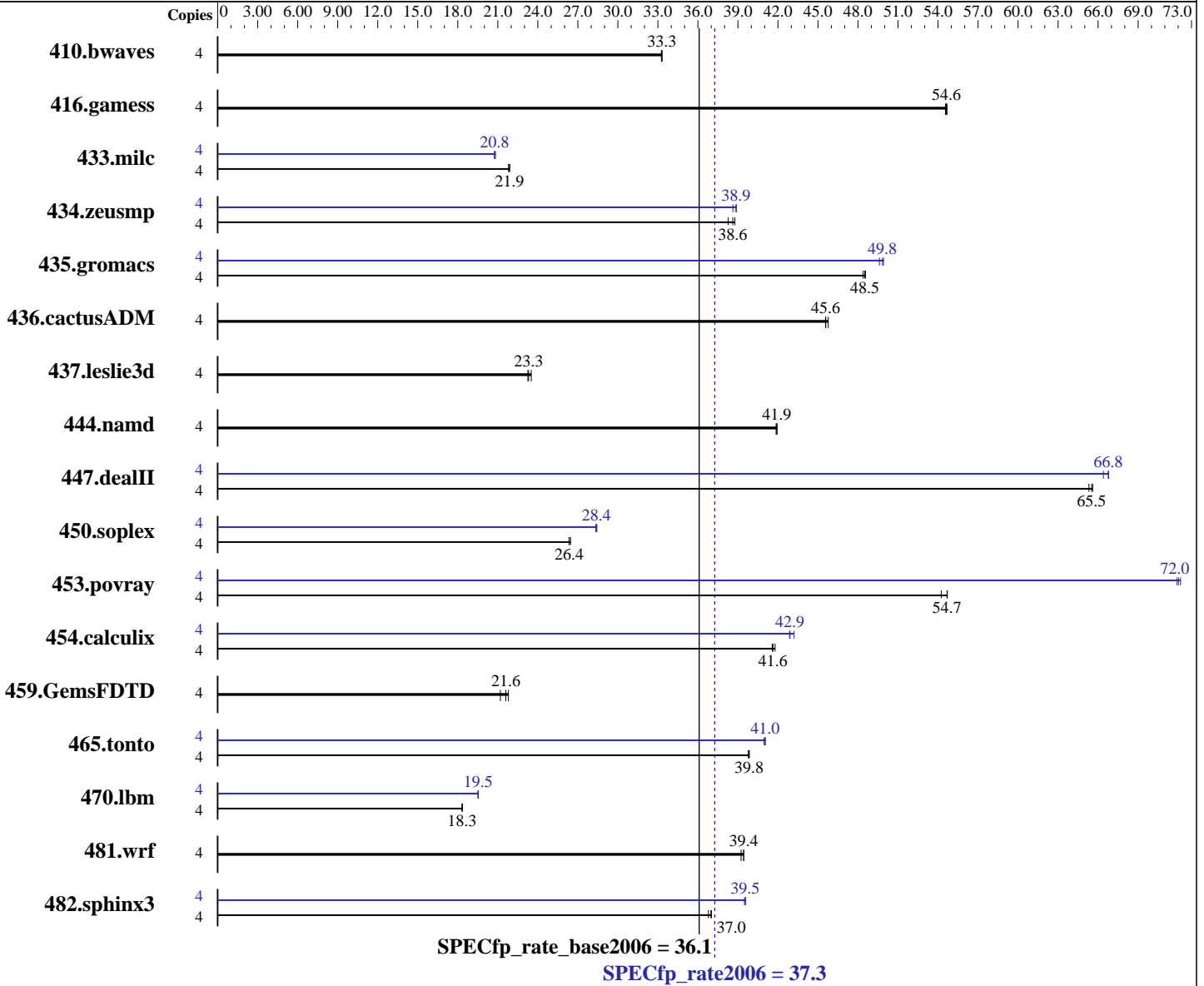
**CPU2006 license:** 22

**Test sponsor:** Fujitsu Siemens Computers

**Tested by:** Fujitsu Siemens Computers

**Test date:** May-2007

**Hardware Availability:** Jul-2006

**Software Availability:** Feb-2007



SPECfp_rate_base2006 = 36.1

SPECfp_rate2006 = 37.3

| Benchmark | Copies | Result |
|---|---|---|
| 410.bwaves | 4 | 33.3 |
| 416.gamess | 4 | 54.6 |
| 433.milc | 4 / 4 | 20.8 / 21.9 |
| 434.zeusmp | 4 / 4 | 38.9 / 38.6 |
| 435.gromacs | 4 / 4 | 49.8 / 48.5 |
| 436.cactusADM | 4 | 45.6 |
| 437.leslie3d | 4 | 23.3 |
| 444.namd | 4 | 41.9 |
| 447.dealII | 4 / 4 | 66.8 / 65.5 |
| 450.soplex | 4 / 4 | 28.4 / 26.4 |
| 453.povray | 4 / 4 | 72.0 / 54.7 |
| 454.calculix | 4 / 4 | 42.9 / 41.6 |
| 459.GemsFDTD | 4 | 21.6 |
| 465.tonto | 4 / 4 | 41.0 / 39.8 |
| 470.lbm | 4 / 4 | 19.5 / 18.3 |
| 481.wrf | 4 | 39.4 |
| 482.sphinx3 | 4 / 4 | 39.5 / 37.0 |

## Hardware

CPU Name: Intel Xeon 5130

CPU Characteristics: 1333 MHz system bus

CPU MHz: 2000

FPU: Integrated

CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip

CPU(s) orderable: 1,2 chips

Primary Cache: 32 KB I + 32 KB D on chip per core

Secondary Cache: 4 MB I+D on chip per chip

**Continued on next page**

## Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64

Compiler: Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package-ID: l_cc_p_9.1.047

Intel Fortran Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package ID: l_fc_p_9.1.043

Auto Parallel: No

File System: ext2

**Continued on next page**

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| | | | |
|---|---|---|---|
| L3 Cache: | None | System State: | Multiuser, Runlevel 3 |
| Other Cache: | None | Base Pointers: | 64-bit |
| Memory: | 8 GB (8x1 GB DDR2 PC2-5300F, 2 rank, CAS 5-5-5, with ECC) | Peak Pointers: | 32/64-bit |
| | | Other Software: | None |
| Disk Subsystem: | SAS (73GB 15400 rpm) | | |
| Other Hardware: | None | | |

## Results Table

| | Base | | | | | | | Peak | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benchmark | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 4 | 1634 | 33.3 | 1632 | 33.3 | **1633** | **33.3** | 4 | 1634 | 33.3 | 1632 | 33.3 | **1633** | **33.3** |
| 416.gamess | 4 | 1436 | 54.6 | 1433 | 54.7 | **1434** | **54.6** | 4 | 1436 | 54.6 | 1433 | 54.7 | **1434** | **54.6** |
| 433.milc | 4 | 1678 | 21.9 | **1678** | **21.9** | 1684 | 21.8 | 4 | **1769** | **20.8** | 1769 | 20.8 | 1763 | 20.8 |
| 434.zeusmp | 4 | 939 | 38.8 | **943** | **38.6** | 951 | 38.3 | 4 | 942 | 38.6 | 936 | 38.9 | **937** | **38.9** |
| 435.gromacs | 4 | 590 | 48.4 | **589** | **48.5** | 588 | 48.6 | 4 | 576 | 49.6 | 572 | 49.9 | **573** | **49.8** |
| 436.cactusADM | 4 | **1049** | **45.6** | 1049 | 45.6 | 1044 | 45.8 | 4 | **1049** | **45.6** | 1049 | 45.6 | 1044 | 45.8 |
| 437.leslie3d | 4 | 1599 | 23.5 | 1617 | 23.3 | **1613** | **23.3** | 4 | 1599 | 23.5 | 1617 | 23.3 | **1613** | **23.3** |
| 444.namd | 4 | 766 | 41.9 | **765** | **41.9** | 765 | 41.9 | 4 | 766 | 41.9 | **765** | **41.9** | 765 | 41.9 |
| 447.dealII | 4 | **698** | **65.5** | 701 | 65.3 | 698 | 65.6 | 4 | 685 | 66.8 | **685** | **66.8** | 689 | 66.4 |
| 450.soplex | 4 | 1267 | 26.3 | **1266** | **26.4** | 1261 | 26.5 | 4 | 1177 | 28.3 | 1173 | 28.4 | **1175** | **28.4** |
| 453.povray | 4 | 389 | 54.7 | **389** | **54.7** | 392 | 54.2 | 4 | 295 | 72.2 | 296 | 71.9 | **295** | **72.0** |
| 454.calculix | 4 | **793** | **41.6** | 790 | 41.8 | 794 | 41.6 | 4 | 764 | 43.2 | **769** | **42.9** | 770 | 42.9 |
| 459.GemsFDTD | 4 | 1947 | 21.8 | 2003 | 21.2 | **1964** | **21.6** | 4 | 1947 | 21.8 | 2003 | 21.2 | **1964** | **21.6** |
| 465.tonto | 4 | 988 | 39.9 | **988** | **39.8** | 989 | 39.8 | 4 | 959 | 41.1 | 961 | 41.0 | **959** | **41.0** |
| 470.lbm | 4 | 2996 | 18.3 | 2999 | 18.3 | **2998** | **18.3** | 4 | 2816 | 19.5 | 2813 | 19.5 | **2815** | **19.5** |
| 481.wrf | 4 | 1133 | 39.4 | 1139 | 39.2 | **1133** | **39.4** | 4 | 1133 | 39.4 | 1139 | 39.2 | **1133** | **39.4** |
| 482.sphinx3 | 4 | 2119 | 36.8 | 2106 | 37.0 | **2108** | **37.0** | 4 | 1969 | 39.6 | 1974 | 39.5 | **1971** | **39.5** |

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

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs

## General Notes

The system bus runs at 1333 MHz

All binaries were built with 64-bit Intel compiler except:
433.milc, 434.zeusmp, 450.soplex, 470.lbm and 482.sphinx3 in peak were built with
32-bit Intel compiler by changing the path for include and library files.

This result was measured on the PRIMERGY RX300 S3. The PRIMERGY RX300 S3 and

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$SPECfp\_rate2006 = 37.3$

$SPECfp\_rate\_base2006 = 36.1$

| | | | |
|---|---|---|---|
| **CPU2006 license:** 22 | | **Test date:** | May-2007 |
| **Test sponsor:** | Fujitsu Siemens Computers | **Hardware Availability:** | Jul-2006 |
| **Tested by:** | Fujitsu Siemens Computers | **Software Availability:** | Feb-2007 |

## General Notes (Continued)

```
the PRIMERGY TX300 S3 are electronically equivalent.

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

## Base Compiler Invocation

C benchmarks:
```
icc
```

C++ benchmarks:
```
icpc
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icc ifort
```

## Base Portability Flags

```
   410.bwaves: -DSPEC_CPU_LP64
   416.gamess: -DSPEC_CPU_LP64
     433.milc: -DSPEC_CPU_LP64
   434.zeusmp: -DSPEC_CPU_LP64
  435.gromacs: -DSPEC_CPU_LP64 -nofor_main
 436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
  437.leslie3d: -DSPEC_CPU_LP64
     444.namd: -DSPEC_CPU_LP64
    447.dealII: -DSPEC_CPU_LP64
    450.soplex: -DSPEC_CPU_LP64
    453.povray: -DSPEC_CPU_LP64
   454.calculix: -DSPEC_CPU_LP64 -nofor_main
  459.GemsFDTD: -DSPEC_CPU_LP64
     465.tonto: -DSPEC_CPU_LP64
      470.lbm: -DSPEC_CPU_LP64
      481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
   482.sphinx3: -DSPEC_CPU_LP64
```

## Base Optimization Flags

C benchmarks:
```
-fast
```

C++ benchmarks:
```
-fast
```

Continued on next page

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## Base Optimization Flags (Continued)

Fortran benchmarks:
```
-fast
```

Benchmarks using both Fortran and C:
```
-fast
```

## Peak Compiler Invocation

C benchmarks:
```
/opt/intel/cc/9.1.047/bin/icc -I/opt/intel/cc/9.1.047/include
-L/opt/intel/cc/9.1.047/lib
```

C++ benchmarks (except as noted below):
```
icpc
```
```
  450.soplex: /opt/intel/cc/9.1.047/bin/icpc
              -I/opt/intel/cc/9.1.047/include -L/opt/intel/cc/9.1.047/lib
```

Fortran benchmarks (except as noted below):
```
ifort
```
```
  434.zeusmp: /opt/intel/fc/9.1.043/bin/ifort
              -I/opt/intel/fc/9.1.043/include -L/opt/intel/fc/9.1.043/lib
```

Benchmarks using both Fortran and C:
```
icc ifort
```

## Peak Portability Flags

```
    410.bwaves: -DSPEC_CPU_LP64
    416.gamess: -DSPEC_CPU_LP64
   435.gromacs: -DSPEC_CPU_LP64 -nofor_main
  436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
    437.leslie3d: -DSPEC_CPU_LP64
      444.namd: -DSPEC_CPU_LP64
     447.dealII: -DSPEC_CPU_LP64
    453.povray: -DSPEC_CPU_LP64
   454.calculix: -DSPEC_CPU_LP64 -nofor_main
  459.GemsFDTD: -DSPEC_CPU_LP64
      465.tonto: -DSPEC_CPU_LP64
       481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```

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## Peak Optimization Flags

C benchmarks:

    433.milc: -prof_gen(pass 1) -prof_use(pass 2) -fast

    470.lbm: Same as 433.milc

    482.sphinx3: -fast

C++ benchmarks:

    444.namd: basepeak = yes

    447.dealII: -prof_gen(pass 1) -prof_use(pass 2) -fast

    450.soplex: Same as 447.dealII

    453.povray: Same as 447.dealII

Fortran benchmarks:

    410.bwaves: basepeak = yes

    416.gamess: basepeak = yes

    434.zeusmp: -fast

    437.leslie3d: basepeak = yes

    459.GemsFDTD: basepeak = yes

    465.tonto: -prof_gen(pass 1) -prof_use(pass 2) -fast

Benchmarks using both Fortran and C:

    435.gromacs: -prof_gen(pass 1) -prof_use(pass 2) -fast

    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.20090714.09.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.xml

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