



SPEC® CFP2006 Result

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Fujitsu Siemens Computers

PRIMERGY RX600 S3, Intel Xeon processor 7140M, 3.40 GHz

SPECfp®_rate2006 = 39.0

SPECfp_rate_base2006 = 37.9

CPU2006 license: 22

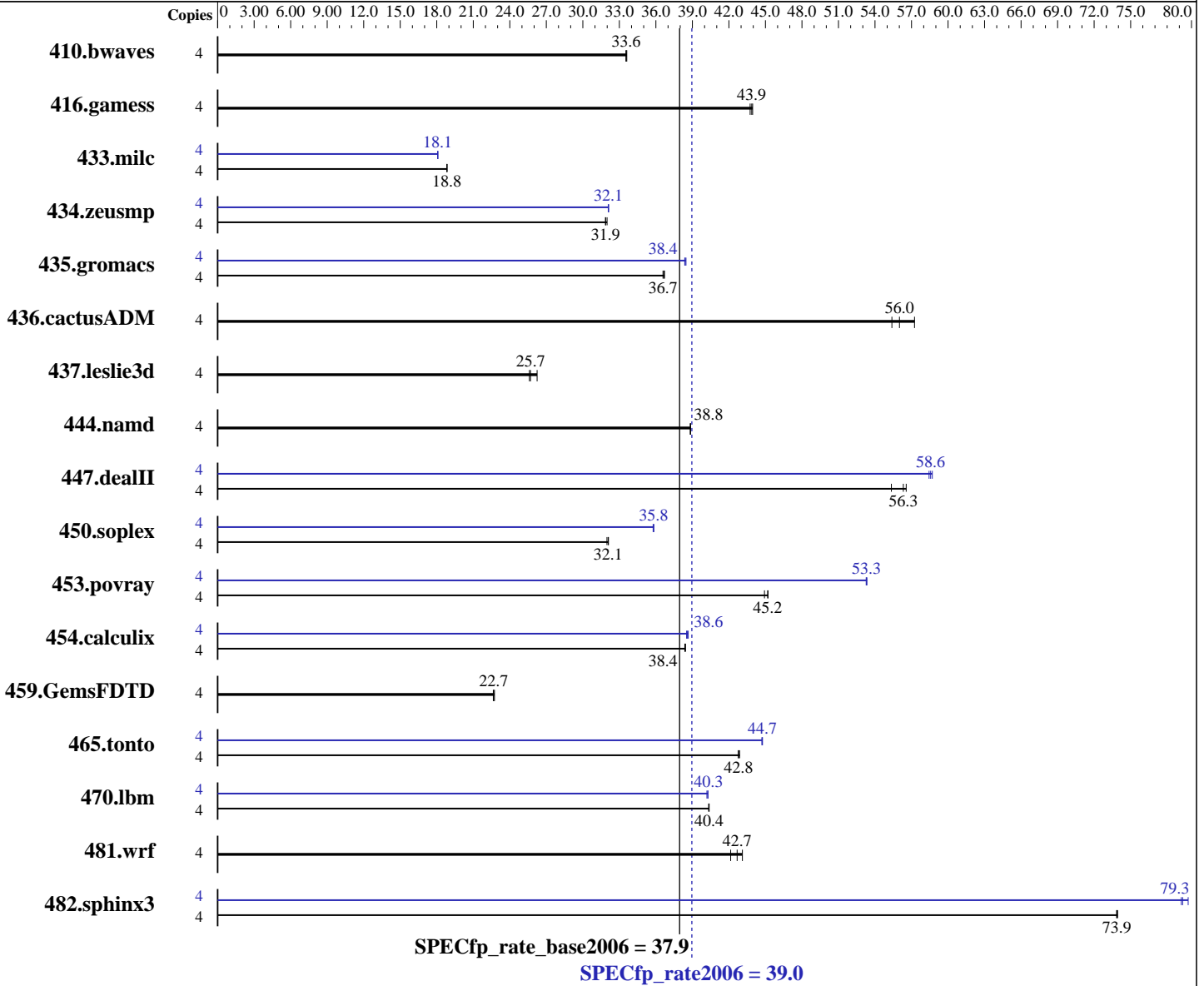
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Apr-2007

Hardware Availability: Dec-2006

Software Availability: Feb-2007



Hardware

CPU Name: Intel Xeon 7140M
 CPU Characteristics: 800 MHz system bus
 CPU MHz: 3400
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2,4 chips
 Primary Cache: 12 K micro-ops I + 16 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core

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: ReiserFS

Continued on next page



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L3 Cache: 16 MB I+D on chip per chip
Other Cache: None
Memory: 32 GB (16x2 GB DDR2 PC2-3200R, 2 rank, CAS 3-3-3, with ECC)
Disk Subsystem: Fujitsu MAS3735NC (SCSI 73GB 15 krpm)
Other Hardware: None

System State: Multiuser, Runlevel 3
Base Pointers: 64-bit
Peak Pointers: 32/64-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 | 4 | 1620 | 33.6 | 1620 | 33.5 | 1617 | 33.6 | 4 | 1620 | 33.6 | 1620 | 33.5 | 1617 | 33.6 | | |
| 416.gamess | 4 | 1782 | 43.9 | 1790 | 43.7 | 1785 | 43.9 | 4 | 1782 | 43.9 | 1790 | 43.7 | 1785 | 43.9 | | |
| 433.milc | 4 | 1949 | 18.8 | 1949 | 18.8 | 1950 | 18.8 | 4 | 2030 | 18.1 | 2030 | 18.1 | 2031 | 18.1 | | |
| 434.zeusmp | 4 | 1142 | 31.9 | 1138 | 32.0 | 1142 | 31.9 | 4 | 1134 | 32.1 | 1134 | 32.1 | 1133 | 32.1 | | |
| 435.gromacs | 4 | 778 | 36.7 | 781 | 36.6 | 779 | 36.7 | 4 | 743 | 38.4 | 742 | 38.5 | 744 | 38.4 | | |
| 436.cactusADM | 4 | 853 | 56.0 | 835 | 57.2 | 863 | 55.4 | 4 | 853 | 56.0 | 835 | 57.2 | 863 | 55.4 | | |
| 437.leslie3d | 4 | 1433 | 26.2 | 1468 | 25.6 | 1463 | 25.7 | 4 | 1433 | 26.2 | 1468 | 25.6 | 1463 | 25.7 | | |
| 444.namd | 4 | 826 | 38.8 | 826 | 38.9 | 826 | 38.8 | 4 | 826 | 38.8 | 826 | 38.9 | 826 | 38.8 | | |
| 447.dealII | 4 | 827 | 55.3 | 812 | 56.3 | 809 | 56.6 | 4 | 779 | 58.7 | 783 | 58.4 | 781 | 58.6 | | |
| 450.soplex | 4 | 1040 | 32.1 | 1039 | 32.1 | 1043 | 32.0 | 4 | 933 | 35.8 | 931 | 35.8 | 931 | 35.8 | | |
| 453.povray | 4 | 474 | 44.9 | 471 | 45.2 | 471 | 45.2 | 4 | 399 | 53.3 | 399 | 53.3 | 399 | 53.3 | | |
| 454.calculix | 4 | 859 | 38.4 | 860 | 38.4 | 859 | 38.4 | 4 | 857 | 38.5 | 854 | 38.7 | 855 | 38.6 | | |
| 459.GemsFDTD | 4 | 1866 | 22.7 | 1871 | 22.7 | 1874 | 22.6 | 4 | 1866 | 22.7 | 1871 | 22.7 | 1874 | 22.6 | | |
| 465.tonto | 4 | 920 | 42.8 | 918 | 42.9 | 920 | 42.8 | 4 | 880 | 44.7 | 880 | 44.7 | 879 | 44.8 | | |
| 470.lbm | 4 | 1361 | 40.4 | 1362 | 40.4 | 1363 | 40.3 | 4 | 1365 | 40.3 | 1368 | 40.2 | 1365 | 40.3 | | |
| 481.wrf | 4 | 1047 | 42.7 | 1036 | 43.1 | 1060 | 42.1 | 4 | 1047 | 42.7 | 1036 | 43.1 | 1060 | 42.1 | | |
| 482.sphinx3 | 4 | 1055 | 73.9 | 1056 | 73.8 | 1055 | 73.9 | 4 | 985 | 79.2 | 978 | 79.7 | 983 | 79.3 | | |

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 800 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.

BIOS configuration:

Continued on next page



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General Notes (Continued)

Hardware Prefetch = Enable, Adjacent Sector Prefetch = Enable

The PRIMERGY RX600 S3 and the PRIMERGY TX600 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

Continued on next page



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Base Optimization Flags (Continued)

C++ benchmarks:

-fast

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

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