SPEC® CFP2006 Result

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Fujitsu Siemens Computers

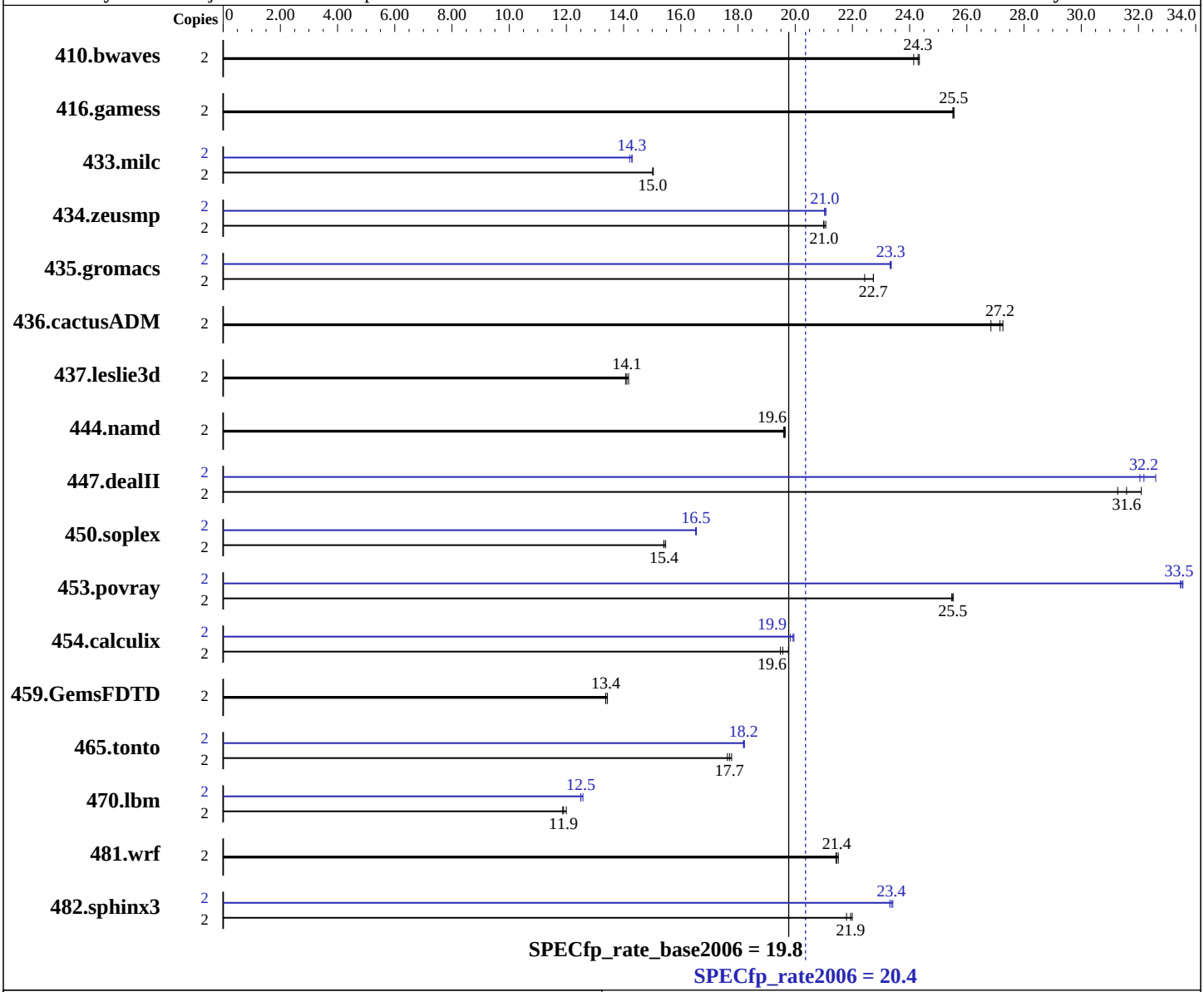
PRIMERGY TX120, Intel Xeon processor 3040, 1.86 GHz

SPECfp®_rate2006 = 20.4

SPECfp_rate_base2006 = 19.8

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

Test date: Jun-2007
Hardware Availability: Sep-2006
Software Availability: Mar-2007



Hardware

CPU Name:	Intel Xeon 3040
CPU Characteristics:	1067 MHz system bus
CPU MHz:	1867
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:	2 MB I+D on chip per chip

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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

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L3 Cache: None
Other Cache: None
Memory: 8 GB (4x2 GB DDR2 PC2-4200E, 2 rank, CAS 4-4-4, with ECC)
Disk Subsystem: Seagate ST973401SS (SAS, 73GB 10000rpm)
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	2	1117	24.3	**1119**	**24.3**	1126	24.1	2	1117	24.3	**1119**	**24.3**	1126	24.1
416.gamess	2	**1533**	**25.5**	1533	25.6	1535	25.5	2	**1533**	**25.5**	1533	25.6	1535	25.5
433.milc	2	1222	15.0	**1222**	**15.0**	1221	15.0	2	1292	14.2	1284	14.3	**1285**	**14.3**
434.zeusmp	2	864	21.1	**866**	**21.0**	867	21.0	2	**865**	**21.0**	864	21.1	866	21.0
435.gromacs	2	628	22.7	**628**	**22.7**	637	22.4	2	612	23.3	**612**	**23.3**	611	23.4
436.cactusADM	2	890	26.8	877	27.3	**880**	**27.2**	2	890	26.8	877	27.3	**880**	**27.2**
437.leslie3d	2	1336	14.1	1326	14.2	**1332**	**14.1**	2	1336	14.1	1326	14.2	**1332**	**14.1**
444.namd	2	819	19.6	816	19.6	**817**	**19.6**	2	819	19.6	816	19.6	**817**	**19.6**
447.dealII	2	732	31.3	**724**	**31.6**	713	32.1	2	**711**	**32.2**	714	32.1	702	32.6
450.soplex	2	1078	15.5	**1082**	**15.4**	1083	15.4	2	1008	16.5	**1009**	**16.5**	1010	16.5
453.povray	2	**417**	**25.5**	417	25.5	418	25.5	2	**318**	**33.5**	318	33.5	317	33.6
454.calculix	2	835	19.8	847	19.5	**843**	**19.6**	2	827	20.0	832	19.8	**828**	**19.9**
459.GemsFDTD	2	1579	13.4	**1586**	**13.4**	1587	13.4	2	1579	13.4	**1586**	**13.4**	1587	13.4
465.tonto	2	1107	17.8	**1112**	**17.7**	1116	17.6	2	1080	18.2	**1081**	**18.2**	1082	18.2
470.lbm	2	2290	12.0	**2309**	**11.9**	2315	11.9	2	2185	12.6	2197	12.5	**2197**	**12.5**
481.wrf	2	1039	21.5	1043	21.4	**1042**	**21.4**	2	1039	21.5	1043	21.4	**1042**	**21.4**
482.sphinx3	2	1772	22.0	1789	21.8	**1777**	**21.9**	2	1665	23.4	**1669**	**23.4**	1673	23.3

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 1067 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.

For information about Fujitsu Siemens Computers in your country please see:

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General Notes (Continued)

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

Fortran benchmarks:
-fast

Continued on next page

Base Optimization Flags (Continued)

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`

Peak Optimization Flags

C benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

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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