SPEC® CFP2006 Result

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Fujitsu Siemens Computers

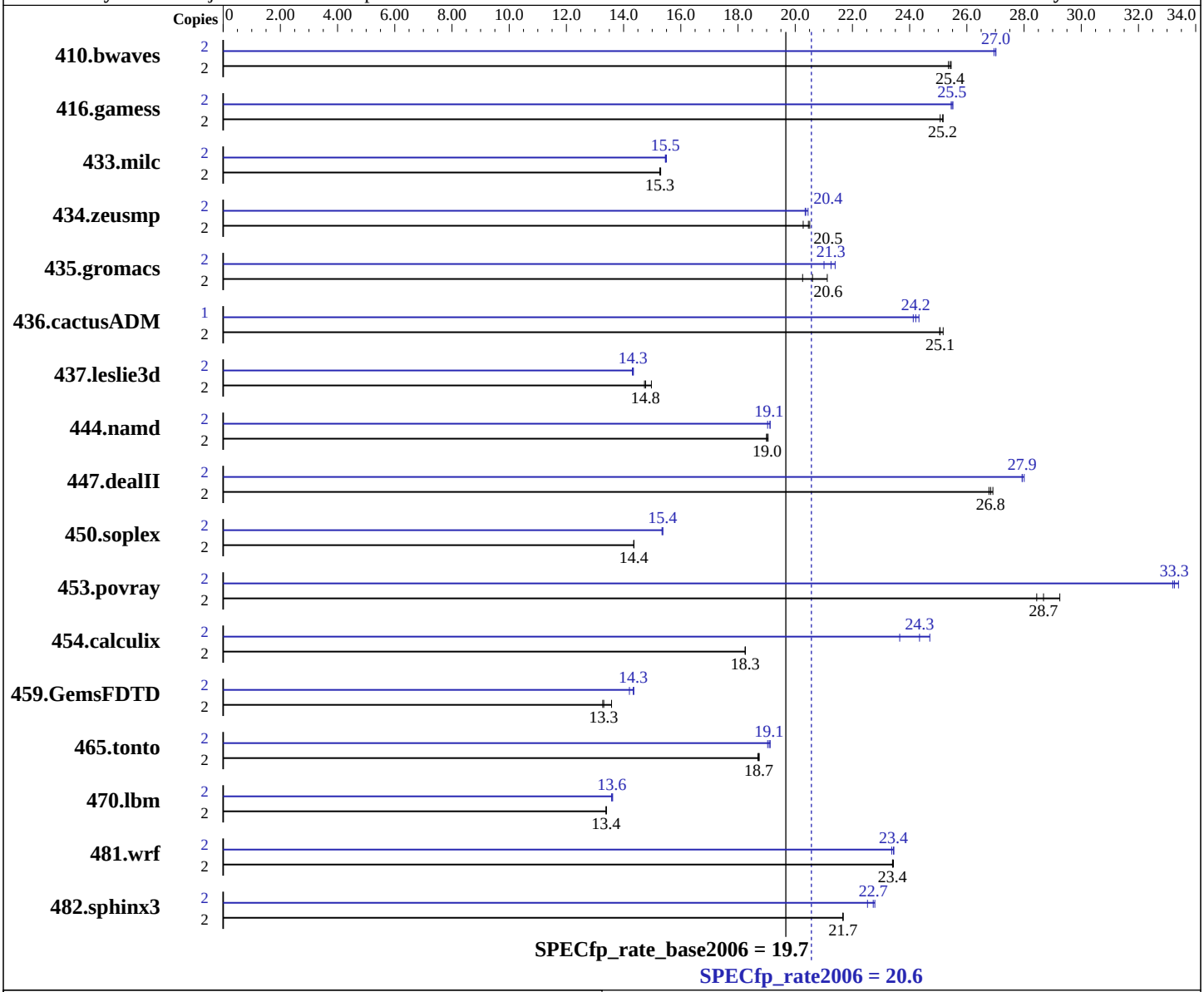
PRIMERGY RX100 S5, Intel Pentium Dual Core E2160, 1.80 GHz

SPECfp®_rate2006 = 20.6

SPECfp_rate_base2006 = 19.7

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

Test date: Apr-2008
Hardware Availability: Apr-2008
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Pentium Dual Core E2160
CPU Characteristics:	800 MHz system bus
CPU MHz:	1800
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:	1 MB I+D on chip per chip

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Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 - Build 20070725
Auto Parallel:	Yes
File System:	ext2
System State:	Multi-User Run Level 3
Base Pointers:	64-bit

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L3 Cache: None
Other Cache: None
Memory: 8 GB (4x2 GB PC2-6400E, 2 rank, CL 6-6-6, ECC)
Disk Subsystem: 1x SATA, 500 GB, 7200 rpm
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: binutils-2.17.50.0.5-0.1.x86_64

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	1068	25.5	1072	25.4	**1069**	**25.4**	2	1009	27.0	**1006**	**27.0**	1006	27.0
416.gamess	2	**1557**	**25.2**	1556	25.2	1562	25.1	2	1535	25.5	**1537**	**25.5**	1539	25.5
433.milc	2	1200	15.3	**1202**	**15.3**	1202	15.3	2	**1187**	**15.5**	1185	15.5	1187	15.5
434.zeusmp	2	887	20.5	898	20.3	**890**	**20.5**	2	890	20.4	894	20.3	**894**	**20.4**
435.gromacs	2	**693**	**20.6**	676	21.1	705	20.3	2	667	21.4	**672**	**21.3**	680	21.0
436.cactusADM	2	954	25.0	949	25.2	**954**	**25.1**	1	495	24.1	491	24.3	**494**	**24.2**
437.leslie3d	2	1256	15.0	1276	14.7	**1273**	**14.8**	2	1311	14.3	1314	14.3	**1312**	**14.3**
444.namd	2	844	19.0	**843**	**19.0**	842	19.1	2	**839**	**19.1**	843	19.0	839	19.1
447.dealII	2	855	26.8	850	26.9	**853**	**26.8**	2	817	28.0	819	27.9	**819**	**27.9**
450.soplex	2	1162	14.4	1161	14.4	**1162**	**14.4**	2	1085	15.4	**1086**	**15.4**	1087	15.3
453.povray	2	**371**	**28.7**	374	28.4	364	29.3	2	319	33.4	320	33.2	**320**	**33.3**
454.calculix	2	904	18.3	904	18.3	**904**	**18.3**	2	668	24.7	698	23.7	**678**	**24.3**
459.GemsFDTD	2	1563	13.6	1599	13.3	**1595**	**13.3**	2	1478	14.4	**1480**	**14.3**	1494	14.2
465.tonto	2	1050	18.7	**1051**	**18.7**	1053	18.7	2	**1031**	**19.1**	1029	19.1	1034	19.0
470.lbm	2	2051	13.4	**2052**	**13.4**	2053	13.4	2	2018	13.6	**2021**	**13.6**	2024	13.6
481.wrf	2	953	23.4	**955**	**23.4**	955	23.4	2	953	23.4	956	23.4	**953**	**23.4**
482.sphinx3	2	**1799**	**21.7**	1799	21.7	1798	21.7	2	**1715**	**22.7**	1730	22.5	1711	22.8

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
OMP_NUM_THREADS set to number of cores (default)
```

Platform Notes

```
BIOS configuration:
Hardware Prefetch = Enable, Adjacent Sector Prefetch = Enable
```

General Notes

```
All binaries were built with 64-bit Intel compiler except:
437.leslie3d, 450.soplex, 470.lbm, and 482.sphinx3 in peak
were built with 32-bit Intel compiler by changing
```

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General Notes (Continued)

```
the path for include and library files.

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

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

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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 (except as noted below):
`/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib -I/opt/intel/cc/10.1.008/include`

433.milc: `icc`

C++ benchmarks (except as noted below):
`icpc`

450.soplex: `/opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib -I/opt/intel/cc/10.1.008/include`

Fortran benchmarks (except as noted below):
`ifort`

437.leslie3d: `/opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib -I/opt/intel/fc/10.1.008/include`

Benchmarks using both Fortran and C:
`icc ifort`

Peak 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`
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`

Continued on next page

Peak Portability Flags (Continued)

465.tonto: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

433.milc: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias -auto-ilp32

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -scalar-rep- -prefetch -opt-malloc-options=3

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias -auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast -opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

Continued on next page

Peak Optimization Flags (Continued)

435.gromacs: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch -auto-ilp32`

436.cactusADM: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -prefetch -parallel -auto-ilp32`

454.calculix: `-fast -unroll-aggressive -auto-ilp32`

481.wrf: `-fast -auto-ilp32`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090713.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090713.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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