SPEC® CFP2006 Result

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Fujitsu

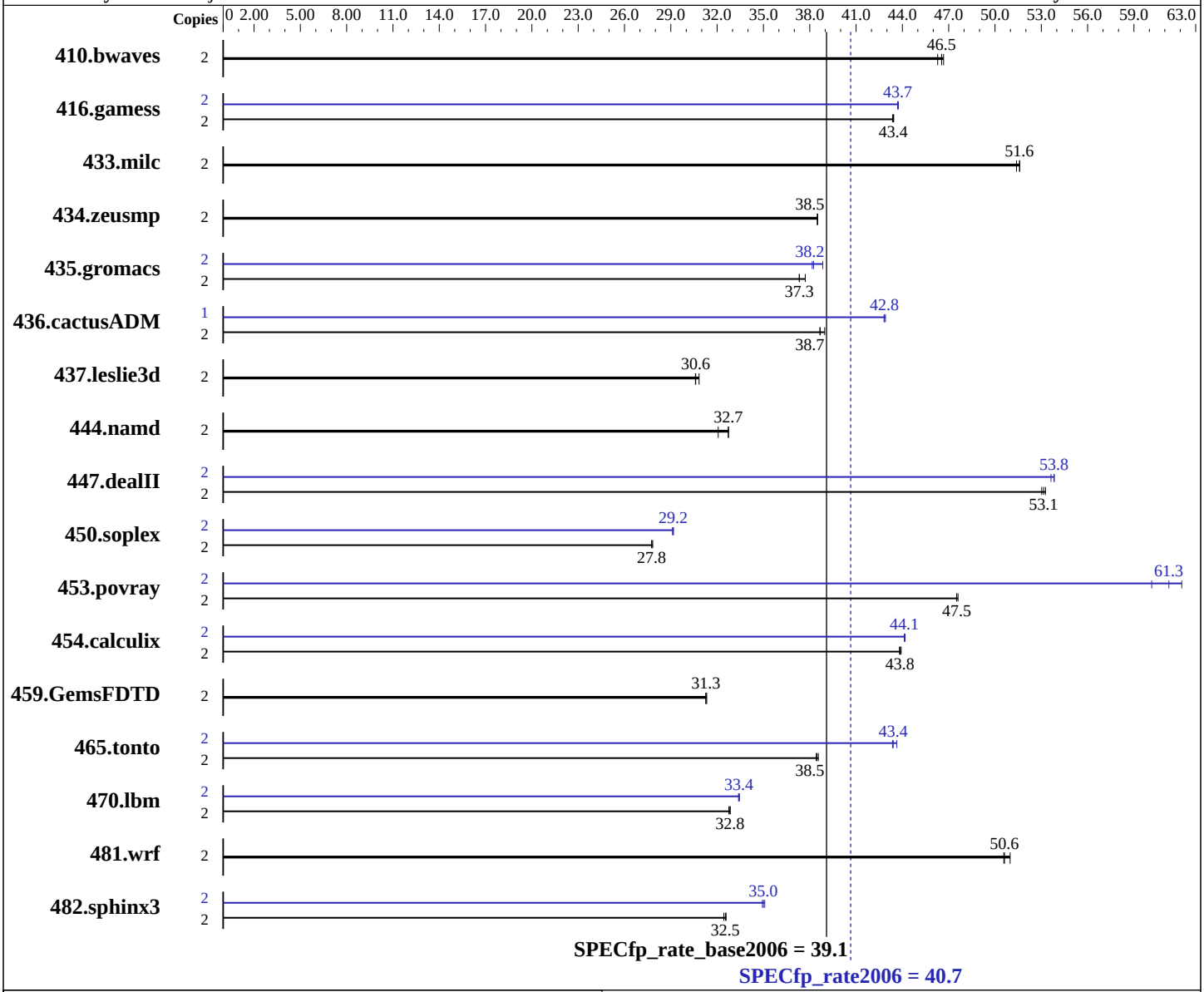
PRIMERGY RX100 S6, Intel Pentium G6950, 2.80 GHz

SPECfp®_rate2006 = 40.7

SPECfp_rate_base2006 = 39.1

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Jan-2010
Hardware Availability: Jan-2010
Software Availability: Nov-2009



Hardware

CPU Name:	Intel Pentium G6950
CPU Characteristics:	
CPU MHz:	2800
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:	256 KB I+D on chip per core

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Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-smp
Compiler:	Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091012 Package ID: l_cproc_p_11.1.059, l_cprof_p_11.1.059
Auto Parallel:	Yes
File System:	ext3
System State:	Multi-User Run Level 3

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L3 Cache: 3 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2x4 GB PC3-10600E, 2 rank, CL9-9-9, ECC, see add'l detail in notes)
Disk Subsystem: 1 x SATA, 250 GB, 7200 RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	582	46.7	587	46.3	**584**	**46.5**	2	582	46.7	587	46.3	**584**	**46.5**
416.gamess	2	901	43.4	**902**	**43.4**	903	43.4	2	896	43.7	895	43.7	**896**	**43.7**
433.milc	2	357	51.4	**356**	**51.6**	356	51.6	2	357	51.4	**356**	**51.6**	356	51.6
434.zeusmp	2	473	38.5	473	38.5	**473**	**38.5**	2	473	38.5	473	38.5	**473**	**38.5**
435.gromacs	2	383	37.3	379	37.7	**383**	**37.3**	2	368	38.8	**373**	**38.2**	374	38.2
436.cactusADM	2	618	38.7	**618**	**38.7**	613	39.0	1	279	42.9	**279**	**42.8**	279	42.8
437.leslie3d	2	**614**	**30.6**	610	30.8	615	30.6	2	**614**	**30.6**	610	30.8	615	30.6
444.namd	2	490	32.7	**490**	**32.7**	500	32.1	2	490	32.7	**490**	**32.7**	500	32.1
447.dealII	2	430	53.3	431	53.0	**430**	**53.1**	2	425	53.8	**425**	**53.8**	427	53.6
450.soplex	2	601	27.8	599	27.8	**601**	**27.8**	2	**572**	**29.2**	573	29.1	572	29.2
453.povray	2	224	47.5	**224**	**47.5**	224	47.6	2	**174**	**61.3**	171	62.1	177	60.2
454.calculix	2	376	43.9	**376**	**43.8**	377	43.8	2	374	44.2	**374**	**44.1**	374	44.1
459.GemsFDTD	2	**679**	**31.3**	679	31.3	677	31.3	2	**679**	**31.3**	679	31.3	677	31.3
465.tonto	2	510	38.6	512	38.4	**512**	**38.5**	2	454	43.4	451	43.6	**453**	**43.4**
470.lbm	2	837	32.8	**837**	**32.8**	839	32.8	2	822	33.4	**822**	**33.4**	823	33.4
481.wrf	2	438	51.0	**441**	**50.6**	442	50.6	2	438	51.0	**441**	**50.6**	442	50.6
482.sphinx3	2	**1198**	**32.5**	1202	32.4	1196	32.6	2	1111	35.1	1116	34.9	**1114**	**35.0**

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

Submit Notes

```
The config file option 'submit' was used.
 taskset has been used to bind processes to cores except
 for 436.cactusADM peak
```

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
KMP_AFFINITY set to "granularity=fine,scatter"
KMP_STACKSIZE set to 64M
```

Platform Notes

The system automatically configures the memory to run at 1066 MHz.

General Notes

For information about Fujitsu please visit: http://www.fujitsu.com

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

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:
-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch

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Base Optimization Flags (Continued)

C++ benchmarks:
`-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch`

Fortran benchmarks:
`-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch`

Benchmarks using both Fortran and C:
`-xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -m64`

482.sphinx3: `icc -m32`

C++ benchmarks (except as noted below):
`icpc -m64`

450.soplex: `icpc -m32`

Fortran benchmarks:
`ifort -m64`

Benchmarks using both Fortran and C:
`icc -m64 ifort -m64`

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`
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`
470.lbm: `-DSPEC_CPU_LP64`
481.wrf: `-DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: -xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch -auto-ilp32

482.sphinx3: -xSSSE3 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3 -no-prec-div -static -opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3 -no-prec-div -static -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3 -no-prec-div -static -unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3 -no-prec-div -static -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3 -no-prec-div -static -opt-prefetch -auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -xSSSE3 -ipo -O3 -no-prec-div -static -unroll2 -opt-prefetch -parallel -auto-ilp32

454.calculix: -xSSSE3 -ipo -O3 -no-prec-div -static -auto-ilp32

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Peak Optimization Flags (Continued)

481.wrf: `basepeak = yes`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revF.20100202.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revF.20100202.xml`

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For other inquiries, please contact webmaster@spec.org.

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