SPEC® CFP2006 Result

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Fujitsu Siemens Computers

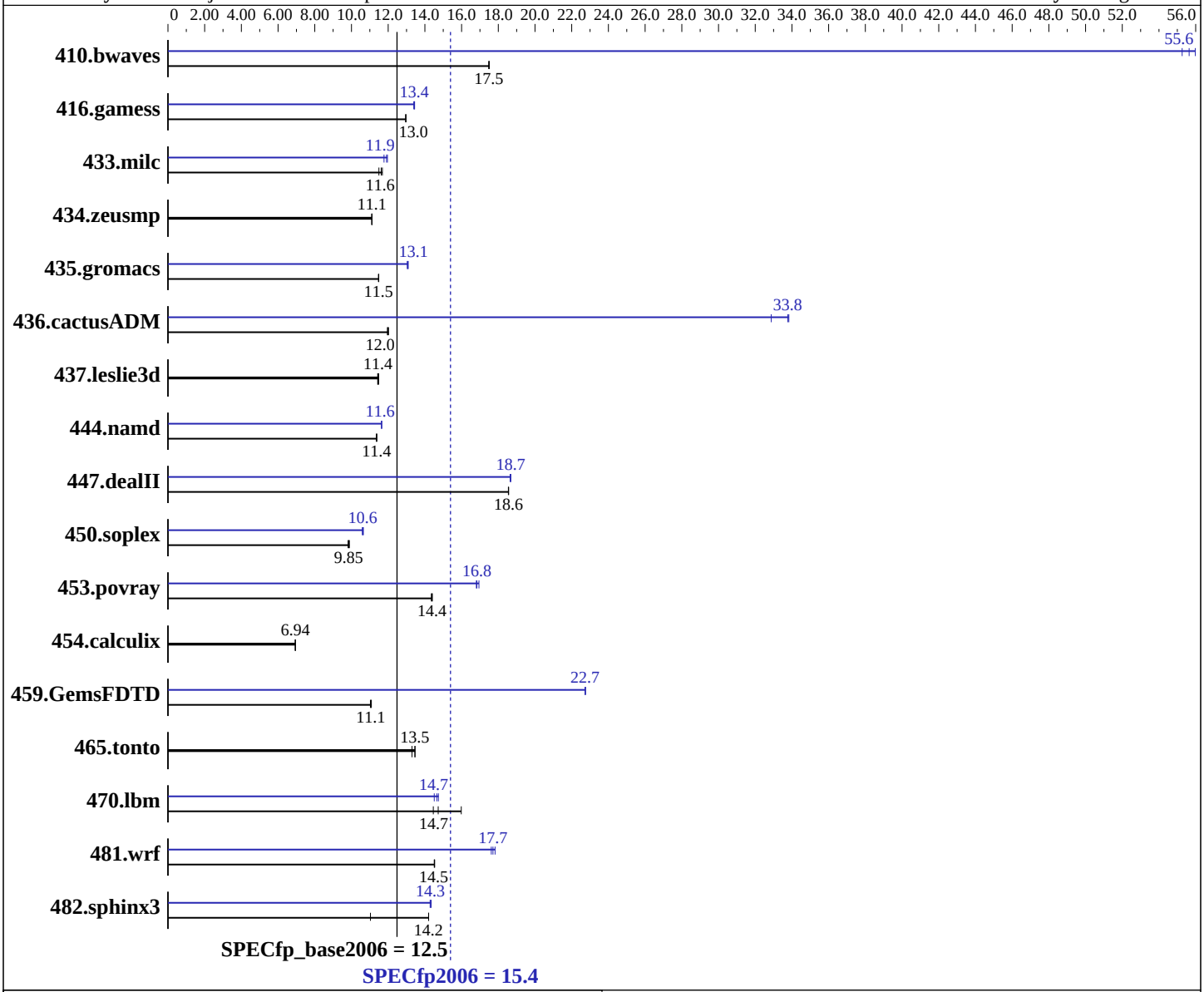
CELSIUS V840, AMD Opteron 2218

SPECfp®2006 = 15.4

SPECfp_base2006 = 12.5

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

Test date: Jan-2007
Hardware Availability: Nov-2006
Software Availability: Aug-2006



Hardware

CPU Name:	AMD Opteron 2218
CPU Characteristics:	Dual Core, 2.6 GHz, 2 MB L2-cache
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core

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Software

Operating System:	SLES 10 for AMD64/EM64T
Compiler:	QLogic Pathscale Compiler Suite 2.5
Auto Parallel:	Yes
File System:	ext3
System State:	Multi-User SuSE Run Level 3
Base Pointers:	64-bit
Peak Pointers:	64-bit
Other Software:	--

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2GB DDR2-667 CL5 dual rank ECC DIMMs registered)
Disk Subsystem: SATA II, 80 GB
Other Hardware: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	776	17.5	777	17.5	**777**	**17.5**	246	55.3	243	56.0	**244**	**55.6**
416.gamess	1511	13.0	1511	13.0	**1511**	**13.0**	**1458**	**13.4**	1462	13.4	1457	13.4
433.milc	799	11.5	786	11.7	**790**	**11.6**	**771**	**11.9**	768	12.0	780	11.8
434.zeusmp	820	11.1	**819**	**11.1**	818	11.1	820	11.1	**819**	**11.1**	818	11.1
435.gromacs	622	11.5	**622**	**11.5**	622	11.5	**546**	**13.1**	548	13.0	545	13.1
436.cactusADM	999	12.0	994	12.0	**997**	**12.0**	364	32.9	**354**	**33.8**	353	33.8
437.leslie3d	819	11.5	**821**	**11.4**	823	11.4	819	11.5	**821**	**11.4**	823	11.4
444.namd	705	11.4	706	11.4	**705**	**11.4**	**689**	**11.6**	689	11.6	689	11.6
447.dealII	616	18.6	617	18.5	**616**	**18.6**	613	18.7	614	18.6	**613**	**18.7**
450.soplex	844	9.89	**846**	**9.85**	850	9.81	788	10.6	**785**	**10.6**	783	10.6
453.povray	371	14.4	369	14.4	**370**	**14.4**	**316**	**16.8**	314	16.9	317	16.8
454.calculix	1188	6.95	1190	6.93	**1188**	**6.94**	1188	6.95	1190	6.93	**1188**	**6.94**
459.GemsFDTD	957	11.1	**959**	**11.1**	962	11.0	466	22.8	**467**	**22.7**	467	22.7
465.tonto	731	13.5	740	13.3	**731**	**13.5**	731	13.5	740	13.3	**731**	**13.5**
470.lbm	860	16.0	**933**	**14.7**	950	14.5	932	14.7	**938**	**14.7**	947	14.5
481.wrf	770	14.5	769	14.5	**770**	**14.5**	627	17.8	**631**	**17.7**	634	17.6
482.sphinx3	1372	14.2	**1372**	**14.2**	1767	11.0	1364	14.3	1359	14.3	**1362**	**14.3**

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

Operating System Notes

```
powersave -f is applied to set CPU to maximum frequency prior to run
stacksize is set to unlimited prior to run
```

General Notes

```
Binaries are generated on an Opteron-based system
         running Suse 9.3.

BIOS default settings with
Node memory interleave disabled, SRAT enabled

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:
pathcc

C++ benchmarks:
pathCC

Fortran benchmarks:
pathf95

Benchmarks using both Fortran and C:
pathcc pathf95

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
436.cactusADM: -DSPEC_CPU_LP64 -fno-second-underscore
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64 -DSPEC_CPU_TABLE_WORKAROUND
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX -fno-second-underscore
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-Ofast

C++ benchmarks:
-Ofast

Continued on next page

Base Optimization Flags (Continued)

Fortran benchmarks:
`-Ofast`

Benchmarks using both Fortran and C:
`-Ofast`

Peak Compiler Invocation

C benchmarks:
`pathcc`

C++ benchmarks:
`pathCC`

Fortran benchmarks:
`pathf95`

Benchmarks using both Fortran and C:
`pathcc pathf95`

Peak Portability Flags

`Same as Base Portability Flags`

Peak Optimization Flags

C benchmarks:

433.milc: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2) `-Ofast`

470.lbm: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2)

482.sphinx3: `-Ofast -apo`

C++ benchmarks:

444.namd: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2) `-Ofast`

447.dealII: `-Ofast -fno-exceptions`

450.soplex: `-O3 -OPT:IEEE_arith=3 -CG:load_exe=0 -CG:movnti=1 -LNO:minvariant=off -fno-exceptions`

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Peak Optimization Flags (Continued)

453.povray: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2) `-Ofast -fno-fast-math`

Fortran benchmarks:

410.bwaves: `-Ofast -apo`

416.gamess: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2) `-Ofast`

434.zeusmp: `basepeak = yes`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `Same as 410.bwaves`

465.tonto: `basepeak = yes`

Benchmarks using both Fortran and C:

435.gromacs: `-O3 -OPT:rsqrt=2 -OPT:ro=3`

436.cactusADM: `-Ofast -apo`

454.calculix: `basepeak = yes`

481.wrf: `Same as 436.cactusADM`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.14.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.14.xml`

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