



SPEC[®] CFP2006 Result

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Fujitsu Siemens Computers

SPECfp[®]2006 = 15.4

CELSIUS V840, AMD Opteron 2218

SPECfp_base2006 = 12.5

CPU2006 license: 22

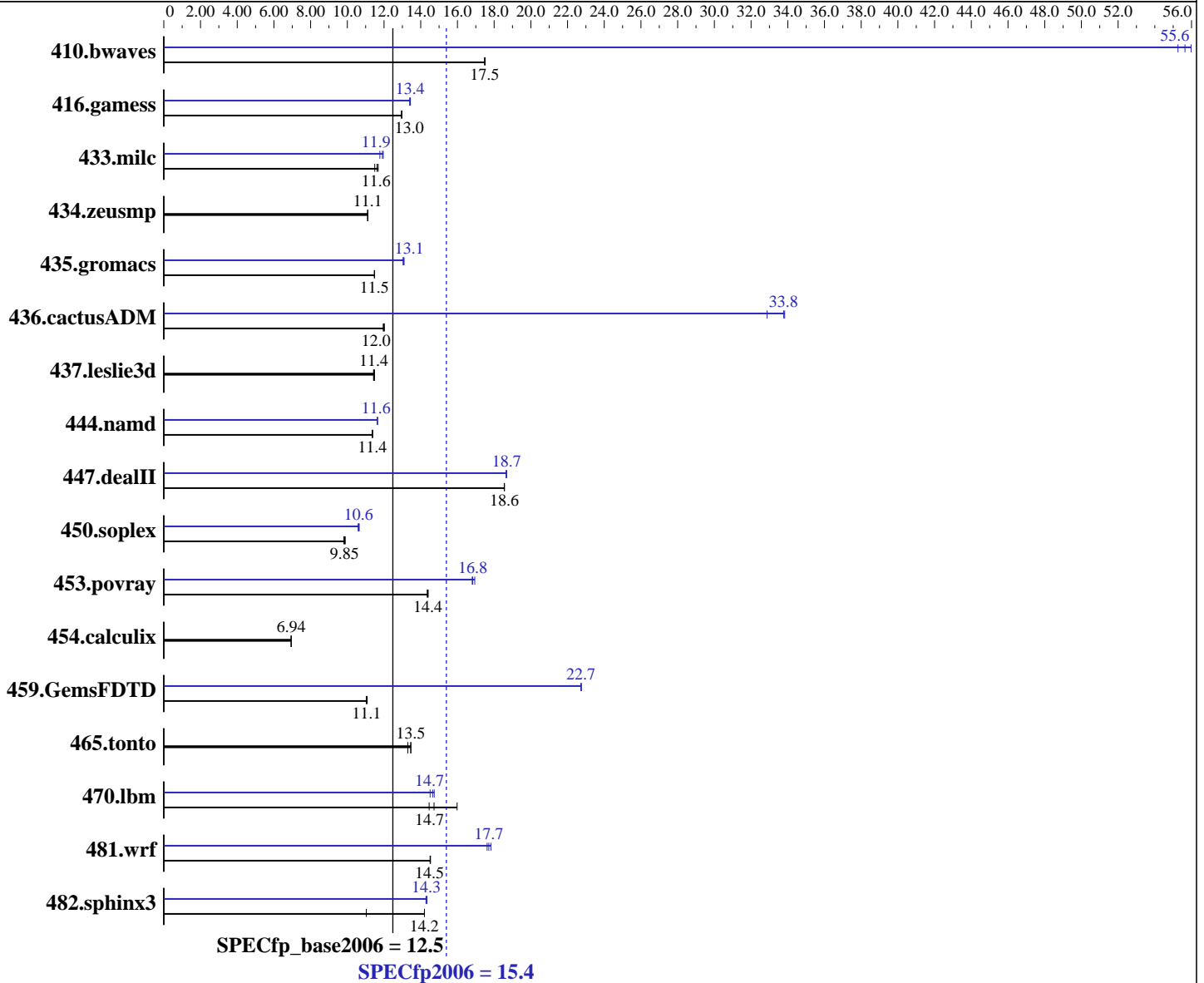
Test sponsor: Fujitsu Siemens Computers

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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Hardware (Continued)

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

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

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General Notes (Continued)

For information about Fujitsu Siemens Computers in your country please see:
<http://www.fujitsu-siemens.com/countries>

Compiler Invocation

C benchmarks:
pathcc

C++ benchmarks:
pathCC

Fortran benchmarks:
pathf95

Benchmarks using both Fortran and C:
pathcc pathf95

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

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Base Optimization Flags (Continued)

Fortran benchmarks:

-Ofast

Benchmarks using both Fortran and C:

-Ofast

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

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

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Peak Optimization Flags (Continued)

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

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