



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp®_rate2006 = 41.3

Acer Altos R5250 (AMD Opteron 2350)

SPECfp_rate_base2006 = 37.7

CPU2006 license: 97

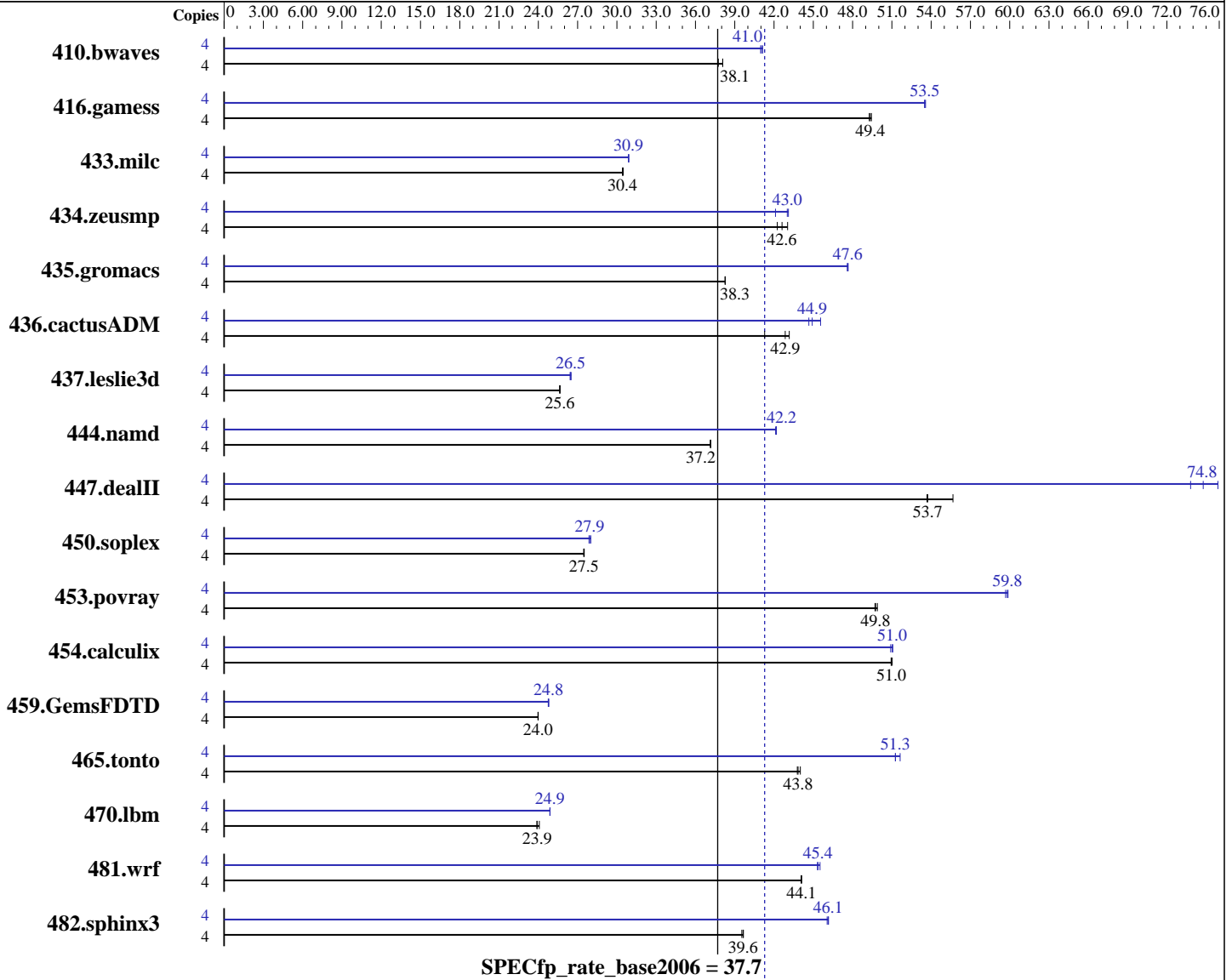
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2008

Hardware Availability: Apr-2008

Software Availability: May-2008



Hardware

CPU Name: AMD Opteron 2350
 CPU Characteristics:
 CPU MHz: 2000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 512 KB I+D on chip per core

Continued on next page

Software

Operating System: SuSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: PGI Server Complete Version 7.2 PathScale Compiler Suite Version 3.1
 Auto Parallel: No
 File System: ReiserFS
 System State: Default
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 41.3

Acer Altos R5250 (AMD Opteron 2350)

SPECfp_rate_base2006 = 37.7

CPU2006 license: 97

Test date: May-2008

Test sponsor: Acer Incorporated

Hardware Availability: Apr-2008

Tested by: Acer Incorporated

Software Availability: May-2008

L3 Cache: 2 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (4x2GB, DDR2-667, CL5, Reg, Dual Rank)
Disk Subsystem: 1x160GB SATA, 7200 RPM
Other Hardware: None

Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1440	37.7	<u>1427</u>	<u>38.1</u>	1427	38.1	4	1322	41.1	1327	41.0	<u>1325</u>	<u>41.0</u>
416.gamess	4	<u>1587</u>	<u>49.4</u>	1590	49.3	1584	49.4	4	1464	53.5	<u>1464</u>	<u>53.5</u>	1462	53.6
433.milc	4	1205	30.5	1207	30.4	<u>1206</u>	<u>30.4</u>	4	<u>1189</u>	<u>30.9</u>	1189	30.9	1188	30.9
434.zeusmp	4	862	42.2	846	43.0	<u>854</u>	<u>42.6</u>	4	<u>846</u>	<u>43.0</u>	864	42.1	845	43.1
435.gromacs	4	746	38.3	<u>746</u>	<u>38.3</u>	747	38.3	4	600	47.6	599	47.7	<u>600</u>	<u>47.6</u>
436.cactusADM	4	1107	43.2	1158	41.3	<u>1115</u>	<u>42.9</u>	4	1070	44.7	<u>1064</u>	<u>44.9</u>	1049	45.6
437.leslie3d	4	1467	25.6	1466	25.7	<u>1466</u>	<u>25.6</u>	4	1419	26.5	<u>1421</u>	<u>26.5</u>	1423	26.4
444.namd	4	864	37.1	<u>863</u>	<u>37.2</u>	863	37.2	4	762	42.1	<u>761</u>	<u>42.2</u>	761	42.2
447.dealII	4	<u>852</u>	<u>53.7</u>	852	53.7	822	55.7	4	603	75.9	620	73.8	<u>612</u>	<u>74.8</u>
450.soplex	4	1214	27.5	<u>1214</u>	<u>27.5</u>	1213	27.5	4	<u>1195</u>	<u>27.9</u>	1197	27.9	1191	28.0
453.povray	4	<u>428</u>	<u>49.8</u>	428	49.7	427	49.9	4	<u>356</u>	<u>59.8</u>	355	59.9	357	59.7
454.calculix	4	647	51.0	648	50.9	<u>648</u>	<u>51.0</u>	4	<u>647</u>	<u>51.0</u>	648	50.9	646	51.1
459.GemsFDTD	4	1769	24.0	1770	24.0	<u>1770</u>	<u>24.0</u>	4	<u>1713</u>	<u>24.8</u>	1714	24.8	1711	24.8
465.tonto	4	894	44.0	899	43.8	<u>898</u>	<u>43.8</u>	4	762	51.6	<u>768</u>	<u>51.3</u>	768	51.3
470.lbm	4	2283	24.1	2301	23.9	<u>2299</u>	<u>23.9</u>	4	2208	24.9	<u>2208</u>	<u>24.9</u>	2209	24.9
481.wrf	4	1014	44.1	1013	44.1	<u>1013</u>	<u>44.1</u>	4	986	45.3	<u>985</u>	<u>45.4</u>	982	45.5
482.sphinx3	4	1966	39.7	1972	39.5	<u>1967</u>	<u>39.6</u>	4	1689	46.2	1693	46.1	<u>1690</u>	<u>46.1</u>

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

Operating System Notes

```
'numactl' was used to bind copies to the cores
Environment variable PGI_HUGE_PAGES set to 150
'ulimit -s unlimited' was used to set environment stack size
'ulimit -l 1228800' was used to set environment locked pages in memory quantity
Set vm/nr_hugepages=600 in /etc/sysctl.conf
mount -t hugetlbfs nodev /mnt/hugepages
```

Base Compiler Invocation

C benchmarks:
pgcc

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 41.3

Acer Altos R5250 (AMD Opteron 2350)

SPECfp_rate_base2006 = 37.7

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2008

Hardware Availability: Apr-2008

Software Availability: May-2008

Base Compiler Invocation (Continued)

C++ benchmarks:

pgcpp

Fortran benchmarks:

pgf95

Benchmarks using both Fortran and C:

pgcc pgf95

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 -Mnomain
436.cactusADM: -DSPEC_CPU_LP64 -Mnomain
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 -Mnomain
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 -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:150
-tp barcelona-64 -Bstatic_pgi
```

C++ benchmarks:

```
-fast -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:150
--zc_eh -tp barcelona-64 -Bstatic_pgi
```

Fortran benchmarks:

```
-fast -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:150
-tp barcelona-64 -Bstatic_pgi
```

Benchmarks using both Fortran and C:

```
-fast -Mipa=fast -Mipa=inline -Mfprelaxed -Msmartalloc=huge:150
-tp barcelona-64 -Bstatic_pgi
```



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 41.3

Acer Altos R5250 (AMD Opteron 2350)

SPECfp_rate_base2006 = 37.7

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2008

Hardware Availability: Apr-2008

Software Availability: May-2008

Base Other Flags

C benchmarks:

-w -Mipa=jobs:4

C++ benchmarks:

-w -Mipa=jobs:4

Fortran benchmarks:

-w -Mipa=jobs:4

Benchmarks using both Fortran and C:

-w -Mipa=jobs:4

Peak Compiler Invocation

C benchmarks (except as noted below):

pathcc

433.milc: pgcc

C++ benchmarks (except as noted below):

pathCC

444.namd: pgcpp

Fortran benchmarks (except as noted below):

pathf95

410.bwaves: pgf95

434.zeusmp: pgf95

Benchmarks using both Fortran and C (except as noted below):

pgcc pgf95

436.cactusADM: pathcc pathf95

481.wrf: pathcc pathf95

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 -Mnomain

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 4



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 41.3

Acer Altos R5250 (AMD Opteron 2350)

SPECfp_rate_base2006 = 37.7

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2008

Hardware Availability: Apr-2008

Software Availability: May-2008

Peak Portability Flags (Continued)

```

436.cactusADM: -DSPEC_CPU_LP64 -fno-second-underscore
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -Mnomain
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

```

Peak Optimization Flags

C benchmarks:

```

433.milc: -fastsse -Msmartalloc=huge:150 -Msafeptr -Mfprelaxed
-Mipa=inline -Mipa=arg -Mipa=const -Mipa=ptr -Mipa=shape
-tp barcelona-64 -Bstatic_pgi

```

```

470.lbm: -march=barcelona -Ofast -m3dnow

```

```

482.sphinx3: -march=barcelona -Ofast

```

C++ benchmarks:

```

444.namd: -Mphi(pass 1) -Mipa=fast(pass 2) -Mipa=inline(pass 2)
-Mpfo(pass 2) -fast -Mfprelaxed -Msmartalloc=huge:150
--zc_eh -Mnodepchk -Munroll=n:4 -Munroll=m:8
-tp barcelona-64 -Bstatic_pgi

```

```

447.deallI: -march=barcelona -Ofast -static -INLINE:aggressive=on
-OPT:malloc_alg=1 -m32 -fno-exceptions

```

```

450.soplex: -march=barcelona -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -m32 -O3 -TENV:frame_pointer=off
-LNO:prefetch=1

```

```

453.povray: -march=barcelona -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -Ofast -CG:load_exe=0

```

Fortran benchmarks:

```

410.bwaves: -Mphi(pass 1) -Mipa=fast(pass 2) -Mipa=inline(pass 2)
-Mpfo(pass 2) -fastsse -Mfprelaxed -Msmartalloc
-Mprefetch=distance:12 -Mprefetch=nta -tp barcelona-64
-Bstatic_pgi

```

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 41.3

Acer Altos R5250 (AMD Opteron 2350)

SPECfp_rate_base2006 = 37.7

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2008

Hardware Availability: Apr-2008

Software Availability: May-2008

Peak Optimization Flags (Continued)

416.gamess: -march=barcelona -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -O2 -OPT:Ofast -OPT:ro=3
-OPT:unroll_size=256

434.zeusmp: -fastsse -Mfprelaxed -Msmartalloc=huge:150 -Mipa=fast
-Mipa=inline -tp barcelona-64 -Bstatic_pgi

437.leslie3d: -march=barcelona -Ofast -m3dnw -OPT:unroll_size=256
-CG:load_exe=0 -OPT:malloc_alg=1

459.GemsFDTD: -march=barcelona -Ofast -LNO:fission=2 -LNO:simd=2
-OPT:malloc_alg=1

465.tonto: -march=barcelona -Ofast -OPT:malloc_alg=1
-OPT:alias=no_f90_pointer_alias -LNO:blocking=off
-CG:load_exe=1 -IPA:plimit=525

Benchmarks using both Fortran and C:

435.gromacs: -fast -Mfpapprox=rsqrt -Mipa=fast -Mipa=inline -Mfprelaxed
-Msmartalloc=huge:150 -tp barcelona-64 -Bstatic_pgi

436.cactusADM: -march=barcelona -fb_create fbdata(pass 1)
-fb_opt fbdata(pass 2) -Ofast -WOPT:aggstr=0

454.calculix: -fastsse -Mfprelaxed -Msmartalloc=huge:150 -Mipa=fast
-Mipa=inline -tp barcelona-64 -Bstatic_pgi

481.wrf: -march=barcelona -Ofast -LNO:blocking=off
-LNO:prefetch_ahead=10 -OPT:malloc_alg=1 -m3dnw
-LANG:copyinout=off -IPA:callee_limit=5000

Peak Other Flags

C benchmarks:

433.milc: -w -Mipa=jobs:4

C++ benchmarks:

444.namd: -w -Mipa=jobs:4(pass 2)

Fortran benchmarks:

410.bwaves: -w -Mipa=jobs:4(pass 2)

434.zeusmp: -w -Mipa=jobs:4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp_rate2006 = 41.3

Acer Altos R5250 (AMD Opteron 2350)

SPECfp_rate_base2006 = 37.7

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: May-2008

Hardware Availability: Apr-2008

Software Availability: May-2008

Peak Other Flags (Continued)

Benchmarks using both Fortran and C:

435.gromacs: -w -Mipa=jobs:4

454.calculix: -w -Mipa=jobs:4

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/amd123GH-flags.20090713.01.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/amd123GH-flags.20090713.01.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 17:47:12 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 June 2008.