



# SPEC® CFP2006 Result

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## Acer Incorporated

## SPECfp®\_rate2006 = 33.1

## Acer Altos G540 (Intel Xeon E5345)

## SPECfp\_rate\_base2006 = 32.9

CPU2006 license: 97

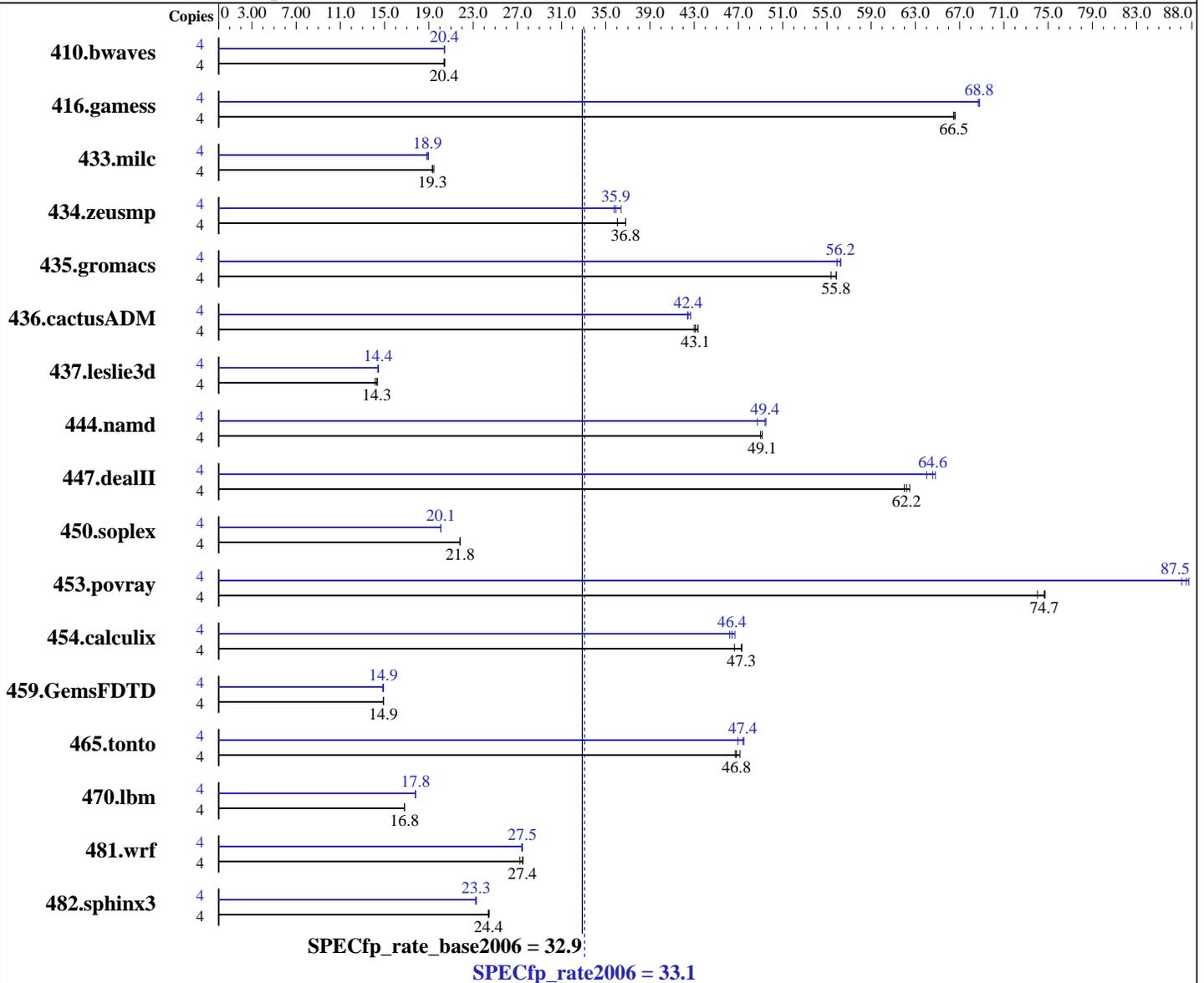
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jul-2007

Hardware Availability: Nov-2006

Software Availability: Jun-2007



### Hardware

CPU Name: Intel Xeon E5345  
 CPU Characteristics: 1333MHz system bus  
 CPU MHz: 2333  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip  
 CPU(s) orderable: 1, 2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

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### Software

Operating System: SUSE Linux Enterprise Server 10 EM64T (kernel 2.6.16.21-0.8-smp)  
 Compiler: Intel C++ Compiler for Linux32 version 10.0 Build 20070426 Package ID: l\_cc\_p\_10.0.023  
 Intel Fortran Compiler for Linux32 version 10.0 Build 20070426 Package ID: l\_fc\_p\_10.0.023  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Default

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L3 Cache: None  
Other Cache: None  
Memory: 16 GB (8 x 2048MB ECC FB-DIMM DDR2-667 CL5-5-5)  
Disk Subsystem: 1 x 73 GB 10000RPM SAS HDD  
Other Hardware: None

Base Pointers: 32-bit  
Peak Pointers: 32-bit  
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	2659	20.4	<b>2665</b>	<b>20.4</b>	2669	20.4	4	2666	20.4	<b>2662</b>	<b>20.4</b>	2661	20.4
416.gamess	4	1176	66.6	1178	66.5	<b>1178</b>	<b>66.5</b>	4	<b>1139</b>	<b>68.8</b>	1140	68.7	1138	68.8
433.milc	4	1901	19.3	1887	19.5	<b>1900</b>	<b>19.3</b>	4	<b>1946</b>	<b>18.9</b>	1952	18.8	1936	19.0
434.zeusmp	4	1010	36.0	<b>989</b>	<b>36.8</b>	989	36.8	4	<b>1013</b>	<b>35.9</b>	1000	36.4	1018	35.8
435.gromacs	4	516	55.4	511	55.9	<b>512</b>	<b>55.8</b>	4	508	56.3	<b>508</b>	<b>56.2</b>	511	55.9
436.cactusADM	4	<b>1109</b>	<b>43.1</b>	1112	43.0	1103	43.3	4	1120	42.7	1127	42.4	<b>1126</b>	<b>42.4</b>
437.leslie3d	4	2621	14.3	2656	14.2	<b>2629</b>	<b>14.3</b>	4	2606	14.4	2610	14.4	<b>2609</b>	<b>14.4</b>
444.namd	4	653	49.1	655	49.0	<b>653</b>	<b>49.1</b>	4	659	48.7	<b>649</b>	<b>49.4</b>	648	49.5
447.dealII	4	<b>736</b>	<b>62.2</b>	732	62.5	738	62.0	4	<b>709</b>	<b>64.6</b>	715	64.0	706	64.8
450.soplex	4	1528	21.8	1530	21.8	<b>1528</b>	<b>21.8</b>	4	<b>1660</b>	<b>20.1</b>	1662	20.1	1660	20.1
453.povray	4	285	74.7	<b>285</b>	<b>74.7</b>	287	74.0	4	244	87.1	<b>243</b>	<b>87.5</b>	243	87.7
454.calculix	4	<b>698</b>	<b>47.3</b>	697	47.3	708	46.6	4	714	46.2	<b>711</b>	<b>46.4</b>	707	46.7
459.GemsFDTD	4	2850	14.9	<b>2850</b>	<b>14.9</b>	2846	14.9	4	2851	14.9	<b>2851</b>	<b>14.9</b>	2861	14.8
465.tonto	4	835	47.1	<b>841</b>	<b>46.8</b>	843	46.7	4	<b>830</b>	<b>47.4</b>	829	47.5	838	46.9
470.lbm	4	3272	16.8	3272	16.8	<b>3272</b>	<b>16.8</b>	4	3090	17.8	<b>3089</b>	<b>17.8</b>	3089	17.8
481.wrf	4	<b>1628</b>	<b>27.4</b>	1641	27.2	1624	27.5	4	<b>1628</b>	<b>27.5</b>	1631	27.4	1626	27.5
482.sphinx3	4	3188	24.5	<b>3195</b>	<b>24.4</b>	3199	24.4	4	<b>3349</b>	<b>23.3</b>	3357	23.2	3347	23.3

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

## General Notes

All programs compiled with the 64-bit compiler except 437.leslie3d, 450.soplex, 470.lbm and 482.sphinx3, at peak, compiled with the 32-bit compiler

taskset was used to bind copies to cores

## Base Compiler Invocation

C benchmarks:  
icc

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## Base Compiler Invocation (Continued)

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  
436.cactusADM: -DSPEC\_CPU\_LP64  
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  
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 -auto-ilp32

C++ benchmarks:  
-fast -auto-ilp32

Fortran benchmarks:  
-fast

Benchmarks using both Fortran and C:  
435.gromacs: -fast -auto-ilp32 -nofor\_main(\*)  
436.cactusADM: Same as 435.gromacs

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## Base Optimization Flags (Continued)

454.calculix: Same as 435.gromacs

481.wrf: -fast -auto-ilp32

(\*) Indicates an optimization flag that was found in a portability variable.

## Peak Compiler Invocation

C benchmarks (except as noted below):

/opt/intel/cc/10.0.023/bin/icc -L/opt/intel/cc/10.0.023/lib  
-I/opt/intel/cc/10.0.023/include

433.milc: icc

C++ benchmarks (except as noted below):

icpc

450.soplex: /opt/intel/cc/10.0.023/bin/icpc -L/opt/intel/cc/10.0.023/lib  
-I/opt/intel/cc/10.0.023/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /opt/intel/fc/10.0.023/bin/ifort -L/opt/intel/fc/10.0.023/lib  
-I/opt/intel/fc/10.0.023/include

Benchmarks using both Fortran and C:

icc ifort

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

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

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-scalar-rep- -prefetch

482.sphinx3: -fast -unroll2

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## Peak Optimization Flags (Continued)

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) -xT -ipo -O3  
-no-prec-div

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

Fortran benchmarks:

410.bwaves: -fast

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: Same as 434.zeusmp

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

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

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -auto-ilp32  
-nofor\_main(\*)

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-auto-ilp32 -nofor\_main(\*)

454.calculix: -fast -auto-ilp32 -nofor\_main(\*)

481.wrf: -fast -auto-ilp32

(\*) Indicates an optimization flag that was found in a portability variable.

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.16.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.16.xml>



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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