



# SPEC<sup>®</sup> CFP2006 Result

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## Acer Incorporated

SPECfp<sup>®</sup>\_rate2006 = 57.1

## Acer Altos G540 (Intel Xeon E5345)

SPECfp\_rate\_base2006 = 55.6

CPU2006 license: 97

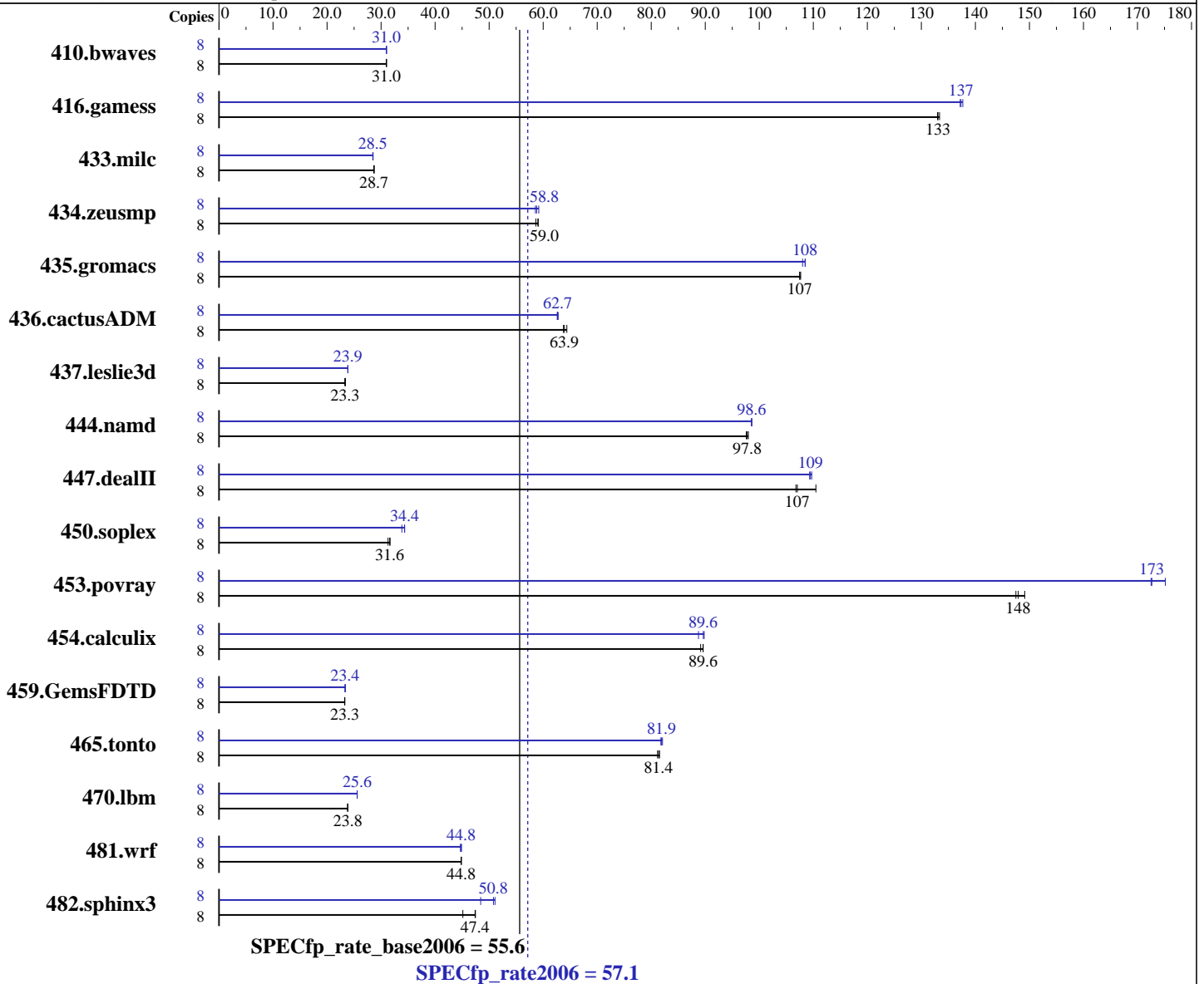
Test date: Jul-2007

Test sponsor: Acer Incorporated

Hardware Availability: Nov-2006

Tested by: Acer Incorporated

Software Availability: Jun-2007



### Hardware

CPU Name: Intel Xeon E5345  
 CPU Characteristics: 1333MHz system bus  
 CPU MHz: 2333  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 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	8	<b>3509</b>	<b>31.0</b>	3509	31.0	3509	31.0	8	<b>3508</b>	<b>31.0</b>	3508	31.0	3508	31.0
416.gamess	8	1175	133	<b>1177</b>	<b>133</b>	1178	133	8	<b>1141</b>	<b>137</b>	1142	137	1138	138
433.milc	8	2556	28.7	2563	28.7	<b>2561</b>	<b>28.7</b>	8	2579	28.5	<b>2579</b>	<b>28.5</b>	2575	28.5
434.zeusmp	8	<b>1233</b>	<b>59.0</b>	1241	58.6	1232	59.1	8	1230	59.2	1243	58.6	<b>1238</b>	<b>58.8</b>
435.gromacs	8	531	108	<b>531</b>	<b>107</b>	531	107	8	<b>527</b>	<b>108</b>	529	108	526	109
436.cactusADM	8	1500	63.8	<b>1495</b>	<b>63.9</b>	1485	64.4	8	1527	62.6	<b>1526</b>	<b>62.7</b>	1523	62.8
437.leslie3d	8	<b>3221</b>	<b>23.3</b>	3228	23.3	3213	23.4	8	3150	23.9	<b>3151</b>	<b>23.9</b>	3156	23.8
444.namd	8	<b>656</b>	<b>97.8</b>	655	98.0	657	97.6	8	651	98.6	651	98.6	<b>651</b>	<b>98.6</b>
447.dealII	8	828	110	<b>855</b>	<b>107</b>	857	107	8	<b>836</b>	<b>109</b>	837	109	834	110
450.soplex	8	2132	31.3	2108	31.7	<b>2111</b>	<b>31.6</b>	8	1971	33.8	1942	34.4	<b>1942</b>	<b>34.4</b>
453.povray	8	285	149	<b>288</b>	<b>148</b>	289	147	8	<b>246</b>	<b>173</b>	243	175	247	173
454.calculix	8	737	89.6	740	89.2	<b>737</b>	<b>89.6</b>	8	735	89.8	744	88.7	<b>736</b>	<b>89.6</b>
459.GemsFDTD	8	3651	23.2	<b>3648</b>	<b>23.3</b>	3644	23.3	8	<b>3635</b>	<b>23.4</b>	3640	23.3	3629	23.4
465.tonto	8	965	81.5	<b>968</b>	<b>81.4</b>	970	81.2	8	963	81.8	<b>961</b>	<b>81.9</b>	959	82.1
470.lbm	8	4614	23.8	4613	23.8	<b>4613</b>	<b>23.8</b>	8	<b>4298</b>	<b>25.6</b>	4297	25.6	4298	25.6
481.wrf	8	1992	44.9	<b>1994</b>	<b>44.8</b>	1994	44.8	8	2000	44.7	<b>1993</b>	<b>44.8</b>	1991	44.9
482.sphinx3	8	3454	45.1	3285	47.5	<b>3290</b>	<b>47.4</b>	8	3219	48.4	<b>3069</b>	<b>50.8</b>	3052	51.1

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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