



# SPEC<sup>®</sup> CFP2006 Result

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## Acer Incorporated

## SPECfp<sup>®</sup>\_rate2006 = 72.0

## Acer AR380 F1(Intel Xeon E5502)

## SPECfp\_rate\_base2006 = 69.9

CPU2006 license: 97

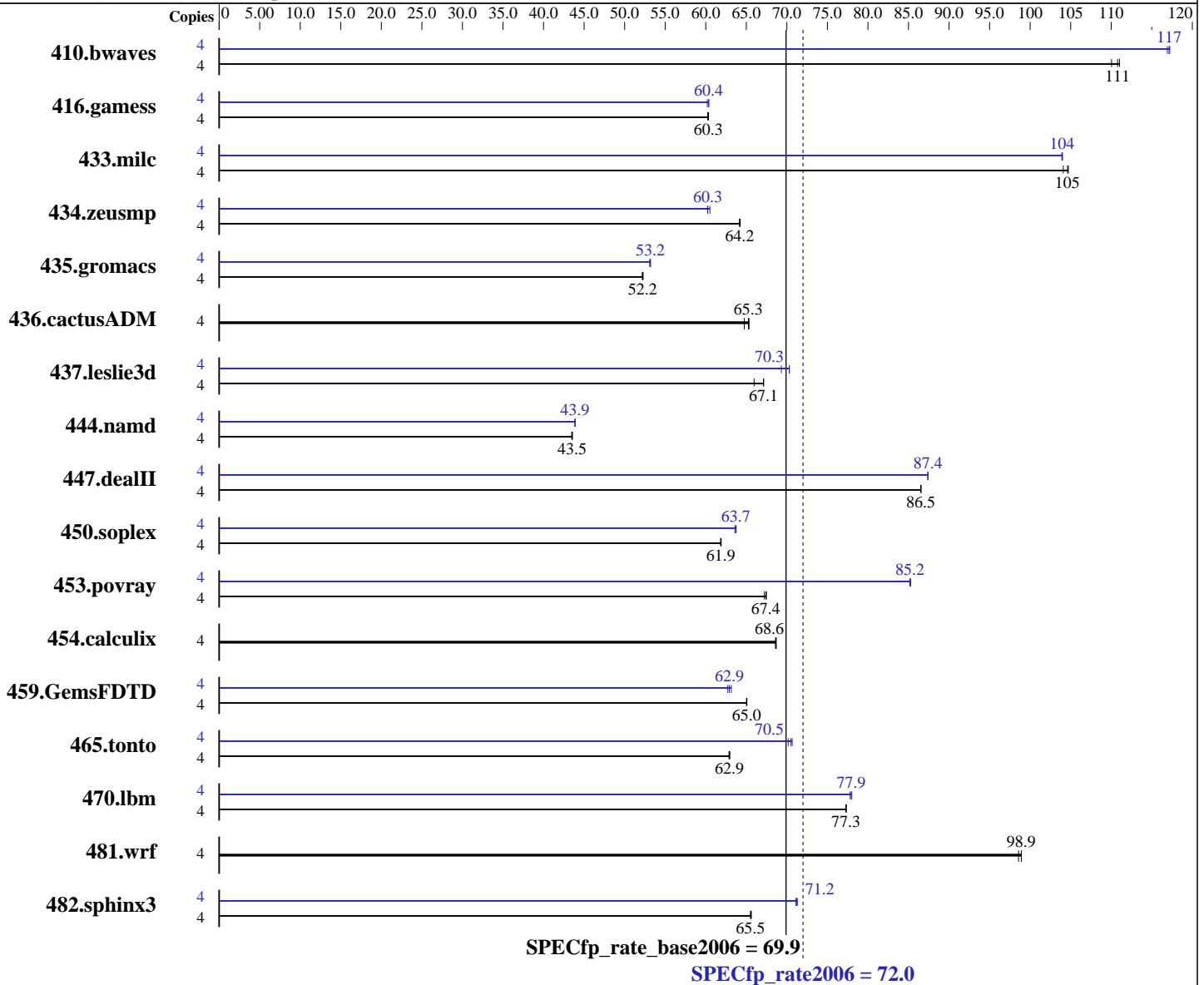
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Mar-2010

Hardware Availability: Jan-2010

Software Availability: Oct-2009



### Hardware

CPU Name: Intel Xeon E5502  
 CPU Characteristics:  
 CPU MHz: 1867  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core

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### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64)  
 Kernel 2.6.27.19-5  
 Compiler: Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1  
 Build 20091012 Package ID: l\_cproc\_p\_11.1.059, l\_cprof\_p\_11.1.059  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)

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L3 Cache: 4 MB I+D on chip per chip  
Other Cache: None  
Memory: 24 GB (12 x 2GB DDR3-1333 RDIMM, running at 800 MHz)  
Disk Subsystem: 1000 GB SATA II, 7200 RPM  
Other Hardware: None

Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other Software: Binutils 2.18.50.0.7.20080502

## Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
410.bwaves	4	494	110	490	111	<b>491</b>	<b>111</b>	4	464	117	<b>464</b>	<b>117</b>	465	117		
416.gamess	4	1300	60.2	1298	60.3	<b>1299</b>	<b>60.3</b>	4	<b>1297</b>	<b>60.4</b>	1301	60.2	1297	60.4		
433.milc	4	<b>351</b>	<b>105</b>	353	104	351	105	4	<b>353</b>	<b>104</b>	353	104	353	104		
434.zeusmp	4	567	64.2	567	64.3	<b>567</b>	<b>64.2</b>	4	604	60.2	<b>604</b>	<b>60.3</b>	602	60.5		
435.gromacs	4	547	52.2	546	52.3	<b>547</b>	<b>52.2</b>	4	537	53.2	538	53.1	<b>537</b>	<b>53.2</b>		
436.cactusADM	4	732	65.3	738	64.8	<b>732</b>	<b>65.3</b>	4	732	65.3	738	64.8	<b>732</b>	<b>65.3</b>		
437.leslie3d	4	560	67.1	570	66.0	<b>560</b>	<b>67.1</b>	4	<b>535</b>	<b>70.3</b>	542	69.3	535	70.3		
444.namd	4	738	43.5	<b>737</b>	<b>43.5</b>	737	43.6	4	731	43.9	<b>731</b>	<b>43.9</b>	731	43.9		
447.dealII	4	<b>529</b>	<b>86.5</b>	529	86.5	529	86.5	4	523	87.4	524	87.4	<b>524</b>	<b>87.4</b>		
450.soplex	4	540	61.8	539	61.9	<b>539</b>	<b>61.9</b>	4	<b>524</b>	<b>63.7</b>	525	63.6	523	63.7		
453.povray	4	<b>316</b>	<b>67.4</b>	317	67.2	315	67.5	4	250	85.2	250	85.3	<b>250</b>	<b>85.2</b>		
454.calculix	4	480	68.7	481	68.6	<b>481</b>	<b>68.6</b>	4	480	68.7	481	68.6	<b>481</b>	<b>68.6</b>		
459.GemsFDTD	4	653	65.0	652	65.1	<b>652</b>	<b>65.0</b>	4	<b>675</b>	<b>62.9</b>	672	63.2	677	62.7		
465.tonto	4	625	63.0	626	62.9	<b>625</b>	<b>62.9</b>	4	<b>558</b>	<b>70.5</b>	561	70.2	557	70.7		
470.lbm	4	<b>711</b>	<b>77.3</b>	711	77.3	711	77.3	4	705	78.0	706	77.8	<b>705</b>	<b>77.9</b>		
481.wrf	4	452	98.9	453	98.6	<b>452</b>	<b>98.9</b>	4	452	98.9	453	98.6	<b>452</b>	<b>98.9</b>		
482.sphinx3	4	1190	65.5	1188	65.6	<b>1190</b>	<b>65.5</b>	4	1097	71.1	1094	71.3	<b>1094</b>	<b>71.2</b>		

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

## Submit Notes

The config file option 'submit' was used.  
numactl was used to bind copies to the cores

## Operating System Notes

'ulimit -s unlimited' was set for stacksize unlimited

## General Notes

This result was measured on the Gateway GR380 F1.  
The Acer AR380 F1 and Gateway GR380 F1 are electronically equivalent.



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## Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

## 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 -nofor\_main  
436.cactusADM: -DSPEC\_CPU\_LP64 -nofor\_main  
437.lelie3d: -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 -nofor\_main  
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:

-xSSE4.2 -ipo -O3 -no-prec-div -static

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static



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**Software Availability:** Oct-2009

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

482.sphinx3:icc -m32

C++ benchmarks (except as noted below):

icpc -m64

450.soplex:icpc -m32

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

## 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 -nofor\_main  
 436.cactusADM: -DSPEC\_CPU\_LP64 -nofor\_main  
 437.leslie3d: -DSPEC\_CPU\_LP64  
 444.namd: -DSPEC\_CPU\_LP64  
 447.dealII: -DSPEC\_CPU\_LP64  
 453.povray: -DSPEC\_CPU\_LP64  
 454.calculix: -DSPEC\_CPU\_LP64 -nofor\_main  
 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

## Peak Optimization Flags

C benchmarks:

433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
 -fno-alias -opt-prefetch

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
 -opt-malloc-options=3 -ansi-alias -auto-ilp32

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## Peak Optimization Flags (Continued)

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

### C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-fno-alias -auto-ilp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias -scalar-rep-

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-opt-malloc-options=3

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll4 -ansi-alias

### Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)

437.leslie3d: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-opt-malloc-options=3 -opt-prefetch

459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll2 -Ob0

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll4 -auto -inline-calloc -opt-malloc-options=3

### Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-opt-prefetch -auto-ilp32

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## Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revE.20100202.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revE.20100202.xml>

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

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