



# SPEC® CFP2006 Result

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## Acer Incorporated

SPECfp®2006 = 24.6

## Acer AR380 F1(Intel Xeon E5502)

SPECfp\_base2006 = 23.1

CPU2006 license: 97

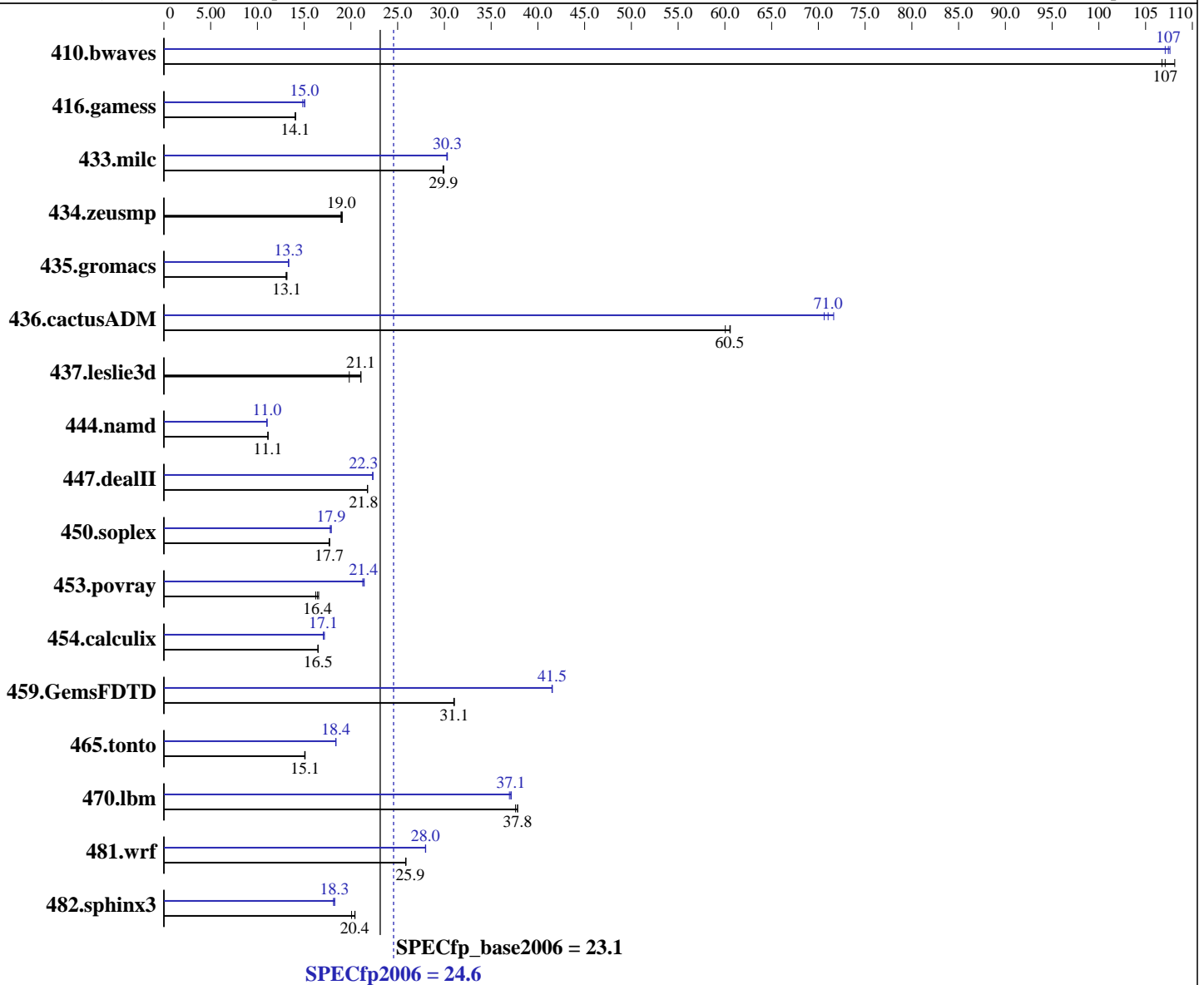
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Mar-2010

Hardware Availability: Jan-2010

Software Availability: Sep-2009



### Hardware

CPU Name: Intel Xeon E5502  
 CPU Characteristics:  
 CPU MHz: 1861  
 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 20091130 Package ID: l\_cproc\_p\_11.1.064, l\_cprof\_p\_11.1.064  
 Auto Parallel: Yes  
 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	127	107	<b>127</b>	<b>107</b>	126	108	<b>126</b>	<b>107</b>	127	107	126	108
416.gamess	<b>1394</b>	<b>14.1</b>	1389	14.1	1395	14.0	1300	15.1	<b>1302</b>	<b>15.0</b>	1319	14.8
433.milc	<b>307</b>	<b>29.9</b>	307	29.9	308	29.8	303	30.3	<b>303</b>	<b>30.3</b>	303	30.3
434.zeusmp	480	18.9	<b>479</b>	<b>19.0</b>	477	19.1	480	18.9	<b>479</b>	<b>19.0</b>	477	19.1
435.gromacs	<b>543</b>	<b>13.1</b>	543	13.1	547	13.1	<b>535</b>	<b>13.3</b>	535	13.3	537	13.3
436.cactusADM	<b>197</b>	<b>60.5</b>	199	60.0	197	60.6	167	71.6	<b>168</b>	<b>71.0</b>	169	70.6
437.leslie3d	474	19.8	446	21.1	<b>446</b>	<b>21.1</b>	474	19.8	446	21.1	<b>446</b>	<b>21.1</b>
444.namd	720	11.1	721	11.1	<b>721</b>	<b>11.1</b>	728	11.0	728	11.0	<b>728</b>	<b>11.0</b>
447.dealII	525	21.8	526	21.8	<b>525</b>	<b>21.8</b>	<b>512</b>	<b>22.3</b>	512	22.3	512	22.3
450.soplex	470	17.7	<b>472</b>	<b>17.7</b>	472	17.7	<b>466</b>	<b>17.9</b>	466	17.9	469	17.8
453.povray	328	16.2	<b>324</b>	<b>16.4</b>	321	16.6	248	21.4	<b>249</b>	<b>21.4</b>	250	21.3
454.calculix	<b>501</b>	<b>16.5</b>	500	16.5	501	16.5	480	17.2	483	17.1	<b>483</b>	<b>17.1</b>
459.GemsFDTD	342	31.1	342	31.0	<b>342</b>	<b>31.1</b>	<b>255</b>	<b>41.5</b>	256	41.5	255	41.5
465.tonto	<b>652</b>	<b>15.1</b>	652	15.1	654	15.1	535	18.4	535	18.4	<b>535</b>	<b>18.4</b>
470.lbm	365	37.6	<b>363</b>	<b>37.8</b>	363	37.8	372	37.0	<b>370</b>	<b>37.1</b>	370	37.2
481.wrf	432	25.8	<b>432</b>	<b>25.9</b>	431	25.9	399	28.0	<b>399</b>	<b>28.0</b>	399	28.0
482.sphinx3	953	20.4	971	20.1	<b>955</b>	<b>20.4</b>	<b>1068</b>	<b>18.3</b>	1067	18.3	1075	18.1

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

## Operating System Notes

'ulimit -s unlimited' was set for stacksize unlimited

## General Notes

OMP\_NUM\_THREADS set to number of cores

KMP\_AFFINITY set to granularity=fine,scatter

KMP\_STACKSIZE set to 200M

The Acer AR360 F1, Gateway GR360 F1, Acer AR380 F1 and the Gateway GR380 F1 are electronically equivalent.

This result was measured on the Gateway GR380 F1.



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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 -parallel -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch



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<b>CPU2006 license:</b> 97	<b>Test date:</b> Mar-2010
<b>Test sponsor:</b> Acer Incorporated	<b>Hardware Availability:</b> Jan-2010
<b>Tested by:</b> Acer Incorporated	<b>Software Availability:</b> Sep-2009

## Peak Compiler Invocation

C benchmarks:  
icc -m64

C++ benchmarks:  
icpc -m64

Fortran benchmarks:  
ifort -m64

Benchmarks using both Fortran and C:  
icc -m64 ifort -m64

## Peak Portability Flags

Same as Base Portability Flags

## 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)  
-ansi-alias

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)  
-parallel -ansi-alias -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32  
-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- -auto-ilp32

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 -auto-ilp32

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## Peak Optimization Flags (Continued)

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  
-parallel

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: basepeak = yes

437.leslie3d: basepeak = yes

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 -opt-prefetch -parallel

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)  
-inline-calloc -opt-malloc-options=3 -auto -unroll4

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

436.cactusADM: -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 -opt-prefetch -parallel -auto-ilp32

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: Same as 454.calculix

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.xml>



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