



# SPEC<sup>®</sup> CFP2006 Result

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## Acer Incorporated

SPECfp<sup>®</sup>2006 = 24.2

## Acer AT110 F1 (Intel Xeon E3110)

SPECfp\_base2006 = 23.3

CPU2006 license: 97

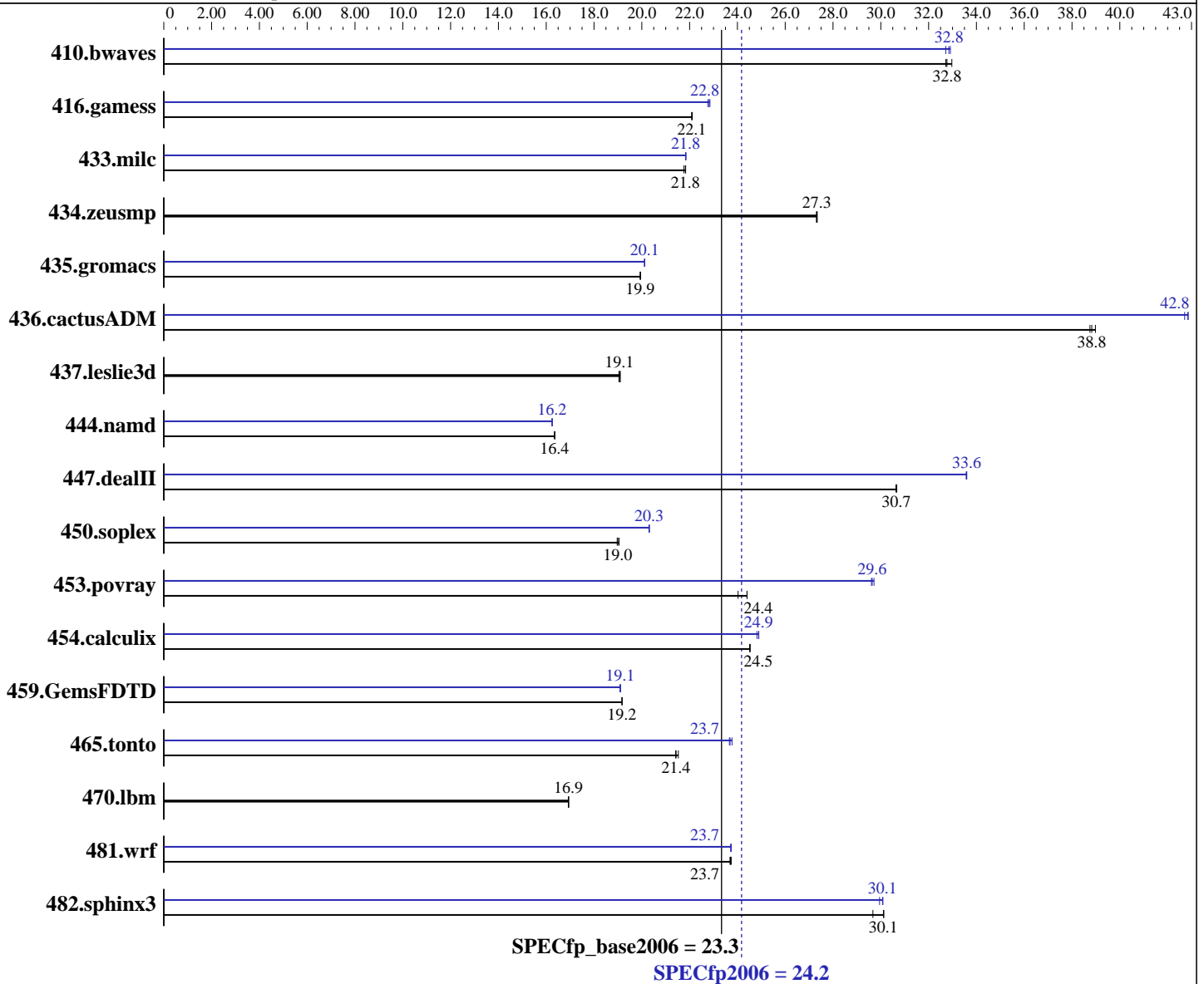
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Nov-2009

Hardware Availability: Dec-2009

Software Availability: Nov-2008



**Hardware**

CPU Name: Intel Xeon E3110  
 CPU Characteristics: 1333 MHz system bus  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 6 MB I+D on chip per chip

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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 Compiler 11.0 for Linux  
 Build 20080930 Package ID: I\_cproc\_p\_11.0.066,  
 I\_cprof\_p\_11.0.066  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Multi-user, level 3  
 Base Pointers: 64-bit

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L3 Cache: None  
Other Cache: None  
Memory: 8 GB (4 x 2048 MB ECC Unbuffered DDR2-800 CL5)  
Disk Subsystem: 1 x 640 GB 7200RPM SATA HDD  
Other Hardware: None

Peak Pointers: 32/64-bit  
Other Software: Microquill SmartHeap V8.1  
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	412	33.0	<b>415</b>	<b>32.8</b>	415	32.7	415	32.7	413	32.9	<b>414</b>	<b>32.8</b>
416.gamess	885	22.1	<b>886</b>	<b>22.1</b>	886	22.1	857	22.9	860	22.8	<b>858</b>	<b>22.8</b>
433.milc	422	21.8	420	21.8	<b>421</b>	<b>21.8</b>	420	21.8	<b>420</b>	<b>21.8</b>	420	21.8
434.zeusmp	333	27.3	<b>333</b>	<b>27.3</b>	333	27.3	333	27.3	<b>333</b>	<b>27.3</b>	333	27.3
435.gromacs	<b>358</b>	<b>19.9</b>	358	19.9	358	19.9	355	20.1	<b>355</b>	<b>20.1</b>	355	20.1
436.cactusADM	308	38.8	307	39.0	<b>308</b>	<b>38.8</b>	280	42.7	<b>279</b>	<b>42.8</b>	279	42.9
437.leslie3d	492	19.1	<b>493</b>	<b>19.1</b>	494	19.0	492	19.1	<b>493</b>	<b>19.1</b>	494	19.0
444.namd	491	16.3	<b>490</b>	<b>16.4</b>	490	16.4	<b>494</b>	<b>16.2</b>	494	16.2	493	16.3
447.dealII	373	30.6	373	30.7	<b>373</b>	<b>30.7</b>	341	33.6	<b>341</b>	<b>33.6</b>	341	33.6
450.soplex	438	19.1	<b>439</b>	<b>19.0</b>	440	19.0	411	20.3	410	20.3	<b>411</b>	<b>20.3</b>
453.povray	221	24.0	<b>218</b>	<b>24.4</b>	218	24.4	179	29.7	180	29.6	<b>179</b>	<b>29.6</b>
454.calculix	336	24.5	<b>336</b>	<b>24.5</b>	336	24.5	332	24.8	<b>332</b>	<b>24.9</b>	331	24.9
459.GemsFDTD	553	19.2	<b>553</b>	<b>19.2</b>	553	19.2	<b>556</b>	<b>19.1</b>	556	19.1	555	19.1
465.tonto	457	21.5	459	21.4	<b>459</b>	<b>21.4</b>	414	23.8	416	23.7	<b>415</b>	<b>23.7</b>
470.lbm	812	16.9	811	16.9	<b>811</b>	<b>16.9</b>	812	16.9	811	16.9	<b>811</b>	<b>16.9</b>
481.wrf	<b>471</b>	<b>23.7</b>	471	23.7	472	23.7	471	23.7	<b>471</b>	<b>23.7</b>	471	23.7
482.sphinx3	647	30.1	657	29.7	<b>647</b>	<b>30.1</b>	<b>648</b>	<b>30.1</b>	648	30.1	651	29.9

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 processors  
KMP\_AFFINITY set to "physical,0"  
KMP\_STACKSIZE set to 200M

This result was measured on the Gateway GT110 F1.  
The Acer AT110 F1 and Gateway GT110 F1 are electronically equivalent.



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## Base Compiler Invocation

C benchmarks:

icc

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 -nofor\_main  
 436.cactusADM: -DSPEC\_CPU\_LP64 -nofor\_main  
 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 -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:

-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Fortran benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch



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## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):

icpc

450.soplex: icpc -m32

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icc ifort

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

470.lbm: basepeak = yes

482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

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## Peak Optimization Flags (Continued)

C++ benchmarks:

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

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

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

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

Fortran benchmarks:

410.bwaves: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch  
-parallel

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

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll4 -auto

Benchmarks using both Fortran and C:

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

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -opt-prefetch -parallel  
-auto-ilp32

454.calculix: -xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch  
-parallel -auto-ilp32



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The flags file that was used to format this result can be browsed at  
<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revF.20100209.html>

You can also download the XML flags source by saving the following link:  
<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revF.20100209.xml>

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