



# SPEC® CFP2006 Result

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Acer Incorporated

**SPECfp®\_rate2006 = 71.6**

Acer AB460 F1 (Intel Xeon E5502, 1.86 GHz)

**SPECfp\_rate\_base2006 = 69.4**

CPU2006 license: 97

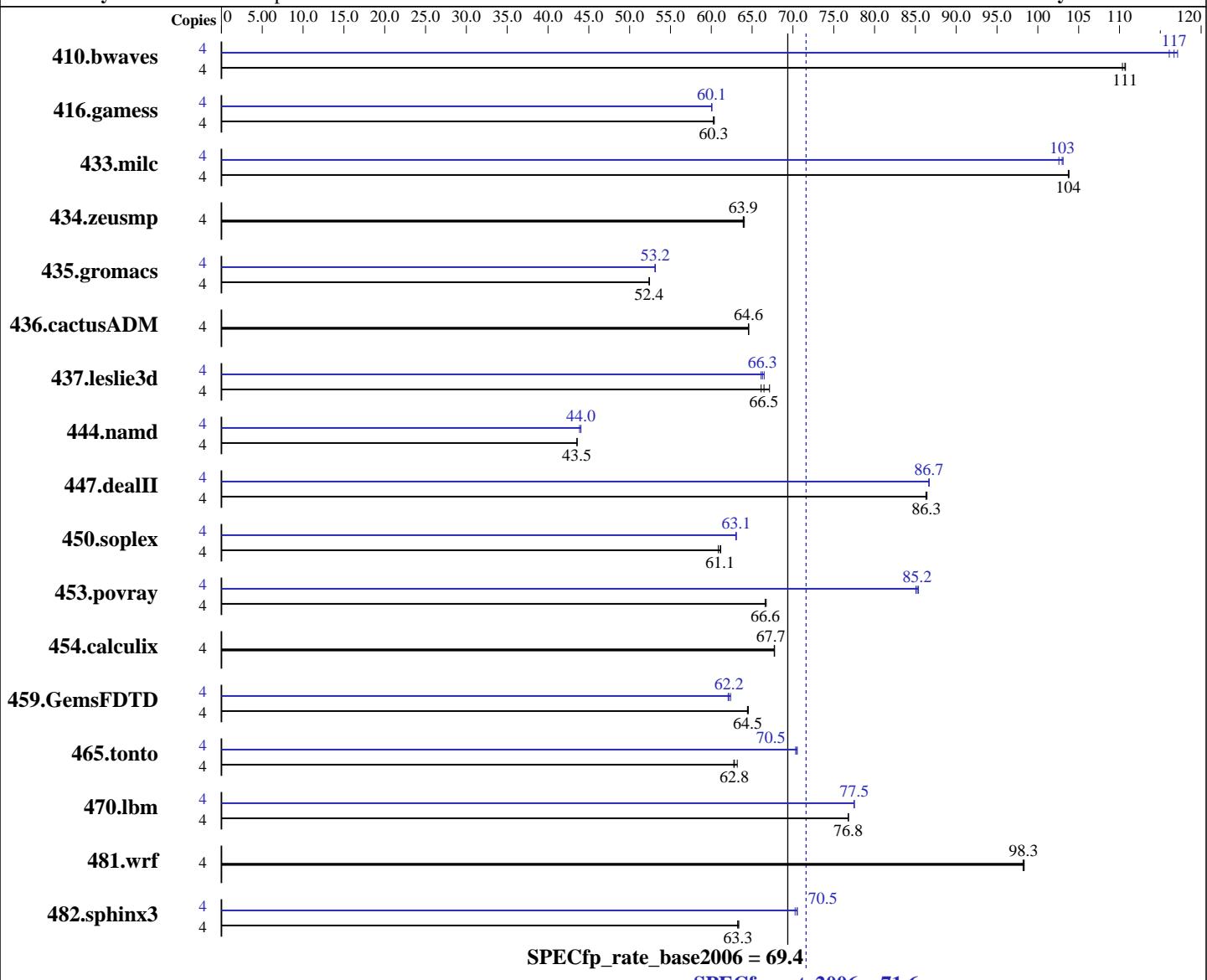
Test date: May-2010

Test sponsor: Acer Incorporated

Hardware Availability: Jul-2010

Tested by: Acer Incorporated

Software Availability: Jan-2010



## Hardware

CPU Name: Intel Xeon E5502  
CPU Characteristics:  
CPU MHz: 1866  
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

## Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64)  
Compiler: Kernel 2.6.27.19-5-default  
Auto Parallel: Intel C++ and Fortran Professional Compiler for  
File System: IA32 and Intel 64, Version 11.1  
System State: Build 20091130 Package ID: l\_cproc\_p\_11.1.064,  
l\_cprof\_p\_11.1.064  
No  
ReiserFS  
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 (6 x 4 GB DDR3-1333 RDIMM, ECC, CL9 running at 800MHz)  
 Disk Subsystem: 1 x 300 GB SATA II, 10000 RPM  
 Other Hardware: None

Base Pointers: 64-bit  
 Peak Pointers: 32/64-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	<b>491</b>	<b>111</b>	491	111	493	110	4	464	117	468	116	<b>466</b>	<b>117</b>
416.gamess	4	<b>1299</b>	<b>60.3</b>	1299	60.3	1297	60.4	4	<b>1304</b>	<b>60.1</b>	1304	60.1	1304	60.0
433.milc	4	354	104	<b>354</b>	<b>104</b>	354	104	4	358	103	356	103	<b>357</b>	<b>103</b>
434.zeusmp	4	568	64.0	<b>569</b>	<b>63.9</b>	569	63.9	4	568	64.0	<b>569</b>	<b>63.9</b>	569	63.9
435.gromacs	4	545	52.4	<b>545</b>	<b>52.4</b>	545	52.4	4	537	53.2	538	53.1	<b>537</b>	<b>53.2</b>
436.cactusADM	4	741	64.5	740	64.6	<b>740</b>	<b>64.6</b>	4	741	64.5	740	64.6	<b>740</b>	<b>64.6</b>
437.leslie3d	4	<b>566</b>	<b>66.5</b>	560	67.1	569	66.1	4	566	66.5	569	66.1	<b>567</b>	<b>66.3</b>
444.namd	4	736	43.6	<b>737</b>	<b>43.5</b>	737	43.5	4	729	44.0	731	43.9	<b>729</b>	<b>44.0</b>
447.dealII	4	529	86.4	<b>530</b>	<b>86.3</b>	530	86.3	4	528	86.7	528	86.7	<b>528</b>	<b>86.7</b>
450.soplex	4	548	60.9	545	61.2	<b>546</b>	<b>61.1</b>	4	<b>529</b>	<b>63.1</b>	529	63.1	529	63.0
453.povray	4	319	66.7	320	66.6	<b>319</b>	<b>66.6</b>	4	<b>250</b>	<b>85.2</b>	249	85.4	250	85.1
454.calculix	4	487	67.7	487	67.8	<b>487</b>	<b>67.7</b>	4	487	67.7	487	67.8	<b>487</b>	<b>67.7</b>
459.GemsFDTD	4	<b>658</b>	<b>64.5</b>	658	64.5	659	64.4	4	680	62.4	<b>683</b>	<b>62.2</b>	684	62.1
465.tonto	4	623	63.2	627	62.8	<b>626</b>	<b>62.8</b>	4	558	70.5	<b>559</b>	<b>70.5</b>	560	70.3
470.lbm	4	716	76.8	716	76.8	<b>716</b>	<b>76.8</b>	4	<b>709</b>	<b>77.5</b>	709	77.5	709	77.5
481.wrf	4	<b>455</b>	<b>98.3</b>	454	98.3	455	98.2	4	<b>455</b>	<b>98.3</b>	454	98.3	455	98.2
482.sphinx3	4	1233	63.2	1230	63.4	<b>1232</b>	<b>63.3</b>	4	1109	70.3	<b>1105</b>	<b>70.5</b>	1105	70.5

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 used to set the stack size to unlimited prior to run

## Platform Notes

Fan speed set to full Speed (ie. Enterprise Blade mode) with Smart Blade Console through CMM (Chassis Management Module)



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Acer AB460 F1 (Intel Xeon E5502, 1.86 GHz)

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CPU2006 license: 97

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## General Notes

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

The Acer AB460 F1, and Gateway GB460 F1 are electronically equivalent.  
This result was measured on Gateway GB460 F1.

## 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.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:

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

C++ benchmarks:

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

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## Base Optimization Flags (Continued)

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

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

## 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



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## 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
```

```
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 -Obo -ansi-alias -scalar-rep-
```

```
434.zeusmp: basepeak = yes
```

```
437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static
```

```
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 -Obo
```

```
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
```

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## Peak Optimization Flags (Continued)

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: 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-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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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.

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