



# SPEC® CFP2006 Result

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Acer Incorporated

**SPECfp®\_rate2006 = 112**

Gateway GR360 F1 (Intel Xeon E5603)

**SPECfp\_rate\_base2006 = 107**

CPU2006 license: 97

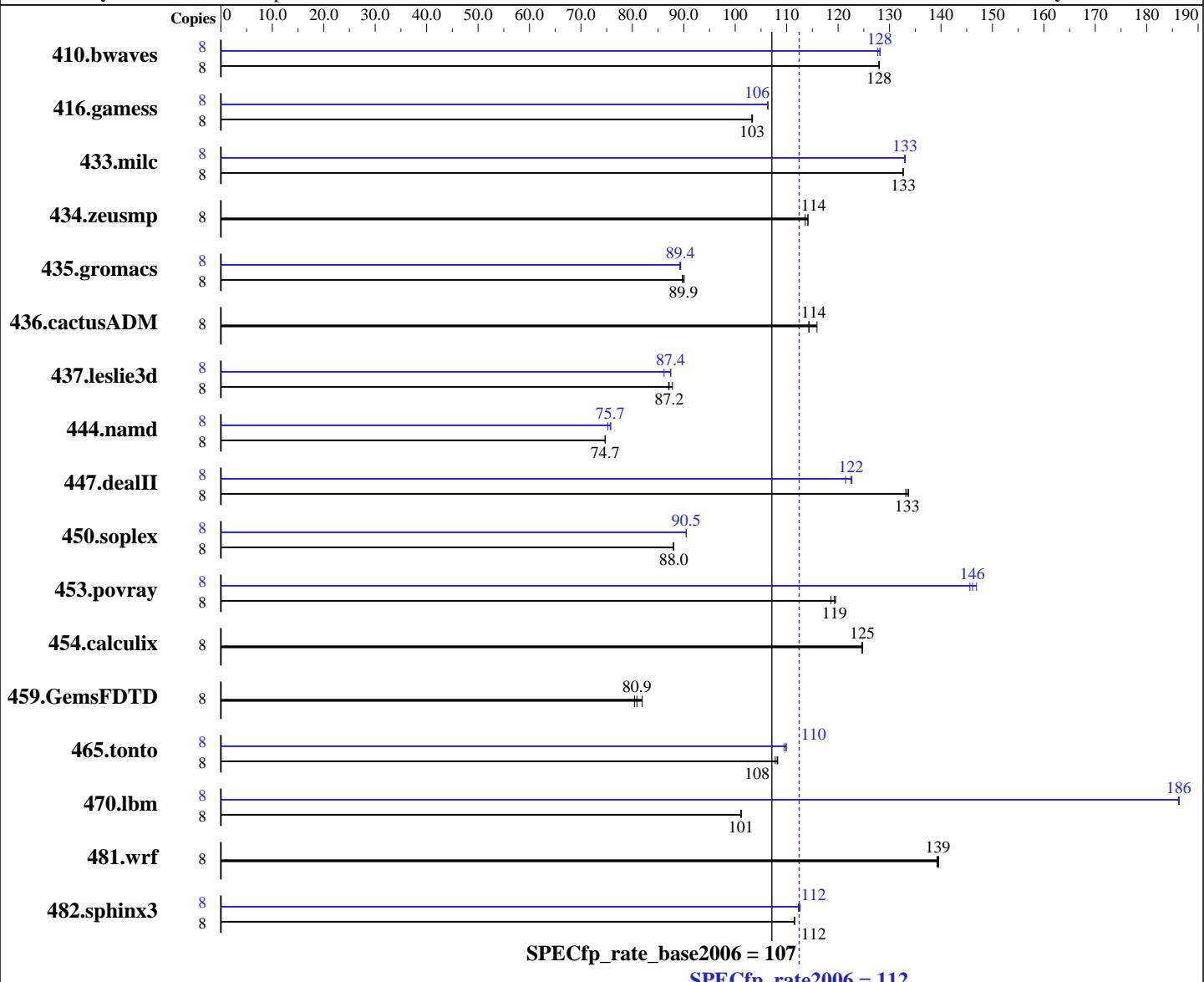
Test date: May-2011

Test sponsor: Acer Incorporated

Hardware Availability: Feb-2011

Tested by: Acer Incorporated

Software Availability: Jan-2011



## Hardware

CPU Name: Intel Xeon E5603  
CPU Characteristics:  
CPU MHz:  
FPU:  
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: 256 KB I+D on chip per core

## Software

Operating System: SUSE Linux Enterprise server 11 (x86\_64) SP1, Kernel 2.6.32.12-0.7-default  
Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.1.116 Build 20101116  
Auto Parallel: No  
File System: ext3  
System State: Run level 3 (multi-user)  
Base Pointers: 64-bit

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L3 Cache: 4 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB 2Rx8 PC3-10600R-9, ECC, running at 1066 MHz)  
 Disk Subsystem: 1 x 300 GB SATA, 10000 RPM  
 Other Hardware: None

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	Seconds	Ratio
410.bwaves	8	849	128	850	128	<b>850</b>	<b>128</b>	8	851	128	<b>849</b>	<b>128</b>	848	128		
416.gamess	8	1515	103	<b>1517</b>	<b>103</b>	1517	103	8	<b>1473</b>	<b>106</b>	1473	106	1473	106		
433.milc	8	554	133	<b>554</b>	<b>133</b>	554	133	8	552	133	<b>552</b>	<b>133</b>	553	133		
434.zeusmp	8	638	114	<b>638</b>	<b>114</b>	641	114	8	638	114	<b>638</b>	<b>114</b>	641	114		
435.gromacs	8	634	90.1	637	89.7	<b>635</b>	<b>89.9</b>	8	<b>639</b>	<b>89.4</b>	639	89.4	640	89.2		
436.cactusADM	8	<b>836</b>	<b>114</b>	836	114	825	116	8	<b>836</b>	<b>114</b>	836	114	825	116		
437.leslie3d	8	864	87.0	<b>863</b>	<b>87.2</b>	857	87.8	8	860	87.5	873	86.2	<b>860</b>	<b>87.4</b>		
444.namd	8	858	74.8	<b>859</b>	<b>74.7</b>	859	74.7	8	853	75.2	<b>848</b>	<b>75.7</b>	846	75.8		
447.dealII	8	684	134	<b>686</b>	<b>133</b>	687	133	8	754	121	746	123	<b>747</b>	<b>122</b>		
450.soplex	8	<b>758</b>	<b>88.0</b>	758	88.0	758	88.0	8	<b>737</b>	<b>90.5</b>	738	90.5	737	90.5		
453.povray	8	356	120	359	119	<b>357</b>	<b>119</b>	8	<b>291</b>	<b>146</b>	290	147	292	146		
454.calculix	8	529	125	<b>529</b>	<b>125</b>	530	125	8	529	125	<b>529</b>	<b>125</b>	530	125		
459.GemsFDTD	8	1036	81.9	1056	80.4	<b>1049</b>	<b>80.9</b>	8	1036	81.9	1056	80.4	<b>1049</b>	<b>80.9</b>		
465.tonto	8	727	108	<b>728</b>	<b>108</b>	730	108	8	<b>717</b>	<b>110</b>	716	110	719	109		
470.lbm	8	1086	101	1087	101	<b>1087</b>	<b>101</b>	8	590	186	<b>590</b>	<b>186</b>	590	186		
481.wrf	8	640	140	<b>641</b>	<b>139</b>	642	139	8	640	140	<b>641</b>	<b>139</b>	642	139		
482.sphinx3	8	<b>1398</b>	<b>112</b>	1398	112	1399	111	8	1389	112	1384	113	<b>1387</b>	<b>112</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 used to set environment stack size  
 Large pages were disabled for this run

## Platform Notes

BIOS Settings:  
 Fan speed = full speed (Default = Balanced)  
 Data Reuse = Disabled (Default = Enabled)



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## General Notes

Binaries compiled on RHEL5.5

This result was measured on the Gateway GR380 F1.

The Acer AR360 F1, AR380 F1, Gateway GR360 F1 are electronically equivalent

## 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 -ansi-alias

C++ benchmarks:

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

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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 -ansi-alias

## 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) -prof-use(pass 2) -static -auto-ilp32

470.lbm: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3  
-ansi-alias -opt-prefetch -static -auto-ilp32

482.sphinx3: -xsse4.2 -ipo -O3 -no-prec-div -unroll12

C++ benchmarks:

444.namd: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(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) -prof-use(pass 2) -static -auto-ilp32

450.soplex: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3  
-B /usr/share/libhugetlbfss/ -Wl,-hugetlbfss-link=BDT

453.povray: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll14 -ansi-alias  
-B /usr/share/libhugetlbfss/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfss-link=BDT

Fortran benchmarks:

410.bwaves: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -static

416.gamess: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll12  
-inline-level=0 -scalar-rep -static

434.zeusmp: basepeak = yes

437.leslie3d: -xsse4.2 -ipo -O3 -no-prec-div  
-B /usr/share/libhugetlbfss/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfss-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll14 -auto  
-inline-calloc -opt-malloc-options=3  
-B /usr/share/libhugetlbfss/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfss-link=BDT

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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) -prof-use(pass 2) -opt-prefetch
               -static -auto-ilp32
```

```
436.cactusADM: basepeak = yes
```

```
454.calculix: basepeak = yes
```

```
481.wrf: basepeak = yes
```

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html>  
<http://www.spec.org/cpu2006/flags/Acer-Intel-Linux-Settings-flags.20110608.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>  
<http://www.spec.org/cpu2006/flags/Acer-Intel-Linux-Settings-flags.20110608.xml>

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

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