



# SPEC® CFP2006 Result

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## Acer Incorporated

**SPECfp®\_rate2006 = 198**

Acer AW1000-AW170 F1 (Intel Xeon X5570)

**SPECfp\_rate\_base2006 = 192**

CPU2006 license: 97

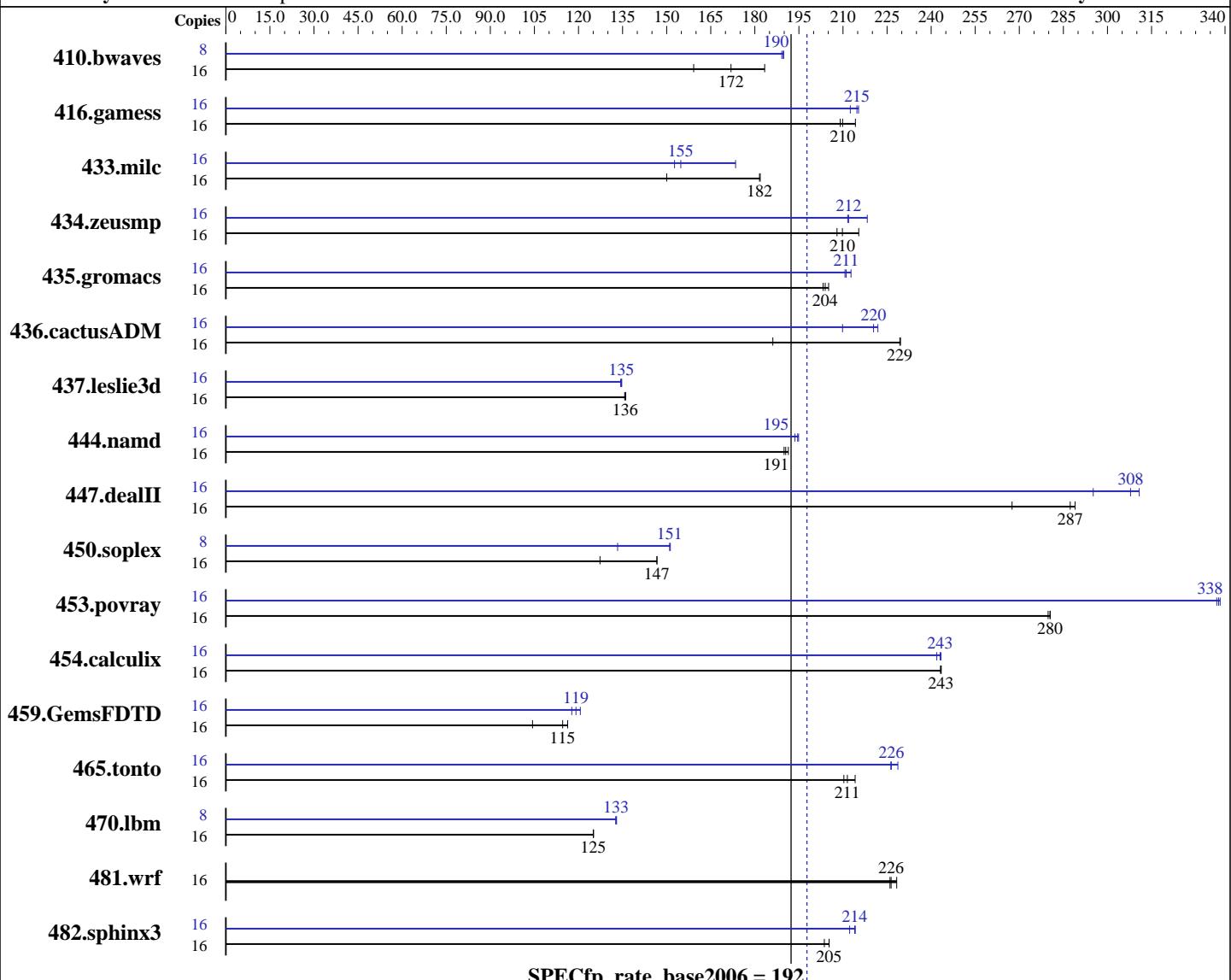
Test date: Jan-2010

Test sponsor: Acer Incorporated

Hardware Availability: Jan-2010

Tested by: Acer Incorporated

Software Availability: Feb-2009



### Hardware

CPU Name: Intel Xeon X5570  
CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz  
CPU MHz: 2933  
FPU: Integrated  
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core  
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  
Auto Parallel: Intel C++ and Fortran Compiler 11.0 for Linux  
File System: Build 20090131 Package ID: l\_cproc\_p\_11.0.080,  
System State: l\_cprof\_p\_11.0.080  
Base Pointers: No  
ReiserFS  
Run level 3 (multi-user)  
64-bit

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L3 Cache: 8 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 24 GB (6 x 4 GB DDR3-1333 RDIMM)  
 Disk Subsystem: 1 x 750 GB SATA II, 7200 RPM  
 Other Hardware: None

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	16	1366	159	1186	183	<b>1265</b>	<b>172</b>	8	573	190	<b>573</b>	<b>190</b>	575	189
416.gamess	16	1462	214	<b>1493</b>	<b>210</b>	1498	209	16	1455	215	<b>1459</b>	<b>215</b>	1474	213
433.milc	16	979	150	808	182	<b>809</b>	<b>182</b>	16	847	173	<b>949</b>	<b>155</b>	962	153
434.zeusmp	16	676	215	700	208	<b>694</b>	<b>210</b>	16	<b>687</b>	<b>212</b>	667	218	688	212
435.gromacs	16	557	205	<b>560</b>	<b>204</b>	562	203	16	537	213	<b>541</b>	<b>211</b>	542	211
436.cactusADM	16	1027	186	<b>834</b>	<b>229</b>	833	230	16	862	222	911	210	<b>868</b>	<b>220</b>
437.leslie3d	16	1108	136	1105	136	<b>1106</b>	<b>136</b>	16	1120	134	1117	135	<b>1117</b>	<b>135</b>
444.namd	16	676	190	<b>674</b>	<b>191</b>	670	191	16	<b>660</b>	<b>195</b>	663	194	658	195
447.dealII	16	684	268	<b>637</b>	<b>287</b>	633	289	16	589	311	620	295	<b>595</b>	<b>308</b>
450.soplex	16	1048	127	909	147	<b>910</b>	<b>147</b>	8	500	133	441	151	<b>442</b>	<b>151</b>
453.povray	16	304	280	303	281	<b>304</b>	<b>280</b>	16	<b>252</b>	<b>338</b>	252	337	252	338
454.calculix	16	543	243	<b>542</b>	<b>243</b>	542	243	16	542	243	546	242	<b>543</b>	<b>243</b>
459.GemsFDTD	16	1627	104	<b>1481</b>	<b>115</b>	1460	116	16	1442	118	<b>1425</b>	<b>119</b>	1407	121
465.tonto	16	<b>744</b>	<b>211</b>	749	210	735	214	16	696	226	<b>695</b>	<b>226</b>	688	229
470.lbm	16	<b>1758</b>	<b>125</b>	1757	125	1758	125	8	827	133	<b>828</b>	<b>133</b>	829	133
481.wrf	16	791	226	<b>789</b>	<b>226</b>	783	228	16	791	226	<b>789</b>	<b>226</b>	783	228
482.sphinx3	16	1531	204	<b>1519</b>	<b>205</b>	1519	205	16	<b>1469</b>	<b>212</b>	1456	214	<b>1457</b>	<b>214</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

## General Notes

This result was measured on the Gateway GW1000-GW170 F1 .  
 The Acer AW1000-AW170 F1 and Gateway GW1000-GW170 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:  
-xSSE4.2 -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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## 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 (except as noted below):

ifort

437.leslie3d: ifort -m32

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  
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

470.lbm: -xsse4.2 -ipo -O3 -no-prec-div -static -opt-prefetch  
-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 -opt-prefetch

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

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: -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)  
-unroll12 -opt-prefetch -auto-ilp32

454.calculix: -xsse4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

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-ic11.0-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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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.

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