



# SPEC® CFP2006 Result

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Acer Incorporated

**SPECfp®2006 = 45.2**

Gateway GT350 F1 (Intel Xeon X5670)

**SPECfp\_base2006 = 42.5**

CPU2006 license: 97

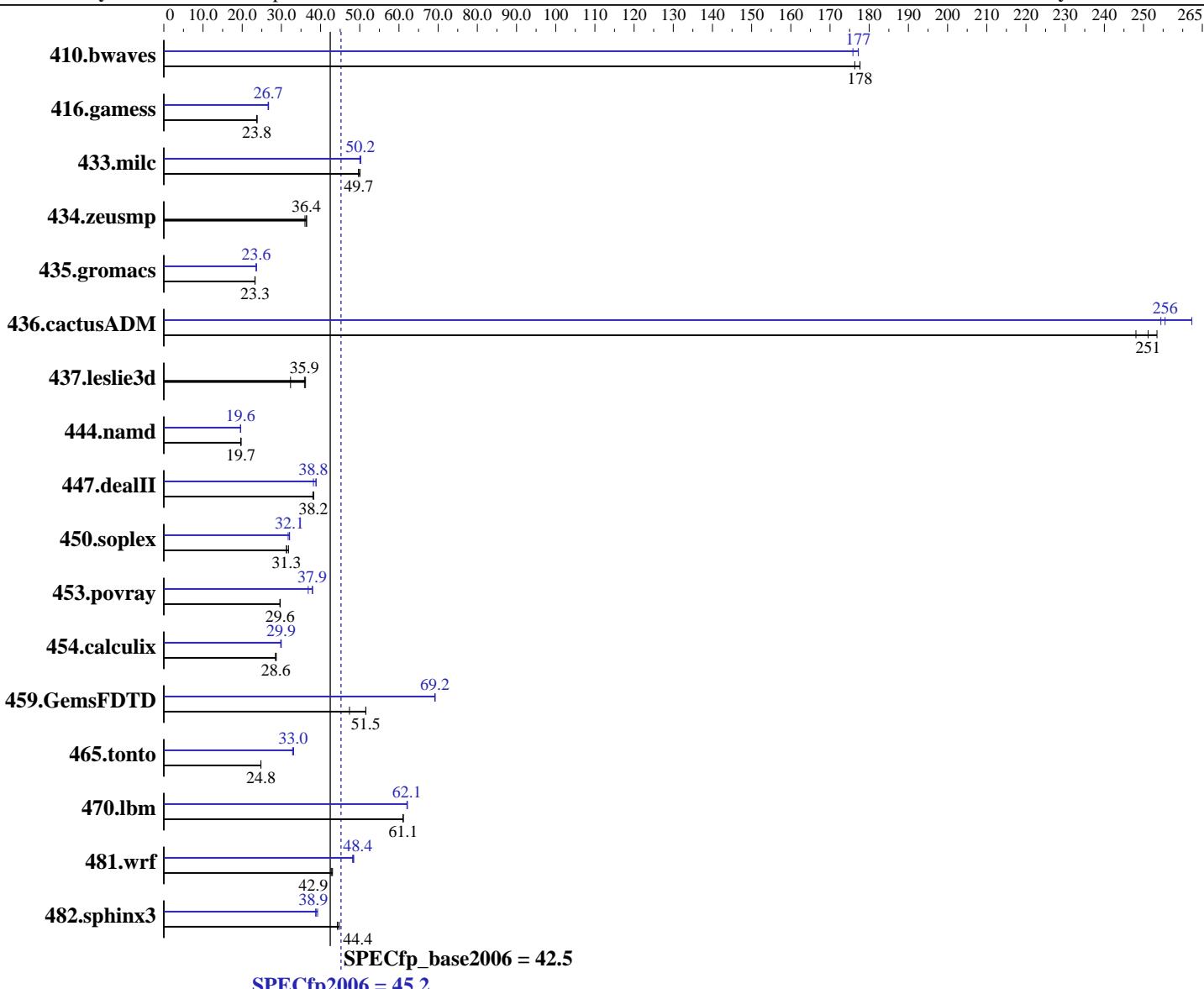
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Dec-2010

Hardware Availability: Mar-2010

Software Availability: Jan-2010



## Hardware

CPU Name: Intel Xeon X5670  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz  
 CPU MHz: 2993  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 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: Kernel 2.6.27.19-5-default  
 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: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit

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L3 Cache: 12 MB I+D on chip per chip Other Cache: None Memory: 48 GB (12 x 4 GB 2Rx8 PC3-10600R-9, ECC) Disk Subsystem: 1 x 300 GB SATA, 10000RPM SATA HDD Other Hardware: None	Peak Pointers: 32/64-bit Other Software: None	

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	76.5	178	77.1	176	<b>76.5</b>	<b>178</b>	<b>76.7</b>	<b>177</b>	77.3	176	76.7	177
416.gamess	823	23.8	825	23.7	<b>824</b>	<b>23.8</b>	<b>734</b>	<b>26.7</b>	736	26.6	732	26.7
433.milc	<b>185</b>	<b>49.7</b>	183	50.1	185	49.7	184	50.0	<b>183</b>	<b>50.2</b>	183	50.3
434.zeusmp	250	36.4	253	36.0	<b>250</b>	<b>36.4</b>	250	36.4	253	36.0	<b>250</b>	<b>36.4</b>
435.gromacs	307	23.3	<b>307</b>	<b>23.3</b>	307	23.2	302	23.6	<b>302</b>	<b>23.6</b>	303	23.6
436.cactusADM	47.2	253	48.2	248	<b>47.6</b>	<b>251</b>	47.0	254	<b>46.8</b>	<b>256</b>	45.6	262
437.leslie3d	291	32.3	<b>262</b>	<b>35.9</b>	260	36.2	291	32.3	<b>262</b>	<b>35.9</b>	260	36.2
444.namd	408	19.7	<b>408</b>	<b>19.7</b>	407	19.7	409	19.6	<b>409</b>	<b>19.6</b>	410	19.5
447.dealII	301	38.0	299	38.3	<b>299</b>	<b>38.2</b>	300	38.2	<b>295</b>	<b>38.8</b>	294	38.9
450.soplex	262	31.8	<b>266</b>	<b>31.3</b>	267	31.3	<b>263</b>	<b>31.7</b>	260	32.1	<b>260</b>	<b>32.1</b>
453.povray	179	29.7	179	29.6	<b>179</b>	<b>29.6</b>	140	38.0	<b>140</b>	<b>37.9</b>	144	36.8
454.calculix	288	28.7	290	28.5	<b>289</b>	<b>28.6</b>	277	29.8	275	30.0	<b>276</b>	<b>29.9</b>
459.GemsFDTD	224	47.4	206	51.6	<b>206</b>	<b>51.5</b>	<b>153</b>	<b>69.2</b>	153	69.2	153	69.2
465.tonto	<b>397</b>	<b>24.8</b>	397	24.8	397	24.8	<b>298</b>	<b>33.0</b>	297	33.1	299	32.9
470.lbm	225	61.0	225	61.1	<b>225</b>	<b>61.1</b>	221	62.1	<b>221</b>	<b>62.1</b>	221	62.2
481.wrf	<b>261</b>	<b>42.9</b>	262	42.7	259	43.0	<b>231</b>	<b>48.4</b>	231	48.5	232	48.2
482.sphinx3	435	44.8	440	44.3	<b>439</b>	<b>44.4</b>	<b>497</b>	<b>39.2</b>	503	38.7	<b>502</b>	<b>38.9</b>

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

## General Notes

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502  
This result was measured on the Gateway GT350 F1.  
The Acer AT350 F1 is electronically equivalent.

## Base Compiler Invocation

C benchmarks:  
icc -m64

C++ benchmarks:  
icpc -m64

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## Base Compiler Invocation (Continued)

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 -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

## Peak Compiler Invocation

C benchmarks:

icc -m64

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## Peak Compiler Invocation (Continued)

C++ benchmarks:

icpc -m64

Fortran benchmarks:

fort -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

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

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## Peak Optimization Flags (Continued)

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)  
-unroll12 -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)  
-unroll12 -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 -unroll14

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)  
-unroll12 -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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Tested with SPEC CPU2006 v1.1.

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