



SPEC® CFP2006 Result

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Acer Incorporated

SPECfp®2006 = 43.7

Gateway GB460 F1 (Intel Xeon X5570, 2.93 GHz)

SPECfp_base2006 = 40.8

CPU2006 license: 97

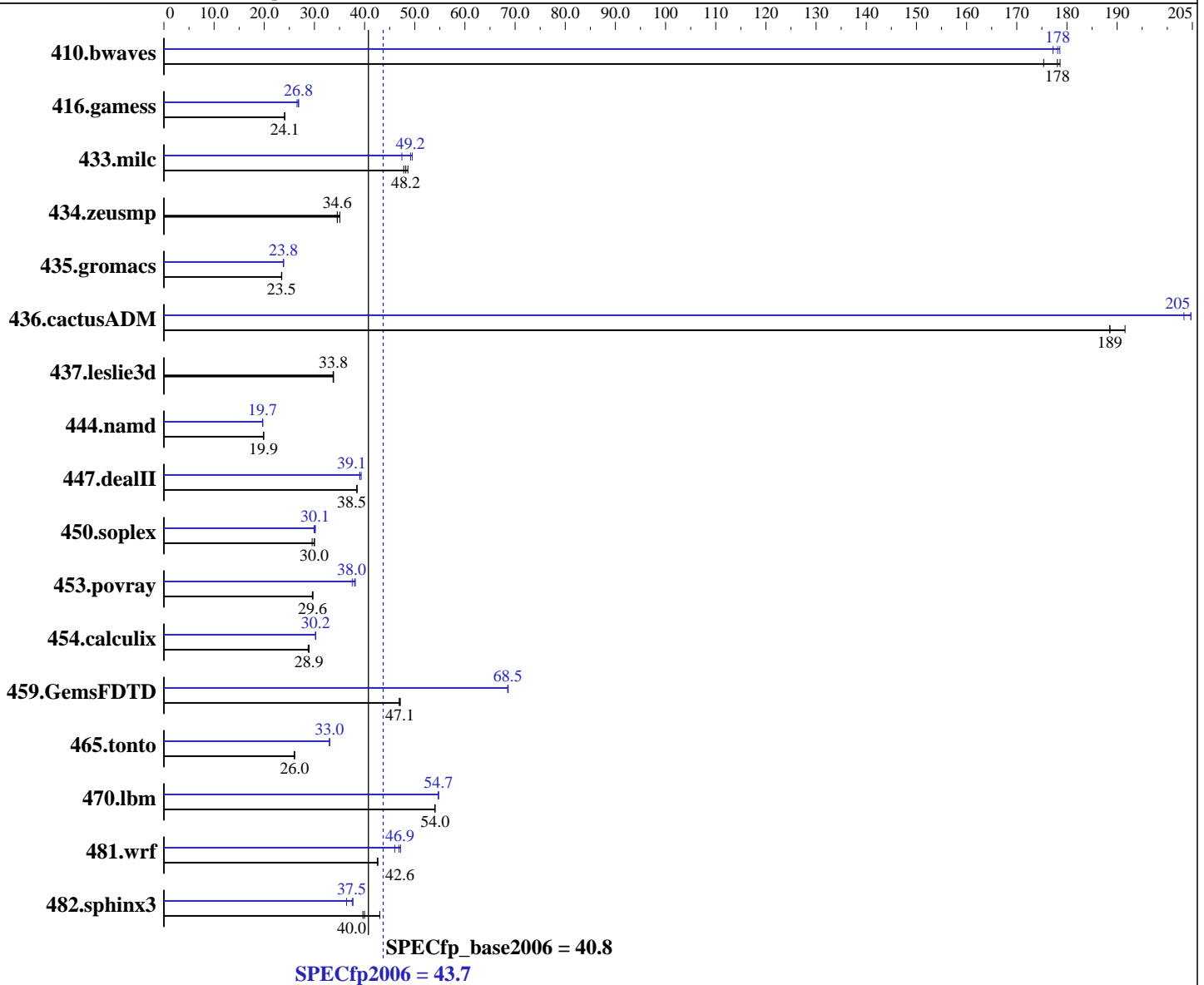
Test date: May-2010

Test sponsor: Acer Incorporated

Hardware Availability: Jul-2010

Tested by: Acer Incorporated

Software Availability: Jan-2010



Hardware

CPU Name: Intel Xeon 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

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Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64)
 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: ReiserFS
 System State: Run level 3 (multi-user)

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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, ECC, CL9)
 Disk Subsystem: 1 x 146 GB SAS, 15000 RPM
 Other Hardware: None

Base Pointers: 64-bit
 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	77.5	175	<u>76.3</u>	<u>178</u>	76.1	179	<u>76.7</u>	<u>177</u>	76.1	179	<u>76.3</u>	<u>178</u>
416.gamess	812	24.1	814	24.0	<u>813</u>	<u>24.1</u>	729	26.9	738	26.5	<u>730</u>	<u>26.8</u>
433.milc	192	47.8	<u>190</u>	<u>48.2</u>	189	48.6	194	47.4	185	49.5	<u>187</u>	<u>49.2</u>
434.zeusmp	<u>263</u>	<u>34.6</u>	259	35.1	263	34.6	<u>263</u>	<u>34.6</u>	259	35.1	263	34.6
435.gromacs	<u>304</u>	<u>23.5</u>	304	23.4	304	23.5	<u>300</u>	<u>23.8</u>	299	23.9	300	23.8
436.cactusADM	<u>63.4</u>	<u>189</u>	63.4	189	62.4	192	<u>58.8</u>	203	58.4	205	<u>58.4</u>	<u>205</u>
437.leslie3d	<u>278</u>	<u>33.8</u>	278	33.8	279	33.7	<u>278</u>	<u>33.8</u>	278	33.8	279	33.7
444.namd	<u>404</u>	<u>19.9</u>	403	19.9	404	19.9	407	19.7	408	19.7	<u>407</u>	<u>19.7</u>
447.dealII	<u>297</u>	<u>38.5</u>	297	38.5	297	38.5	293	39.0	291	39.3	<u>293</u>	<u>39.1</u>
450.soplex	282	29.5	<u>278</u>	<u>30.0</u>	278	30.0	279	29.9	276	30.2	<u>277</u>	<u>30.1</u>
453.povray	179	29.7	<u>179</u>	<u>29.6</u>	180	29.6	142	37.5	<u>140</u>	<u>38.0</u>	139	38.2
454.calculix	<u>285</u>	<u>28.9</u>	285	29.0	287	28.8	272	30.3	273	30.2	<u>273</u>	<u>30.2</u>
459.GemsFDTD	225	47.1	226	46.9	<u>225</u>	<u>47.1</u>	155	68.6	<u>155</u>	<u>68.5</u>	155	68.5
465.tonto	<u>378</u>	<u>26.0</u>	379	26.0	378	26.1	298	33.0	<u>298</u>	<u>33.0</u>	298	33.0
470.lbm	254	54.0	254	54.0	<u>254</u>	<u>54.0</u>	<u>251</u>	<u>54.7</u>	251	54.8	251	54.7
481.wrf	262	42.7	<u>262</u>	<u>42.6</u>	263	42.5	237	47.2	243	46.0	<u>238</u>	<u>46.9</u>
482.sphinx3	453	43.0	491	39.7	<u>487</u>	<u>40.0</u>	535	36.4	517	37.7	<u>519</u>	<u>37.5</u>

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stack size to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
```

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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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 -parallel -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

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Base Optimization Flags (Continued)

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`

C++ benchmarks:

`icpc -m64`

Fortran benchmarks:

`ifort -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`

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Peak Optimization Flags (Continued)

447.dealIII: -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

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)
-unroll2 -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)
-unroll2 -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 -unroll4

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)
-unroll2 -opt-prefetch -parallel -auto-ilp32

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: Same as 454.calculix



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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-ic11.1-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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