



SPEC® CFP2006 Result

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Acer Incorporated

SPECfp®2006 = **56.2**

Acer AT350 F1 (Intel Xeon X5670)

SPECfp_base2006 = **54.5**

CPU2006 license: 97

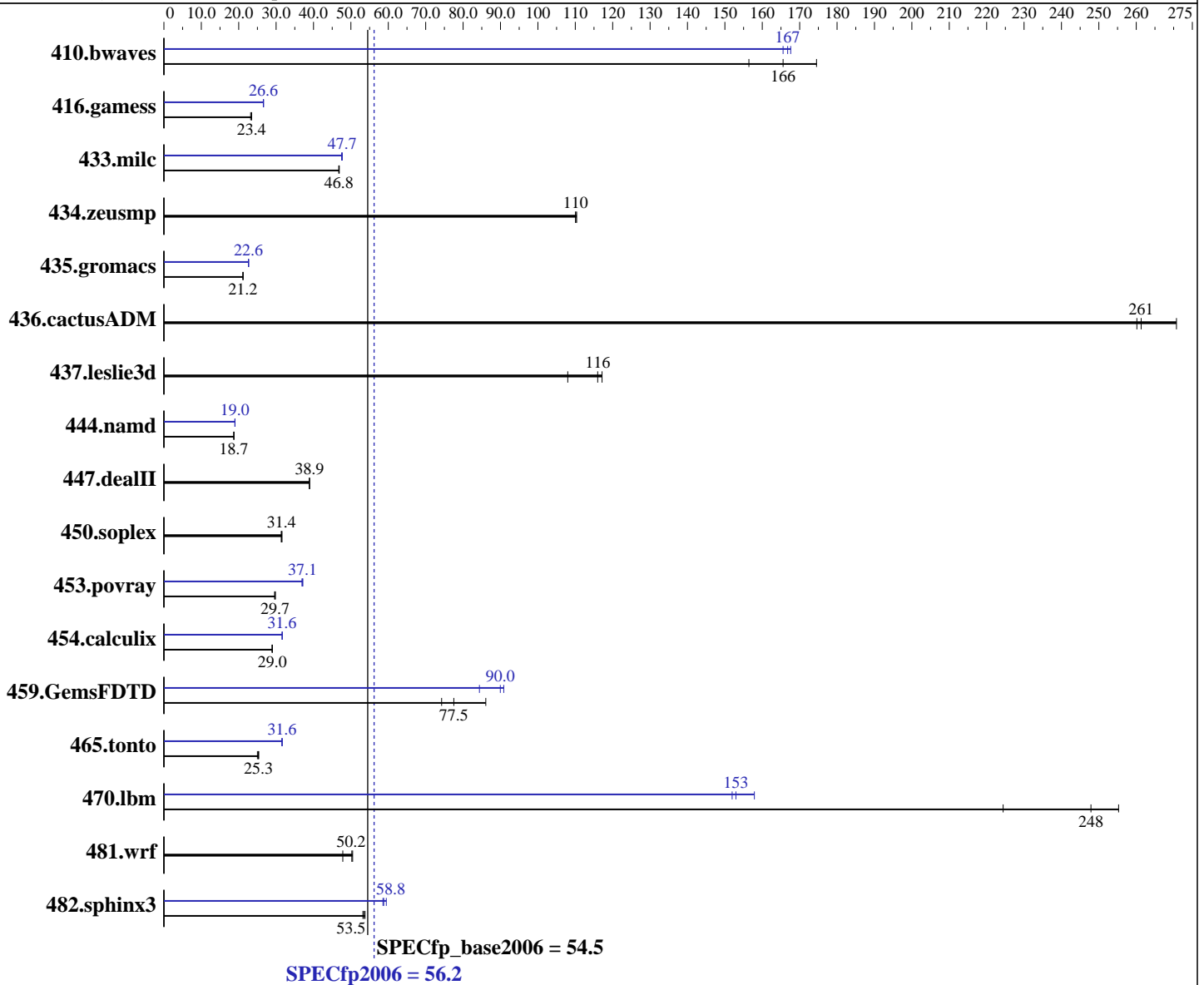
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Apr-2011

Hardware Availability: Mar-2010

Software Availability: Jan-2011



Hardware

CPU Name: Intel Xeon X5670
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz
 CPU MHz: 2933
 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

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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: Yes
 File System: ext3
 System State: Run level 3 (multi-user)

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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, 10000 RPM SATA HDD
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	86.9	156	<u>82.1</u>	<u>166</u>	77.9	175	81.1	168	82.1	166	<u>81.5</u>	<u>167</u>
416.gamess	844	23.2	834	23.5	<u>836</u>	<u>23.4</u>	735	26.6	<u>735</u>	<u>26.6</u>	737	26.6
433.milc	<u>196</u>	<u>46.8</u>	196	46.8	196	46.9	<u>193</u>	<u>47.7</u>	193	47.7	193	47.5
434.zeusmp	82.5	110	<u>82.7</u>	<u>110</u>	82.7	110	82.5	110	<u>82.7</u>	<u>110</u>	82.7	110
435.gromacs	338	21.1	<u>338</u>	<u>21.2</u>	337	21.2	<u>316</u>	<u>22.6</u>	314	22.7	316	22.6
436.cactusADM	<u>45.7</u>	<u>261</u>	44.1	271	45.9	260	<u>45.7</u>	<u>261</u>	44.1	271	45.9	260
437.leslie3d	80.2	117	87.0	108	<u>81.0</u>	<u>116</u>	80.2	117	87.0	108	<u>81.0</u>	<u>116</u>
444.namd	<u>429</u>	<u>18.7</u>	429	18.7	428	18.7	<u>422</u>	<u>19.0</u>	422	19.0	422	19.0
447.dealII	<u>294</u>	<u>38.9</u>	294	38.9	294	38.9	<u>294</u>	<u>38.9</u>	294	38.9	294	38.9
450.soplex	266	31.4	<u>265</u>	<u>31.4</u>	264	31.6	266	31.4	<u>265</u>	<u>31.4</u>	264	31.6
453.povray	180	29.6	<u>179</u>	<u>29.7</u>	179	29.8	<u>144</u>	<u>37.1</u>	143	37.1	144	36.9
454.calculix	<u>285</u>	<u>29.0</u>	284	29.0	286	28.9	261	31.6	<u>261</u>	<u>31.6</u>	261	31.6
459.GemsFDTD	123	86.1	143	74.3	<u>137</u>	<u>77.5</u>	<u>118</u>	<u>90.0</u>	126	84.4	117	90.9
465.tonto	<u>390</u>	<u>25.3</u>	388	25.4	394	25.0	312	31.6	<u>312</u>	<u>31.6</u>	311	31.7
470.lbm	53.8	255	61.2	224	<u>55.4</u>	<u>248</u>	87.0	158	<u>89.8</u>	<u>153</u>	90.4	152
481.wrf	234	47.8	221	50.5	<u>222</u>	<u>50.2</u>	234	47.8	221	50.5	<u>222</u>	<u>50.2</u>
482.sphinx3	362	53.8	366	53.2	<u>365</u>	<u>53.5</u>	333	58.6	<u>332</u>	<u>58.8</u>	328	59.5

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

Operating System Notes

Large pages were disabled for this run

Platform Notes

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

General Notes

OMP_NUM_THREADS set to number of cores
Binaries compiled on RHEL5.5
This result was measured on the Gateway GT350 F1.

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General Notes (Continued)

The Acer AT350 F1 is 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 -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:

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

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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
-ansi-alias`

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) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias`

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) -parallel
-ansi-alias -static -auto-ilp32`

482.sphinx3: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel`

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`

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Peak Optimization Flags (Continued)

447.deallI: basepeak = yes

450.soplex: basepeak = yes

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) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -parallel
-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) -unroll2
-inline-level=0 -scalar-rep- -static

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) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

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) -inline-calloc
-opt-malloc-options=3 -auto -unroll4
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

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) -static -auto-ilp32
-ansi-alias

436.cactusADM: basepeak = yes

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

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.html>



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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.xml>

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