



SPEC[®] CFP2006 Result

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Acer Incorporated
(Test Sponsor: Acer Incorporation)

SPECfp[®]_rate2006 = 110

Acer AT310 F2 (Xeon E3-1220)

SPECfp_rate_base2006 = 108

CPU2006 license: 97

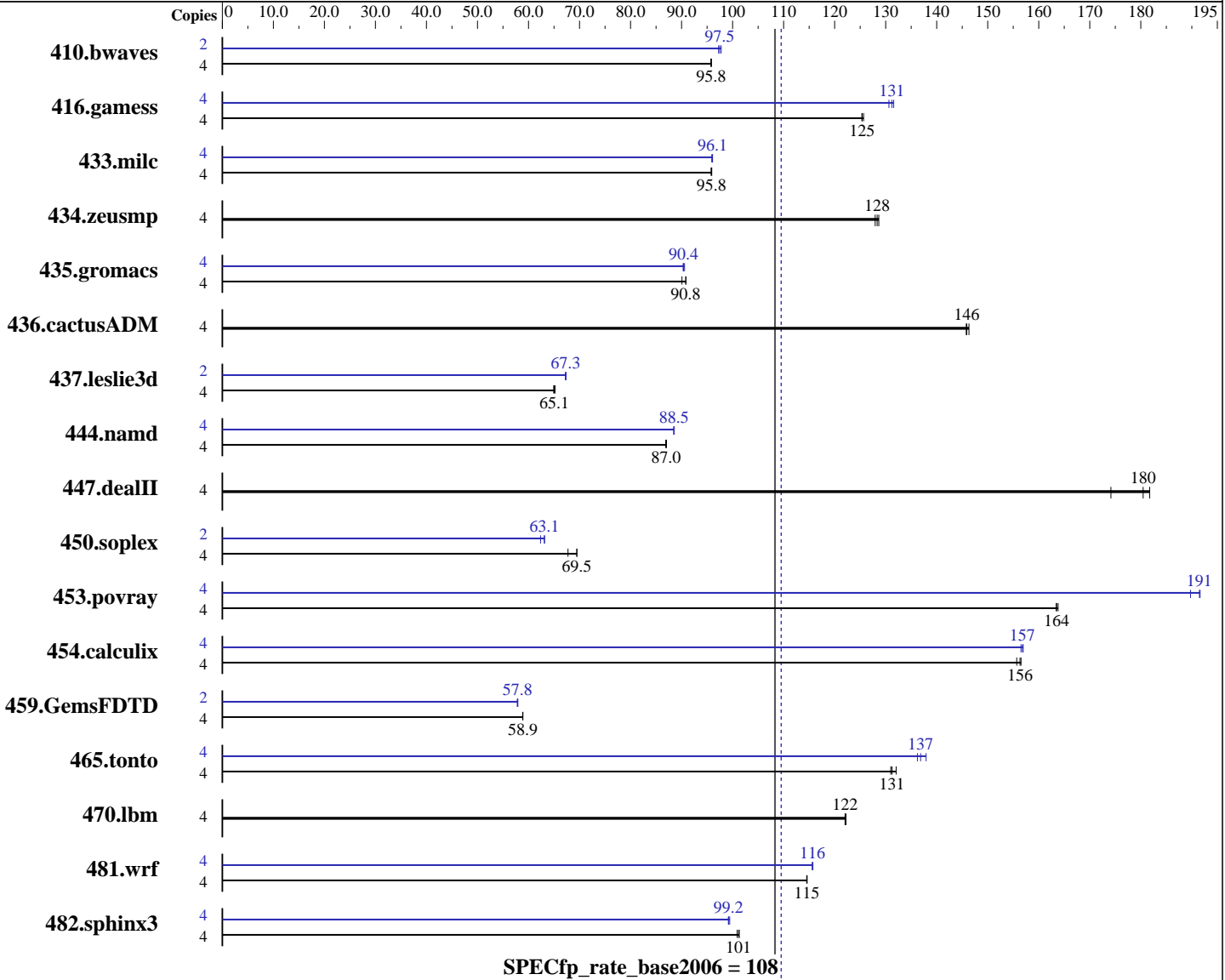
Test date: Dec-2011

Test sponsor: Acer Incorporation

Hardware Availability: Jan-2012

Tested by: Acer Incorporation

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E3-1220
 CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
 CPU MHz: 3100
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 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: Red Hat Enterprise Linux Server release 6.1
 Kernel 2.6.32-131.0.15.el6.x86_64-default
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)

Continued on next page



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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600E-9,ECC)
Disk Subsystem: 1 x 250 GB SATA, 7200 RPM
Other Hardware: None

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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	568	95.8	567	95.8	568	95.8	2	279	97.3	278	97.8	279	97.5
416.gamess	4	623	126	625	125	625	125	4	595	132	597	131	600	131
433.milc	4	383	95.8	383	95.9	383	95.8	4	382	96.1	383	95.9	382	96.1
434.zeusmp	4	283	129	285	128	284	128	4	283	129	285	128	284	128
435.gromacs	4	315	90.8	314	90.8	317	90.1	4	316	90.4	315	90.6	316	90.3
436.cactusADM	4	328	146	327	146	328	146	4	328	146	327	146	328	146
437.leslie3d	4	577	65.2	579	64.9	578	65.1	2	279	67.4	279	67.3	280	67.2
444.namd	4	369	86.9	369	87.0	369	87.0	4	362	88.5	363	88.5	362	88.5
447.dealII	4	254	180	263	174	252	182	4	254	180	263	174	252	182
450.soplex	4	492	67.7	480	69.5	480	69.5	2	267	62.4	264	63.2	264	63.1
453.povray	4	130	164	130	164	130	163	4	111	192	112	190	111	191
454.calculix	4	212	156	211	157	211	156	4	210	157	210	157	211	157
459.GemsFDTD	4	721	58.9	720	58.9	721	58.9	2	367	57.8	366	57.9	367	57.8
465.tonto	4	300	131	298	132	300	131	4	289	136	285	138	288	137
470.lbm	4	450	122	450	122	450	122	4	450	122	450	122	450	122
481.wrf	4	390	115	390	115	390	115	4	386	116	386	116	386	116
482.sphinx3	4	773	101	770	101	770	101	4	786	99.2	786	99.2	784	99.4

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

Submit Notes

numactl was used to bind copies to the cores
The config file option 'submit' was used.

Operating System Notes

Large pages were disabled for this run.

General Notes

Binaries compiled on RHEL5.5



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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:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias

Fortran benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-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  
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:

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Peak Optimization Flags (Continued)

433.milc: -xAVX(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: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2

C++ benchmarks:

444.namd: -xAVX(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.dealIII: basepeak = yes

450.soplex: -xAVX(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

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

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

416.gamess: -xAVX(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: -xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

459.GemsFDTD: -xAVX(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

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
-inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(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

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Peak Optimization Flags (Continued)

454.calculix: -xAVX -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-ic12.1-official-linux64.20111122.html>

You can also download the XML flags source by saving the following link:
<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

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For other inquiries, please contact webmaster@spec.org.

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