SPEC® CFP2006 Result

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Acer Incorporated

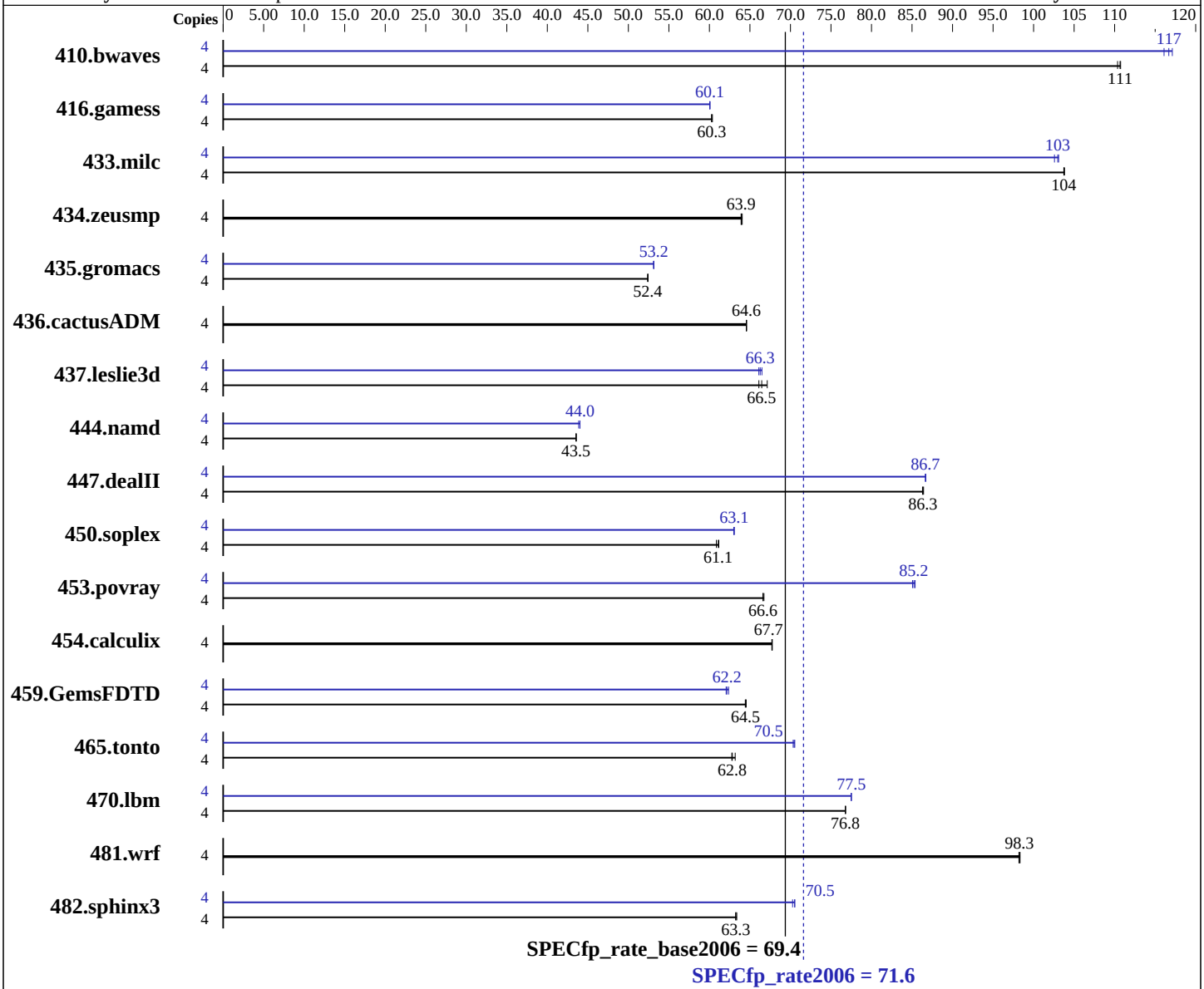
Acer AB460 F1 (Intel Xeon E5502, 1.86 GHz)

SPECfp®_rate2006 = 71.6

SPECfp_rate_base2006 = 69.4

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated

Test date: May-2010
Hardware Availability: Jul-2010
Software Availability: Jan-2010



Hardware

CPU Name:	Intel Xeon E5502
CPU Characteristics:	
CPU MHz:	1866
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
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:	No
File System:	ReiserFS
System State:	Run level 3 (multi-user)

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L3 Cache: 4 MB I+D on chip per chip
Other Cache: None
Memory: 24 GB (6 x 4 GB DDR3-1333 RDIMM, ECC, CL9 running at 800MHz)
Disk Subsystem: 1 x 300 GB SATA II, 10000 RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	**491**	**111**	491	111	493	110	4	464	117	468	116	**466**	**117**
416.gamess	4	**1299**	**60.3**	1299	60.3	1297	60.4	4	**1304**	**60.1**	1304	60.1	1304	60.0
433.milc	4	354	104	**354**	**104**	354	104	4	358	103	356	103	**357**	**103**
434.zeusmp	4	568	64.0	**569**	**63.9**	569	63.9	4	568	64.0	**569**	**63.9**	569	63.9
435.gromacs	4	545	52.4	**545**	**52.4**	545	52.4	4	537	53.2	538	53.1	**537**	**53.2**
436.cactusADM	4	741	64.5	740	64.6	**740**	**64.6**	4	741	64.5	740	64.6	**740**	**64.6**
437.leslie3d	4	**566**	**66.5**	560	67.1	569	66.1	4	566	66.5	569	66.1	**567**	**66.3**
444.namd	4	736	43.6	**737**	**43.5**	737	43.5	4	729	44.0	731	43.9	**729**	**44.0**
447.dealII	4	529	86.4	**530**	**86.3**	530	86.3	4	528	86.7	528	86.7	**528**	**86.7**
450.soplex	4	548	60.9	545	61.2	**546**	**61.1**	4	**529**	**63.1**	529	63.1	529	63.0
453.povray	4	319	66.7	320	66.6	**319**	**66.6**	4	**250**	**85.2**	249	85.4	250	85.1
454.calculix	4	487	67.7	487	67.8	**487**	**67.7**	4	487	67.7	487	67.8	**487**	**67.7**
459.GemsFDTD	4	**658**	**64.5**	658	64.5	659	64.4	4	680	62.4	**683**	**62.2**	684	62.1
465.tonto	4	623	63.2	627	62.8	**626**	**62.8**	4	558	70.5	**559**	**70.5**	560	70.3
470.lbm	4	716	76.8	716	76.8	**716**	**76.8**	4	**709**	**77.5**	709	77.5	709	77.5
481.wrf	4	**455**	**98.3**	454	98.3	455	98.2	4	**455**	**98.3**	454	98.3	455	98.2
482.sphinx3	4	1233	63.2	1230	63.4	**1232**	**63.3**	4	1109	70.3	**1105**	**70.5**	1105	70.5

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
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stack size to unlimited prior to run
```

Platform Notes

```
Fan speed set to full Speed (ie. Enterprise Blade mode) with
Smart Blade Console through CMM (Chassis Management Module)
```

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
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static
```

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Base Optimization Flags (Continued)

Fortran benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -static`

Benchmarks using both Fortran and C:
`-xSSE4.2 -ipo -O3 -no-prec-div -static`

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`
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 -opt-prefetch

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) -opt-malloc-options=3 -ansi-alias -auto-ilp32

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: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static

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

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 -inline-calloc -opt-malloc-options=3

Continued on next page

Peak Optimization Flags (Continued)

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: `basepeak = yes`

454.calculix: `basepeak = yes`

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-ic11.1-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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