SPEC® CFP2006 Result

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Acer Incorporated

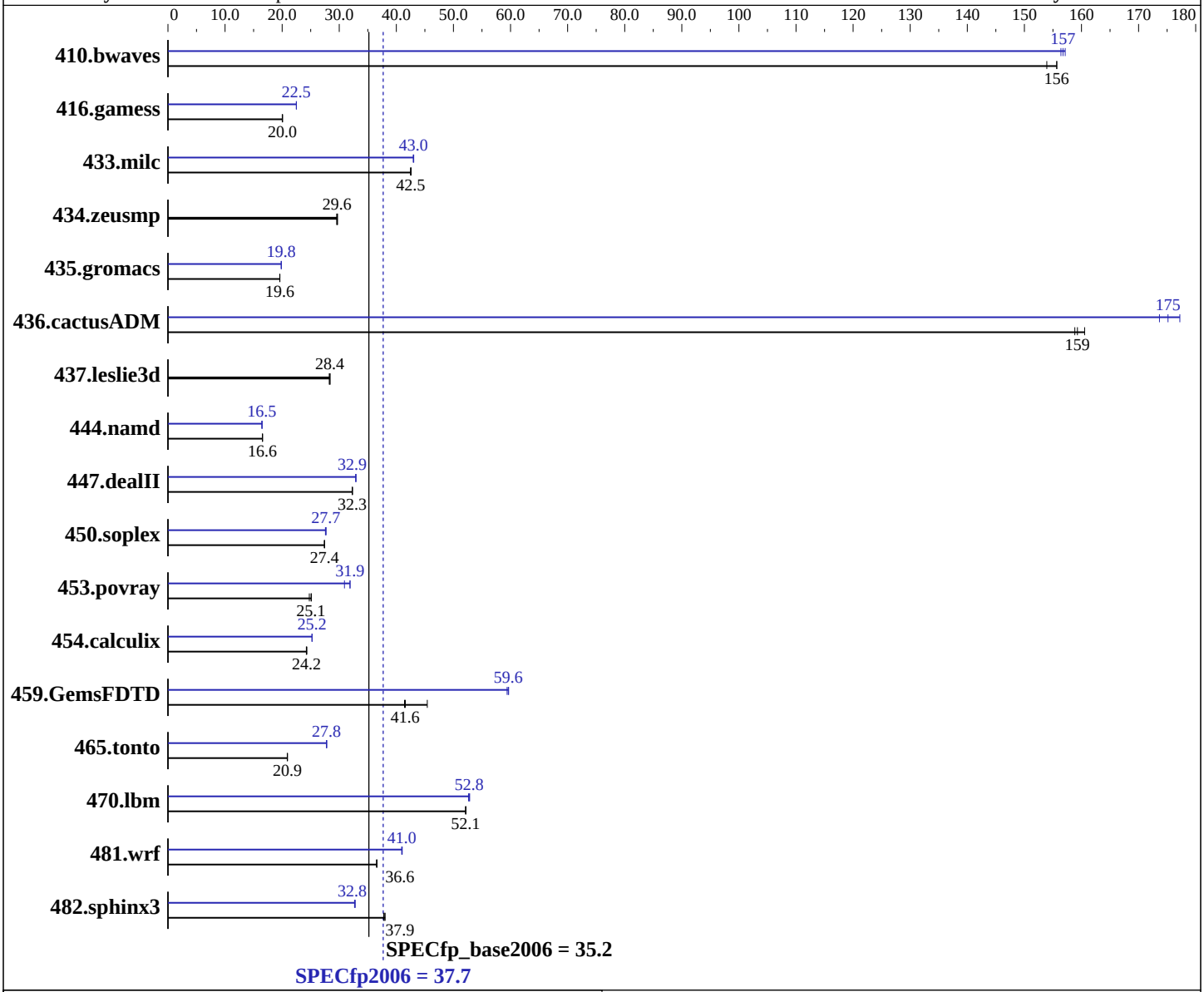
Acer AR360 F1 (Intel Xeon E5630)

SPECfp®2006 = 37.7

SPECfp_base2006 = 35.2

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

Test date: Nov-2010
Hardware Availability: Mar-2010
Software Availability: Jan-2010



Hardware

CPU Name:	Intel Xeon E5630
CPU Characteristics:	Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz:	2533
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:	SUES 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:	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 10000RPM SATA HDD
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	88.3	154	**87.3**	**156**	87.3	156	**86.7**	**157**	86.9	156	86.5	157
416.gamess	**977**	**20.0**	978	20.0	975	20.1	870	22.5	871	22.5	**871**	**22.5**
433.milc	216	42.5	**216**	**42.5**	216	42.6	213	43.0	**213**	**43.0**	214	43.0
434.zeusmp	308	29.6	306	29.7	**307**	**29.6**	308	29.6	306	29.7	**307**	**29.6**
435.gromacs	**364**	**19.6**	364	19.6	365	19.6	**360**	**19.8**	360	19.8	360	19.9
436.cactusADM	**75.0**	**159**	75.2	159	74.4	161	68.8	174	67.4	177	**68.2**	**175**
437.leslie3d	333	28.2	331	28.4	**331**	**28.4**	333	28.2	331	28.4	**331**	**28.4**
444.namd	**484**	**16.6**	485	16.5	484	16.6	**487**	**16.5**	487	16.5	487	16.5
447.dealII	354	32.3	**354**	**32.3**	354	32.3	348	32.9	**348**	**32.9**	347	32.9
450.soplex	**304**	**27.4**	304	27.4	304	27.4	302	27.6	**302**	**27.7**	301	27.7
453.povray	212	25.1	**212**	**25.1**	215	24.8	**167**	**31.9**	167	31.9	172	30.9
454.calculix	**340**	**24.2**	340	24.2	339	24.3	327	25.3	**327**	**25.2**	327	25.2
459.GemsFDTD	256	41.4	**255**	**41.6**	234	45.4	179	59.4	**178**	**59.6**	178	59.7
465.tonto	471	20.9	**471**	**20.9**	470	20.9	354	27.8	354	27.8	**354**	**27.8**
470.lbm	263	52.2	**264**	**52.1**	264	52.1	261	52.6	260	52.8	**260**	**52.8**
481.wrf	306	36.5	305	36.6	**305**	**36.6**	272	41.0	273	40.9	**273**	**41.0**
482.sphinx3	516	37.8	512	38.0	**514**	**37.9**	596	32.7	**595**	**32.8**	595	32.8

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

General Notes

```
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
This result was measured on the Gateway GR360 F1.
The Acer AR360, Acer AR380 F1, Gateway GR360 F1 and Gateway GR380 F1 are electronically equivalent.
```

Base Compiler Invocation

C benchmarks:

```
icc   -m64
```

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Base Compiler Invocation (Continued)

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

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

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

Continued on next page

Peak Optimization Flags (Continued)

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`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revG.20101027.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revG.20101027.xml`

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Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 14:55:11 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 December 2010.