SPEC® CFP2006 Result

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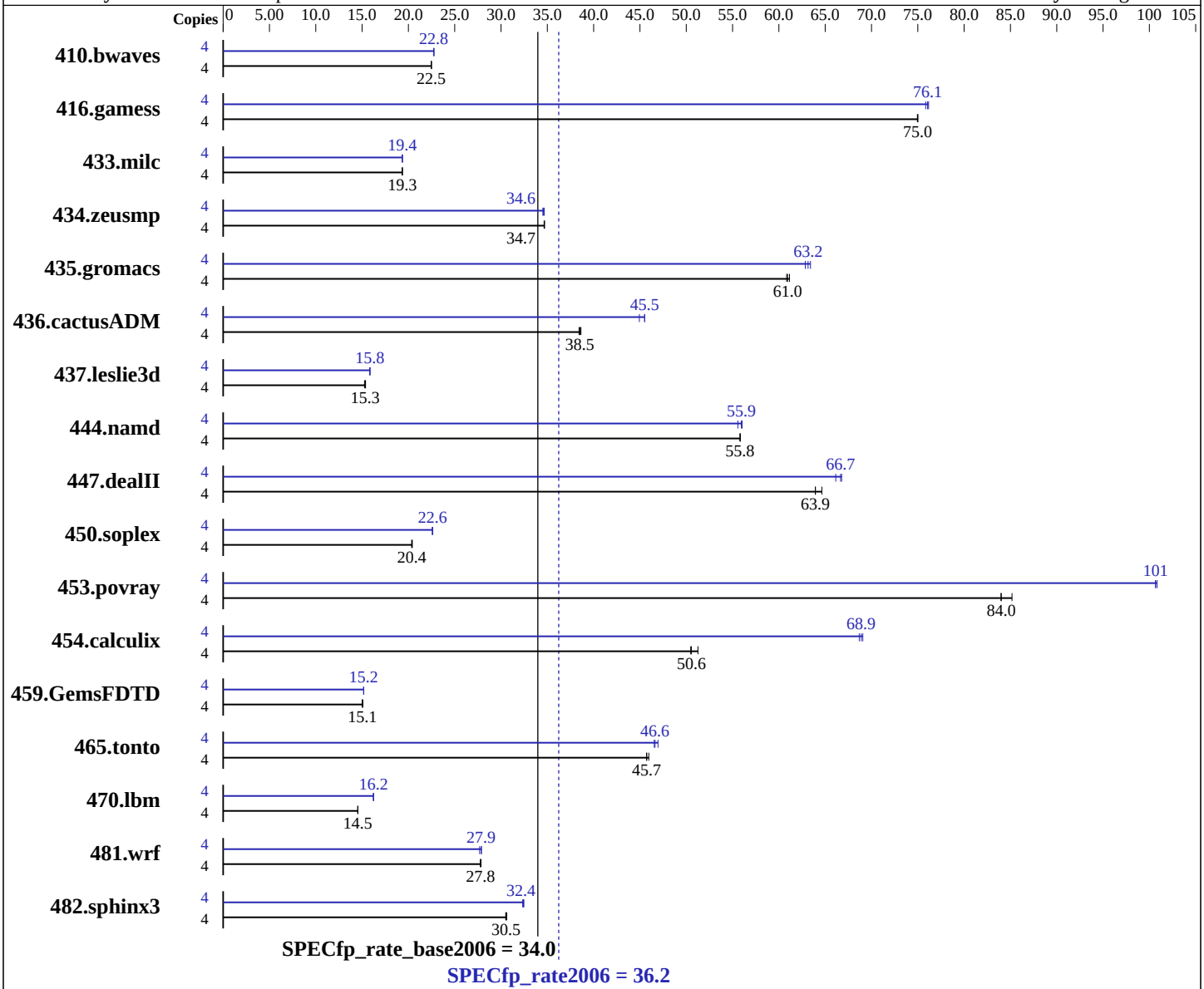
Acer Incorporated
Acer Altos R720 (Intel X5355)

SPECfp®_rate2006 = 36.2

SPECfp_rate_base2006 = 34.0

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

Test date: Sep-2007
Hardware Availability: Nov-2006
Software Availability: Aug-2007



Hardware

CPU Name:	Intel Xeon X5355
CPU Characteristics:	1333MHz system bus
CPU MHz:	2660
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
CPU(s) orderable:	1, 2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System:	SuSE Linux Enterprise Server 10 EM64T (kernel 2.6.16.21-0.8-smp)
Compiler:	Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070725
Auto Parallel:	No
File System:	ReiserFS
System State:	Multi-user, level 3
Base Pointers:	64-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8 x 2048MB ECC FB-DIMM DDR2-667 CL5-5-5)
Disk Subsystem: 1 x 73GB 10000PRM SAS HDD
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: MicroQuill SmartHeap Library 8.1

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	2420	22.5	2417	22.5	**2418**	**22.5**	4	**2389**	**22.8**	2390	22.7	2389	22.8
416.gamess	4	1045	75.0	**1045**	**75.0**	1044	75.0	4	1033	75.9	**1030**	**76.1**	1028	76.2
433.milc	4	1897	19.4	**1898**	**19.3**	1901	19.3	4	**1898**	**19.4**	1897	19.4	1900	19.3
434.zeusmp	4	1049	34.7	1050	34.7	**1050**	**34.7**	4	**1053**	**34.6**	1050	34.7	1054	34.5
435.gromacs	4	467	61.1	469	60.8	**469**	**61.0**	4	**452**	**63.2**	454	62.9	450	63.4
436.cactusADM	4	1237	38.6	1244	38.4	**1241**	**38.5**	4	**1051**	**45.5**	1064	44.9	1050	45.5
437.leslie3d	4	2446	15.4	2463	15.3	**2450**	**15.3**	4	**2373**	**15.8**	2375	15.8	2371	15.9
444.namd	4	575	55.8	**575**	**55.8**	575	55.8	4	573	56.0	577	55.6	**573**	**55.9**
447.dealII	4	708	64.6	716	63.9	**716**	**63.9**	4	685	66.8	692	66.1	**686**	**66.7**
450.soplex	4	1633	20.4	1638	20.4	**1638**	**20.4**	4	1478	22.6	**1476**	**22.6**	1474	22.6
453.povray	4	250	85.2	253	84.0	**253**	**84.0**	4	211	101	**211**	**101**	211	101
454.calculix	4	**653**	**50.6**	644	51.3	654	50.5	4	**479**	**68.9**	478	69.1	480	68.7
459.GemsFDTD	4	**2818**	**15.1**	2828	15.0	2814	15.1	4	2796	15.2	2798	15.2	**2797**	**15.2**
465.tonto	4	856	46.0	861	45.7	**861**	**45.7**	4	846	46.5	838	46.9	**844**	**46.6**
470.lbm	4	3780	14.5	**3780**	**14.5**	3779	14.5	4	**3386**	**16.2**	3386	16.2	3386	16.2
481.wrf	4	1605	27.8	1609	27.8	**1607**	**27.8**	4	1614	27.7	1602	27.9	**1604**	**27.9**
482.sphinx3	4	**2552**	**30.5**	2546	30.6	2555	30.5	4	2411	32.3	**2405**	**32.4**	2401	32.5

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

General Notes

```
This result was measured on the Acer Altos R520
The Altos R720 and Altos R520 are electronically equivalent.

BIOS Settings
  Snoop Filter set to OFF
   Snoop Filter preserves cache coherency while
   minimizing snoops to remote nodes.

  Adjacent Cache Line Prefetch set to OFF
   Prefetch data in order to shorten execution cycles
   and maximize data processing efficiency.

  Optimization for high-frequency FSB applications set to ON
```

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General Notes (Continued)

All results used taskset to bind processes to cores

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

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:
-fast

C++ benchmarks:
-fast

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Base Optimization Flags (Continued)

Fortran benchmarks:
`-fast`

Benchmarks using both Fortran and C:
`-fast`

Peak Compiler Invocation

C benchmarks (except as noted below):
`/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc`
`-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib`
`-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

433.milc: `icc`

C++ benchmarks (except as noted below):
`icpc`

450.soplex: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc`
`-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib`
`-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

Fortran benchmarks (except as noted below):
`ifort`

437.leslie3d: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort`
`-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib`
`-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

Benchmarks using both Fortran and C:
`icc ifort`

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`
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`

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Peak Portability Flags (Continued)

465.tonto: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

433.milc: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias -auto-ilp32

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -scalar-rep- -prefetch -opt-malloc-options=3

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias -auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast -opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0 -prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

Continued on next page

Peak Optimization Flags (Continued)

435.gromacs: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch -auto-ilp32`

436.cactusADM: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -prefetch -auto-ilp32`

454.calculix: `-fast -unroll-aggressive -auto-ilp32`

481.wrf: `-fast -auto-ilp32`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.17.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.17.xml`

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Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 14:55:46 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 October 2007.