SPEC® CFP2006 Result

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Acer Incorporated

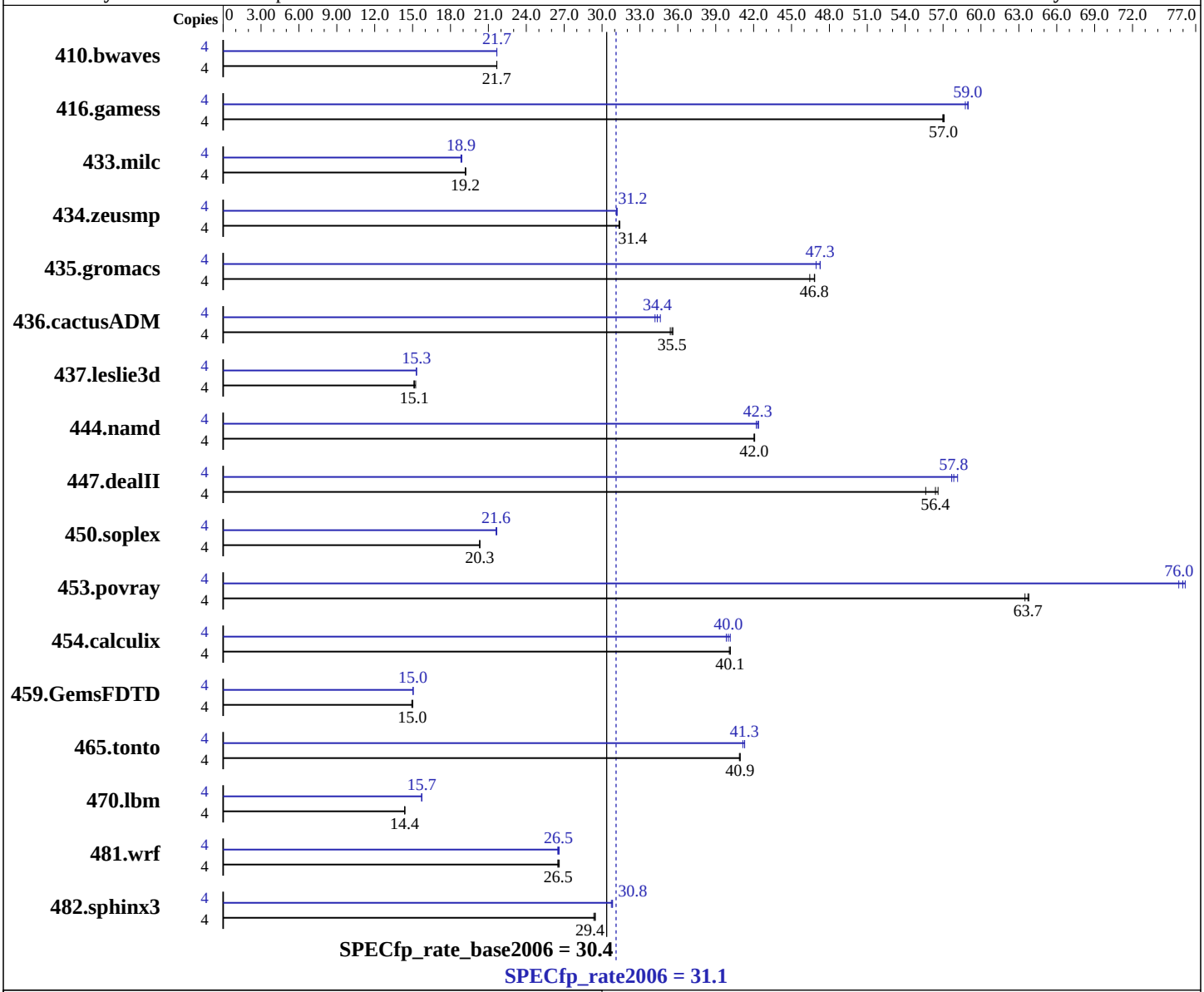
Acer Altos R520 (Intel Xeon E5335)

SPECfp®_rate2006 = 31.1

SPECfp_rate_base2006 = 30.4

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

Test date: Jul-2007
Hardware Availability: Nov-2006
Software Availability: Jun-2007



Hardware

CPU Name:	Intel Xeon E5335
CPU Characteristics:	1333MHz system bus
CPU MHz:	2000
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++ Compiler for Linux32 version 10.0 Build 20070426 Package ID: l_cc_p_10.0.023 Intel Fortran Compiler for Linux32 version 10.0 Build 20070426 Package ID: l_fc_p_10.0.023
Auto Parallel:	No
File System:	ReiserFS
System State:	Default

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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 10000RPM SAS HDD
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32-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	**2509**	**21.7**	2508	21.7	2509	21.7	4	**2508**	**21.7**	2508	21.7	2509	21.7
416.gamess	4	1375	57.0	1372	57.1	**1373**	**57.0**	4	1333	58.8	1328	59.0	**1329**	**59.0**
433.milc	4	1911	19.2	1916	19.2	**1916**	**19.2**	4	1950	18.8	**1948**	**18.9**	1943	18.9
434.zeusmp	4	1159	31.4	**1161**	**31.4**	1162	31.3	4	**1168**	**31.2**	1167	31.2	1169	31.1
435.gromacs	4	610	46.8	**610**	**46.8**	615	46.4	4	**604**	**47.3**	608	46.9	604	47.3
436.cactusADM	4	1342	35.6	1350	35.4	**1345**	**35.5**	4	1398	34.2	1381	34.6	**1391**	**34.4**
437.leslie3d	4	**2483**	**15.1**	2490	15.1	2467	15.2	4	2455	15.3	2459	15.3	**2457**	**15.3**
444.namd	4	763	42.0	762	42.1	**763**	**42.0**	4	757	42.4	760	42.2	**758**	**42.3**
447.dealII	4	808	56.6	823	55.6	**811**	**56.4**	4	787	58.2	793	57.7	**791**	**57.8**
450.soplex	4	1642	20.3	1642	20.3	**1642**	**20.3**	4	**1543**	**21.6**	1540	21.7	1543	21.6
453.povray	4	335	63.5	334	63.8	**334**	**63.7**	4	**280**	**76.0**	281	75.7	279	76.2
454.calculix	4	822	40.2	823	40.1	**822**	**40.1**	4	822	40.2	828	39.8	**825**	**40.0**
459.GemsFDTD	4	2826	15.0	**2832**	**15.0**	2842	14.9	4	2824	15.0	2820	15.0	**2823**	**15.0**
465.tonto	4	962	40.9	963	40.9	**962**	**40.9**	4	956	41.2	953	41.3	**953**	**41.3**
470.lbm	4	3823	14.4	**3822**	**14.4**	3821	14.4	4	**3495**	**15.7**	3495	15.7	3496	15.7
481.wrf	4	1686	26.5	1679	26.6	**1684**	**26.5**	4	1679	26.6	**1684**	**26.5**	1686	26.5
482.sphinx3	4	**2649**	**29.4**	2645	29.5	2656	29.3	4	**2531**	**30.8**	2528	30.8	2536	30.7

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

General Notes

```
All programs compiled with the 64-bit compiler except
437.leslie3d, 450.soplex, 470.lbm and 482.sphinx3, at peak,
compiled with the 32-bit compiler
This result was measured on the Acer Altos R520
The Altos R720 and Altos R520 are electronically equivalent.

taskset was used to bind copies to cores
```

Base Compiler Invocation

C benchmarks:
icc

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Base Compiler Invocation (Continued)

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
436.cactusADM: -DSPEC_CPU_LP64
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
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 -auto-ilp32

C++ benchmarks:
-fast -auto-ilp32

Fortran benchmarks:
-fast

Benchmarks using both Fortran and C:

435.gromacs: -fast -auto-ilp32 -nofor_main(*)

436.cactusADM: Same as 435.gromacs

Continued on next page

Base Optimization Flags (Continued)

454.calculix: `Same as 435.gromacs`

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

(*) Indicates an optimization flag that was found in a portability variable.

Peak Compiler Invocation

C benchmarks (except as noted below):
`/opt/intel/cc/10.0.023/bin/icc -L/opt/intel/cc/10.0.023/lib -I/opt/intel/cc/10.0.023/include`

433.milc: `icc`

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

450.soplex: `/opt/intel/cc/10.0.023/bin/icpc -L/opt/intel/cc/10.0.023/lib -I/opt/intel/cc/10.0.023/include`

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

437.leslie3d: `/opt/intel/fc/10.0.023/bin/ifort -L/opt/intel/fc/10.0.023/lib -I/opt/intel/fc/10.0.023/include`

Benchmarks using both Fortran and C:
`icc ifort`

Peak Portability Flags

`Same as Base Portability Flags`

Peak Optimization Flags

C benchmarks:

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

470.lbm: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -scalar-rep- -prefetch`

482.sphinx3: `-fast -unroll2`

Continued on next page

Peak Optimization Flags (Continued)

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) -xT -ipo -O3 -no-prec-div

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

Fortran benchmarks:

410.bwaves: -fast

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: Same as 434.zeusmp

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

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

Benchmarks using both Fortran and C:

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

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

454.calculix: -fast -auto-ilp32 -nofor_main(*)

481.wrf: -fast -auto-ilp32

(*) Indicates an optimization flag that was found in a portability variable.

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.16.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.16.xml

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