SPEC® CFP2006 Result

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Acer Incorporated

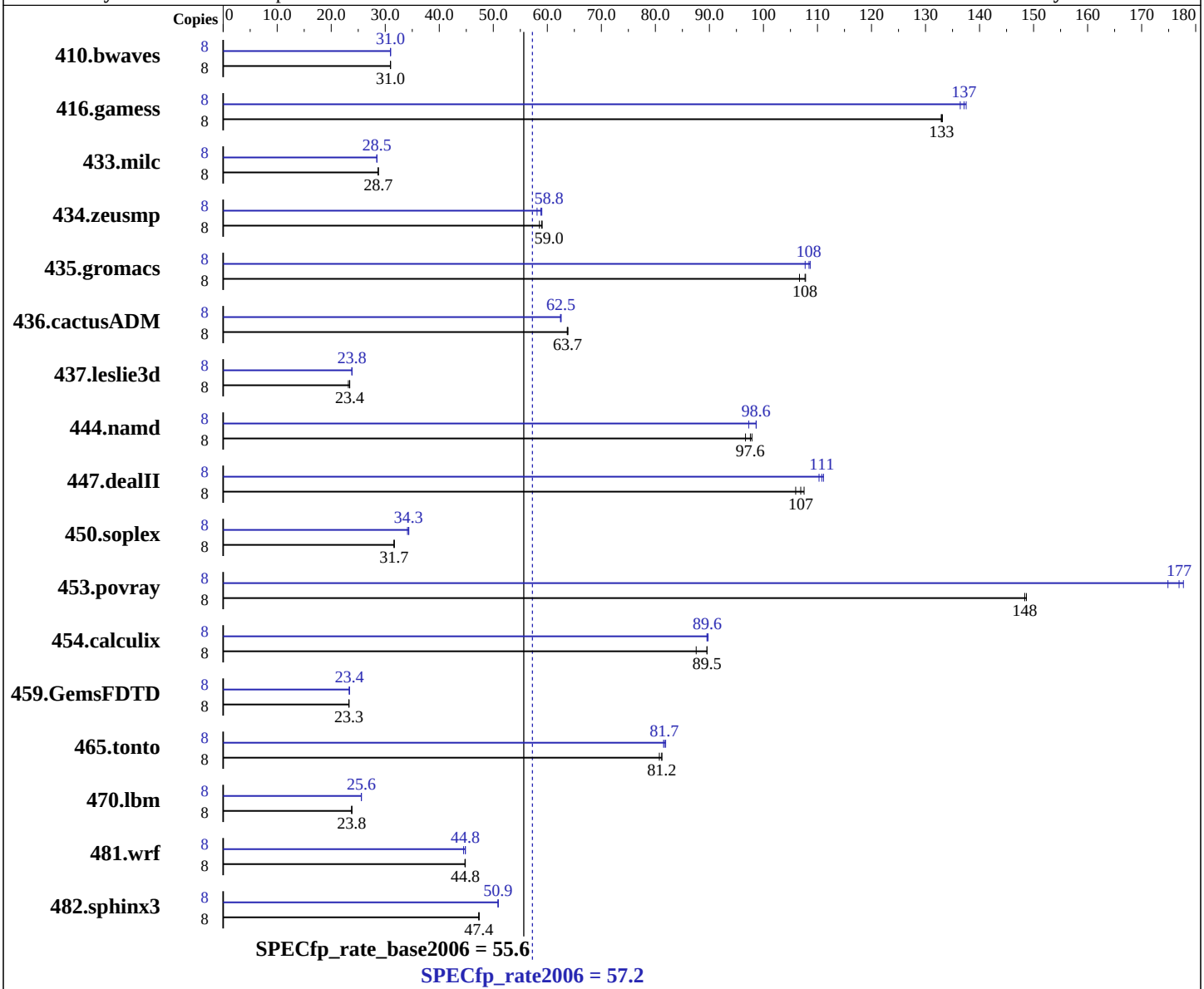
Acer Altos R720 (Intel Xeon E5345)

SPECfp®_rate2006 = 57.2

SPECfp_rate_base2006 = 55.6

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

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



Hardware

CPU Name:	Intel Xeon E5345
CPU Characteristics:	1333MHz system bus
CPU MHz:	2330
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 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	8	3512	31.0	3509	31.0	**3510**	**31.0**	8	3510	31.0	3509	31.0	**3509**	**31.0**
416.gamess	8	1177	133	**1178**	**133**	1179	133	8	**1142**	**137**	1148	136	1139	138
433.milc	8	2559	28.7	2557	28.7	**2558**	**28.7**	8	2582	28.4	**2581**	**28.5**	2580	28.5
434.zeusmp	8	**1235**	**59.0**	1244	58.5	1233	59.0	8	1253	58.1	1234	59.0	**1238**	**58.8**
435.gromacs	8	535	107	**530**	**108**	530	108	8	526	109	**527**	**108**	530	108
436.cactusADM	8	**1500**	**63.7**	1498	63.8	1501	63.7	8	1528	62.5	1531	62.4	**1529**	**62.5**
437.leslie3d	8	3244	23.2	**3211**	**23.4**	3211	23.4	8	3152	23.9	**3154**	**23.8**	3157	23.8
444.namd	8	**658**	**97.6**	664	96.7	656	97.9	8	659	97.3	650	98.7	**650**	**98.6**
447.dealII	8	864	106	**856**	**107**	851	108	8	**826**	**111**	830	110	824	111
450.soplex	8	2106	31.7	2110	31.6	**2108**	**31.7**	8	1955	34.1	1941	34.4	**1945**	**34.3**
453.povray	8	**287**	**148**	287	148	286	149	8	239	178	243	175	**241**	**177**
454.calculix	8	737	89.6	754	87.5	**737**	**89.5**	8	735	89.8	737	89.5	**736**	**89.6**
459.GemsFDTD	8	**3646**	**23.3**	3647	23.3	3645	23.3	8	3637	23.3	**3632**	**23.4**	3631	23.4
465.tonto	8	**970**	**81.2**	970	81.2	975	80.7	8	966	81.5	961	81.9	**964**	**81.7**
470.lbm	8	**4617**	**23.8**	4614	23.8	4622	23.8	8	4298	25.6	4297	25.6	**4297**	**25.6**
481.wrf	8	1994	44.8	1997	44.7	**1994**	**44.8**	8	**1994**	**44.8**	2008	44.5	1993	44.8
482.sphinx3	8	**3292**	**47.4**	3292	47.4	3296	47.3	8	3063	50.9	**3063**	**50.9**	3064	50.9

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

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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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