



SPEC® CFP2006 Result

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Acer Incorporated

SPECfp®_rate2006 = 18.6

Acer Altos R520 (Intel Xeon 5120)

SPECfp_rate_base2006 = 17.5

CPU2006 license: 97

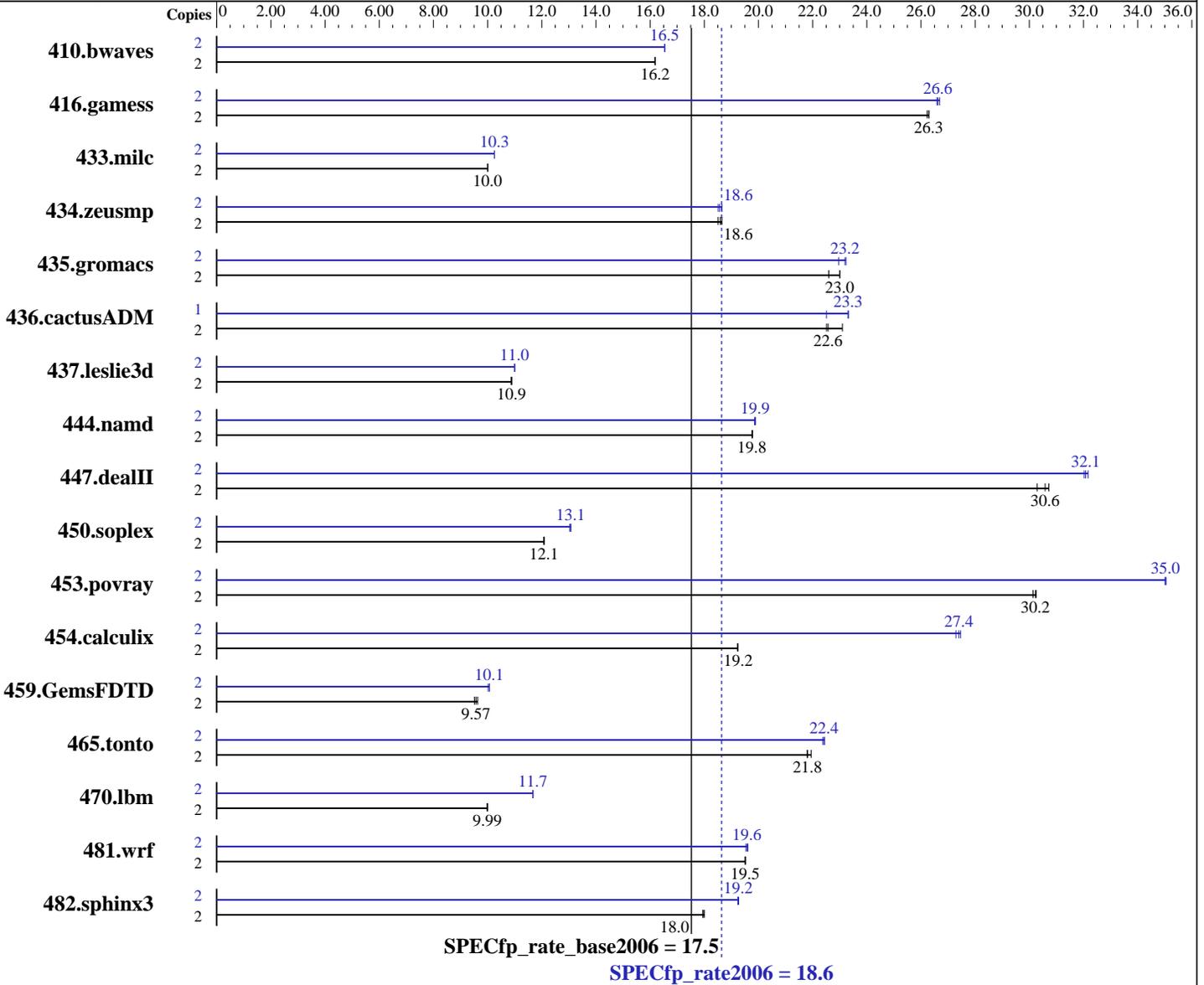
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Nov-2007

Hardware Availability: Nov-2006

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon 5120
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 1860
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 CPU(s) orderable: 1, 2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 4 MB I+D on chip per chip

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Software

Operating System: SuSE Linux Enterprise Server 10 SP1 EM64T (kernel 2.6.16.46-0.12-smp)
 Compiler: Intel C++ and Fortran Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008, l_fc_p_10.1.008
 Auto Parallel: Yes
 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: Binutils 2.17.50.0.15

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	1679	16.2	1679	16.2	<u>1679</u>	<u>16.2</u>	2	1643	16.5	1643	16.5	<u>1643</u>	<u>16.5</u>
416.gamess	2	1489	26.3	<u>1490</u>	<u>26.3</u>	1493	26.2	2	1467	26.7	1473	26.6	<u>1471</u>	<u>26.6</u>
433.milc	2	1833	10.0	<u>1836</u>	<u>10.0</u>	1836	10.0	2	<u>1791</u>	<u>10.3</u>	1790	10.3	1791	10.3
434.zeusmp	2	983	18.5	976	18.7	<u>979</u>	<u>18.6</u>	2	983	18.5	976	18.7	<u>980</u>	<u>18.6</u>
435.gromacs	2	632	22.6	621	23.0	<u>621</u>	<u>23.0</u>	2	<u>616</u>	<u>23.2</u>	622	23.0	615	23.2
436.cactusADM	2	1035	23.1	<u>1059</u>	<u>22.6</u>	1061	22.5	1	531	22.5	512	23.3	<u>513</u>	<u>23.3</u>
437.leslie3d	2	1725	10.9	<u>1727</u>	<u>10.9</u>	1730	10.9	2	<u>1709</u>	<u>11.0</u>	1710	11.0	1709	11.0
444.namd	2	812	19.8	<u>812</u>	<u>19.8</u>	811	19.8	2	808	19.9	806	19.9	<u>807</u>	<u>19.9</u>
447.dealII	2	745	30.7	755	30.3	<u>748</u>	<u>30.6</u>	2	714	32.0	<u>713</u>	<u>32.1</u>	711	32.2
450.soplex	2	1381	12.1	<u>1381</u>	<u>12.1</u>	1380	12.1	2	<u>1277</u>	<u>13.1</u>	1280	13.0	1276	13.1
453.povray	2	352	30.3	353	30.1	<u>352</u>	<u>30.2</u>	2	304	35.0	<u>304</u>	<u>35.0</u>	304	35.0
454.calculix	2	<u>858</u>	<u>19.2</u>	857	19.2	858	19.2	2	601	27.5	<u>602</u>	<u>27.4</u>	605	27.3
459.GemsFDTD	2	2204	9.63	<u>2218</u>	<u>9.57</u>	2230	9.52	2	2118	10.0	2107	10.1	<u>2108</u>	<u>10.1</u>
465.tonto	2	897	21.9	<u>902</u>	<u>21.8</u>	903	21.8	2	877	22.4	<u>878</u>	<u>22.4</u>	880	22.4
470.lbm	2	<u>2751</u>	<u>9.99</u>	2748	10.0	2752	9.98	2	2353	11.7	<u>2354</u>	<u>11.7</u>	2354	11.7
481.wrf	2	1144	19.5	1145	19.5	<u>1145</u>	<u>19.5</u>	2	1143	19.5	<u>1141</u>	<u>19.6</u>	1139	19.6
482.sphinx3	2	2165	18.0	2172	17.9	<u>2170</u>	<u>18.0</u>	2	2026	19.2	2023	19.3	<u>2025</u>	<u>19.2</u>

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.

All benchmarks compiled in 64-bit mode except 437.leslie3d, 450.soplex
470.lbm and 482.sphinx3, at peak, are compiled in 32-bit mode

BIOS Setting

Hardware Prefetcher set to ON
Adjacent Cache Line Prefetch set to ON
Optimization for high-frequency FSB applications set to ON

All results used taskset to bind processes to cores.



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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

Fortran benchmarks:

-fast

Benchmarks using both Fortran and C:

-fast



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Peak Compiler Invocation

C benchmarks (except as noted below):

```
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include
```

433.milc: icc

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include
```

Fortran benchmarks (except as noted below):

ifort

```
437.leslie3d: /opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib
-I/opt/intel/fc/10.1.008/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.deall: -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
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
```

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Peak Optimization Flags (Continued)

482.sphinx3: -fast -unroll2

C++ benchmarks:

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

447.dealIII: -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:

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 -parallel -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.20090714.06.html>



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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.20090714.06.xml>

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