



# SPEC<sup>®</sup> CFP2006 Result

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## Acer Incorporated

## SPECfp<sup>®</sup>\_rate2006 = 22.2

## Acer Altos R520 (Intel Xeon 5130)

## SPECfp\_rate\_base2006 = 20.5

CPU2006 license: 97

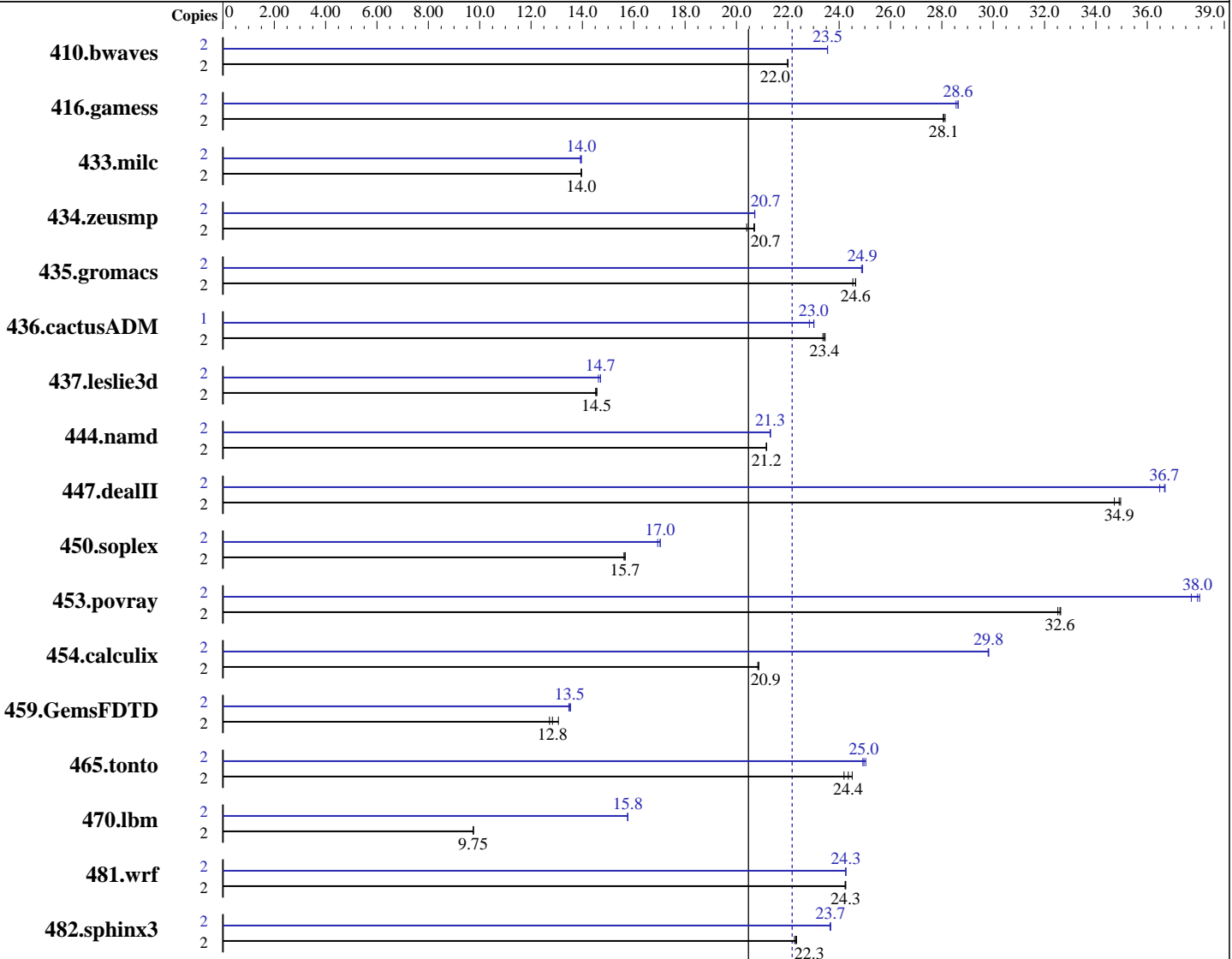
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Nov-2007

Hardware Availability: Nov-2006

Software Availability: Nov-2007



SPECfp\_rate\_base2006 = 20.5

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### Hardware

CPU Name: Intel Xeon 5130  
 CPU Characteristics: 1333MHz system bus  
 CPU MHz: 2000  
 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	1235	22.0	<b><u>1236</u></b>	<b><u>22.0</u></b>	1236	22.0	2	1154	23.5	1154	23.5	<b><u>1154</u></b>	<b><u>23.5</u></b>
416.gamess	2	1392	28.1	<b><u>1395</u></b>	<b><u>28.1</u></b>	1396	28.1	2	1371	28.6	<b><u>1368</u></b>	<b><u>28.6</u></b>	1368	28.6
433.milc	2	1316	14.0	1315	14.0	<b><u>1315</u></b>	<b><u>14.0</u></b>	2	<b><u>1315</u></b>	<b><u>14.0</u></b>	1315	14.0	1319	13.9
434.zeusmp	2	<b><u>880</u></b>	<b><u>20.7</u></b>	892	20.4	879	20.7	2	879	20.7	<b><u>879</u></b>	<b><u>20.7</u></b>	878	20.7
435.gromacs	2	582	24.5	<b><u>580</u></b>	<b><u>24.6</u></b>	579	24.6	2	<b><u>573</u></b>	<b><u>24.9</u></b>	574	24.9	573	24.9
436.cactusADM	2	<b><u>1020</u></b>	<b><u>23.4</u></b>	1023	23.4	1019	23.5	1	519	23.0	523	22.8	<b><u>519</u></b>	<b><u>23.0</u></b>
437.leslie3d	2	<b><u>1292</u></b>	<b><u>14.5</u></b>	1291	14.6	1295	14.5	2	1278	14.7	<b><u>1279</u></b>	<b><u>14.7</u></b>	1285	14.6
444.namd	2	757	21.2	<b><u>758</u></b>	<b><u>21.2</u></b>	758	21.2	2	753	21.3	752	21.3	<b><u>752</u></b>	<b><u>21.3</u></b>
447.dealII	2	<b><u>655</u></b>	<b><u>34.9</u></b>	654	35.0	659	34.7	2	623	36.7	<b><u>624</u></b>	<b><u>36.7</u></b>	627	36.5
450.soplex	2	1068	15.6	<b><u>1065</u></b>	<b><u>15.7</u></b>	1065	15.7	2	979	17.0	985	16.9	<b><u>980</u></b>	<b><u>17.0</u></b>
453.povray	2	326	32.6	<b><u>326</u></b>	<b><u>32.6</u></b>	327	32.5	2	282	37.7	<b><u>280</u></b>	<b><u>38.0</u></b>	280	38.0
454.calculix	2	791	20.9	792	20.8	<b><u>791</u></b>	<b><u>20.9</u></b>	2	<b><u>553</u></b>	<b><u>29.8</u></b>	553	29.8	554	29.8
459.GemsFDTD	2	<b><u>1653</u></b>	<b><u>12.8</u></b>	1668	12.7	1624	13.1	2	<b><u>1572</u></b>	<b><u>13.5</u></b>	1575	13.5	1567	13.5
465.tonto	2	803	24.5	<b><u>808</u></b>	<b><u>24.4</u></b>	814	24.2	2	790	24.9	786	25.0	<b><u>788</u></b>	<b><u>25.0</u></b>
470.lbm	2	2815	9.76	<b><u>2819</u></b>	<b><u>9.75</u></b>	2819	9.75	2	1743	15.8	<b><u>1743</u></b>	<b><u>15.8</u></b>	1743	15.8
481.wrf	2	<b><u>921</u></b>	<b><u>24.3</u></b>	921	24.3	922	24.2	2	921	24.3	<b><u>921</u></b>	<b><u>24.3</u></b>	921	24.3
482.sphinx3	2	1751	22.3	1745	22.3	<b><u>1747</u></b>	<b><u>22.3</u></b>	2	1649	23.6	<b><u>1647</u></b>	<b><u>23.7</u></b>	1647	23.7

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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CPU2006 license: 97

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Tested by: Acer Incorporated

Test date: Nov-2007

Hardware Availability: Nov-2006

Software Availability: Nov-2007

## 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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