



# SPEC<sup>®</sup> CFP2006 Result

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## Acer Incorporated

## SPECfp<sup>®</sup>\_rate2006 = 21.5

## Acer Altos R720 (Intel Xeon E5205)

## SPECfp\_rate\_base2006 = 19.6

CPU2006 license: 97

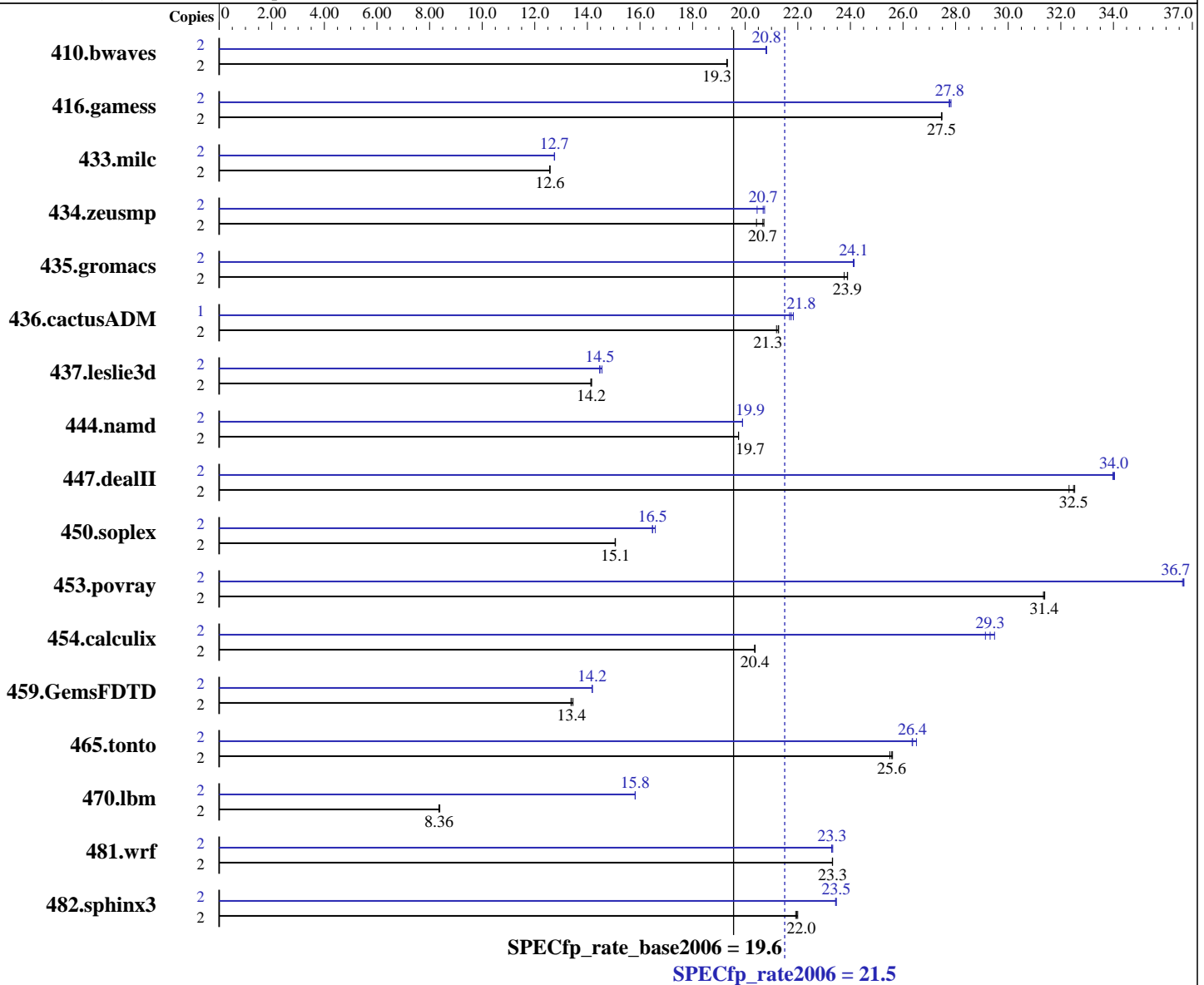
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Mar-2008

Hardware Availability: Nov-2007

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon E5205  
 CPU Characteristics: 1066MHz 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: 6 MB I+D on chip per chip

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### Software

Operating System: SuSE Linux Enterprise Server 10 SP1 (x86\_64)  
 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 10K RPM 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	1406	19.3	<b><u>1408</u></b>	<b><u>19.3</u></b>	1408	19.3	2	1306	20.8	<b><u>1306</u></b>	<b><u>20.8</u></b>	1307	20.8
416.gamess	2	1425	27.5	<b><u>1426</u></b>	<b><u>27.5</u></b>	1426	27.5	2	1411	27.8	<b><u>1410</u></b>	<b><u>27.8</u></b>	1407	27.8
433.milc	2	<b><u>1460</u></b>	<b><u>12.6</u></b>	1461	12.6	1460	12.6	2	1441	12.7	1440	12.8	<b><u>1440</u></b>	<b><u>12.7</u></b>
434.zeusmp	2	891	20.4	879	20.7	<b><u>880</u></b>	<b><u>20.7</u></b>	2	890	20.5	878	20.7	<b><u>880</u></b>	<b><u>20.7</u></b>
435.gromacs	2	601	23.8	<b><u>598</u></b>	<b><u>23.9</u></b>	598	23.9	2	592	24.1	591	24.1	<b><u>592</u></b>	<b><u>24.1</u></b>
436.cactusADM	2	1124	21.3	<b><u>1124</u></b>	<b><u>21.3</u></b>	1128	21.2	1	<b><u>549</u></b>	<b><u>21.8</u></b>	547	21.8	551	21.7
437.leslie3d	2	1330	14.1	1328	14.2	<b><u>1328</u></b>	<b><u>14.2</u></b>	2	<b><u>1298</u></b>	<b><u>14.5</u></b>	1300	14.5	1292	14.6
444.namd	2	812	19.7	<b><u>812</u></b>	<b><u>19.7</u></b>	812	19.7	2	806	19.9	806	19.9	<b><u>806</u></b>	<b><u>19.9</u></b>
447.dealII	2	708	32.3	<b><u>704</u></b>	<b><u>32.5</u></b>	703	32.5	2	672	34.0	673	34.0	<b><u>673</u></b>	<b><u>34.0</u></b>
450.soplex	2	1108	15.1	<b><u>1107</u></b>	<b><u>15.1</u></b>	1107	15.1	2	<b><u>1012</u></b>	<b><u>16.5</u></b>	1013	16.5	1006	16.6
453.povray	2	<b><u>339</u></b>	<b><u>31.4</u></b>	340	31.3	339	31.4	2	<b><u>290</u></b>	<b><u>36.7</u></b>	290	36.6	290	36.7
454.calculix	2	810	20.4	811	20.4	<b><u>810</u></b>	<b><u>20.4</u></b>	2	560	29.5	<b><u>563</u></b>	<b><u>29.3</u></b>	566	29.1
459.GemsFDTD	2	1577	13.5	1586	13.4	<b><u>1584</u></b>	<b><u>13.4</u></b>	2	1496	14.2	<b><u>1496</u></b>	<b><u>14.2</u></b>	1496	14.2
465.tonto	2	<b><u>770</u></b>	<b><u>25.6</u></b>	772	25.5	769	25.6	2	742	26.5	<b><u>746</u></b>	<b><u>26.4</u></b>	747	26.3
470.lbm	2	3275	8.39	<b><u>3287</u></b>	<b><u>8.36</u></b>	3289	8.36	2	1737	15.8	<b><u>1737</u></b>	<b><u>15.8</u></b>	1737	15.8
481.wrf	2	958	23.3	958	23.3	<b><u>958</u></b>	<b><u>23.3</u></b>	2	958	23.3	959	23.3	<b><u>959</u></b>	<b><u>23.3</u></b>
482.sphinx3	2	1772	22.0	<b><u>1775</u></b>	<b><u>22.0</u></b>	1778	21.9	2	1663	23.4	<b><u>1662</u></b>	<b><u>23.5</u></b>	1661	23.5

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.

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 Settings

Hardware Prefetcher set to ON

Adjacent Cache Line Prefetch set to ON

All results but peak 436.cactusADM used taskset to bind  
processes to cores.

"ulimit -s unlimited" was set for stacksize unlimited

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CPU2006 license: 97

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Test date: Mar-2008

Hardware Availability: Nov-2007

Software Availability: Nov-2007

## General Notes (Continued)

OMP\_NUM\_THREADS set to number of 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

Fortran benchmarks:

-fast

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## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

-fast

## 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.dealII: -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



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## 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:

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

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## Peak Optimization Flags (Continued)

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-linux64-revC.20090713.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-fp-linux64-revC.20090713.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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