



# SPEC® CINT2006 Result

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## Acer Incorporated

SPECint®\_rate2006 = 53.7

## Acer Altos R520 (Intel Xeon E5405)

SPECint\_rate\_base2006 = 45.7

CPU2006 license: 97

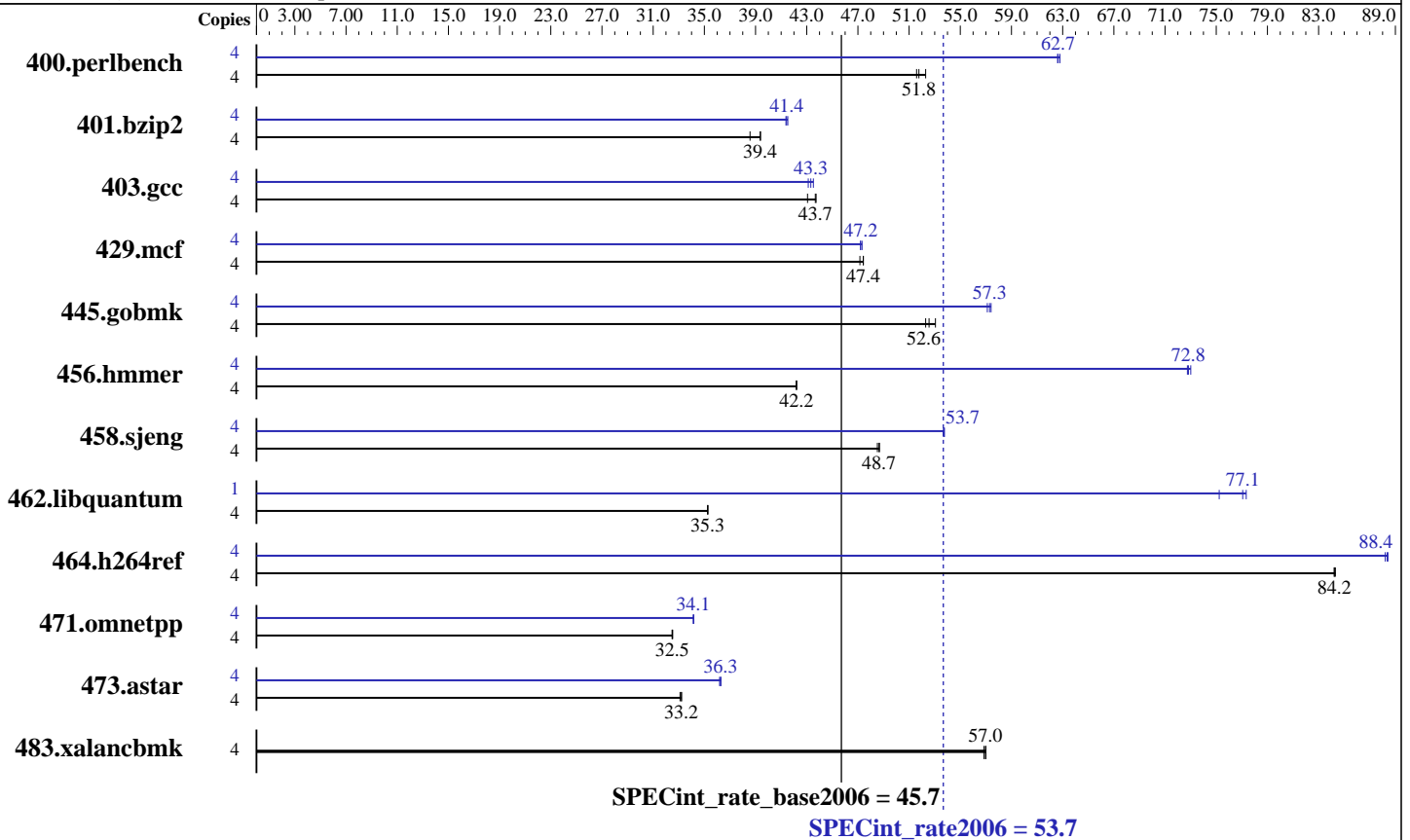
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Mar-2008

Hardware Availability: Nov-2007

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon E5405  
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores  
 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

### Software

Operating System: SuSE Linux Enterprise Server 10 SP1 (x86\_64)  
 Kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ Compiler 10.1 for Linux  
 Build 20070913 Package ID: l\_cc\_p\_10.1.008  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Multi-user, level 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V8.1  
 Binutils 2.17.50.0.15



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## Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	758	51.6	<u>755</u>	<u>51.8</u>	747	52.3	4	<u>624</u>	<u>62.7</u>	622	62.8	624	62.6
401.bzip2	4	980	39.4	<u>981</u>	<u>39.4</u>	1001	38.6	4	<u>932</u>	<u>41.4</u>	933	41.4	930	41.5
403.gcc	4	736	43.7	748	43.1	<u>737</u>	<u>43.7</u>	4	<u>743</u>	<u>43.3</u>	747	43.1	740	43.5
429.mcf	4	769	47.4	<u>769</u>	<u>47.4</u>	774	47.2	4	771	47.3	<u>773</u>	<u>47.2</u>	773	47.2
445.gobmk	4	802	52.3	<u>798</u>	<u>52.6</u>	791	53.1	4	<u>732</u>	<u>57.3</u>	735	57.1	731	57.4
456.hmmer	4	<u>884</u>	<u>42.2</u>	884	42.2	885	42.2	4	513	72.7	511	73.0	<u>512</u>	<u>72.8</u>
458.sjeng	4	997	48.5	<u>995</u>	<u>48.7</u>	994	48.7	4	900	53.8	<u>901</u>	<u>53.7</u>	902	53.7
462.libquantum	4	<u>2350</u>	<u>35.3</u>	2350	35.3	2350	35.3	1	275	75.2	268	77.3	<u>269</u>	<u>77.1</u>
464.h264ref	4	1051	84.2	1050	84.3	<u>1051</u>	<u>84.2</u>	4	<u>1002</u>	<u>88.4</u>	1004	88.2	1001	88.4
471.omnetpp	4	770	32.5	769	32.5	<u>769</u>	<u>32.5</u>	4	732	34.1	<u>732</u>	<u>34.1</u>	732	34.2
473.astar	4	<u>846</u>	<u>33.2</u>	848	33.1	845	33.2	4	774	36.3	776	36.2	<u>774</u>	<u>36.3</u>
483.xalancbmk	4	484	57.0	<u>484</u>	<u>57.0</u>	486	56.8	4	484	57.0	<u>484</u>	<u>57.0</u>	486	56.8

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 32-bit mode except 401.bzip2 and 456.hmmer, for peak, are compiled in 64-bit mode

BIOS Settings

Hardware Prefetcher set to ON

Adjacent Cache Line Prefetch set to OFF

All results but peak 462.libquantum used taskset to bind processes to cores.

"ulimit -s unlimited" was set for stacksize unlimited

OMP\_NUM\_THREADS set to number of cores

## Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc



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## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-fast -inline-calloc -opt-malloc-options=3

C++ benchmarks:

-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /opt/intel/cce/10.1.008/bin/icc  
-L/opt/intel/cce/10.1.008/lib  
-I/opt/intel/cce/10.1.008/include

456.hmmer: /opt/intel/cce/10.1.008/bin/icc  
-L/opt/intel/cce/10.1.008/lib  
-I/opt/intel/cce/10.1.008/include

C++ benchmarks:

icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX

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## Peak Portability Flags (Continued)

483.xalanbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias  
-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo  
-no-prec-div -ansi-alias

456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch  
-opt-streaming-stores always -vec-guard-write  
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs  
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs  
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

483.xalanbmk: basepeak = yes



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## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags file that was used to format this result can be browsed at

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

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

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