



# SPEC® CINT2006 Result

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## Intel Corporation

Alienware Area-51 M15x-R1 (Intel Core 2 Extreme X9000)

**SPECint\_rate2006 = 34.5**

**SPECint\_rate\_base2006 = 32.2**

CPU2006 license: 13

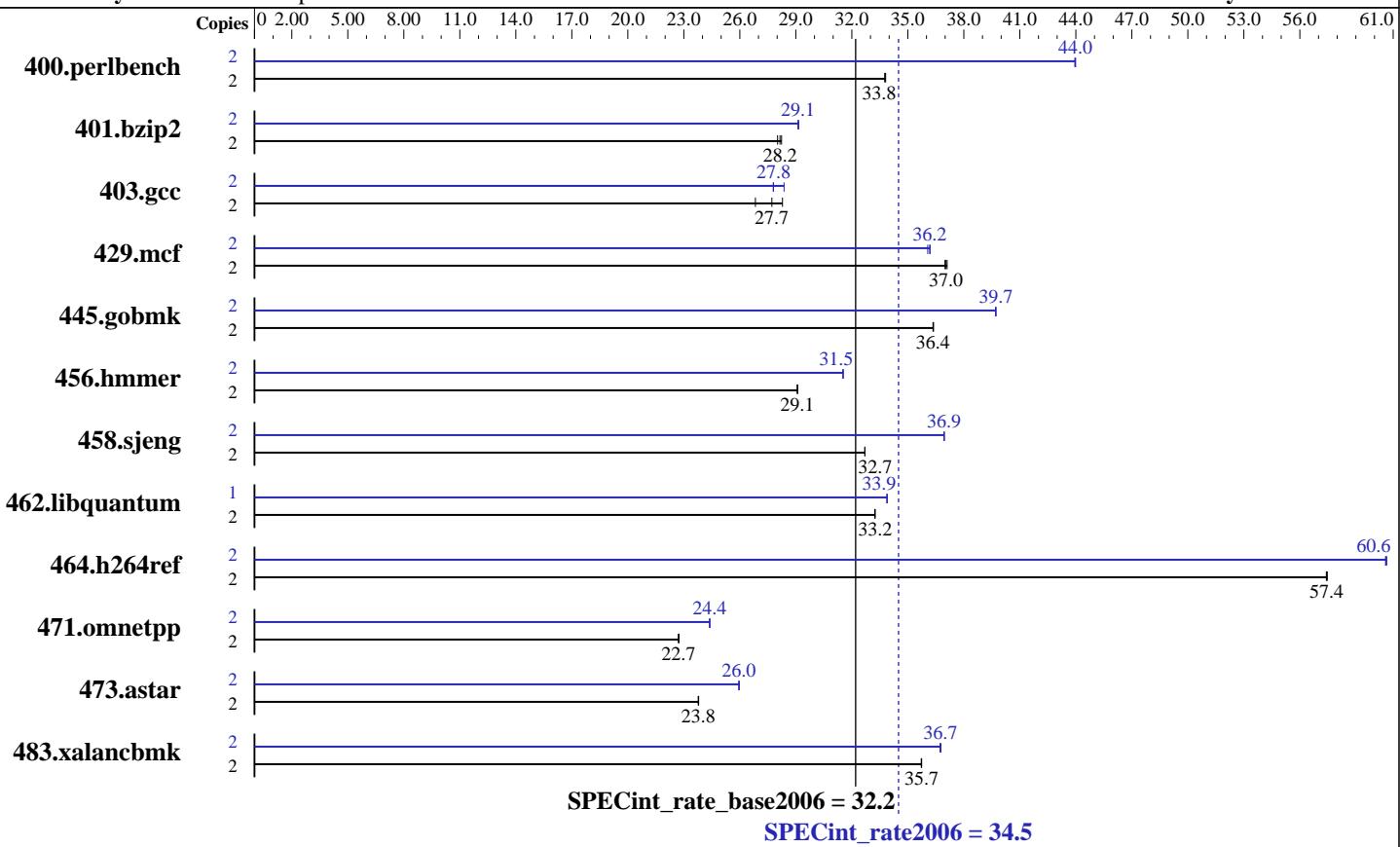
Test sponsor: Intel Corporation

Tested by: Intel Corporation

**Test date:** Dec-2007

**Hardware Availability:** Jan-2008

**Software Availability:** Nov-2007



### Hardware

CPU Name: Intel Core 2 Extreme X9000  
 CPU Characteristics:  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 6 MB I+D on chip per chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 2 GB (2x1GB Qimonda DDR2-667 CL5)  
 Disk Subsystem: Fujitsu 120GB GB SATA, 7200 RPM  
 Other Hardware: None

### Software

Operating System: Windows Vista Ultimate(32-bit)  
 Compiler: Intel C++ Compiler for IA32 version 10.1  
 Build 20070913 Package ID: w\_cc\_p\_10.1.011  
 Microsoft Visual Studio 2005 SP1 (for libraries)  
 Auto Parallel: Yes  
 File System: NTFS  
 System State: Default  
 Base Pointers: 32-bit  
 Peak Pointers: 32-bit  
 Other Software: None  
 SmartHeap Library Version 8.1 from  
<http://www.microquill.com/>



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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	2	579	33.8	578	33.8	<b>579</b>	<b>33.8</b>	2	444	44.0	<b>444</b>	<b>44.0</b>	445	43.9
401.bzip2	2	689	28.0	684	28.2	<b>686</b>	<b>28.2</b>	2	<b>663</b>	<b>29.1</b>	663	29.1	662	29.2
403.gcc	2	<b>581</b>	<b>27.7</b>	569	28.3	600	26.8	2	568	28.4	<b>579</b>	<b>27.8</b>	579	27.8
429.mcf	2	492	37.1	<b>492</b>	<b>37.0</b>	493	37.0	2	504	36.2	506	36.1	<b>504</b>	<b>36.2</b>
445.gobmk	2	577	36.4	<b>577</b>	<b>36.4</b>	577	36.4	2	<b>528</b>	<b>39.7</b>	529	39.7	528	39.7
456.hammer	2	642	29.1	641	29.1	<b>642</b>	<b>29.1</b>	2	<b>592</b>	<b>31.5</b>	592	31.5	592	31.5
458.sjeng	2	<b>740</b>	<b>32.7</b>	740	32.7	740	32.7	2	<b>655</b>	<b>36.9</b>	655	36.9	655	36.9
462.libquantum	2	<b>1247</b>	<b>33.2</b>	1247	33.2	1246	33.2	1	612	33.9	611	33.9	<b>611</b>	<b>33.9</b>
464.h264ref	2	770	57.5	<b>771</b>	<b>57.4</b>	771	57.4	2	<b>730</b>	<b>60.6</b>	730	60.6	730	60.7
471.omnetpp	2	550	22.7	<b>550</b>	<b>22.7</b>	550	22.7	2	512	24.4	<b>513</b>	<b>24.4</b>	513	24.4
473.astar	2	591	23.8	<b>590</b>	<b>23.8</b>	590	23.8	2	541	26.0	541	25.9	<b>541</b>	<b>26.0</b>
483.xalancbmk	2	386	35.7	<b>386</b>	<b>35.7</b>	386	35.7	2	376	36.7	375	36.8	<b>376</b>	<b>36.7</b>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## General Notes

The system bus runs at 800 MHz

Binaries were built on Windows Vista32

The following VS 2005 SP1 updates were applied: KB926601 and KB932232

OMP\_NUM\_THREADS set to number of cores

KMP\_AFFINITY set to physical,0

The start command with the /affinity switch was used to bind processes to cores

## Base Compiler Invocation

C benchmarks:

  icl -Qvc8 -Qc99

C++ benchmarks:

  icl -Qvc8

## Base Portability Flags

403.gcc: -DSPEC\_CPU\_WIN32

464.h264ref: -DSPEC\_CPU\_NO\_INTTYPES -DWIN32

483.xalancbmk: -Qoption,cpp,--no\_wchar\_t\_keyword



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## Base Optimization Flags

### C benchmarks:

-fast -Qvec-guard-write /F512000000

## C++ benchmarks:

**Test date:** Dec-2007

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Dec-2007

## **Hardware Availability:** Jan-2008

### **Software Availability:** Nov-2007

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca= alloca

## Peak Compiler Invocation

C benchmarks:

icl -Qvc8 -Qc99

## C++ benchmarks:

icl -Qvc8

## Peak Portability Flags

403.gcc: -DSPEC CPU WIN32

464.h264ref: -DSPEC CPU NO INTTYPES -DWIN32

483.xalanchmk: -Ooption.cpp, --no wchar\_t keyword

## Peak Optimization Flags

C benchmarks:

```
400.perlbench: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias  
                  -Qprefetch /F512000000 shlw32m.lib  
                  -link /FORCE:MULTIPLE
```

401.bzip2: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qprefetch /F512000000

403.gcc: -Oprof\_gen(pass 1) -Oprof\_use(pass 2) -fast /F51200000

```
429.mcf: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qprefetch  
          /F512000000 shlw32m.lib           -link /FORCE:MULTIPLE
```

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## Peak Optimization Flags (Continued)

445.gobmk: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -QxT -O2 -Qipo  
-Qprec-div- -Qansi-alias /F512000000

456.hmmer: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qunroll12  
-Qansi-alias -Qopt-multi-version-aggressive /F512000000

458.sjeng: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qunroll14  
/F512000000

462.libquantum: -fast -Qunroll14 -Ob0 -Qprefetch  
-Qopt-streaming-stores:always -Qparallel  
-Qpar-runtime-control /F512000000

464.h264ref: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qunroll12  
-Qansi-alias /F512000000

C++ benchmarks:

471.omnetpp: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qansi-alias  
-Qopt-ra-region-strategy=block -Qcxx\_features /F512000000  
shlw32m.lib -link /FORCE:MULTIPLE

473.astar: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qansi-alias  
-Qopt-ra-region-strategy=routine -Qcxx\_features /F512000000  
shlw32m.lib -link /FORCE:MULTIPLE

483.xalancbmk: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qansi-alias  
-Qcxx\_features /F512000000 shlw32m.lib  
-link /FORCE:MULTIPLE

## Peak Other Flags

C benchmarks:

403.gnu: -Dalloca=\_alloca

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.20090714.09.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.20090714.09.xml>



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

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