



# SPEC® CINT2006 Result

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## ASUSTeK Computer Inc.

**SPECint®2006 = 25.5**

Asus P5E3 Premium (Intel Core 2 Quad Q9450)

**SPECint\_base2006 = 23.2**

CPU2006 license: 13

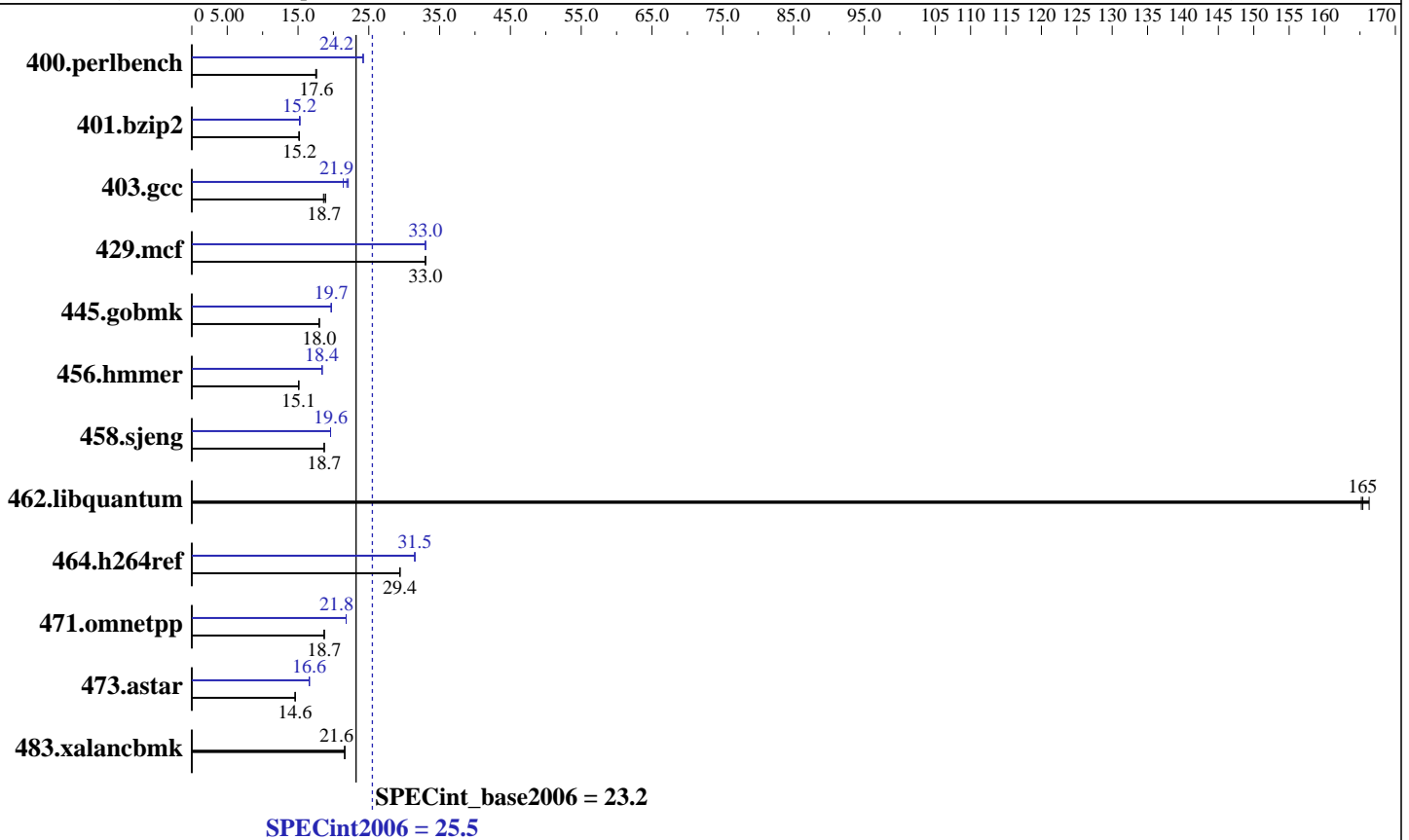
Test date: Oct-2008

Test sponsor: Intel Corporation

Hardware Availability: Apr-2008

Tested by: Intel Corporation

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Core 2 Quad Q9450  
 CPU Characteristics:  
 CPU MHz: 2667  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip  
 CPU(s) orderable: 1 chip  
 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: 4 GB (4 x 1GB Corsair CM3X1024-1333C9DHX DDR3-1333 CL9)  
 Disk Subsystem: 80 GB Intel X-25M SATA Solid-State Drive  
 Other Hardware: None

### Software

Operating System: Windows Vista Ultimate w/ SP1 (64-bit)  
 Compiler: Intel C++ Compiler Professional 11.0 for IA32  
 Build 20080930 Package ID: w\_cproc\_p\_11.0.054  
 Microsoft Visual Studio 2008 (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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	556	17.6	558	17.5	<b>556</b>	<b>17.6</b>	404	24.2	<b>404</b>	<b>24.2</b>	403	24.2
401.bzip2	<b>637</b>	<b>15.2</b>	638	15.1	635	15.2	<b>633</b>	<b>15.2</b>	633	15.2	632	15.3
403.gcc	433	18.6	<b>431</b>	<b>18.7</b>	427	18.9	<b>368</b>	<b>21.9</b>	376	21.4	364	22.1
429.mcf	276	33.0	<b>276</b>	<b>33.0</b>	276	33.0	276	33.0	276	33.0	<b>276</b>	<b>33.0</b>
445.gobmk	582	18.0	<b>582</b>	<b>18.0</b>	582	18.0	<b>532</b>	<b>19.7</b>	532	19.7	532	19.7
456.hammer	<b>618</b>	<b>15.1</b>	618	15.1	618	15.1	506	18.4	<b>506</b>	<b>18.4</b>	506	18.4
458.sjeng	<b>648</b>	<b>18.7</b>	648	18.7	648	18.7	<b>618</b>	<b>19.6</b>	618	19.6	618	19.6
462.libquantum	<b>125</b>	<b>165</b>	125	166	125	165	<b>125</b>	<b>165</b>	125	166	125	165
464.h264ref	<b>752</b>	<b>29.4</b>	752	29.4	753	29.4	702	31.5	<b>702</b>	<b>31.5</b>	702	31.5
471.omnetpp	334	18.7	<b>334</b>	<b>18.7</b>	335	18.7	287	21.8	287	21.8	<b>287</b>	<b>21.8</b>
473.astar	482	14.6	482	14.6	<b>482</b>	<b>14.6</b>	424	16.6	<b>424</b>	<b>16.6</b>	424	16.6
483.xalancbmk	319	21.6	<b>319</b>	<b>21.6</b>	320	21.6	319	21.6	<b>319</b>	<b>21.6</b>	320	21.6

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

## General Notes

Tested systems can be used with Shin-G ATX case,  
 PC Power and Cooling 1200W power supply  
 The system bus runs at 1333 MHz  
 System was configured with nVidia GTX 280 discrete graphics card  
 Binaries were built on Windows Vista Ultimate (32-bit)  
 OMP\_NUM\_THREADS set to number of logical processors as seen by the OS  
 KMP\_AFFINITY set to physical,0

## Compiler Invocation

C benchmarks:  
 icl -Qvc9 -Qc99

C++ benchmarks:  
 icl -Qvc9

## 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:

-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel  
-Qpar-runtime-control -Qvec-guard-write /F512000000

C++ benchmarks:

-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features  
/F512000000 shlw32m.lib -link /FORCE:MULTIPLE

## Peak Optimization Flags

C benchmarks:

400.perlbench: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch  
/F512000000 shlw32m.lib -link /FORCE:MULTIPLE

401.bzip2: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias  
/F512000000

403.gcc: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- /F512000000

429.mcf: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch  
/F512000000

445.gobmk: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmer: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias  
/F512000000

458.sjeng: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll14 /F512000000

462.libquantum: basepeak = yes

464.h264ref: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

C++ benchmarks:

471.omnetpp: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qansi-alias  
-Qopt-ra-region-strategy=block /F512000000 shlw32m.lib  
-link /FORCE:MULTIPLE

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## Peak Optimization Flags (Continued)

```
473.astar: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
          -Qipo -O3 -Qprec-div- -Qansi-alias
          -Qopt-ra-region-strategy=routine /F512000000 shlw32m.lib
          -link /FORCE:MULTIPLE
```

483.xalancbmk: basepeak = yes

## Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.html>

<http://www.spec.org/cpu2006/flags/Intel-Win32-Platform.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.xml>

<http://www.spec.org/cpu2006/flags/Intel-Win32-Platform.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.

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