



# SPEC<sup>®</sup> CINT2006 Result

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## Intel Corporation

**SPECint<sup>®</sup>2006 = 20.0**

Intel DQ45CB motherboard (Intel Core 2 Quad Q8200)

**SPECint\_base2006 = 18.3**

CPU2006 license: 13

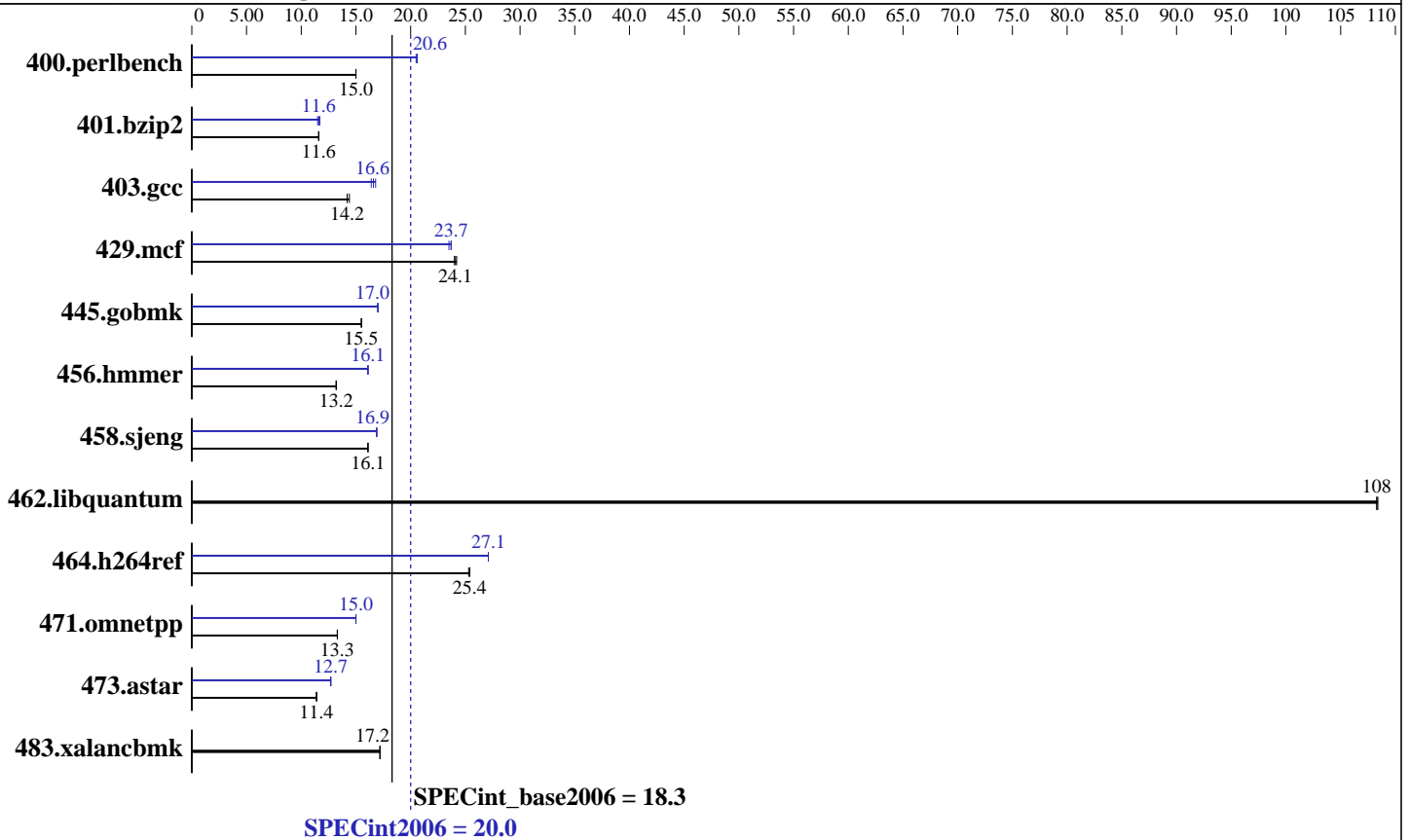
Test date: Apr-2009

Test sponsor: Intel Corporation

Hardware Availability: May-2009

Tested by: Intel Corporation

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Core 2 Quad Q8200  
 CPU Characteristics: 2333  
 CPU MHz: 2333  
 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: 4 MB I+D on chip per chip, 2 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 4 GB (4x1GB DDR2-800 CL5)  
 Disk Subsystem: Seagate 320 GB SATA, 7200RPM  
 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: 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	652	15.0	651	15.0	<u>651</u>	<u>15.0</u>	<u>475</u>	<u>20.6</u>	476	20.5	475	20.6
401.bzip2	<u>835</u>	<u>11.6</u>	835	11.6	833	11.6	827	11.7	<u>829</u>	<u>11.6</u>	839	11.5
403.gcc	560	14.4	568	14.2	<u>566</u>	<u>14.2</u>	478	16.8	490	16.4	<u>485</u>	<u>16.6</u>
429.mcf	378	24.2	<u>378</u>	<u>24.1</u>	379	24.0	384	23.7	<u>385</u>	<u>23.7</u>	387	23.5
445.gobmk	676	15.5	677	15.5	<u>677</u>	<u>15.5</u>	<u>619</u>	<u>17.0</u>	619	17.0	618	17.0
456.hammer	708	13.2	<u>708</u>	<u>13.2</u>	708	13.2	581	16.1	<u>581</u>	<u>16.1</u>	580	16.1
458.sjeng	752	16.1	751	16.1	<u>751</u>	<u>16.1</u>	716	16.9	716	16.9	<u>716</u>	<u>16.9</u>
462.libquantum	<u>191</u>	<u>108</u>	191	108	191	108	<u>191</u>	<u>108</u>	191	108	191	108
464.h264ref	874	25.3	873	25.4	<u>873</u>	<u>25.4</u>	<u>818</u>	<u>27.1</u>	817	27.1	818	27.1
471.omnetpp	471	13.3	471	13.3	<u>471</u>	<u>13.3</u>	416	15.0	<u>416</u>	<u>15.0</u>	416	15.0
473.astar	<u>617</u>	<u>11.4</u>	617	11.4	617	11.4	552	12.7	<u>552</u>	<u>12.7</u>	552	12.7
483.xalancbmk	400	17.2	401	17.2	<u>401</u>	<u>17.2</u>	400	17.2	401	17.2	<u>401</u>	<u>17.2</u>

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,  
 Antec Truepower Trio power supply TP3-650  
 Binaries were built on Windows Vista Ultimate (32-bit)  
 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

## Base Compiler Invocation

C benchmarks:  
 icl -Qvc9 -Qc99

C++ benchmarks:  
 icl -Qvc9

## 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:

-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

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks:

icl -Qvc9 -Qc99

C++ benchmarks:

icl -Qvc9

## Peak Portability Flags

403.gcc: -DSPEC\_CPU\_WIN32  
464.h264ref: -DSPEC\_CPU\_NO\_INTTYPES -DWIN32  
483.xalanbmk: -Qoption,cpp,--no\_wchar\_t\_keyword

## 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

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## Peak Optimization Flags (Continued)

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.hmmcr: -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- -Qunroll4 /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

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

## 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-ic11.0-win32-revA.20090710.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.20090710.xml>



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

Tested with SPEC CPU2006 v1.1.  
Report generated on Wed Jul 23 01:12:56 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 23 June 2009.