



# SPEC® CINT2006 Result

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## Intel Corporation

**SPECint®2006 = 22.0**

Intel DQ45CB motherboard (Intel Core 2 Quad Q8400)

**SPECint\_base2006 = 20.0**

CPU2006 license: 13

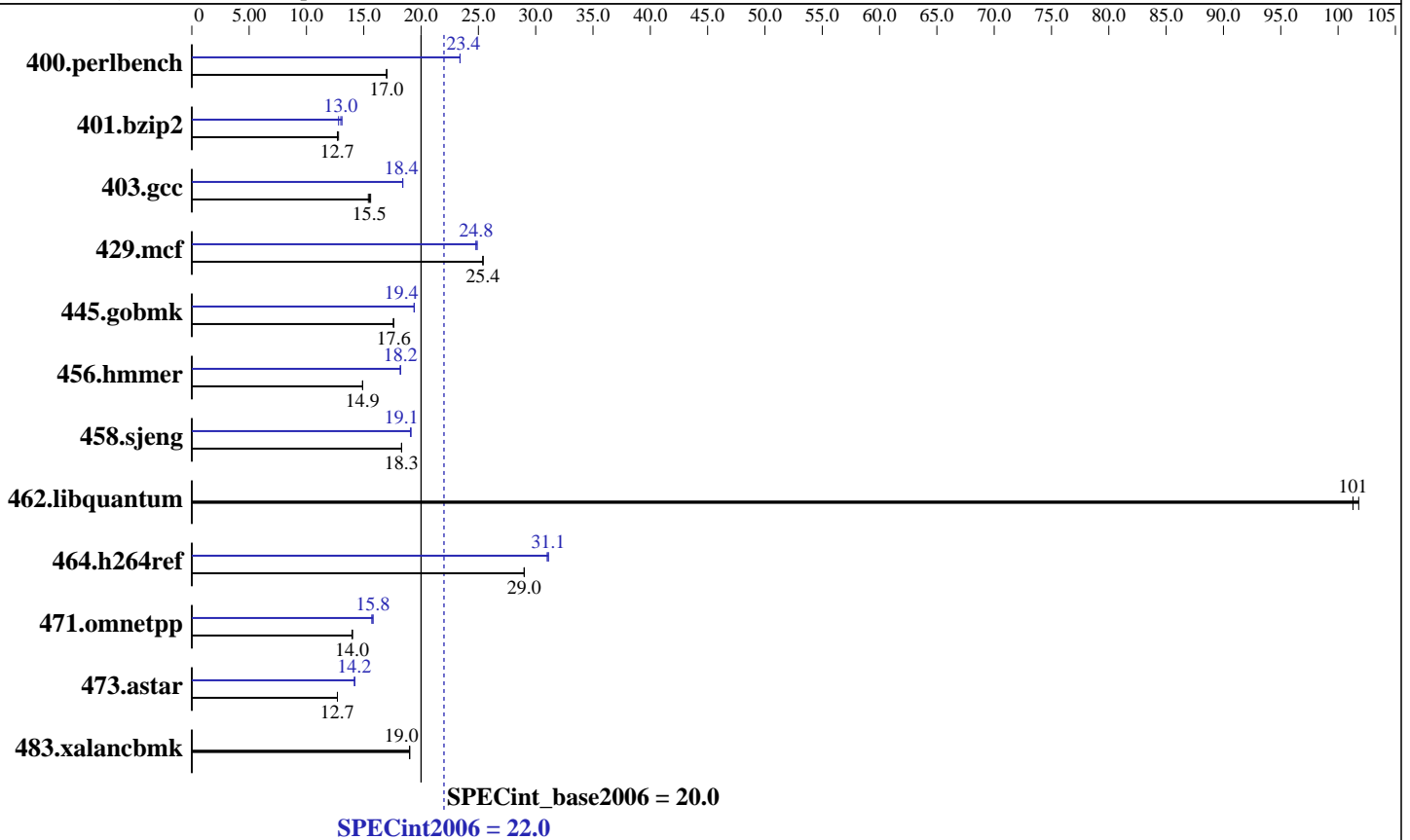
Test date: Apr-2009

Test sponsor: Intel Corporation

Hardware Availability: May-2009

Tested by: Intel Corporation

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Core 2 Quad Q8400  
 CPU Characteristics: 2666  
 CPU MHz: 2666  
 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	573	17.0	<u>573</u>	<u>17.0</u>	574	17.0	<u>418</u>	<u>23.4</u>	418	23.4	418	23.4
401.bzip2	760	12.7	<u>760</u>	<u>12.7</u>	752	12.8	756	12.8	<u>745</u>	<u>13.0</u>	734	13.1
403.gcc	<u>518</u>	<u>15.5</u>	516	15.6	524	15.4	438	18.4	<u>438</u>	<u>18.4</u>	437	18.4
429.mcf	358	25.4	360	25.4	<u>359</u>	<u>25.4</u>	366	24.9	<u>367</u>	<u>24.8</u>	368	24.8
445.gobmk	<u>595</u>	<u>17.6</u>	595	17.6	596	17.6	540	19.4	<u>540</u>	<u>19.4</u>	540	19.4
456.hammer	625	14.9	625	14.9	<u>625</u>	<u>14.9</u>	514	18.2	514	18.2	<u>514</u>	<u>18.2</u>
458.sjeng	<u>662</u>	<u>18.3</u>	661	18.3	662	18.3	634	19.1	634	19.1	<u>634</u>	<u>19.1</u>
462.libquantum	204	102	205	101	<u>205</u>	<u>101</u>	204	102	205	101	<u>205</u>	<u>101</u>
464.h264ref	763	29.0	<u>763</u>	<u>29.0</u>	763	29.0	<u>713</u>	<u>31.1</u>	712	31.1	713	31.0
471.omnetpp	446	14.0	<u>446</u>	<u>14.0</u>	446	14.0	397	15.7	396	15.8	<u>397</u>	<u>15.8</u>
473.astar	551	12.7	<u>552</u>	<u>12.7</u>	552	12.7	495	14.2	494	14.2	<u>494</u>	<u>14.2</u>
483.xalancbmk	363	19.0	363	19.0	<u>363</u>	<u>19.0</u>	363	19.0	363	19.0	<u>363</u>	<u>19.0</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:

-QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel  
-Qpar-runtime-control -Qvec-guard-write /F512000000

C++ benchmarks:

-QxSSSE3 -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: -QxSSSE3(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: -QxSSSE3(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias  
/F512000000

403.gcc: -QxSSSE3(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: -QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch  
/F512000000

445.gobmk: -QxSSSE3 -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O2  
-Qprec-div- -Qansi-alias /F512000000

456.hmmr: -QxSSSE3 -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3  
-Qprec-div- -Qunroll2 -Qansi-alias /F512000000

458.sjeng: -QxSSSE3(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll4 /F512000000

462.libquantum: basepeak = yes

464.h264ref: Same as 456.hmmr

C++ benchmarks:

471.omnetpp: -QxSSSE3(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: -QxSSSE3(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 01:30:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 23 June 2009.