



# SPEC® CFP2006 Result

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## Intel Corporation

**SPECfp®2006 = 22.6**

Intel DQ45CB motherboard (Intel Core 2 Duo E8500)

**SPECfp\_base2006 = 21.9**

CPU2006 license: 13

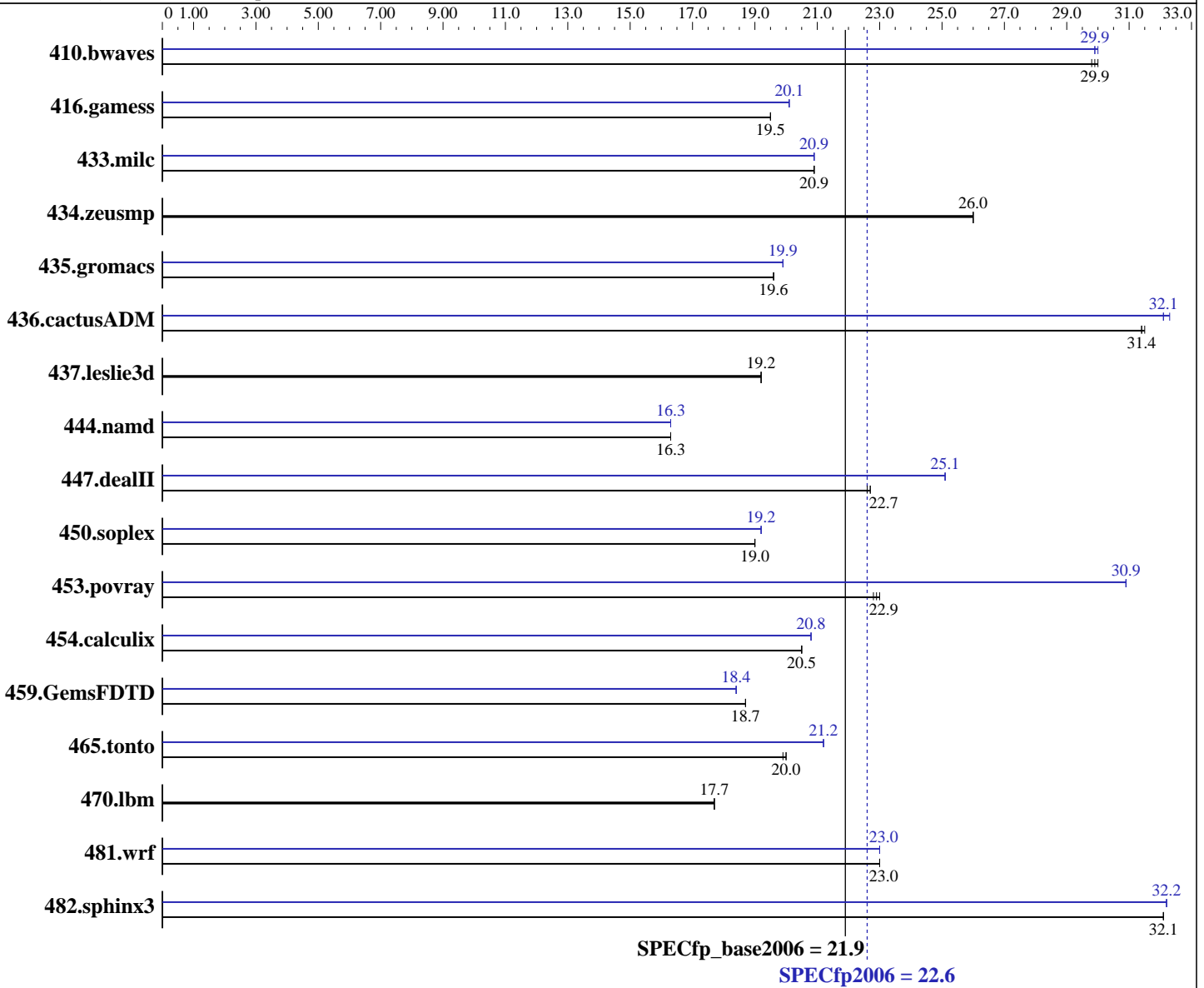
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Apr-2009

Hardware Availability: May-2009

Software Availability: Nov-2008



**Hardware**

CPU Name: Intel Core 2 Duo E8500  
 CPU Characteristics:  
 CPU MHz: 3166  
 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

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**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  
 Intel Visual Fortran Compiler Professional 11.0 for IA32  
 Build 20080930 Package ID: w\_cprof\_p\_11.0.054  
 Microsoft Visual Studio 2008 (for libraries)

Auto Parallel: Yes  
 File System: NTFS

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L3 Cache: None  
 Other Cache: None  
 Memory: 4 GB (4x1GB DDR2-800 CL5)  
 Disk Subsystem: Seagate 320 GB SATA, 7200RPM  
 Other Hardware: None

System State: Default  
 Base Pointers: 32-bit  
 Peak Pointers: 32-bit  
 Other Software: SmartHeap Library Version 8.1 from <http://www.microquill.com/>

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<b>455</b>	<b>29.9</b>	454	30.0	456	29.8	454	30.0	<b>454</b>	<b>29.9</b>	454	29.9
416.gamess	<b>1002</b>	<b>19.5</b>	1003	19.5	1002	19.5	976	20.1	976	20.1	<b>976</b>	<b>20.1</b>
433.milc	439	20.9	<b>440</b>	<b>20.9</b>	440	20.9	439	20.9	440	20.9	<b>439</b>	<b>20.9</b>
434.zeusmp	<b>350</b>	<b>26.0</b>	350	26.0	350	26.0	<b>350</b>	<b>26.0</b>	350	26.0	350	26.0
435.gromacs	<b>365</b>	<b>19.6</b>	365	19.6	365	19.6	359	19.9	<b>359</b>	<b>19.9</b>	359	19.9
436.cactusADM	<b>381</b>	<b>31.4</b>	380	31.5	381	31.4	<b>372</b>	<b>32.1</b>	372	32.1	370	32.3
437.leslie3d	489	19.2	489	19.2	<b>489</b>	<b>19.2</b>	489	19.2	489	19.2	<b>489</b>	<b>19.2</b>
444.namd	491	16.3	<b>491</b>	<b>16.3</b>	491	16.3	492	16.3	492	16.3	<b>492</b>	<b>16.3</b>
447.dealII	505	22.7	<b>505</b>	<b>22.7</b>	505	22.6	<b>456</b>	<b>25.1</b>	456	25.1	456	25.1
450.soplex	<b>440</b>	<b>19.0</b>	439	19.0	440	19.0	435	19.2	435	19.2	<b>435</b>	<b>19.2</b>
453.povray	<b>233</b>	<b>22.9</b>	231	23.0	234	22.8	172	30.9	172	30.9	<b>172</b>	<b>30.9</b>
454.calculix	402	20.5	402	20.5	<b>402</b>	<b>20.5</b>	397	20.8	<b>397</b>	<b>20.8</b>	397	20.8
459.GemsFDTD	568	18.7	569	18.7	<b>568</b>	<b>18.7</b>	576	18.4	<b>575</b>	<b>18.4</b>	575	18.4
465.tonto	493	19.9	493	20.0	<b>493</b>	<b>20.0</b>	464	21.2	464	21.2	<b>464</b>	<b>21.2</b>
470.lbm	778	17.7	<b>778</b>	<b>17.7</b>	778	17.7	778	17.7	<b>778</b>	<b>17.7</b>	778	17.7
481.wrf	485	23.0	<b>486</b>	<b>23.0</b>	486	23.0	486	23.0	<b>486</b>	<b>23.0</b>	486	23.0
482.sphinx3	608	32.1	608	32.1	<b>608</b>	<b>32.1</b>	605	32.2	<b>605</b>	<b>32.2</b>	605	32.2

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

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## Base Compiler Invocation (Continued)

C++ benchmarks:

icl -Qvc9

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc9 -Qc99 ifort

## Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore  
444.namd: -TP  
447.dealII: -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
453.povray: -DSPEC\_CPU\_WINDOWS\_ICL  
454.calculix: -DSPEC\_CPU\_NOZMODIFIER -Qlowercase  
481.wrf: -DSPEC\_CPU\_WINDOWS\_ICL

## Base Optimization Flags

C benchmarks:

-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qparallel -Qopt-prefetch  
/F1000000000

C++ benchmarks:

-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qparallel -Qopt-prefetch  
-Qcxx-features /F1000000000 shlw32m.lib  
-link /FORCE:MULTIPLE

Fortran benchmarks:

-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qparallel -Qopt-prefetch  
/F1000000000

Benchmarks using both Fortran and C:

-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qparallel -Qopt-prefetch  
/F1000000000

## Peak Compiler Invocation

C benchmarks:

icl -Qvc9 -Qc99

C++ benchmarks:

icl -Qvc9

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## Peak Compiler Invocation (Continued)

Fortran benchmarks:  
ifort

Benchmarks using both Fortran and C:  
icl -Qvc9 -Qc99 ifort

## Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore  
444.namd: -TP  
447.dealII: -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
453.povray: -DSPEC\_CPU\_WINDOWS\_ICL  
454.calculix: -DSPEC\_CPU\_NOZMODIFIER -Qlowercase  
481.wrf: -DSPEC\_CPU\_WINDOWS\_ICL

## Peak Optimization Flags

C benchmarks:

433.milc: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Oa /F1000000000

470.lbm: basepeak = yes

482.sphinx3: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qunroll2 /F1000000000

C++ benchmarks:

444.namd: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Oa /F1000000000 shlw32m.lib  
-link /FORCE:MULTIPLE

447.dealII: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll2 -Qopt-prefetch  
-Qansi-alias -Qscalar-rep- /F1000000000 shlw32m.lib  
-link /FORCE:MULTIPLE

450.soplex: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- /F1000000000 shlw32m.lib  
-link /FORCE:MULTIPLE

453.povray: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias /F1000000000  
shlw32m.lib -link /FORCE:MULTIPLE

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## Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel /F1000000000

416.gamess: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qopt-prefetch -Qparallel /F1000000000

465.tonto: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 -Qauto /F1000000000

Benchmarks using both Fortran and C:

435.gromacs: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

436.cactusADM: -QxSSE4.1(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qopt-prefetch -Qparallel /F1000000000

454.calculix: -QxSSE4.1 -Qipo -O3 -Qprec-div- /F1000000000

481.wrf: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel /F1000000000

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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