



# SPEC® CFP2006 Result

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## Intel Corporation

SPECfp®2006 = 46.4

Intel DH67BLB3 Motherboard (Intel Core i3-2120)

SPECfp\_base2006 = 45.1

CPU2006 license: 13

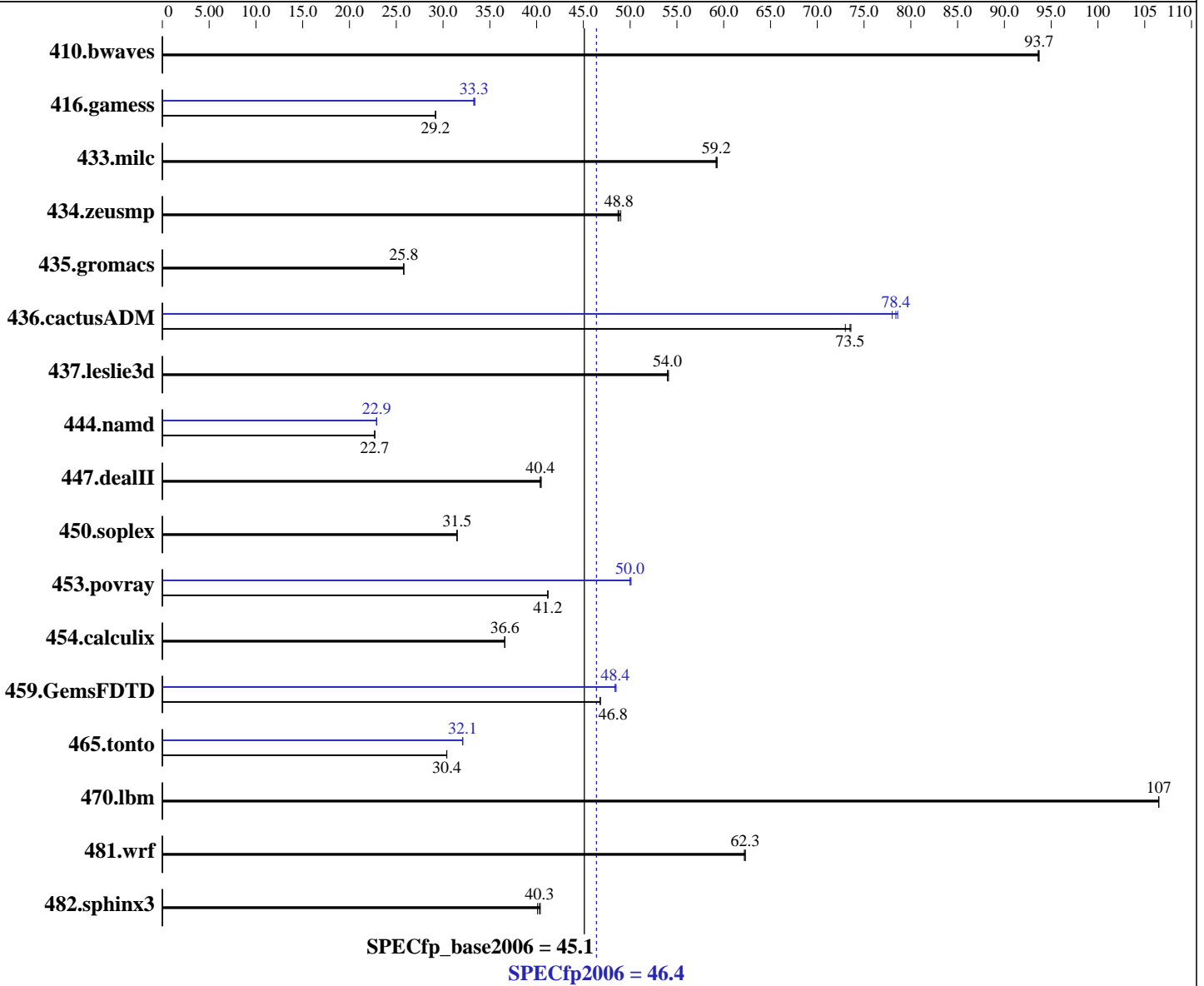
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Apr-2011

Hardware Availability: Mar-2011

Software Availability: Apr-2011



**Hardware**

CPU Name: Intel Core i3-2120  
 CPU Characteristics:  
 CPU MHz: 3300  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core

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**Software**

Operating System: Windows 7 Ultimate (64-bit)  
 Compiler: Intel C++ Compiler XE for Intel64  
 Version 12.0.3.163 Build 20110217  
 Intel Visual Fortran Compiler XE for Intel64  
 Version 12.0.0.104 Build 20101006  
 Microsoft Visual Studio 2008 Professional SP1  
 (for libraries)  
 Auto Parallel: Yes  
 File System: NTFS

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L3 Cache: 3 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600U-9)  
 Disk Subsystem: Seagate 1 TB SATA, 7200 RPM  
 Other Hardware: None

System State: Default  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap Library Version 9.01 from <http://www.microquill.com/>

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	145	93.6	145	93.7	<b>145</b>	<b>93.7</b>	145	93.6	145	93.7	<b>145</b>	<b>93.7</b>
416.gamess	671	29.2	<b>671</b>	<b>29.2</b>	671	29.2	<b>587</b>	<b>33.3</b>	587	33.4	588	33.3
433.milc	155	59.3	<b>155</b>	<b>59.2</b>	155	59.2	155	59.3	<b>155</b>	<b>59.2</b>	155	59.2
434.zeusmp	<b>187</b>	<b>48.8</b>	186	49.0	187	48.7	<b>187</b>	<b>48.8</b>	186	49.0	187	48.7
435.gromacs	277	25.8	277	25.8	<b>277</b>	<b>25.8</b>	277	25.8	277	25.8	<b>277</b>	<b>25.8</b>
436.cactusADM	162	73.6	164	73.0	<b>163</b>	<b>73.5</b>	153	78.0	152	78.6	<b>152</b>	<b>78.4</b>
437.leslie3d	174	54.1	<b>174</b>	<b>54.0</b>	174	54.0	174	54.1	<b>174</b>	<b>54.0</b>	174	54.0
444.namd	353	22.7	<b>353</b>	<b>22.7</b>	353	22.7	<b>350</b>	<b>22.9</b>	350	22.9	350	22.9
447.dealII	<b>283</b>	<b>40.4</b>	283	40.4	283	40.5	<b>283</b>	<b>40.4</b>	283	40.4	283	40.5
450.soplex	265	31.5	265	31.5	<b>265</b>	<b>31.5</b>	265	31.5	265	31.5	<b>265</b>	<b>31.5</b>
453.povray	129	41.2	<b>129</b>	<b>41.2</b>	129	41.2	106	50.1	106	50.0	<b>106</b>	<b>50.0</b>
454.calculix	225	36.6	<b>225</b>	<b>36.6</b>	225	36.6	225	36.6	<b>225</b>	<b>36.6</b>	225	36.6
459.GemsFDTD	<b>227</b>	<b>46.8</b>	227	46.8	227	46.8	219	48.5	<b>219</b>	<b>48.4</b>	219	48.4
465.tonto	<b>324</b>	<b>30.4</b>	323	30.4	324	30.4	<b>307</b>	<b>32.1</b>	306	32.1	307	32.1
470.lbm	129	107	<b>129</b>	<b>107</b>	129	107	129	107	<b>129</b>	<b>107</b>	129	107
481.wrf	179	62.3	180	62.2	<b>179</b>	<b>62.3</b>	179	62.3	180	62.2	<b>179</b>	<b>62.3</b>
482.sphinx3	<b>484</b>	<b>40.3</b>	486	40.1	483	40.4	<b>484</b>	<b>40.3</b>	486	40.1	483	40.4

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  
 OMP\_NUM\_THREADS set to number of processors cores  
 KMP\_AFFINITY set to granularity=fine,scatter

## Base Compiler Invocation

C benchmarks:  
 icl -Qvc9 -Qstd=c99

C++ benchmarks:  
 icl -Qvc9

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## Base Compiler Invocation (Continued)

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc9 -Qstd=c99 ifort

## Base Portability Flags

410.bwaves: -DSPEC\_CPU\_P64 -names:lowercase  
 416.gamess: -DSPEC\_CPU\_P64  
 433.milc: -DSPEC\_CPU\_P64  
 434.zeusmp: -DSPEC\_CPU\_P64  
 435.gromacs: -DSPEC\_CPU\_P64  
 436.cactusADM: -DSPEC\_CPU\_P64 -names:lowercase /assume:underscore  
 437.leslie3d: -DSPEC\_CPU\_P64  
 444.namd: -DSPEC\_CPU\_P64 /TP  
 447.dealII: -DSPEC\_CPU\_P64 -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
 450.soplex: -DSPEC\_CPU\_P64  
 453.povray: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WINDOWS\_ICL  
 454.calculix: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_NOZMODIFIER -names:lowercase  
 459.GemsFDTD: -DSPEC\_CPU\_P64  
 465.tonto: -DSPEC\_CPU\_P64  
 470.lbm: -DSPEC\_CPU\_P64  
 481.wrf: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_WINDOWS\_ICL  
 482.sphinx3: -DSPEC\_CPU\_P64

## Base Optimization Flags

C benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch  
-Qauto-ilp32 /F1000000000

C++ benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch  
-Qcxx-features -Qauto-ilp32 /F1000000000 shlw64M.lib  
-link /FORCE:MULTIPLE

Fortran benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch  
/F1000000000

Benchmarks using both Fortran and C:

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch  
-Qauto-ilp32 /F1000000000



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## Peak Compiler Invocation

C benchmarks:

icl -Qvc9 -Qstd=c99

C++ benchmarks:

icl -Qvc9

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc9 -Qstd=c99 ifort

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -QxAVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo  
-O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000 sh1W64M.lib  
-link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -QxAVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo  
-O3 -Qprec-div- -Qunroll4 -Qansi-alias -Qauto-ilp32  
/F1000000000 sh1W64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

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

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## Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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

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

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: -QxAVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo  
-O3 -Qprec-div- -Qopt-prefetch -Qparallel -Qunroll2  
-Qauto-ilp32 /F1000000000

454.calculix: basepeak = yes

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.html>

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

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

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.xml>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.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).

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