



# SPEC<sup>®</sup> CFP2006 Result

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## Intel Corporation

### SPECfp<sup>®</sup>\_rate2006 = 70.4

### Intel DH67BLB3 Motherboard (Intel Core i3-2100)

### SPECfp\_rate\_base2006 = 70.0

CPU2006 license: 13

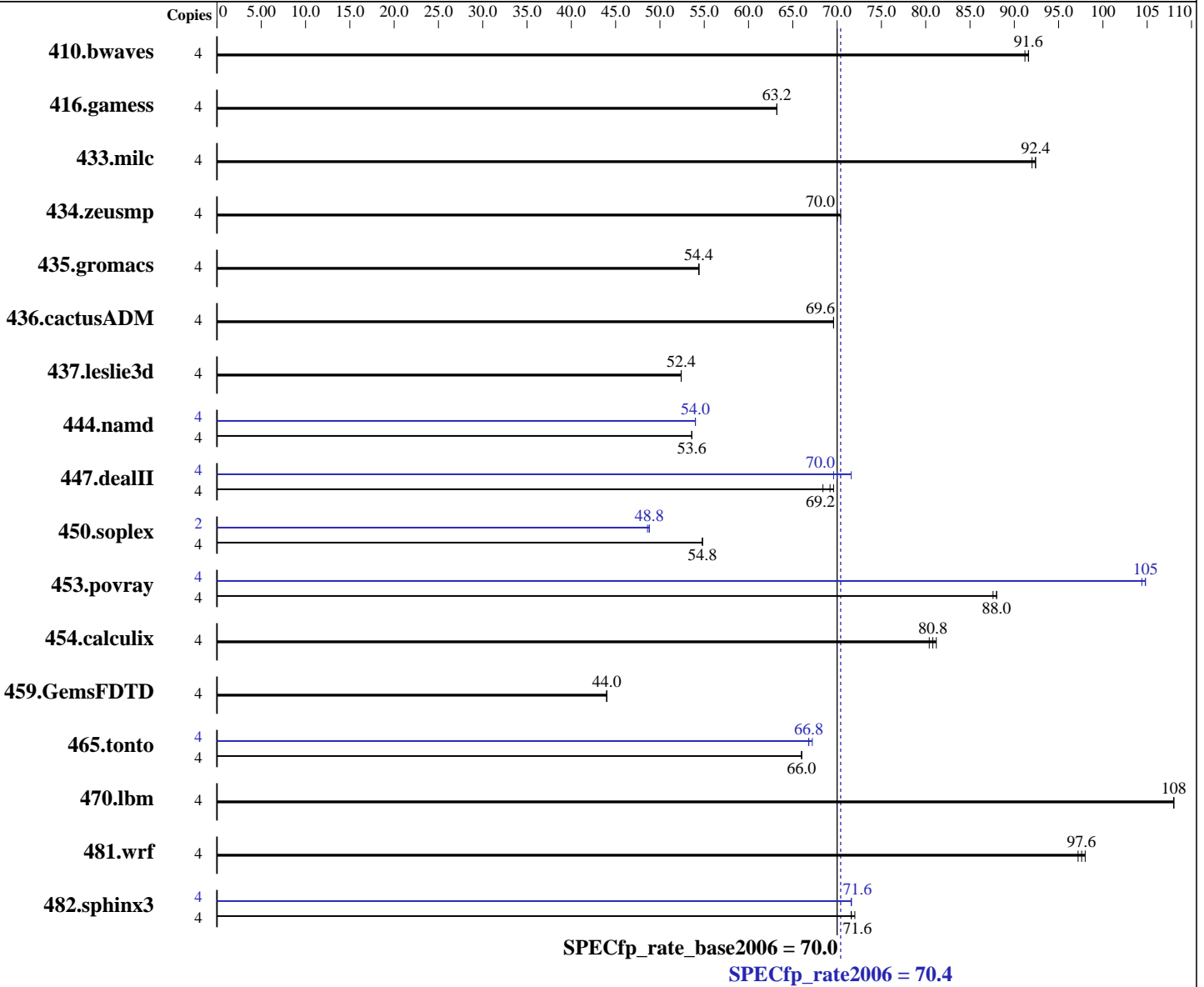
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Apr-2011

Hardware Availability: Mar-2011

Software Availability: Apr-2011



#### Hardware

CPU Name: Intel Core i3-2100  
 CPU Characteristics:  
 CPU MHz: 3100  
 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 12.0.3.163 Build 20110217  
 Microsoft Visual Studio 2008 Professional SP1  
 (for libraries)

Auto Parallel: No  
 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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	<u>595</u>	<u>91.6</u>	595	91.2	594	91.6	4	<u>595</u>	<u>91.6</u>	595	91.2	594	91.6
416.gamess	4	1239	63.2	1236	63.2	<u>1236</u>	<u>63.2</u>	4	1239	63.2	1236	63.2	<u>1236</u>	<u>63.2</u>
433.milc	4	398	92.0	<u>398</u>	<u>92.4</u>	398	92.4	4	398	92.0	<u>398</u>	<u>92.4</u>	398	92.4
434.zeusmp	4	518	70.4	520	70.0	<u>519</u>	<u>70.0</u>	4	518	70.4	520	70.0	<u>519</u>	<u>70.0</u>
435.gromacs	4	523	54.4	<u>523</u>	<u>54.4</u>	523	54.4	4	523	54.4	<u>523</u>	<u>54.4</u>	523	54.4
436.cactusADM	4	686	69.6	<u>686</u>	<u>69.6</u>	688	69.6	4	686	69.6	<u>686</u>	<u>69.6</u>	688	69.6
437.leslie3d	4	718	52.4	<u>718</u>	<u>52.4</u>	717	52.4	4	718	52.4	<u>718</u>	<u>52.4</u>	717	52.4
444.namd	4	<u>597</u>	<u>53.6</u>	597	53.6	597	53.6	4	593	54.0	592	54.0	<u>592</u>	<u>54.0</u>
447.dealII	4	668	68.4	<u>662</u>	<u>69.2</u>	659	69.6	4	<u>652</u>	<u>70.0</u>	639	71.6	656	69.6
450.soplex	4	611	54.8	610	54.8	<u>610</u>	<u>54.8</u>	2	343	48.6	342	48.8	<u>342</u>	<u>48.8</u>
453.povray	4	241	88.0	<u>242</u>	<u>88.0</u>	243	87.6	4	203	105	204	104	<u>203</u>	<u>105</u>
454.calculix	4	407	81.2	<u>408</u>	<u>80.8</u>	410	80.4	4	407	81.2	<u>408</u>	<u>80.8</u>	410	80.4
459.GemsFDTD	4	964	44.0	963	44.0	<u>963</u>	<u>44.0</u>	4	964	44.0	963	44.0	<u>963</u>	<u>44.0</u>
465.tonto	4	598	66.0	<u>597</u>	<u>66.0</u>	597	66.0	4	<u>588</u>	<u>66.8</u>	587	67.2	590	66.8
470.lbm	4	<u>509</u>	<u>108</u>	509	108	508	108	4	<u>509</u>	<u>108</u>	509	108	508	108
481.wrf	4	456	98.0	460	97.2	<u>457</u>	<u>97.6</u>	4	456	98.0	460	97.2	<u>457</u>	<u>97.6</u>
482.sphinx3	4	1087	71.6	1085	72.0	<u>1086</u>	<u>71.6</u>	4	1090	71.6	1090	71.6	<u>1090</u>	<u>71.6</u>

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

## Submit Notes

The config file option 'submit' was used.  
 The start command with the /affinity switch was used to bind processes to cores

## General Notes

Tested systems can be used with Shin-G ATX case,  
 PC Power and Cooling 1200W power supply

## Base Compiler Invocation

C benchmarks:  
 icl -Qvc9 -Qstd=c99

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## Base Compiler Invocation (Continued)

C++ benchmarks:

icl -Qvc9

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- -Qansi-alias -Qauto-ilp32 /F1000000000  
-link /FORCE:MULTIPLE

C++ benchmarks:

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

Fortran benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias /F1000000000  
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:

-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32 /F1000000000  
-link /FORCE:MULTIPLE



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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: -QxAVX -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias  
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

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: -QxAVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo  
-O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qscalar-rep-  
-Qauto-ilp32 /F1000000000 sh1W64M.lib  
-link /FORCE:MULTIPLE

450.soplex: -QxAVX(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo  
-O3 -Qauto-ilp32 /F1000000000 sh1W64M.lib  
-link /FORCE:MULTIPLE

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

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## Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

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

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

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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