



# SPEC<sup>®</sup> CFP2006 Result

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## Intel Corporation

### SPECfp<sup>®</sup>\_rate2006 = 70.1

### Intel DH67BLB3 Motherboard (Intel Core i5-2390T)

### SPECfp\_rate\_base2006 = 69.4

CPU2006 license: 13

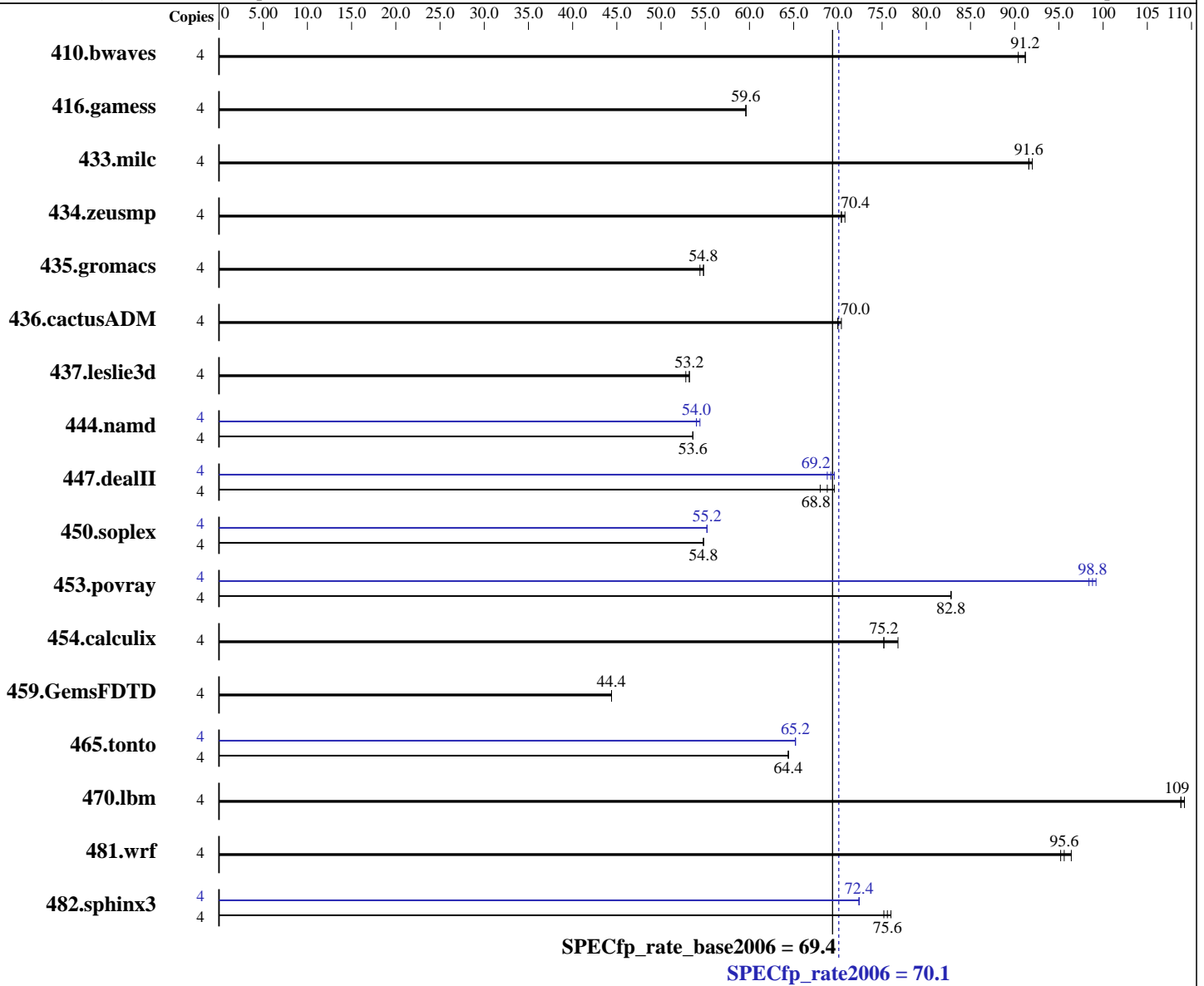
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jul-2011

Hardware Availability: Mar-2011

Software Availability: Apr-2011



#### Hardware

CPU Name: Intel Core i5-2390T  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.5 GHz  
 CPU MHz: 2700  
 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 Intel 64  
 Version 12.0.3.176 Build 20110309  
 Intel Visual Fortran Compiler XE for Intel 64  
 Version 12.0.3.176 Build 20110309  
 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: 4 GB (2 x 2 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	602	90.4	595	91.2	<b>596</b>	<b>91.2</b>	4	602	90.4	595	91.2	<b>596</b>	<b>91.2</b>
416.gamess	4	1312	59.6	1311	59.6	<b>1312</b>	<b>59.6</b>	4	1312	59.6	1311	59.6	<b>1312</b>	<b>59.6</b>
433.milc	4	400	92.0	<b>400</b>	<b>91.6</b>	400	91.6	4	400	92.0	<b>400</b>	<b>91.6</b>	400	91.6
434.zeusmp	4	515	70.8	516	70.4	<b>516</b>	<b>70.4</b>	4	515	70.8	516	70.4	<b>516</b>	<b>70.4</b>
435.gromacs	4	524	54.4	522	54.8	<b>522</b>	<b>54.8</b>	4	524	54.4	522	54.8	<b>522</b>	<b>54.8</b>
436.cactusADM	4	683	70.0	<b>682</b>	<b>70.0</b>	681	70.4	4	683	70.0	<b>682</b>	<b>70.0</b>	681	70.4
437.leslie3d	4	709	53.2	<b>709</b>	<b>53.2</b>	713	52.8	4	709	53.2	<b>709</b>	<b>53.2</b>	713	52.8
444.namd	4	597	53.6	597	53.6	<b>597</b>	<b>53.6</b>	4	<b>592</b>	<b>54.0</b>	592	54.4	592	54.0
447.dealII	4	672	68.0	659	69.6	<b>664</b>	<b>68.8</b>	4	667	68.8	658	69.6	<b>662</b>	<b>69.2</b>
450.soplex	4	607	54.8	608	54.8	<b>607</b>	<b>54.8</b>	4	603	55.2	<b>603</b>	<b>55.2</b>	604	55.2
453.povray	4	257	82.8	<b>257</b>	<b>82.8</b>	257	82.8	4	216	98.4	<b>215</b>	<b>98.8</b>	215	99.2
454.calculix	4	439	75.2	430	76.8	<b>438</b>	<b>75.2</b>	4	439	75.2	430	76.8	<b>438</b>	<b>75.2</b>
459.GemsFDTD	4	954	44.4	958	44.4	<b>957</b>	<b>44.4</b>	4	954	44.4	958	44.4	<b>957</b>	<b>44.4</b>
465.tonto	4	<b>613</b>	<b>64.4</b>	613	64.4	612	64.4	4	602	65.2	<b>603</b>	<b>65.2</b>	603	65.2
470.lbm	4	504	109	<b>505</b>	<b>109</b>	505	109	4	504	109	<b>505</b>	<b>109</b>	505	109
481.wrf	4	464	96.4	<b>467</b>	<b>95.6</b>	468	95.2	4	464	96.4	<b>467</b>	<b>95.6</b>	468	95.2
482.sphinx3	4	1028	76.0	1034	75.2	<b>1032</b>	<b>75.6</b>	4	1077	72.4	<b>1076</b>	<b>72.4</b>	1075	72.4

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 file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.20110808.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.20110808.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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