



# SPEC<sup>®</sup> CFP2006 Result

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## Intel Corporation

SPECfp<sup>®</sup>\_rate2006 = 104

Intel DH67BLB3 Motherboard (Intel Core i5-2500K)

SPECfp\_rate\_base2006 = 103

CPU2006 license: 13

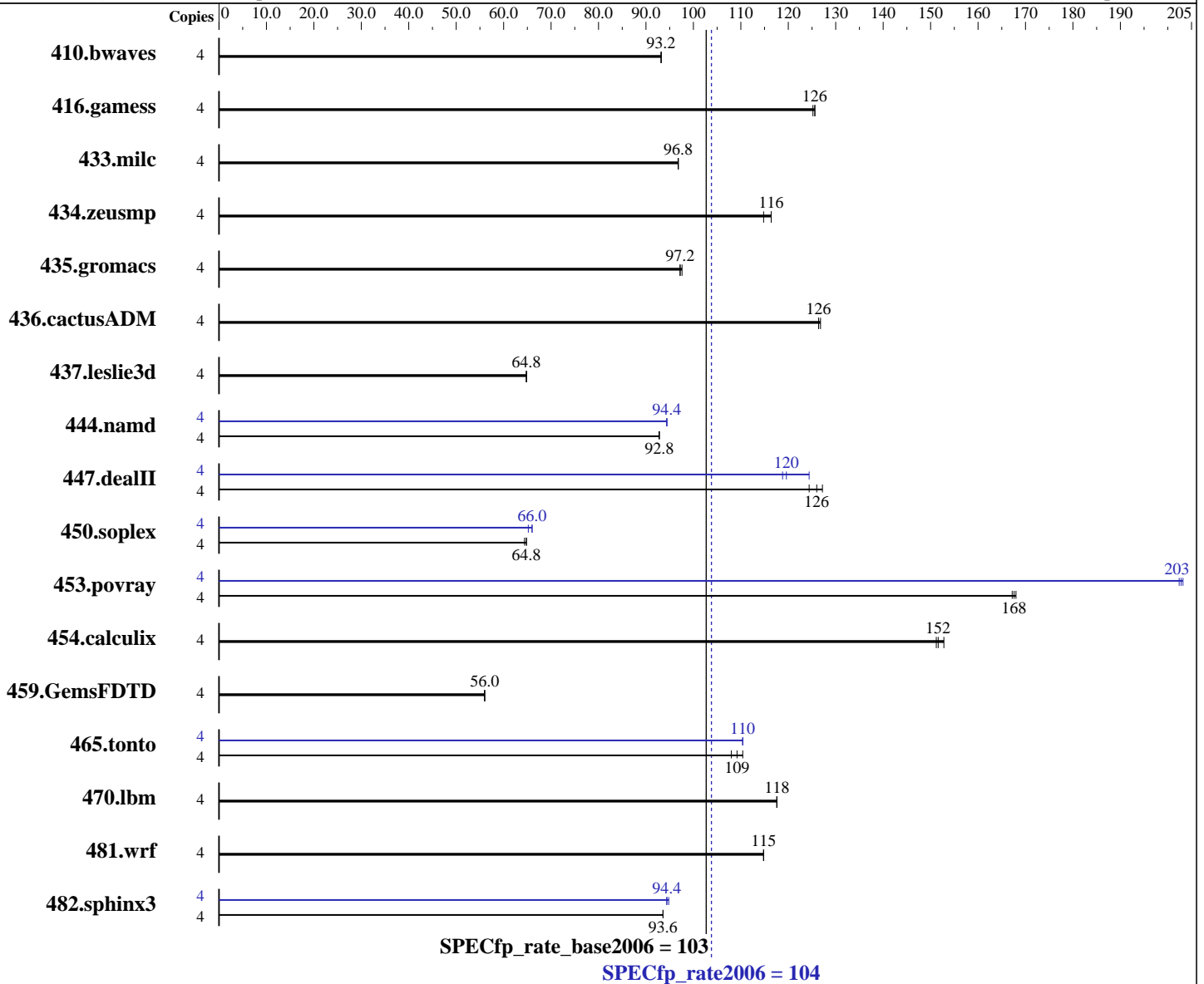
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Apr-2011

Hardware Availability: Mar-2011

Software Availability: Apr-2011



### Hardware

CPU Name: Intel Core i5-2500K  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.7 GHz  
 CPU MHz: 3300  
 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: 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: 6 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	583	93.2	<b>583</b>	<b>93.2</b>	582	93.2	4	583	93.2	<b>583</b>	<b>93.2</b>	582	93.2		
416.gamess	4	625	125	624	126	<b>624</b>	<b>126</b>	4	625	125	624	126	<b>624</b>	<b>126</b>		
433.milc	4	380	96.8	<b>380</b>	<b>96.8</b>	380	96.8	4	380	96.8	<b>380</b>	<b>96.8</b>	380	96.8		
434.zeusmp	4	<b>313</b>	<b>116</b>	313	116	317	115	4	<b>313</b>	<b>116</b>	313	116	317	115		
435.gromacs	4	293	97.6	<b>294</b>	<b>97.2</b>	294	97.2	4	293	97.6	<b>294</b>	<b>97.2</b>	294	97.2		
436.cactusADM	4	379	126	377	127	<b>379</b>	<b>126</b>	4	379	126	377	127	<b>379</b>	<b>126</b>		
437.leslie3d	4	579	64.8	579	64.8	<b>579</b>	<b>64.8</b>	4	579	64.8	579	64.8	<b>579</b>	<b>64.8</b>		
444.namd	4	<b>346</b>	<b>92.8</b>	346	92.8	346	92.8	4	<b>341</b>	<b>94.4</b>	341	94.4	340	94.4		
447.dealII	4	367	124	360	127	<b>363</b>	<b>126</b>	4	368	124	385	119	<b>382</b>	<b>120</b>		
450.soplex	4	517	64.4	516	64.8	<b>516</b>	<b>64.8</b>	4	511	65.2	507	66.0	<b>507</b>	<b>66.0</b>		
453.povray	4	127	167	127	168	<b>127</b>	<b>168</b>	4	<b>105</b>	<b>203</b>	105	203	105	202		
454.calculix	4	218	151	<b>218</b>	<b>152</b>	216	153	4	218	151	<b>218</b>	<b>152</b>	216	153		
459.GemsFDTD	4	<b>758</b>	<b>56.0</b>	757	56.0	759	56.0	4	<b>758</b>	<b>56.0</b>	757	56.0	759	56.0		
465.tonto	4	357	110	<b>361</b>	<b>109</b>	364	108	4	357	110	357	110	<b>357</b>	<b>110</b>		
470.lbm	4	468	118	468	118	<b>468</b>	<b>118</b>	4	468	118	468	118	<b>468</b>	<b>118</b>		
481.wrf	4	389	115	390	115	<b>389</b>	<b>115</b>	4	389	115	390	115	<b>389</b>	<b>115</b>		
482.sphinx3	4	<b>833</b>	<b>93.6</b>	833	93.6	832	93.6	4	827	94.4	<b>827</b>	<b>94.4</b>	824	94.8		

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.dealIII: -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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