



# SPEC<sup>®</sup> CFP2006 Result

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## Intel Corporation

**SPECfp<sup>®</sup>2006 = 55.0**

Intel DH67BLB3 Motherboard (Intel Core i5-2500K)

**SPECfp\_base2006 = 53.2**

CPU2006 license: 13

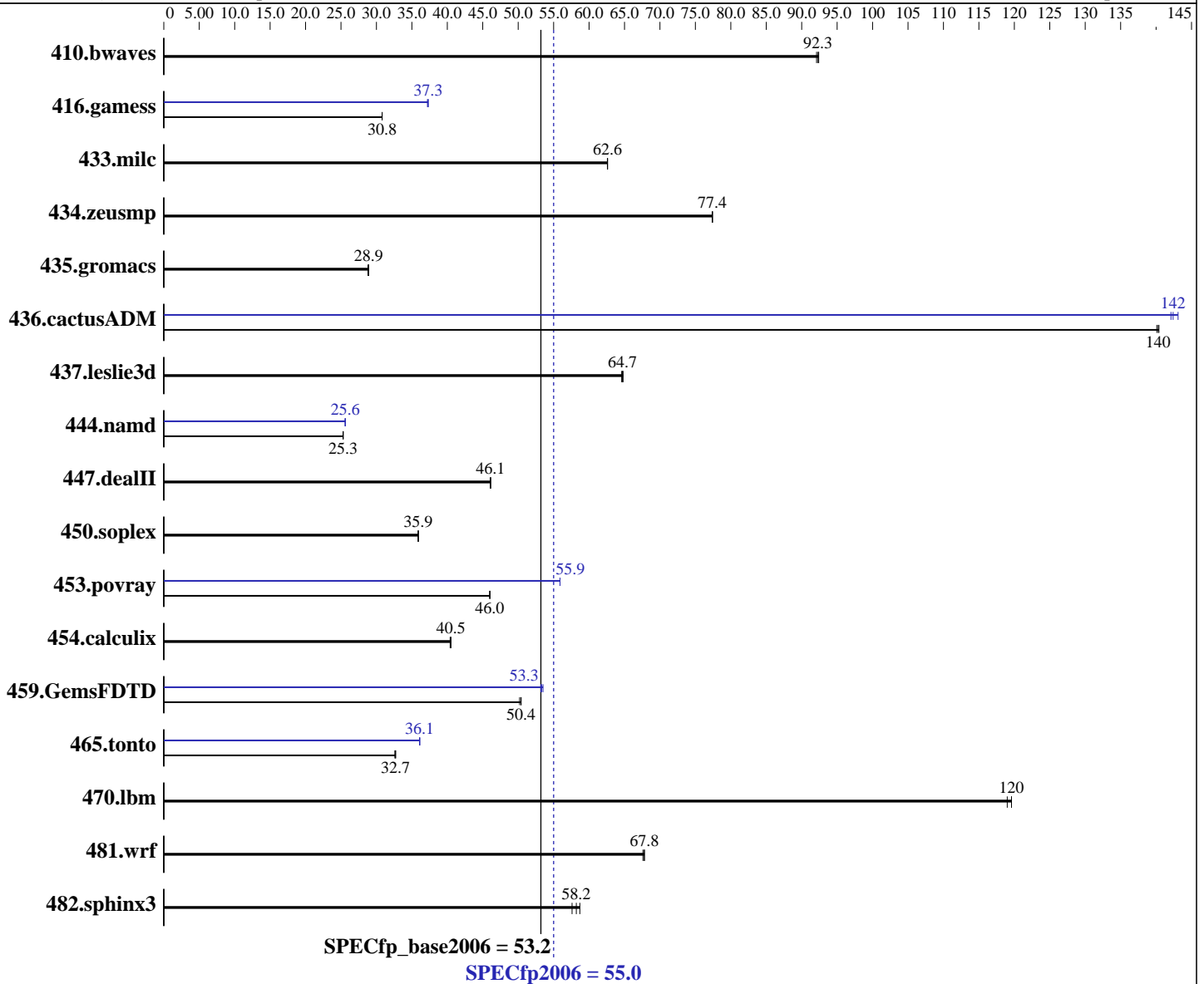
Test date: Apr-2011

Test sponsor: Intel Corporation

Hardware Availability: Mar-2011

Tested by: Intel Corporation

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: Yes  
 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	148	92.1	<b>147</b>	<b>92.3</b>	147	92.4	148	92.1	<b>147</b>	<b>92.3</b>	147	92.4
416.gamess	<b>636</b>	<b>30.8</b>	636	30.8	636	30.8	526	37.3	526	37.2	<b>526</b>	<b>37.3</b>
433.milc	147	62.6	<b>147</b>	<b>62.6</b>	147	62.6	147	62.6	<b>147</b>	<b>62.6</b>	147	62.6
434.zeusmp	118	77.4	118	77.4	<b>118</b>	<b>77.4</b>	118	77.4	118	77.4	<b>118</b>	<b>77.4</b>
435.gromacs	248	28.8	247	28.9	<b>247</b>	<b>28.9</b>	248	28.8	247	28.9	<b>247</b>	<b>28.9</b>
436.cactusADM	85.3	140	85.1	140	<b>85.2</b>	<b>140</b>	<b>83.9</b>	<b>142</b>	84.1	142	83.5	143
437.leslie3d	<b>145</b>	<b>64.7</b>	146	64.6	145	64.8	<b>145</b>	<b>64.7</b>	146	64.6	145	64.8
444.namd	317	25.3	<b>317</b>	<b>25.3</b>	317	25.3	<b>313</b>	<b>25.6</b>	313	25.6	313	25.6
447.dealII	248	46.1	<b>248</b>	<b>46.1</b>	248	46.1	248	46.1	<b>248</b>	<b>46.1</b>	248	46.1
450.soplex	232	35.9	<b>232</b>	<b>35.9</b>	233	35.9	232	35.9	<b>232</b>	<b>35.9</b>	233	35.9
453.povray	116	46.0	<b>116</b>	<b>46.0</b>	116	46.0	95.1	55.9	<b>95.1</b>	<b>55.9</b>	95.2	55.9
454.calculix	204	40.5	204	40.4	<b>204</b>	<b>40.5</b>	204	40.5	204	40.4	<b>204</b>	<b>40.5</b>
459.GemsFDTD	211	50.2	210	50.4	<b>210</b>	<b>50.4</b>	199	53.2	<b>199</b>	<b>53.3</b>	199	53.5
465.tonto	301	32.7	<b>301</b>	<b>32.7</b>	302	32.6	273	36.1	272	36.1	<b>272</b>	<b>36.1</b>
470.lbm	115	120	116	119	<b>115</b>	<b>120</b>	115	120	116	119	<b>115</b>	<b>120</b>
481.wrf	165	67.6	165	67.8	<b>165</b>	<b>67.8</b>	165	67.6	165	67.8	<b>165</b>	<b>67.8</b>
482.sphinx3	<b>335</b>	<b>58.2</b>	332	58.7	338	57.6	<b>335</b>	<b>58.2</b>	332	58.7	338	57.6

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.dealIII: 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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