



# SPEC® CFP2006 Result

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## Intel Corporation

SPECfp®2006 = **55.3**

Intel DH67BLB3 Motherboard (Intel Core i5-2500K)

SPECfp\_base2006 = **53.3**

CPU2006 license: 13

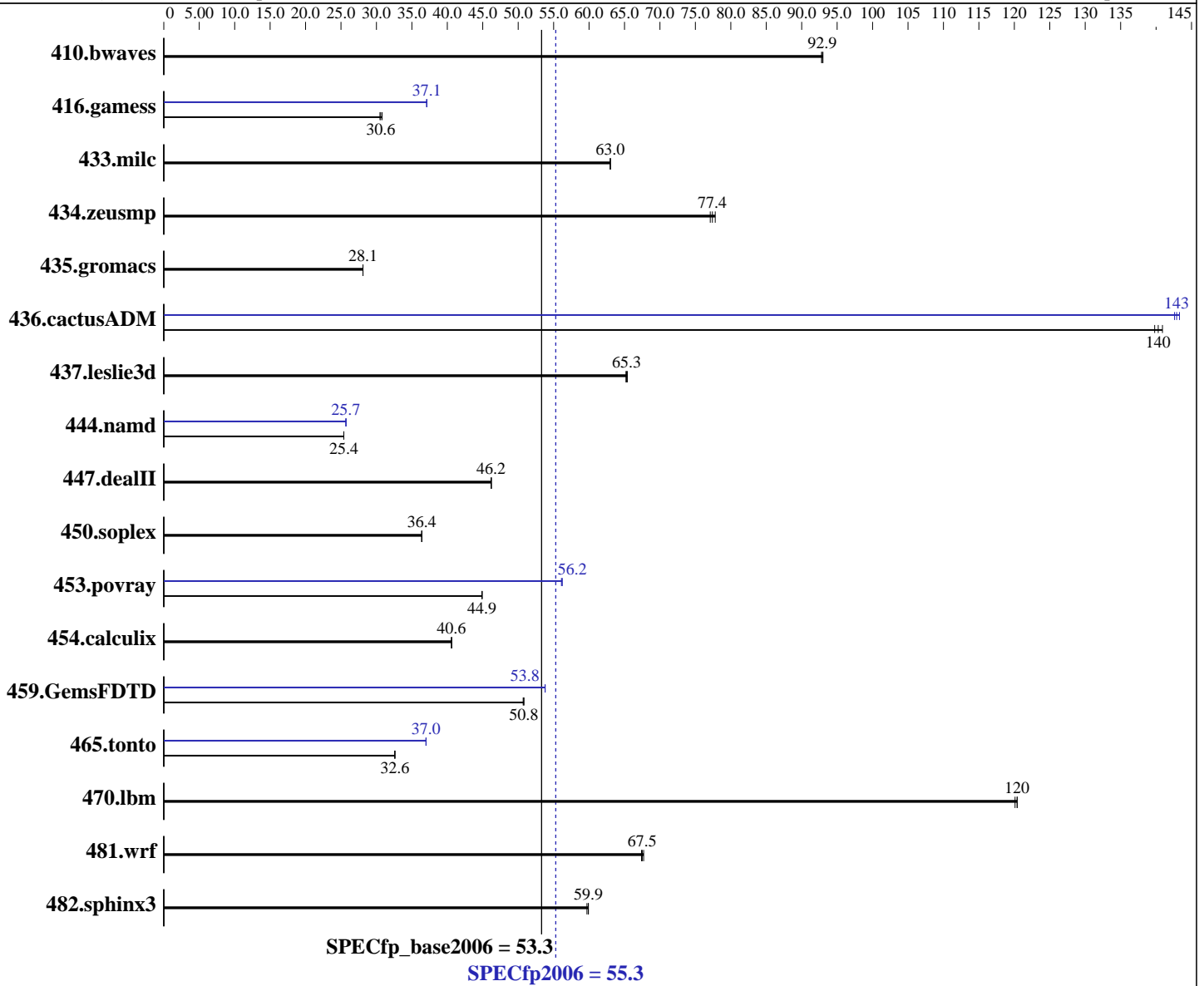
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jul-2011

Hardware Availability: Mar-2011

Software Availability: Apr-2011



### Hardware

CPU Name: Intel Core i5-2500K  
 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 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: Yes  
 File System: NTFS

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L3 Cache: 6 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	146	93.0	<b>146</b>	<b>92.9</b>	147	92.8	146	93.0	<b>146</b>	<b>92.9</b>	147	92.8
416.gamess	635	30.8	<b>640</b>	<b>30.6</b>	641	30.5	528	37.1	<b>528</b>	<b>37.1</b>	528	37.1
433.milc	146	63.0	<b>146</b>	<b>63.0</b>	146	63.0	146	63.0	<b>146</b>	<b>63.0</b>	146	63.0
434.zeusmp	117	77.8	118	77.1	<b>118</b>	<b>77.4</b>	117	77.8	118	77.1	<b>118</b>	<b>77.4</b>
435.gromacs	254	28.1	<b>254</b>	<b>28.1</b>	254	28.1	254	28.1	<b>254</b>	<b>28.1</b>	254	28.1
436.cactusADM	<b>85.2</b>	<b>140</b>	84.8	141	85.5	140	83.4	143	83.8	143	<b>83.6</b>	<b>143</b>
437.leslie3d	144	65.2	144	65.4	<b>144</b>	<b>65.3</b>	144	65.2	144	65.4	<b>144</b>	<b>65.3</b>
444.namd	<b>316</b>	<b>25.4</b>	316	25.4	316	25.4	313	25.7	<b>313</b>	<b>25.7</b>	313	25.7
447.dealII	248	46.2	247	46.2	<b>248</b>	<b>46.2</b>	248	46.2	247	46.2	<b>248</b>	<b>46.2</b>
450.soplex	229	36.4	<b>229</b>	<b>36.4</b>	229	36.4	229	36.4	<b>229</b>	<b>36.4</b>	229	36.4
453.povray	<b>119</b>	<b>44.9</b>	118	44.9	119	44.9	94.6	56.2	94.9	56.1	<b>94.6</b>	<b>56.2</b>
454.calculix	<b>203</b>	<b>40.6</b>	203	40.6	203	40.6	<b>203</b>	<b>40.6</b>	203	40.6	203	40.6
459.GemsFDTD	209	50.8	<b>209</b>	<b>50.8</b>	209	50.7	<b>197</b>	<b>53.8</b>	197	53.8	197	53.8
465.tonto	302	32.6	<b>302</b>	<b>32.6</b>	302	32.6	266	37.0	<b>266</b>	<b>37.0</b>	266	37.0
470.lbm	114	120	114	120	<b>114</b>	<b>120</b>	114	120	114	120	<b>114</b>	<b>120</b>
481.wrf	165	67.7	<b>166</b>	<b>67.5</b>	166	67.4	165	67.7	<b>166</b>	<b>67.5</b>	166	67.4
482.sphinx3	326	59.7	<b>326</b>	<b>59.9</b>	325	59.9	326	59.7	<b>326</b>	<b>59.9</b>	325	59.9

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 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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