



# SPEC® CFP2006 Result

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## Intel Corporation

SPECfp®2006 = **35.0**

Intel DH57JG Motherboard (Intel Core i5-661)

SPECfp\_base2006 = **33.9**

CPU2006 license: 13

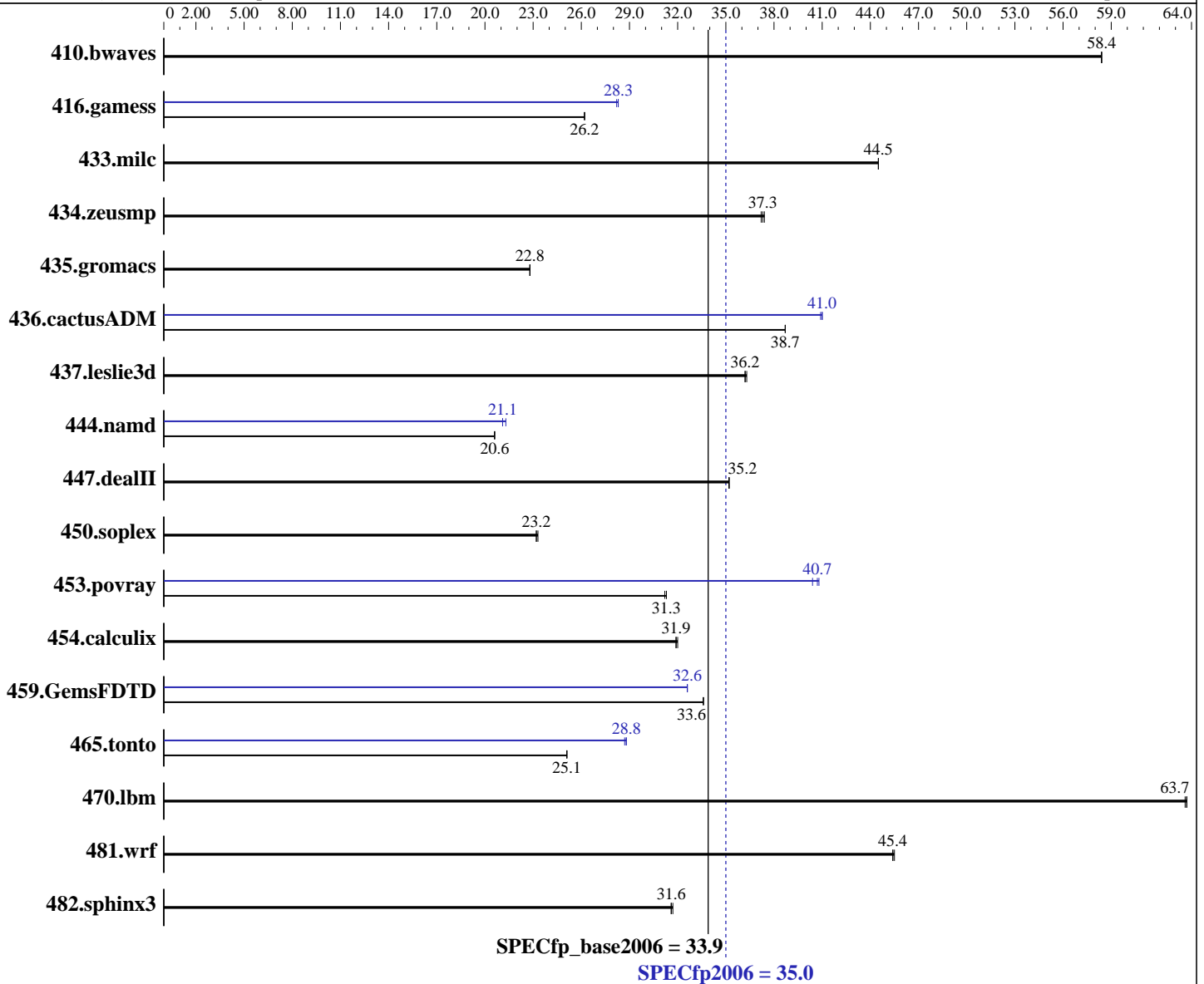
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jul-2011

Hardware Availability: Jan-2010

Software Availability: Apr-2011



### Hardware

CPU Name: Intel Core i5-661  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz  
 CPU MHz: 3333  
 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 12.0.3.176 Build 20110309  
 Intel Visual Fortran Compiler XE for Intel64 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: 4 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	233	58.4	233	58.4	<b><u>233</u></b>	<b><u>58.4</u></b>	233	58.4	233	58.4	<b><u>233</u></b>	<b><u>58.4</u></b>
416.gamess	747	26.2	747	26.2	<b><u>747</u></b>	<b><u>26.2</u></b>	695	28.2	692	28.3	<b><u>693</u></b>	<b><u>28.3</u></b>
433.milc	<b><u>206</u></b>	<b><u>44.5</u></b>	206	44.5	206	44.5	<b><u>206</u></b>	<b><u>44.5</u></b>	206	44.5	206	44.5
434.zeusmp	244	37.4	<b><u>244</u></b>	<b><u>37.3</u></b>	244	37.2	244	37.4	<b><u>244</u></b>	<b><u>37.3</u></b>	244	37.2
435.gromacs	313	22.8	313	22.8	<b><u>313</u></b>	<b><u>22.8</u></b>	313	22.8	313	22.8	<b><u>313</u></b>	<b><u>22.8</u></b>
436.cactusADM	<b><u>309</u></b>	<b><u>38.7</u></b>	309	38.7	309	38.7	293	40.9	<b><u>292</u></b>	<b><u>41.0</u></b>	291	41.0
437.leslie3d	260	36.2	259	36.3	<b><u>259</u></b>	<b><u>36.2</u></b>	260	36.2	259	36.3	<b><u>259</u></b>	<b><u>36.2</u></b>
444.namd	389	20.6	<b><u>389</u></b>	<b><u>20.6</u></b>	389	20.6	<b><u>379</u></b>	<b><u>21.1</u></b>	377	21.3	380	21.1
447.dealII	<b><u>325</u></b>	<b><u>35.2</u></b>	325	35.2	325	35.2	<b><u>325</u></b>	<b><u>35.2</u></b>	325	35.2	325	35.2
450.soplex	358	23.3	360	23.2	<b><u>359</u></b>	<b><u>23.2</u></b>	358	23.3	360	23.2	<b><u>359</u></b>	<b><u>23.2</u></b>
453.povray	170	31.3	170	31.2	<b><u>170</u></b>	<b><u>31.3</u></b>	130	40.8	<b><u>131</u></b>	<b><u>40.7</u></b>	132	40.4
454.calculix	258	32.0	<b><u>258</u></b>	<b><u>31.9</u></b>	258	31.9	258	32.0	<b><u>258</u></b>	<b><u>31.9</u></b>	258	31.9
459.GemsFDTD	316	33.6	<b><u>316</u></b>	<b><u>33.6</u></b>	316	33.6	325	32.6	<b><u>326</u></b>	<b><u>32.6</u></b>	326	32.6
465.tonto	392	25.1	393	25.1	<b><u>393</u></b>	<b><u>25.1</u></b>	<b><u>342</u></b>	<b><u>28.8</u></b>	343	28.7	341	28.8
470.lbm	216	63.6	216	63.7	<b><u>216</u></b>	<b><u>63.7</u></b>	216	63.6	216	63.7	<b><u>216</u></b>	<b><u>63.7</u></b>
481.wrf	246	45.5	<b><u>246</u></b>	<b><u>45.4</u></b>	246	45.4	246	45.5	<b><u>246</u></b>	<b><u>45.4</u></b>	246	45.4
482.sphinx3	615	31.7	<b><u>616</u></b>	<b><u>31.6</u></b>	617	31.6	615	31.7	<b><u>616</u></b>	<b><u>31.6</u></b>	617	31.6

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:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias  
-Qopt-prefetch -Qauto-ilp32 /F1000000000

C++ benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias  
-Qopt-prefetch -Qcxx-features -Qauto-ilp32 /F1000000000 shlw64M.lib  
-link /FORCE:MULTIPLE

Fortran benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias  
-Qopt-prefetch /F1000000000

Benchmarks using both Fortran and C:

-QxSSE4.2 -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: -QxSSE4.2(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: basepeak = yes

450.soplex: basepeak = yes

453.povray: -QxSSE4.2(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: -QxSSE4.2(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: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll2 -Qopt-prefetch -Qparallel  
/F1000000000

465.tonto: -QxSSE4.2(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: -QxSSE4.2(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-revC.html>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revC.xml>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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