



# SPEC® CFP2006 Result

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## Intel Corporation

### SPECfp®\_rate2006 = 47.2

### Intel DH57JG Motherboard (Intel Core i3-540)

### SPECfp\_rate\_base2006 = 46.1

CPU2006 license: 13

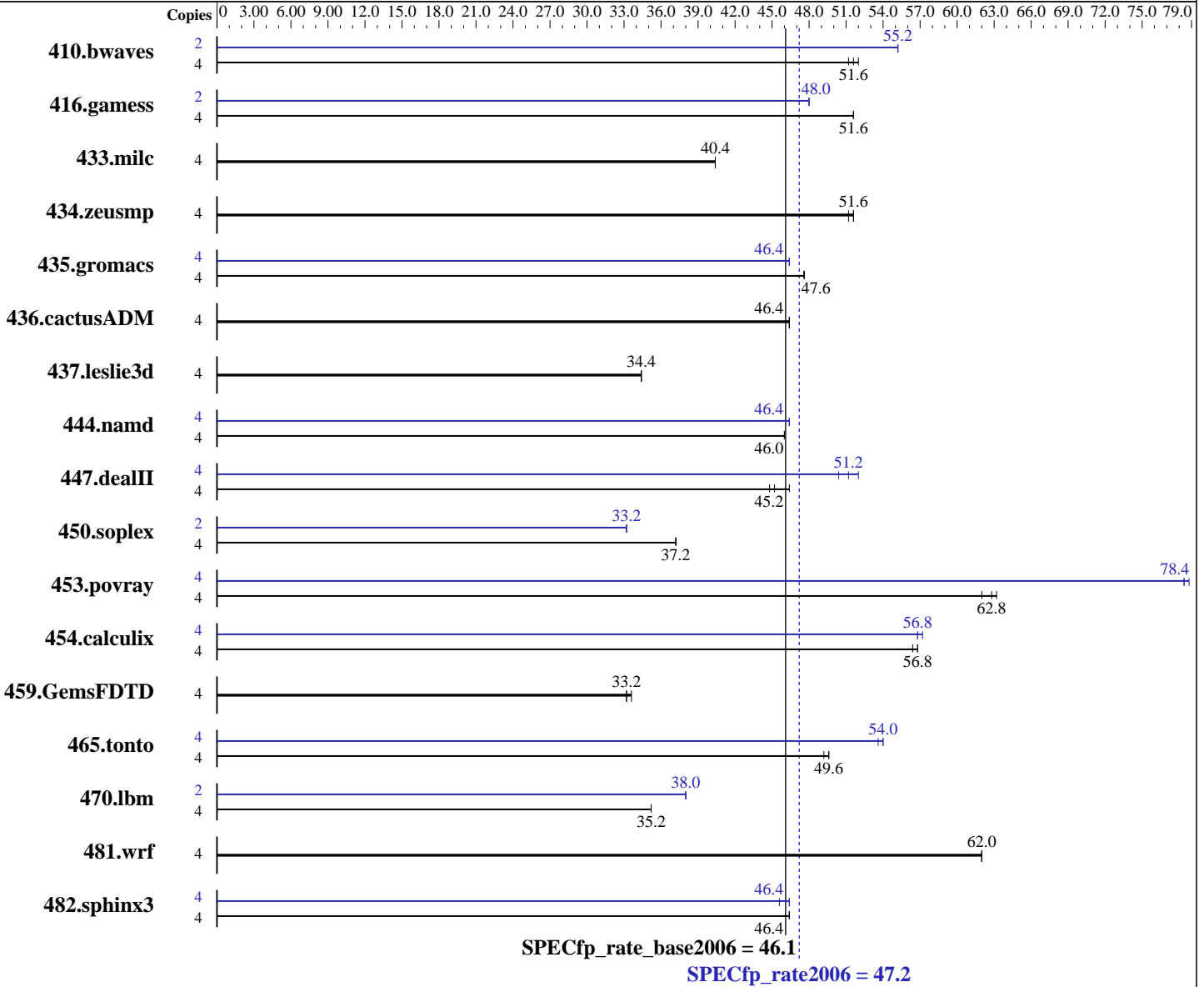
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Sep-2010

Hardware Availability: Jan-2010

Software Availability: Sep-2009



### Hardware

CPU Name: Intel Core i3-540  
 CPU Characteristics: 3066  
 CPU MHz: 3066  
 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 Professional 11.1 for Intel 64  
 Build 20090903 Package ID: w\_cproc\_p\_11.1.045  
 Intel Visual Fortran Compiler Professional 11.1 for Intel 64  
 Build 20090903 Package ID: w\_cproc\_p\_11.1.045, w\_cprof\_p\_11.1.045  
 Microsoft Visual Studio 2008 Professional SP1 (for libraries)  
 Auto Parallel: No

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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

File System: NTFS  
 System State: Default  
 Base Pointers: 64-bit  
 Peak Pointers: 64-bit  
 Other Software: None  
 SmartHeap Library Version 8.1 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	1065	51.2	1047	52.0	<b>1051</b>	<b>51.6</b>	2	492	55.2	<b>492</b>	<b>55.2</b>	492	55.2
416.gamess	4	1519	51.6	<b>1520</b>	<b>51.6</b>	1520	51.6	2	<b>817</b>	<b>48.0</b>	817	48.0	817	48.0
433.milc	4	905	40.4	906	40.4	<b>906</b>	<b>40.4</b>	4	905	40.4	906	40.4	<b>906</b>	<b>40.4</b>
434.zeusmp	4	712	51.2	<b>708</b>	<b>51.6</b>	707	51.6	4	712	51.2	<b>708</b>	<b>51.6</b>	707	51.6
435.gromacs	4	601	47.6	602	47.6	<b>601</b>	<b>47.6</b>	4	613	46.4	<b>613</b>	<b>46.4</b>	614	46.4
436.cactusADM	4	1026	46.4	1031	46.4	<b>1030</b>	<b>46.4</b>	4	1026	46.4	1031	46.4	<b>1030</b>	<b>46.4</b>
437.leslie3d	4	1092	34.4	<b>1090</b>	<b>34.4</b>	1090	34.4	4	1092	34.4	<b>1090</b>	<b>34.4</b>	1090	34.4
444.namd	4	699	46.0	<b>699</b>	<b>46.0</b>	699	46.0	4	694	46.4	<b>692</b>	<b>46.4</b>	692	46.4
447.dealII	4	<b>1012</b>	<b>45.2</b>	1018	44.8	983	46.4	4	<b>892</b>	<b>51.2</b>	910	50.4	879	52.0
450.soplex	4	898	37.2	<b>898</b>	<b>37.2</b>	898	37.2	2	503	33.2	503	33.2	<b>503</b>	<b>33.2</b>
453.povray	4	344	62.0	338	63.2	<b>339</b>	<b>62.8</b>	4	<b>272</b>	<b>78.4</b>	270	78.8	272	78.4
454.calculix	4	<b>583</b>	<b>56.8</b>	587	56.4	582	56.8	4	577	57.2	<b>580</b>	<b>56.8</b>	582	56.8
459.GemsFDTD	4	1263	33.6	<b>1274</b>	<b>33.2</b>	1274	33.2	4	1263	33.6	<b>1274</b>	<b>33.2</b>	1274	33.2
465.tonto	4	796	49.6	800	49.2	<b>797</b>	<b>49.6</b>	4	<b>731</b>	<b>54.0</b>	730	54.0	732	53.6
470.lbm	4	1557	35.2	1558	35.2	<b>1557</b>	<b>35.2</b>	2	723	38.0	<b>722</b>	<b>38.0</b>	722	38.0
481.wrf	4	719	62.0	<b>721</b>	<b>62.0</b>	723	62.0	4	719	62.0	<b>721</b>	<b>62.0</b>	723	62.0
482.sphinx3	4	1681	46.4	1684	46.4	<b>1682</b>	<b>46.4</b>	4	<b>1685</b>	<b>46.4</b>	1684	46.4	1704	45.6

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.

## General Notes

Tested systems can be used with Shin-G ATX case, PC Power and Cooling 1200W power supply



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CPU2006 license: 13

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## Base 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

## Base Portability Flags

410.bwaves: -DSPEC\_CPU\_P64 /Qlowercase  
 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 -Qlowercase /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 -Qlowercase  
 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- -Qopt-prefetch -Qauto-ilp32  
/F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:

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

Fortran benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000  
-link /FORCE:MULTIPLE

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## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32
/F1000000000 -link /FORCE:MULTIPLE
```

## 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: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE
```

```
482.sphinx3: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll2 -Qauto-ilp32
/F1000000000 -link /FORCE:MULTIPLE
```

C++ benchmarks:

```
444.namd: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000
shlW64M.lib -link /FORCE:MULTIPLE
```

```
447.dealII: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
-Qscalar-rep- -Qauto-ilp32 /F1000000000 shlW64M.lib
-link /FORCE:MULTIPLE
```

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## Peak Optimization Flags (Continued)

450.soplex: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qauto-ilp32 /F1000000000 sh1W64M.lib  
-link /FORCE:MULTIPLE

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: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch  
/F1000000000 -link /FORCE:MULTIPLE

416.gamess: Same as 410.bwaves

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -QxSSE4.2(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: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32  
/F1000000000 -link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qauto-ilp32 /F1000000000  
-link /FORCE:MULTIPLE

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-ic11.0-winx64-revA.20100302.01.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.20100302.01.xml>



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Tested with SPEC CPU2006 v1.1.  
Report generated on Wed Jul 23 13:40:05 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 21 December 2010.