



# SPEC<sup>®</sup> CFP2006 Result

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## Intel Corporation

SPECfp<sup>®</sup>2006 = 48.9

Intel DH61WW motherboard (Intel Core i3-2130)

SPECfp\_base2006 = 47.9

CPU2006 license: 13

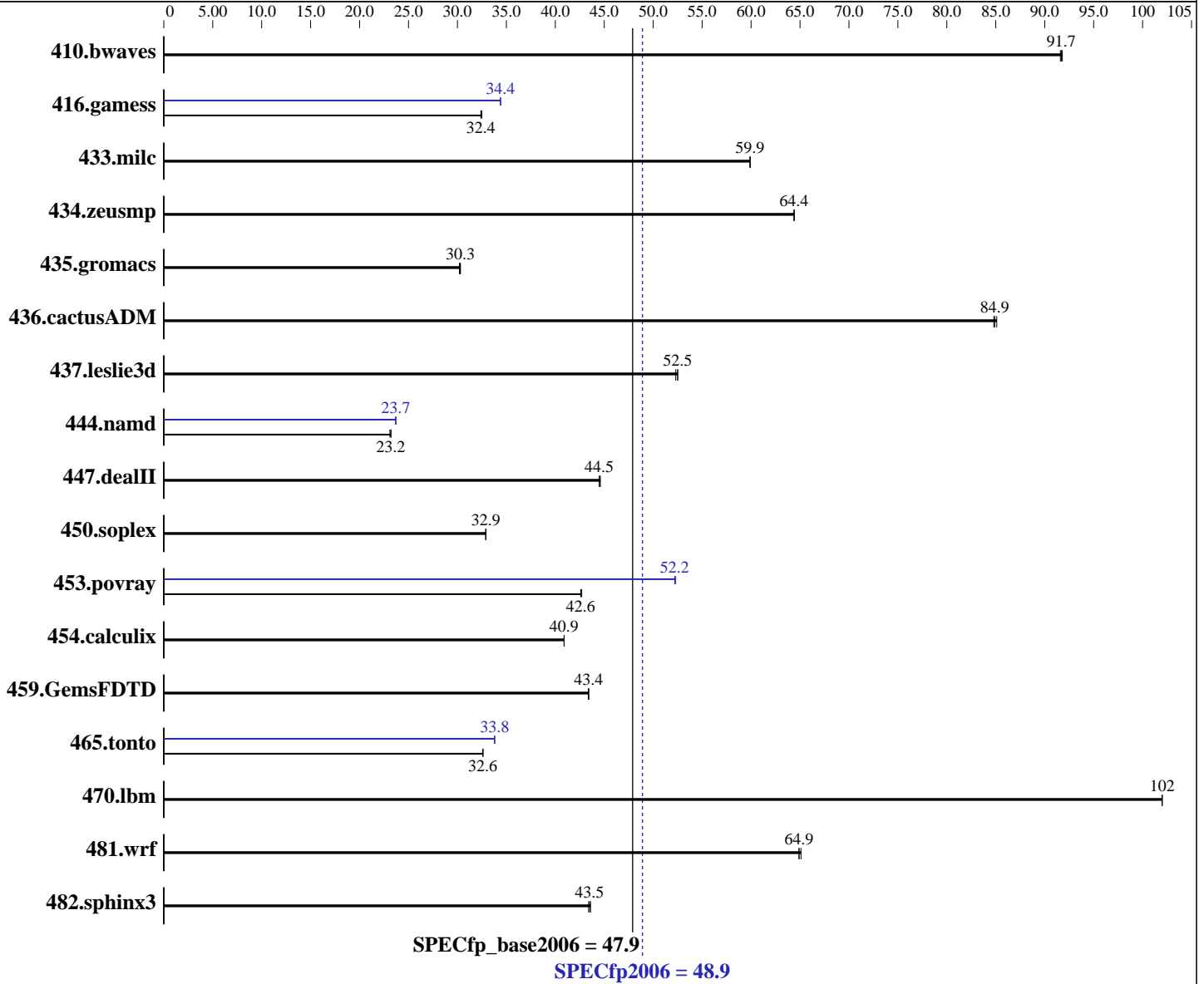
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Dec-2011

Hardware Availability: Sep-2011

Software Availability: Sep-2011



**Hardware**

CPU Name: Intel Core i3-2130  
 CPU Characteristics:  
 CPU MHz: 3400  
 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: Microsoft Windows 7 Ultimate 6.1.7601 Service Pack 1 Build 7601  
 Compiler: C/C++: Version 12.1.0.229 of Intel C++ Studio XE for Windows;  
 Fortran: Version 12.1.0.229 of Intel Fortran Studio XE for Windows;  
 Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1  
 Auto Parallel: Yes

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L3 Cache: 3 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 4 GB (2 x 2 GB 2Rx8 PC3-10600U-9)  
 Disk Subsystem: 1 TB Seagate SATA, 7200 RPM  
 Other Hardware: None

File System: NTFS  
 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	91.6	<b>148</b>	<b>91.7</b>	148	91.8	148	91.6	<b>148</b>	<b>91.7</b>	148	91.8
416.gamess	<b>604</b>	<b>32.4</b>	604	32.4	603	32.5	569	34.4	<b>569</b>	<b>34.4</b>	569	34.4
433.milc	153	59.9	<b>153</b>	<b>59.9</b>	153	59.9	153	59.9	<b>153</b>	<b>59.9</b>	153	59.9
434.zeusmp	<b>141</b>	<b>64.4</b>	141	64.4	141	64.4	<b>141</b>	<b>64.4</b>	141	64.4	141	64.4
435.gromacs	236	30.2	235	30.3	<b>236</b>	<b>30.3</b>	236	30.2	235	30.3	<b>236</b>	<b>30.3</b>
436.cactusADM	141	85.1	<b>141</b>	<b>84.9</b>	141	84.8	141	85.1	<b>141</b>	<b>84.9</b>	141	84.8
437.leslie3d	180	52.3	179	52.5	<b>179</b>	<b>52.5</b>	180	52.3	179	52.5	<b>179</b>	<b>52.5</b>
444.namd	346	23.2	<b>346</b>	<b>23.2</b>	347	23.1	339	23.7	339	23.7	<b>339</b>	<b>23.7</b>
447.dealII	257	44.5	<b>257</b>	<b>44.5</b>	257	44.6	257	44.5	<b>257</b>	<b>44.5</b>	257	44.6
450.soplex	254	32.9	254	32.9	<b>254</b>	<b>32.9</b>	254	32.9	254	32.9	<b>254</b>	<b>32.9</b>
453.povray	<b>125</b>	<b>42.6</b>	125	42.7	125	42.6	<b>102</b>	<b>52.2</b>	102	52.2	102	52.3
454.calculix	202	40.9	<b>202</b>	<b>40.9</b>	202	40.9	202	40.9	<b>202</b>	<b>40.9</b>	202	40.9
459.GemsFDTD	244	43.4	<b>244</b>	<b>43.4</b>	244	43.4	244	43.4	<b>244</b>	<b>43.4</b>	244	43.4
465.tonto	302	32.6	<b>302</b>	<b>32.6</b>	302	32.6	<b>291</b>	<b>33.8</b>	291	33.8	291	33.8
470.lbm	135	102	<b>135</b>	<b>102</b>	135	102	135	102	<b>135</b>	<b>102</b>	135	102
481.wrf	<b>172</b>	<b>64.9</b>	172	64.9	172	65.1	<b>172</b>	<b>64.9</b>	172	64.9	172	65.1
482.sphinx3	448	43.6	449	43.4	<b>448</b>	<b>43.5</b>	448	43.6	449	43.4	<b>448</b>	<b>43.5</b>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Compiler Invocation Notes

ipsxe-comp-vars batch file invoked with intel64

## Platform Notes

Sysinfo program C:\SPEC12.1\Docs\sysinfo  
 \$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c  
 running on CltE06995A30CB5 Fri Dec 23 05:05:12 2011

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:  
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

Trying 'systeminfo'

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## Platform Notes (Continued)

OS Name : Microsoft Windows 7 Ultimate  
 OS Version : 6.1.7601 Service Pack 1 Build 7601  
 System Manufacturer: INTEL\_  
 System Model : DH61WW\_\_  
 Processor(s) : 1 Processor(s) Installed.  
     [01]: Intel64 Family 6 Model 42 Stepping 7 GenuineIntel ~3400 Mhz  
 BIOS Version : Intel Corp. BEH6110H.86A.0016.2011.0118.1128, 1/18/2011  
 Total Physical Memory: 4,004 MB

```
Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize  : 512
L3CacheSize  : 3072
MaxClockSpeed : 3400
Name          : Intel(R) Core(TM) i3-2130 CPU @ 3.40GHz
NumberOfCores : 2
NumberOfLogicalProcessors: 4
```

(End of data from sysinfo program)

## Component Notes

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

## General Notes

OMP\_NUM\_THREADS set to number of processors cores  
 KMP\_AFFINITY set to granularity=fine,scatter  
 Binaries compiled on a system with 1x Intel Core i7-860 CPU  
 + 8GB memory using Windows 7 Enterprise 64-bit

## 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



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## 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

```

## Peak Compiler Invocation

C benchmarks:

```

icl -Qvc9 -Qstd=c99

```

C++ benchmarks:

```

icl -Qvc9

```

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Tested by: Intel Corporation

Software Availability: Sep-2011

## Peak Compiler Invocation (Continued)

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

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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## Peak Optimization Flags (Continued)

459.GemsFDTD: basepeak = yes

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: basepeak = yes

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-ic12.1-official-windows.20120117.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.20120117.xml>

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

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