



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

Intel DH61WW motherboard (Intel Pentium G840)

SPECfp®_rate2006 = 58.0

SPECfp_rate_base2006 = 57.2

CPU2006 license: 13

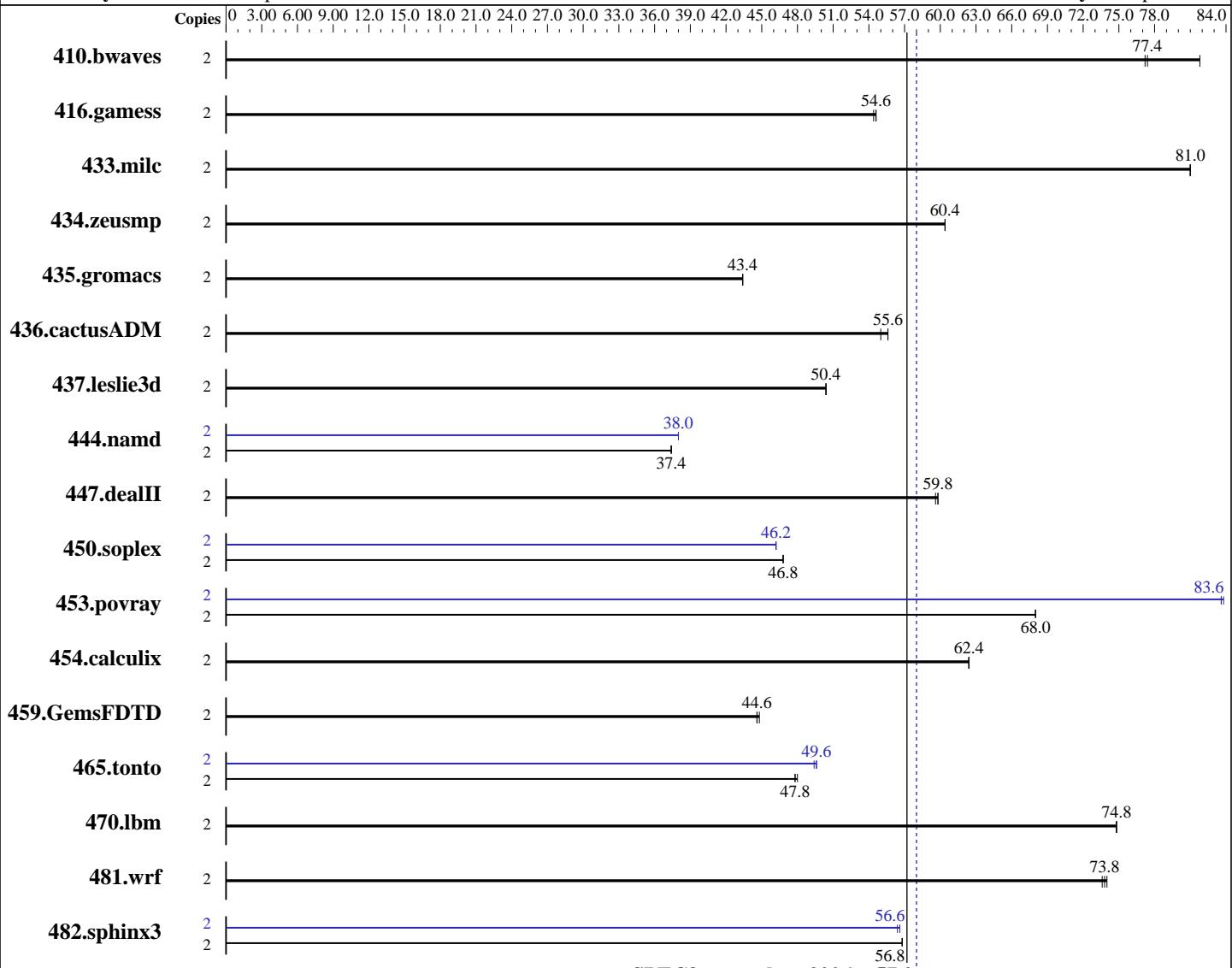
Test date: Dec-2011

Test sponsor: Intel Corporation

Hardware Availability: May-2011

Tested by: Intel Corporation

Software Availability: Sep-2011



SPECfp_rate_base2006 = 57.2

SPECfp_rate2006 = 58.0

Hardware

CPU Name: Intel Pentium G840
 CPU Characteristics:
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 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

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: No

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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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	332	81.8	353	77.2	<u>352</u>	<u>77.4</u>	2	332	81.8	353	77.2	<u>352</u>	<u>77.4</u>
416.gamess	2	719	54.4	718	54.6	<u>718</u>	<u>54.6</u>	2	719	54.4	718	54.6	<u>718</u>	<u>54.6</u>
433.milc	2	227	81.0	226	81.0	<u>226</u>	<u>81.0</u>	2	227	81.0	226	81.0	<u>226</u>	<u>81.0</u>
434.zeusmp	2	302	60.4	<u>301</u>	<u>60.4</u>	301	60.4	2	302	60.4	<u>301</u>	<u>60.4</u>	301	60.4
435.gromacs	2	328	43.4	329	43.4	<u>329</u>	<u>43.4</u>	2	328	43.4	329	43.4	<u>329</u>	<u>43.4</u>
436.cactusADM	2	<u>430</u>	<u>55.6</u>	430	55.6	435	55.0	2	<u>430</u>	<u>55.6</u>	430	55.6	435	55.0
437.leslie3d	2	373	50.4	<u>373</u>	<u>50.4</u>	373	50.4	2	373	50.4	<u>373</u>	<u>50.4</u>	373	50.4
444.namd	2	429	37.4	<u>429</u>	<u>37.4</u>	429	37.4	2	<u>422</u>	<u>38.0</u>	422	38.0	422	38.0
447.dealII	2	382	59.8	<u>383</u>	<u>59.8</u>	384	59.6	2	382	59.8	<u>383</u>	<u>59.8</u>	384	59.6
450.soplex	2	357	46.8	<u>356</u>	<u>46.8</u>	356	46.8	2	<u>361</u>	<u>46.2</u>	361	46.2	361	46.2
453.povray	2	<u>157</u>	<u>68.0</u>	156	68.0	157	68.0	2	<u>127</u>	<u>83.6</u>	127	83.8	127	83.6
454.calculix	2	<u>264</u>	<u>62.4</u>	264	62.4	264	62.4	2	<u>264</u>	<u>62.4</u>	264	62.4	264	62.4
459.GemsFDTD	2	475	44.6	<u>475</u>	<u>44.6</u>	475	44.8	2	475	44.6	<u>475</u>	<u>44.6</u>	475	44.8
465.tonto	2	411	48.0	412	47.8	<u>412</u>	<u>47.8</u>	2	398	49.4	397	49.6	<u>397</u>	<u>49.6</u>
470.lbm	2	<u>367</u>	<u>74.8</u>	367	74.8	367	74.8	2	<u>367</u>	<u>74.8</u>	367	74.8	367	74.8
481.wrf	2	302	74.0	303	73.6	<u>303</u>	<u>73.8</u>	2	302	74.0	303	73.6	<u>303</u>	<u>73.8</u>
482.sphinx3	2	687	56.8	686	56.8	<u>686</u>	<u>56.8</u>	2	689	56.6	<u>689</u>	<u>56.6</u>	692	56.4

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

Submit Notes

Processes were bound to specific processors using the start command with the /affinity switch.
 The config file option 'submit' was used to generate the affinity mask for each process.



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Platform Notes

```
Sysinfo program C:\SPEC12.1\Docs\sysinfo
$Rev: 6775 $ $Date::: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on ClteE06995A30C92 Wed Dec 21 15:00:16 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'
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 ~2800 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: 2800
Name         : Intel(R) Pentium(R) CPU G840 @ 2.80GHz
NumberOfCores: 2
NumberOfLogicalProcessors: 2
```

(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

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
```

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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- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE
```

C++ benchmarks:

```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qcxx-features -Qauto-ilp32 /F1000000000 shlW64M.lib
-link /FORCE:MULTIPLE
```

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

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



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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: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll12 -Qansi-alias  
-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: basepeak = yes
```

```
450.soplex: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)  
-Qipo -O3 -Qauto-ilp32 /F1000000000 shlw64M.lib  
-link /FORCE:MULTIPLE
```

```
453.povray: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32  
/F1000000000 shlw64M.lib -link /FORCE:MULTIPLE
```

Fortran benchmarks:

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Peak Optimization Flags (Continued)

410.bwaves: basepeak = yes
416.gamess: basepeak = yes
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: 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.

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