



# SPEC® CFP2006 Result

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## Intel Corporation

### SPECfp®\_rate2006 = 57.6

### Intel DQ87PG motherboard (Intel Celeron G1820T)

### SPECfp\_rate\_base2006 = 57.0

CPU2006 license: 13

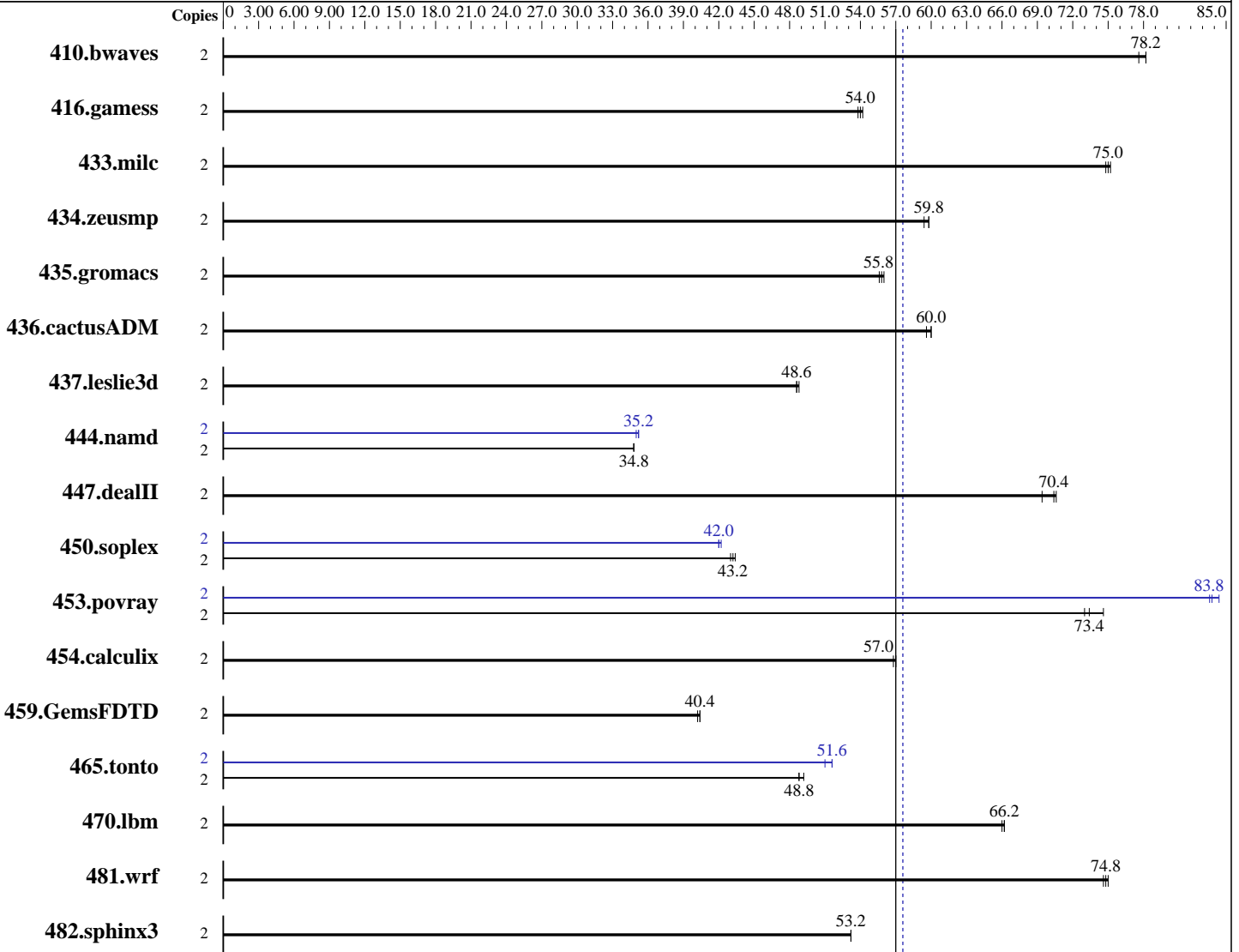
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Mar-2014

Hardware Availability: Dec-2013

Software Availability: Apr-2013



SPECfp\_rate\_base2006 = 57.0

SPECfp\_rate2006 = 57.6

### Hardware

CPU Name: Intel Celeron G1820T  
 CPU Characteristics:  
 CPU MHz: 2400  
 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

Continued on next page

### Software

Operating System: Microsoft Windows 7 Enterprise 6.1.7601 Service Pack 1 Build 7601  
 Compiler: C/C++: Version 13.1.1.171 of Intel C++ Studio XE for Windows;  
 Fortran: Version 13.1.1.171 of Intel Fortran Studio XE for Windows;  
 Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 Professional SP1  
 Auto Parallel: No

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L3 Cache: 2 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 4 GB (2 x 2 GB 1Rx8 PC3-12800U-11, running at 1333 MHz and CL9)  
 Disk Subsystem: 250 GB Seagate SATA HDD, 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 10.0 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	347	78.2	<b>348</b>	<b>78.2</b>	350	77.6	2	347	78.2	<b>348</b>	<b>78.2</b>	350	77.6
416.gamess	2	<b>725</b>	<b>54.0</b>	728	53.8	723	54.2	2	<b>725</b>	<b>54.0</b>	728	53.8	723	54.2
433.milc	2	<b>245</b>	<b>75.0</b>	246	74.8	244	75.2	2	<b>245</b>	<b>75.0</b>	246	74.8	244	75.2
434.zeusmp	2	305	59.8	<b>305</b>	<b>59.8</b>	306	59.4	2	305	59.8	<b>305</b>	<b>59.8</b>	306	59.4
435.gromacs	2	257	55.6	<b>256</b>	<b>55.8</b>	255	56.0	2	257	55.6	<b>256</b>	<b>55.8</b>	255	56.0
436.cactusADM	2	398	60.0	<b>399</b>	<b>60.0</b>	401	59.6	2	398	60.0	<b>399</b>	<b>60.0</b>	401	59.6
437.leslie3d	2	388	48.6	385	48.8	<b>388</b>	<b>48.6</b>	2	388	48.6	385	48.8	<b>388</b>	<b>48.6</b>
444.namd	2	<b>462</b>	<b>34.8</b>	460	34.8	462	34.8	2	455	35.2	458	35.0	<b>455</b>	<b>35.2</b>
447.dealII	2	324	70.6	330	69.4	<b>325</b>	<b>70.4</b>	2	324	70.6	330	69.4	<b>325</b>	<b>70.4</b>
450.soplex	2	<b>386</b>	<b>43.2</b>	389	43.0	385	43.4	2	397	42.0	395	42.2	<b>397</b>	<b>42.0</b>
453.povray	2	146	73.0	143	74.6	<b>145</b>	<b>73.4</b>	2	126	84.4	<b>127</b>	<b>83.8</b>	127	83.6
454.calculix	2	<b>290</b>	<b>57.0</b>	289	57.0	290	56.8	2	<b>290</b>	<b>57.0</b>	289	57.0	290	56.8
459.GemsFDTD	2	529	40.2	524	40.4	<b>526</b>	<b>40.4</b>	2	529	40.2	524	40.4	<b>526</b>	<b>40.4</b>
465.tonto	2	<b>403</b>	<b>48.8</b>	400	49.2	403	48.8	2	381	51.6	386	51.0	<b>382</b>	<b>51.6</b>
470.lbm	2	416	66.0	415	66.2	<b>415</b>	<b>66.2</b>	2	416	66.0	415	66.2	<b>415</b>	<b>66.2</b>
481.wrf	2	300	74.6	298	75.0	<b>299</b>	<b>74.8</b>	2	300	74.6	298	75.0	<b>299</b>	<b>74.8</b>
482.sphinx3	2	731	53.2	<b>733</b>	<b>53.2</b>	733	53.2	2	731	53.2	<b>733</b>	<b>53.2</b>	733	53.2

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

## Compiler Invocation Notes

To compile these binaries, the Intel Compiler 13.1 was set up to generate 64-bit binaries with the command:  
 "ipsxe-comp-vars.bat intel64 vs2010" (shortcut provided in the Intel(r) Parallel Studio XE 2013 program folder)

## 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:\SPEC13.1/Docs/sysinfo  
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c  
running on Clt7C05070FB382 Sat Mar 8 15:09:44 2014

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 Enterprise  
OS Version : 6.1.7601 Service Pack 1 Build 7601  
System Manufacturer: INTEL\_  
System Model : DQ87PG\_\_  
Processor(s) : 1 Processor(s) Installed.  
 [01]: Intel64 Family 6 Model 60 Stepping 3 GenuineIntel ~2400 Mhz  
BIOS Version : Intel(R) Corp. PGQ8710H.86A.0036.2013.0702.1908, 7/2/2013  
Total Physical Memory: 3,749 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0  
L2CacheSize : 512  
L3CacheSize : 2048  
MaxClockSpeed : 2400  
Name : Intel(R) Celeron(R) CPU G1820T @ 2.40GHz  
NumberOfCores : 2  
NumberOfLogicalProcessors: 2

(End of data from sysinfo program)

BIOS: SATA mode set to RAID  
Windows Disk Driver: Intel Rapid Storage Technology 12.5.0.1066  
Windows Chipset Driver: Intel Chipset Driver 9.4.0.1027

## Component Notes

Tested systems can be used with Shin-G ATX case,  
PC Power and Cooling 1200W power supply  
Micron MT8JTF25664AZ-1G6 Series Memory DIMMs

## 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 -Qvc10 -Qstd=c99

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## Base Compiler Invocation (Continued)

C++ benchmarks:

icl -Qvc10

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc10 -Qstd=c99 ifort

## Base Portability Flags

410.bwaves: -DSPEC\_CPU\_P64  
 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  
 -Qoption,cpp,--ms\_incompat\_treatment\_of\_commas\_in\_macros  
 450.soplex: -DSPEC\_CPU\_P64  
 453.povray: -DSPEC\_CPU\_P64 -DSPEC\_CPU\_NEED\_INVHYP -DNEED\_INVHYP  
 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

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## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

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

## Peak Compiler Invocation

C benchmarks:

icl -Qvc10 -Qstd=c99

C++ benchmarks:

icl -Qvc10

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc10 -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  
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

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Software Availability: Apr-2013

## Peak Optimization Flags (Continued)

453.povray: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32  
/F1000000000 sh1W64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

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-ic13.1-official-windows.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic13.1-official-windows.xml>

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

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