



# SPEC® CFP2006 Result

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## Intel Corporation

SPECfp®\_rate2006 = 53.3

Intel DH61WW motherboard (Intel Pentium G630)

SPECfp\_rate\_base2006 = 52.5

CPU2006 license: 13

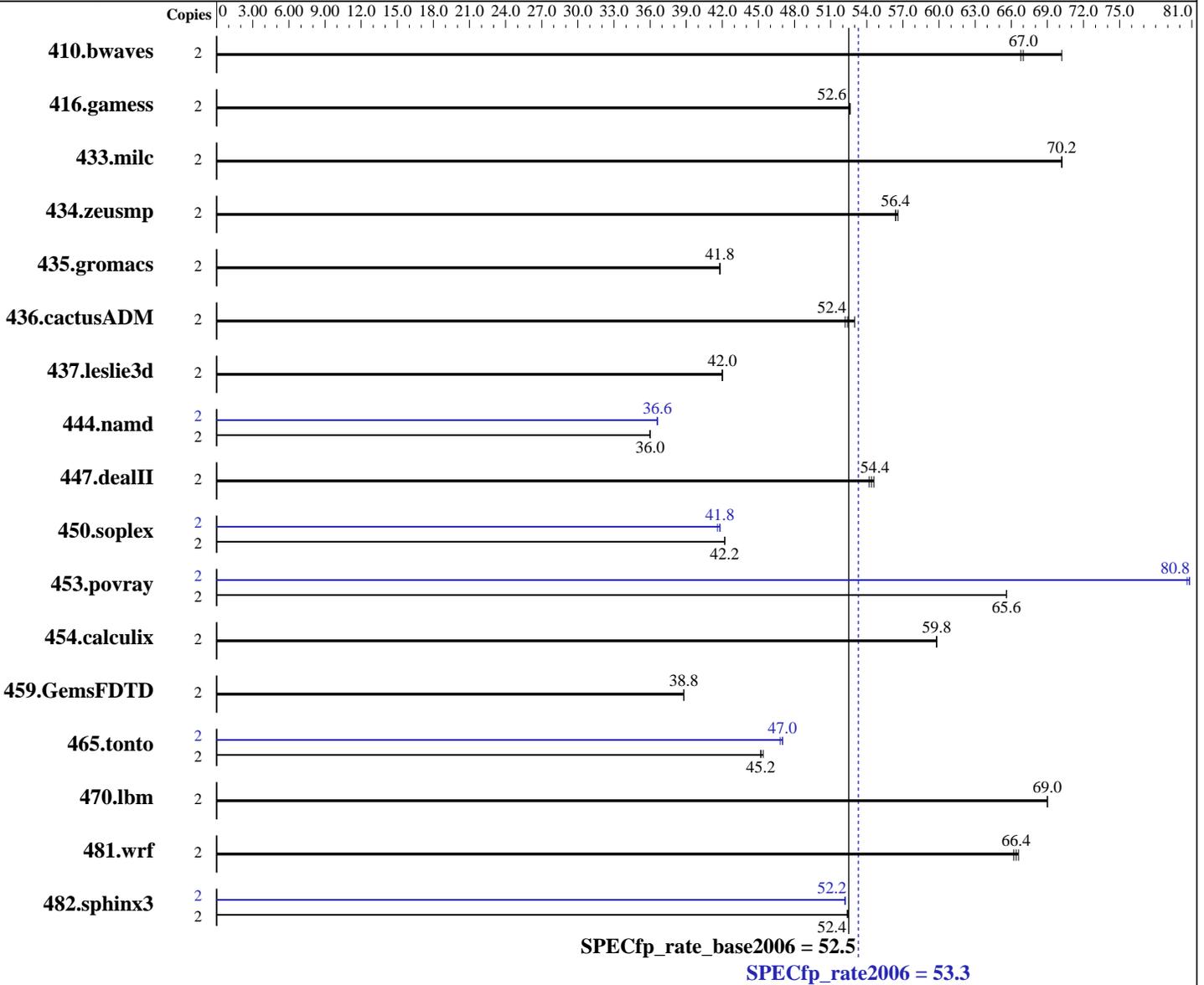
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Dec-2011

Hardware Availability: Sep-2011

Software Availability: Sep-2011



### Hardware

CPU Name: Intel Pentium G630  
 CPU Characteristics:  
 CPU MHz: 2700  
 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 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, running at 1066 MHz and CL7)  
 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      | 387        | 70.2        | <b>406</b> | <b>67.0</b> | 407        | 66.8        | 2      | 387        | 70.2        | <b>406</b> | <b>67.0</b> | 407        | 66.8        |  |  |
| 416.gamess    | 2      | <b>746</b> | <b>52.6</b> | 746        | 52.6        | 745        | 52.6        | 2      | <b>746</b> | <b>52.6</b> | 746        | 52.6        | 745        | 52.6        |  |  |
| 433.milc      | 2      | 262        | 70.2        | <b>261</b> | <b>70.2</b> | 261        | 70.2        | 2      | 262        | 70.2        | <b>261</b> | <b>70.2</b> | 261        | 70.2        |  |  |
| 434.zeusmp    | 2      | <b>322</b> | <b>56.4</b> | 323        | 56.4        | 322        | 56.6        | 2      | <b>322</b> | <b>56.4</b> | 323        | 56.4        | 322        | 56.6        |  |  |
| 435.gromacs   | 2      | 341        | 41.8        | 341        | 41.8        | <b>341</b> | <b>41.8</b> | 2      | 341        | 41.8        | 341        | 41.8        | <b>341</b> | <b>41.8</b> |  |  |
| 436.cactusADM | 2      | 451        | 53.0        | 457        | 52.2        | <b>457</b> | <b>52.4</b> | 2      | 451        | 53.0        | 457        | 52.2        | <b>457</b> | <b>52.4</b> |  |  |
| 437.leslie3d  | 2      | <b>448</b> | <b>42.0</b> | 449        | 42.0        | 448        | 42.0        | 2      | <b>448</b> | <b>42.0</b> | 449        | 42.0        | 448        | 42.0        |  |  |
| 444.namd      | 2      | 445        | 36.0        | <b>445</b> | <b>36.0</b> | 445        | 36.0        | 2      | <b>437</b> | <b>36.6</b> | 437        | 36.6        | 437        | 36.6        |  |  |
| 447.dealII    | 2      | 420        | 54.6        | 422        | 54.2        | <b>421</b> | <b>54.4</b> | 2      | 420        | 54.6        | 422        | 54.2        | <b>421</b> | <b>54.4</b> |  |  |
| 450.soplex    | 2      | 396        | 42.2        | <b>396</b> | <b>42.2</b> | 396        | 42.2        | 2      | 401        | 41.6        | 400        | 41.8        | <b>400</b> | <b>41.8</b> |  |  |
| 453.povray    | 2      | 162        | 65.6        | 162        | 65.6        | <b>162</b> | <b>65.6</b> | 2      | 132        | 80.8        | <b>132</b> | <b>80.8</b> | 132        | 80.6        |  |  |
| 454.calculix  | 2      | 276        | 59.8        | <b>276</b> | <b>59.8</b> | 276        | 59.8        | 2      | 276        | 59.8        | <b>276</b> | <b>59.8</b> | 276        | 59.8        |  |  |
| 459.GemsFDTD  | 2      | 546        | 38.8        | 546        | 38.8        | <b>546</b> | <b>38.8</b> | 2      | 546        | 38.8        | 546        | 38.8        | <b>546</b> | <b>38.8</b> |  |  |
| 465.tonto     | 2      | 434        | 45.4        | 436        | 45.2        | <b>436</b> | <b>45.2</b> | 2      | 420        | 46.8        | 419        | 47.0        | <b>419</b> | <b>47.0</b> |  |  |
| 470.lbm       | 2      | 399        | 69.0        | <b>399</b> | <b>69.0</b> | 399        | 69.0        | 2      | 399        | 69.0        | <b>399</b> | <b>69.0</b> | 399        | 69.0        |  |  |
| 481.wrf       | 2      | 336        | 66.6        | 338        | 66.2        | <b>336</b> | <b>66.4</b> | 2      | 336        | 66.6        | 338        | 66.2        | <b>336</b> | <b>66.4</b> |  |  |
| 482.sphinx3   | 2      | 745        | 52.4        | <b>744</b> | <b>52.4</b> | 744        | 52.4        | 2      | 748        | 52.2        | <b>748</b> | <b>52.2</b> | 748        | 52.2        |  |  |

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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Intel DH61WW motherboard (Intel Pentium G630)

SPECfp\_rate\_base2006 = 52.5

CPU2006 license: 13

Test date: Dec-2011

Test sponsor: Intel Corporation

Hardware Availability: Sep-2011

Tested by: Intel Corporation

Software Availability: Sep-2011

## Platform Notes

Sysinfo program C:\SPEC12.1/Docs/sysinfo  
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c  
running on CltE06995A30CB5 Fri Dec 30 02:09:02 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 ~2700 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 : 2700  
Name : Intel(R) Pentium(R) CPU G630 @ 2.70GHz  
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- -Qunroll2 -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 /F10000000000  
-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 questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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