



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Intel Corporation

### SPECfp®\_rate2006 = 77.5

### Intel DQ77MK motherboard (Intel Core i3-3245)

### SPECfp\_rate\_base2006 = 76.5

CPU2006 license: 13

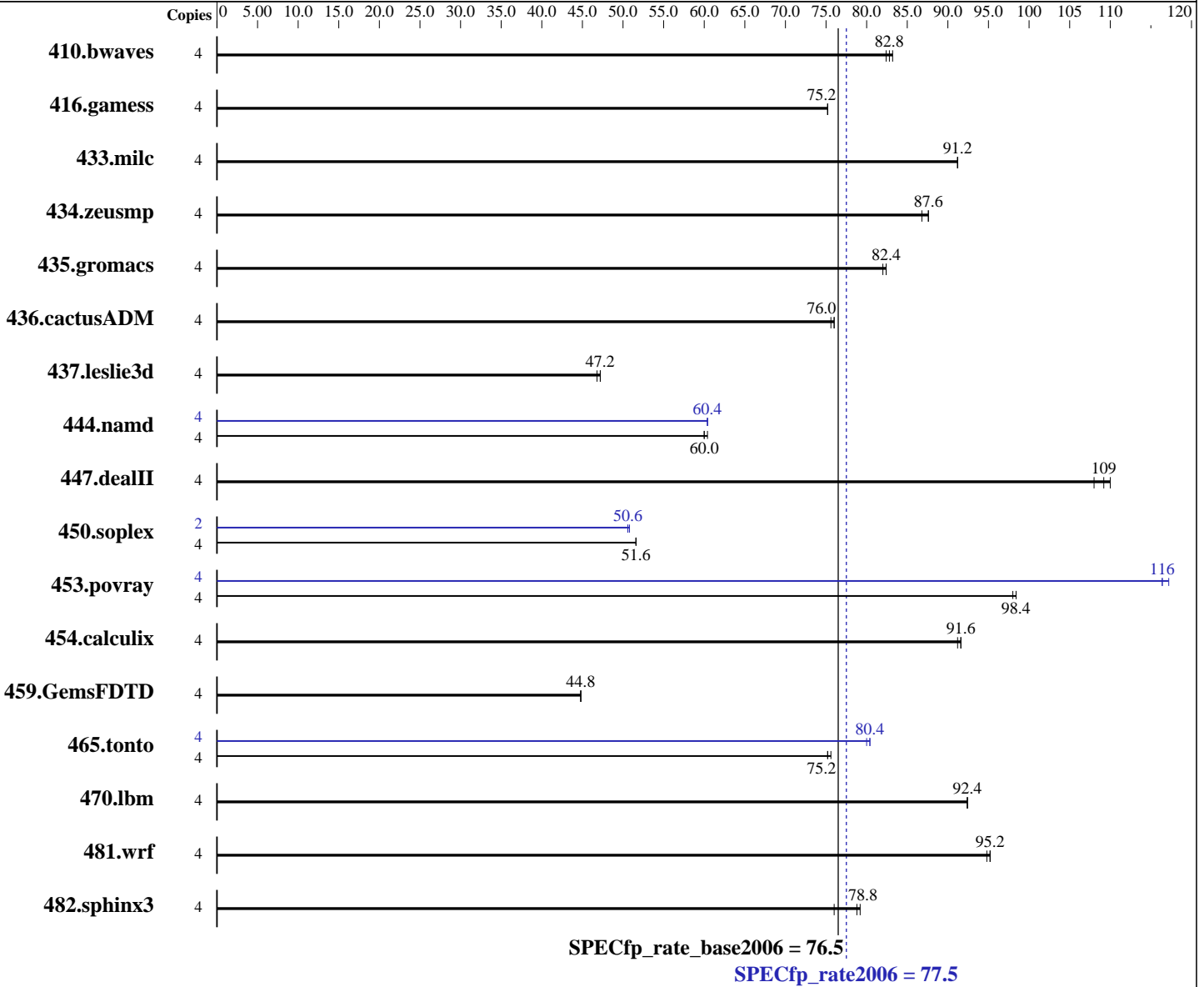
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Dec-2013

Hardware Availability: Jun-2013

Software Availability: Apr-2013



### Hardware

CPU Name: Intel Core i3-3245  
 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

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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Intel Corporation

SPECfp\_rate2006 = **77.5**

Intel DQ77MK motherboard (Intel Core i3-3245)

SPECfp\_rate\_base2006 = **76.5**

CPU2006 license: 13

Test date: Dec-2013

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Apr-2013

L3 Cache: 3 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 4 GB (2 x 2 GB 1Rx8 PC3-12800U-11)  
 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	4	653	83.2	<b>656</b>	<b>82.8</b>	659	82.4	4	653	83.2	<b>656</b>	<b>82.8</b>	659	82.4
416.gamess	4	<b>1042</b>	<b>75.2</b>	1043	75.2	1042	75.2	4	<b>1042</b>	<b>75.2</b>	1043	75.2	1042	75.2
433.milc	4	403	91.2	<b>403</b>	<b>91.2</b>	402	91.2	4	403	91.2	<b>403</b>	<b>91.2</b>	402	91.2
434.zeusmp	4	416	87.6	420	86.8	<b>416</b>	<b>87.6</b>	4	416	87.6	420	86.8	<b>416</b>	<b>87.6</b>
435.gromacs	4	346	82.4	<b>347</b>	<b>82.4</b>	348	82.0	4	346	82.4	<b>347</b>	<b>82.4</b>	348	82.0
436.cactusADM	4	629	76.0	<b>630</b>	<b>76.0</b>	632	75.6	4	629	76.0	<b>630</b>	<b>76.0</b>	632	75.6
437.leslie3d	4	<b>800</b>	<b>47.2</b>	802	46.8	799	47.2	4	<b>800</b>	<b>47.2</b>	802	46.8	799	47.2
444.namd	4	533	60.4	<b>533</b>	<b>60.0</b>	533	60.0	4	531	60.4	<b>532</b>	<b>60.4</b>	532	60.4
447.dealII	4	416	110	424	108	<b>419</b>	<b>109</b>	4	416	110	424	108	<b>419</b>	<b>109</b>
450.soplex	4	<b>646</b>	<b>51.6</b>	645	51.6	646	51.6	2	329	50.8	<b>329</b>	<b>50.6</b>	330	50.6
453.povray	4	217	98.0	216	98.4	<b>216</b>	<b>98.4</b>	4	183	116	182	117	<b>183</b>	<b>116</b>
454.calculix	4	<b>360</b>	<b>91.6</b>	362	91.2	360	91.6	4	<b>360</b>	<b>91.6</b>	362	91.2	360	91.6
459.GemsFDTD	4	943	44.8	946	44.8	<b>943</b>	<b>44.8</b>	4	943	44.8	946	44.8	<b>943</b>	<b>44.8</b>
465.tonto	4	<b>522</b>	<b>75.2</b>	522	75.6	523	75.2	4	490	80.4	<b>491</b>	<b>80.4</b>	492	80.0
470.lbm	4	595	92.4	596	92.4	<b>595</b>	<b>92.4</b>	4	595	92.4	596	92.4	<b>595</b>	<b>92.4</b>
481.wrf	4	<b>470</b>	<b>95.2</b>	471	94.8	469	95.2	4	<b>470</b>	<b>95.2</b>	471	94.8	469	95.2
482.sphinx3	4	<b>988</b>	<b>78.8</b>	1026	76.0	984	79.2	4	<b>988</b>	<b>78.8</b>	1026	76.0	984	79.2

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.



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp\_rate2006 = 77.5

Intel DQ77MK motherboard (Intel Core i3-3245)

SPECfp\_rate\_base2006 = 76.5

CPU2006 license: 13

Test date: Dec-2013

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Apr-2013

## Platform Notes

Sysinfo program C:\SPEC13.1/Docs/sysinfo  
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c  
running on Clt7054D2179849 Sat Dec 7 22:48:28 2013

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 : DQ77MK\_\_  
Processor(s) : 1 Processor(s) Installed.  
 [01]: Intel64 Family 6 Model 58 Stepping 9 GenuineIntel ~3400 Mhz  
BIOS Version : Intel Corp. MKQ7710H.86A.0054.2012.1120.1444, 11/20/2012  
Total Physical Memory: 3,912 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0  
L2CacheSize : 512  
L3CacheSize : 3072  
MaxClockSpeed : 3400  
Name : Intel(R) Core(TM) i3-3245 CPU @ 3.40GHz  
NumberOfCores : 2  
NumberOfLogicalProcessors: 4

(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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp\_rate2006 = 77.5

Intel DQ77MK motherboard (Intel Core i3-3245)

SPECfp\_rate\_base2006 = 76.5

CPU2006 license: 13

Test date: Dec-2013

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Apr-2013

## 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:

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

C++ benchmarks:

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

Fortran benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch  
/F1000000000 -link /FORCE:MULTIPLE

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp\_rate2006 = 77.5

Intel DQ77MK motherboard (Intel Core i3-3245)

SPECfp\_rate\_base2006 = 76.5

CPU2006 license: 13

Test date: Dec-2013

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Apr-2013

## Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
-QxAVX -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: -QxAVX(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: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qauto-ilp32 /F1000000000 shlW64M.lib
-link /FORCE:MULTIPLE
```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

SPECfp\_rate2006 = 77.5

Intel DQ77MK motherboard (Intel Core i3-3245)

SPECfp\_rate\_base2006 = 76.5

CPU2006 license: 13

Test date: Dec-2013

Test sponsor: Intel Corporation

Hardware Availability: Jun-2013

Tested by: Intel Corporation

Software Availability: Apr-2013

## Peak Optimization Flags (Continued)

```
453.povray: -QxAVX(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: -QxAVX(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>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Fri Jul 25 01:00:00 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 15 July 2014.