SPEC® CFP2006 Result

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Intel Corporation

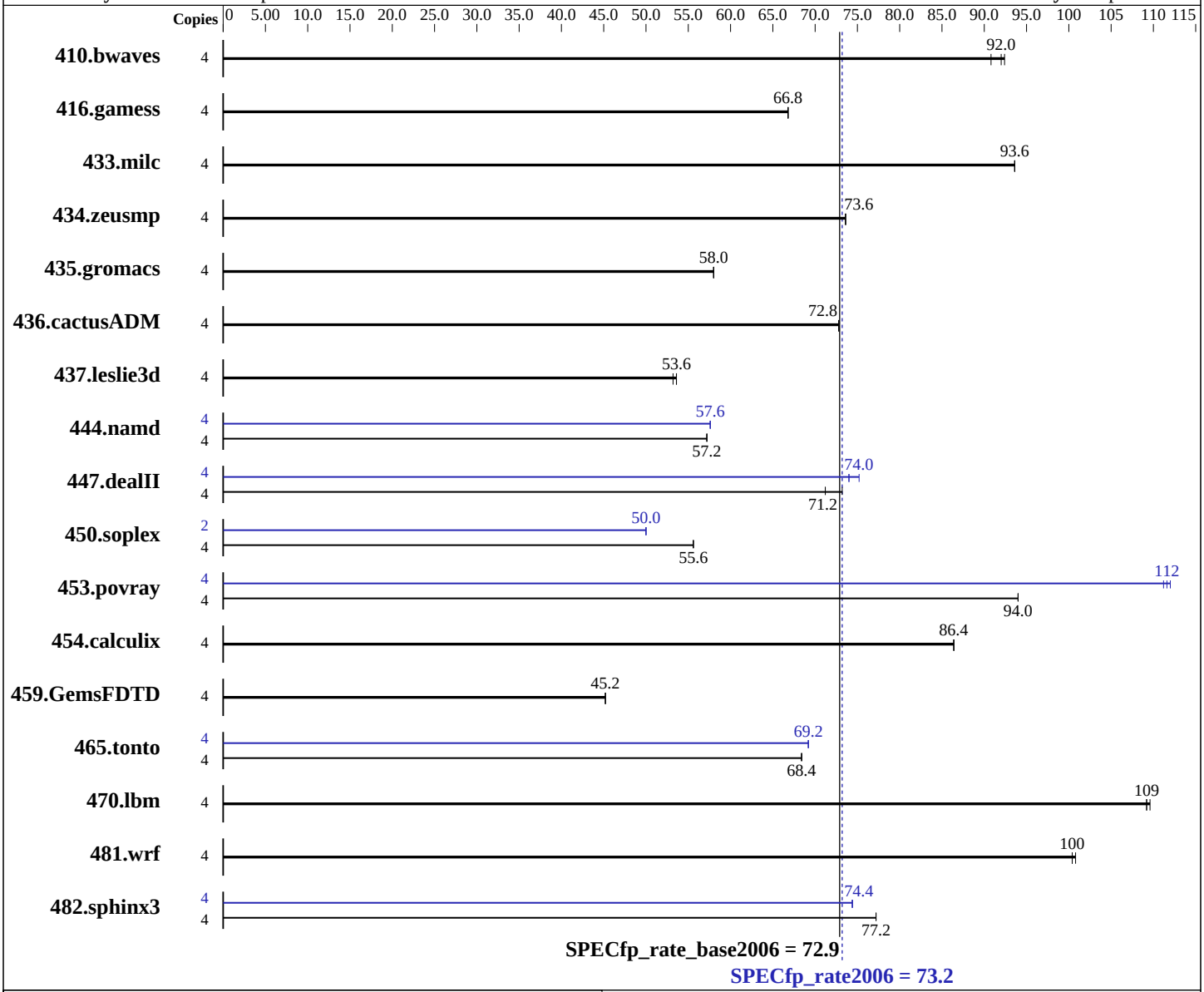
Intel DH67BLB3 Motherboard (Intel Core i3-2120)

SPECfp®_rate2006 = 73.2

SPECfp_rate_base2006 = 72.9

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Jul-2011
Hardware Availability: Mar-2011
Software Availability: Apr-2011



Hardware

CPU Name:	Intel Core i3-2120
CPU Characteristics:	
CPU MHz:	3300
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:	Windows 7 Ultimate (64-bit)
Compiler:	Intel C++ Compiler XE for Intel 64 Version 12.0.3.176 Build 20110309 Intel Visual Fortran Compiler XE for Intel 64 Version 12.0.3.176 Build 20110309 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
Auto Parallel:	No
File System:	NTFS

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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: Seagate 1 TB SATA, 7200 RPM
Other Hardware: None

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	4	598	90.8	589	92.4	**590**	**92.0**	4	598	90.8	589	92.4	**590**	**92.0**
416.gamess	4	1173	66.8	1172	66.8	**1172**	**66.8**	4	1173	66.8	1172	66.8	**1172**	**66.8**
433.milc	4	392	93.6	**393**	**93.6**	393	93.6	4	392	93.6	**393**	**93.6**	393	93.6
434.zeusmp	4	495	73.6	**494**	**73.6**	493	73.6	4	495	73.6	**494**	**73.6**	493	73.6
435.gromacs	4	492	58.0	**492**	**58.0**	491	58.0	4	492	58.0	**492**	**58.0**	491	58.0
436.cactusADM	4	656	72.8	**656**	**72.8**	658	72.8	4	656	72.8	**656**	**72.8**	658	72.8
437.leslie3d	4	703	53.6	**704**	**53.6**	707	53.2	4	703	53.6	**704**	**53.6**	707	53.2
444.namd	4	**561**	**57.2**	561	57.2	561	57.2	4	**556**	**57.6**	556	57.6	556	57.6
447.dealII	4	625	73.2	**642**	**71.2**	643	71.2	4	**618**	**74.0**	610	75.2	618	74.0
450.soplex	4	**601**	**55.6**	601	55.6	601	55.6	2	333	50.0	**333**	**50.0**	333	50.0
453.povray	4	227	94.0	226	94.0	**227**	**94.0**	4	192	111	**191**	**112**	190	112
454.calculix	4	381	86.4	**382**	**86.4**	382	86.4	4	381	86.4	**382**	**86.4**	382	86.4
459.GemsFDTD	4	937	45.2	938	45.2	**938**	**45.2**	4	937	45.2	938	45.2	**938**	**45.2**
465.tonto	4	574	68.4	**574**	**68.4**	575	68.4	4	568	69.2	568	69.2	**568**	**69.2**
470.lbm	4	**502**	**109**	503	109	502	110	4	**502**	**109**	503	109	502	110
481.wrf	4	**444**	**100**	444	101	446	100	4	**444**	**100**	444	101	446	100
482.sphinx3	4	**1010**	**77.2**	1012	77.2	1009	77.2	4	1046	74.4	**1046**	**74.4**	1046	74.4

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

Submit Notes

```
The config file option 'submit' was used.
 The start command with the /affinity switch was used to bind processes to cores
```

General Notes

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

Base Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qstd=c99
```

Continued on next page

Base Compiler Invocation (Continued)

C++ benchmarks:
icl -Qvc9

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

C++ benchmarks:
-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias -Qcxx-features
-Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias /F1000000000
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32 /F1000000000
-link /FORCE:MULTIPLE

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: `-QxAVX -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE`

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: `-QxAVX`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qscalar-rep- -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE`

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

453.povray: `-QxAVX`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE`

Continued on next page

Peak Optimization Flags (Continued)

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-ic12-winx64-revB.20110808.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.20110808.xml

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For other inquiries, please contact webmaster@spec.org.

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