SPEC® CFP2006 Result

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Intel Corporation

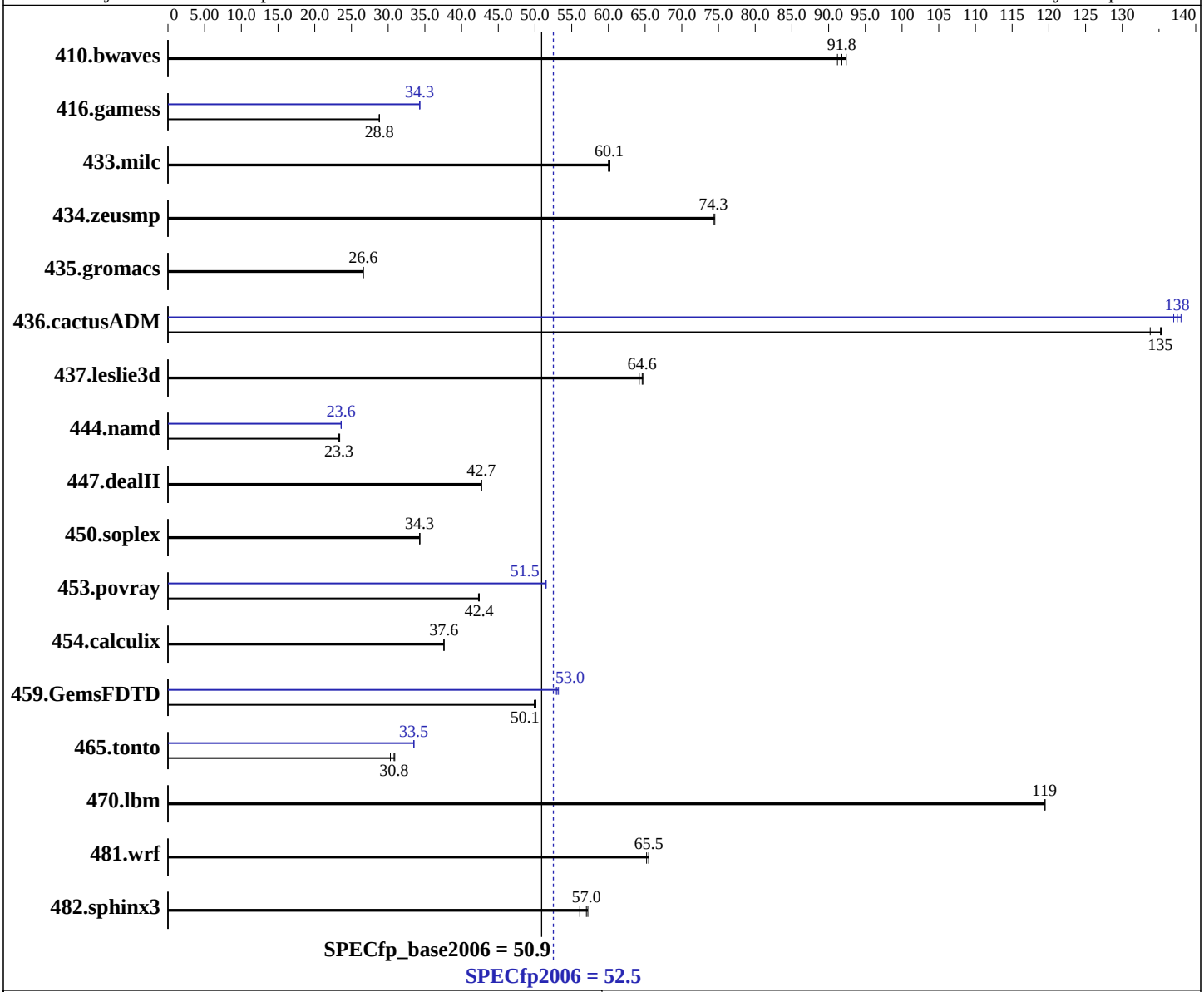
Intel DH67BLB3 Motherboard (Intel Core i5-2400)

SPECfp®2006 = 52.5

SPECfp_base2006 = 50.9

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

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



Hardware

CPU Name:	Intel Core i5-2400
CPU Characteristics:	Intel Turbo Boost Technology up to 3.4 GHz
CPU MHz:	3100
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 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

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Software

Operating System:	Windows 7 Ultimate (64-bit)
Compiler:	Intel C++ Compiler XE for Intel64 Version 12.0.3.163 Build 20110217 Intel Visual Fortran Compiler XE for Intel64 Version 12.0.0.104 Build 20101006 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
Auto Parallel:	Yes
File System:	NTFS

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L3 Cache:	6 MB I+D on chip per chip
Other Cache:	None
Memory:	8 GB (2 x 4 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	149	91.2	**148**	**91.8**	147	92.4	149	91.2	**148**	**91.8**	147	92.4
416.gamess	680	28.8	680	28.8	**680**	**28.8**	570	34.3	**570**	**34.3**	570	34.3
433.milc	153	60.2	**153**	**60.1**	153	60.0	153	60.2	**153**	**60.1**	153	60.0
434.zeusmp	123	74.3	122	74.5	**122**	**74.3**	123	74.3	122	74.5	**122**	**74.3**
435.gromacs	268	26.6	**268**	**26.6**	268	26.6	268	26.6	**268**	**26.6**	268	26.6
436.cactusADM	88.3	135	89.3	134	**88.4**	**135**	86.6	138	**86.9**	**138**	87.2	137
437.leslie3d	145	64.7	**146**	**64.6**	146	64.2	145	64.7	**146**	**64.6**	146	64.2
444.namd	343	23.4	**344**	**23.3**	344	23.3	340	23.6	**340**	**23.6**	340	23.6
447.dealII	268	42.7	268	42.7	**268**	**42.7**	268	42.7	268	42.7	**268**	**42.7**
450.soplex	243	34.3	**244**	**34.3**	244	34.3	243	34.3	**244**	**34.3**	244	34.3
453.povray	126	42.3	126	42.4	**126**	**42.4**	103	51.5	**103**	**51.5**	103	51.5
454.calculix	219	37.6	**220**	**37.6**	220	37.6	219	37.6	**220**	**37.6**	220	37.6
459.GemsFDTD	213	49.9	**212**	**50.1**	212	50.1	201	52.9	199	53.2	**200**	**53.0**
465.tonto	318	30.9	325	30.3	**319**	**30.8**	293	33.5	**293**	**33.5**	293	33.5
470.lbm	115	120	**115**	**119**	115	119	115	120	**115**	**119**	115	119
481.wrf	171	65.2	171	65.5	**171**	**65.5**	171	65.2	171	65.5	**171**	**65.5**
482.sphinx3	341	57.2	347	56.1	**342**	**57.0**	341	57.2	347	56.1	**342**	**57.0**

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

General Notes

```
Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter
```

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:
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

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

Fortran benchmarks:
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
/F1000000000

Benchmarks using both Fortran and C:
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

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: `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: `basepeak = yes`

453.povray: `-QxAVX`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias -Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE`

Fortran benchmarks:

410.bwaves: `basepeak = yes`

416.gamess: `-QxAVX`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000`

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Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qopt-prefetch -Qparallel /F1000000000

465.tonto: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 -Qauto -Qinline-calloc /F1000000000

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel -Qunroll2 -Qauto-ilp32 /F1000000000

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.html
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.xml
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.xml

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

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