SPEC® CFP2006 Result

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Intel Corporation

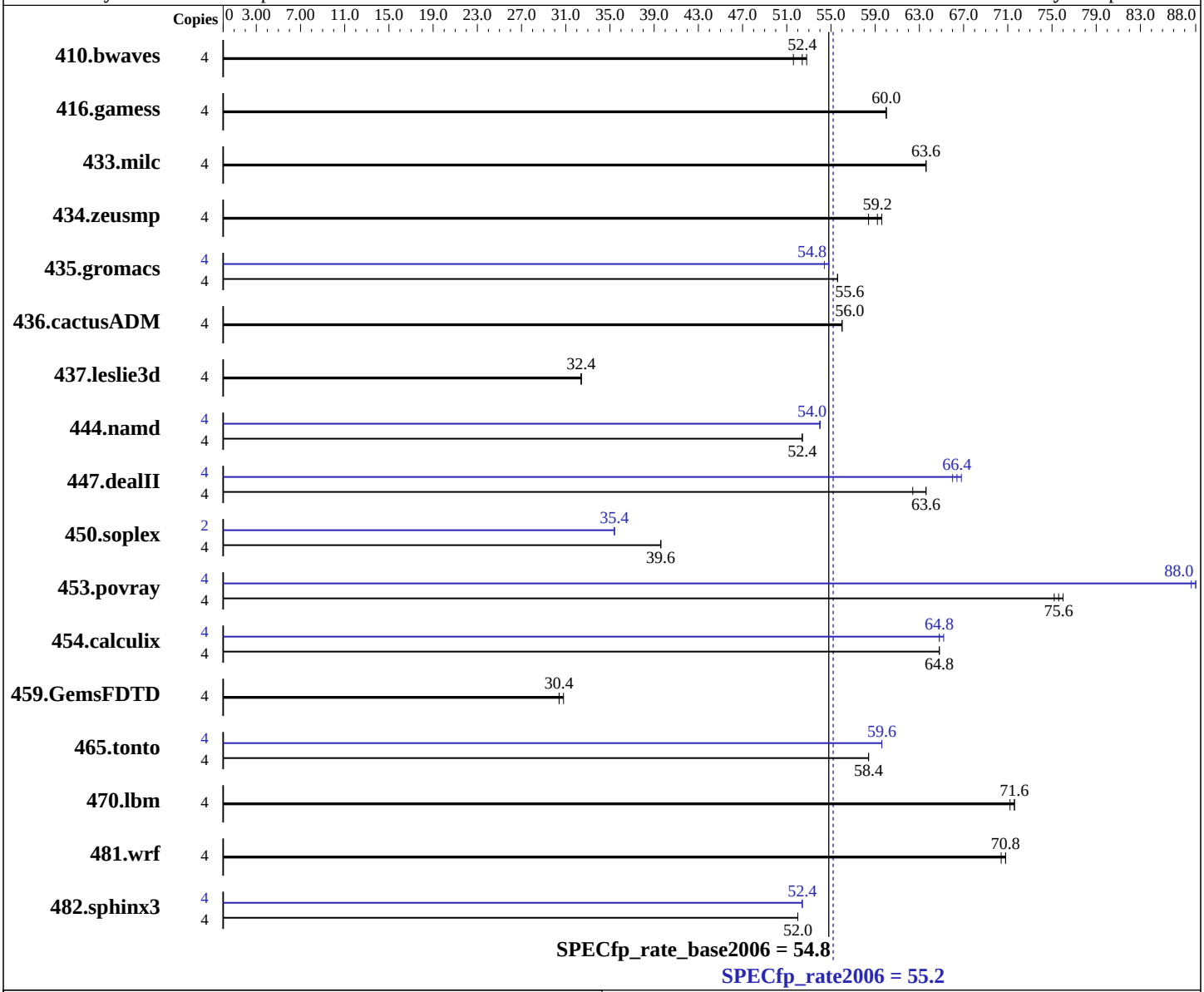
Intel DH57JG Motherboard (Intel Core i5-670)

SPECfp®_rate2006 = 55.2

SPECfp_rate_base2006 = 54.8

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

Test date: Jul-2011
Hardware Availability: Jan-2010
Software Availability: Apr-2011



Hardware

CPU Name:	Intel Core i5-670
CPU Characteristics:	Intel Turbo Boost Technology up to 3.73 GHz
CPU MHz:	3466
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:	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: 4 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	1050	51.6	1032	52.8	**1038**	**52.4**	4	1050	51.6	1032	52.8	**1038**	**52.4**
416.gamess	4	1307	60.0	**1307**	**60.0**	1306	60.0	4	1307	60.0	**1307**	**60.0**	1306	60.0
433.milc	4	**577**	**63.6**	577	63.6	577	63.6	4	**577**	**63.6**	577	63.6	577	63.6
434.zeusmp	4	610	59.6	**616**	**59.2**	625	58.4	4	610	59.6	**616**	**59.2**	625	58.4
435.gromacs	4	514	55.6	**513**	**55.6**	513	55.6	4	**520**	**54.8**	520	54.8	525	54.4
436.cactusADM	4	855	56.0	854	56.0	**855**	**56.0**	4	855	56.0	854	56.0	**855**	**56.0**
437.leslie3d	4	1162	32.4	1163	32.4	**1162**	**32.4**	4	1162	32.4	1163	32.4	**1162**	**32.4**
444.namd	4	612	52.4	611	52.4	**611**	**52.4**	4	594	54.0	**593**	**54.0**	593	54.0
447.dealII	4	732	62.4	720	63.6	**722**	**63.6**	4	694	66.0	**690**	**66.4**	685	66.8
450.soplex	4	838	39.6	838	39.6	**838**	**39.6**	2	472	35.4	**472**	**35.4**	472	35.4
453.povray	4	281	76.0	283	75.2	**282**	**75.6**	4	243	87.6	241	88.0	**242**	**88.0**
454.calculix	4	508	64.8	509	64.8	**509**	**64.8**	4	**508**	**64.8**	510	64.8	508	65.2
459.GemsFDTD	4	**1388**	**30.4**	1384	30.8	1389	30.4	4	**1388**	**30.4**	1384	30.8	1389	30.4
465.tonto	4	674	58.4	672	58.4	**672**	**58.4**	4	660	59.6	**660**	**59.6**	660	59.6
470.lbm	4	770	71.2	770	71.6	**770**	**71.6**	4	770	71.2	770	71.6	**770**	**71.6**
481.wrf	4	632	70.8	634	70.4	**632**	**70.8**	4	632	70.8	634	70.4	**632**	**70.8**
482.sphinx3	4	1495	52.0	1497	52.0	**1496**	**52.0**	4	1493	52.4	1490	52.4	**1493**	**52.4**

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

C++ benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qcxx-features
-Qauto-ilp32 /F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias /F1000000000
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-QxSSE4.2 -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: `-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: `-QxSSE4.2`(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: `-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`

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: -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: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

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-revC.html
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revC.xml
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.20110719.xml

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

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