SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

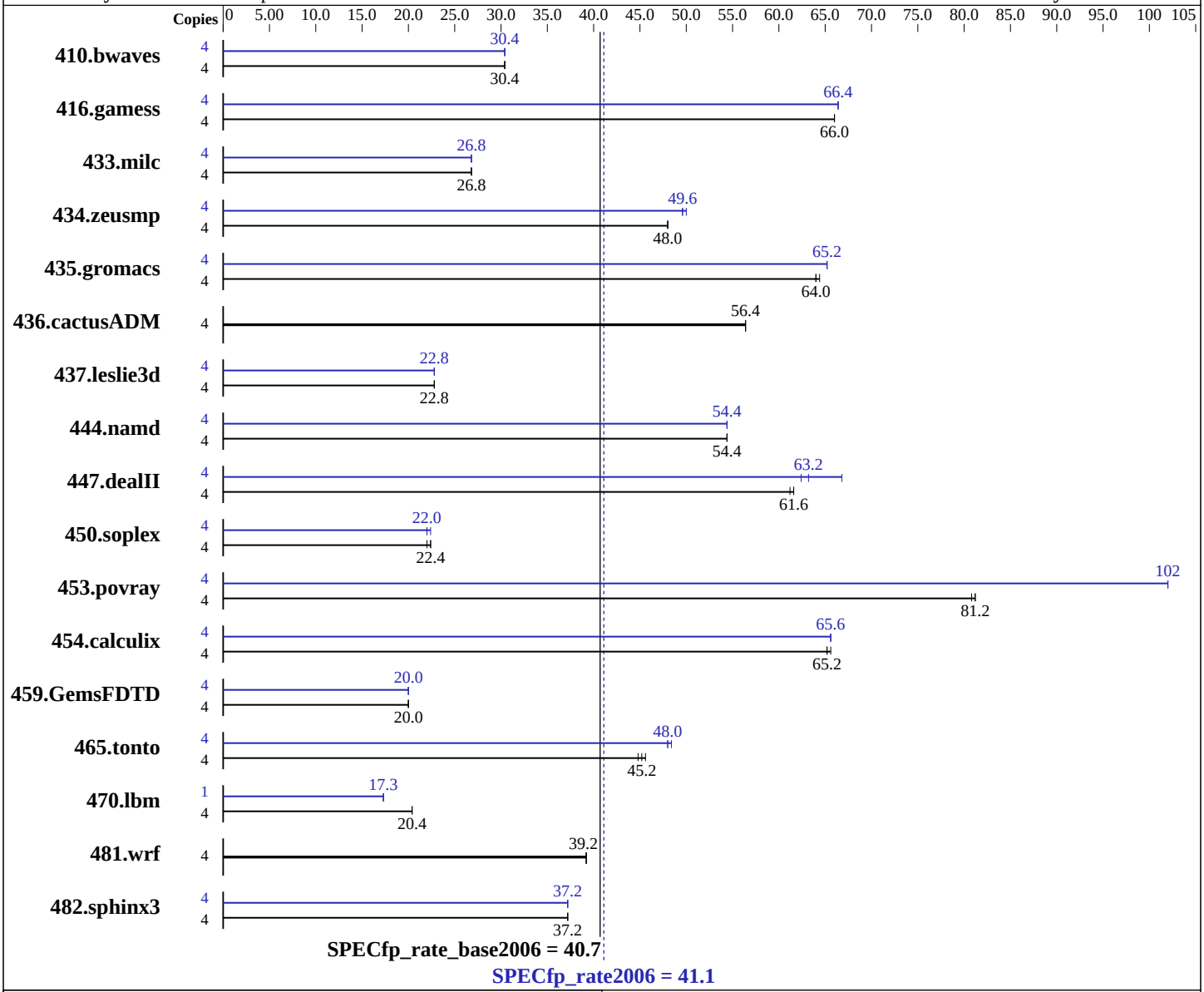
Intel DQ45CB motherboard (Intel Core 2 Quad Q8400)

SPECfp®_rate2006 = 41.1

SPECfp_rate_base2006 = 40.7

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

Test date: Apr-2009
Hardware Availability: May-2009
Software Availability: Nov-2008



Hardware

CPU Name:	Intel Core 2 Quad Q8400
CPU Characteristics:	
CPU MHz:	2666
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:	4 MB I+D on chip per chip, 2 MB shared / 2 cores

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Software

Operating System:	Windows Vista Ultimate w/ SP1 (64-bit)
Compiler:	Intel C++ Compiler Professional 11.0 for IA32 Build 20080930 Package ID: w_cproc_p_11.0.054 Intel Visual Fortran Compiler Professional 11.0 for IA32 Build 20080930 Package ID: w_cprof_p_11.0.054 Microsoft Visual Studio 2008 (for libraries)
Auto Parallel:	No
File System:	NTFS

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L3 Cache: None
Other Cache: None
Memory: 4 GB (4x1GB DDR2-800 CL5)
Disk Subsystem: Seagate 320 GB SATA, 7200RPM
Other Hardware: None

System State: Default
Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: SmartHeap Library Version 8.1 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	1792	30.4	**1792**	**30.4**	1791	30.4	4	1792	30.4	1790	30.4	**1790**	**30.4**
416.gamess	4	1187	66.0	**1187**	**66.0**	1188	66.0	4	1181	66.4	**1182**	**66.4**	1182	66.4
433.milc	4	1370	26.8	**1370**	**26.8**	1370	26.8	4	**1367**	**26.8**	1366	26.8	1367	26.8
434.zeusmp	4	761	48.0	**759**	**48.0**	756	48.0	4	**732**	**49.6**	727	50.0	735	49.6
435.gromacs	4	**446**	**64.0**	444	64.4	446	64.0	4	**438**	**65.2**	439	65.2	438	65.2
436.cactusADM	4	848	56.4	**848**	**56.4**	849	56.4	4	848	56.4	**848**	**56.4**	849	56.4
437.leslie3d	4	1651	22.8	1648	22.8	**1650**	**22.8**	4	**1635**	**22.8**	1635	22.8	1638	22.8
444.namd	4	588	54.4	588	54.4	**588**	**54.4**	4	589	54.4	588	54.4	**588**	**54.4**
447.dealII	4	744	61.6	746	61.2	**744**	**61.6**	4	**722**	**63.2**	687	66.8	735	62.4
450.soplex	4	1501	22.4	**1502**	**22.4**	1510	22.0	4	1511	22.0	**1507**	**22.0**	1502	22.4
453.povray	4	263	80.8	**263**	**81.2**	262	81.2	4	209	102	209	102	**209**	**102**
454.calculix	4	504	65.6	**505**	**65.2**	506	65.2	4	**503**	**65.6**	504	65.6	503	65.6
459.GemsFDTD	4	2124	20.0	2122	20.0	**2122**	**20.0**	4	**2135**	**20.0**	2138	20.0	2134	20.0
465.tonto	4	880	44.8	865	45.6	**870**	**45.2**	4	816	48.4	**817**	**48.0**	819	48.0
470.lbm	4	2695	20.4	2695	20.4	**2695**	**20.4**	1	793	17.3	793	17.3	**793**	**17.3**
481.wrf	4	1135	39.2	1145	39.2	**1141**	**39.2**	4	1135	39.2	1145	39.2	**1141**	**39.2**
482.sphinx3	4	2094	37.2	**2094**	**37.2**	2095	37.2	4	2085	37.2	2088	37.2	**2086**	**37.2**

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.
```

General Notes

```
Tested systems can be used with Shin-G ATX case,
Antec Truepower Trio power supply TP3-650
Binaries were built on Windows Vista Ultimate (32-bit)
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qc99
```

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Base Compiler Invocation (Continued)

C++ benchmarks:
icl -Qvc9

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc9 -Qc99 ifort

Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Base Optimization Flags

C benchmarks:
-QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

C++ benchmarks:
-QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
/F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

Benchmarks using both Fortran and C:
-QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

Peak Compiler Invocation

C benchmarks:
icl -Qvc9 -Qc99

C++ benchmarks:
icl -Qvc9

Fortran benchmarks:
ifort

Continued on next page

Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:
icl -Qvc9 -Qc99 ifort

Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Peak Optimization Flags

C benchmarks:

433.milc: -QxSSSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Oa /F1000000000

470.lbm: -QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

482.sphinx3: -QxSSSE3 -Qipo -O3 -Qprec-div- -Qunroll2 /F1000000000

C++ benchmarks:

444.namd: -QxSSSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Oa /F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

447.dealII: -QxSSSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qscalar-rep- /F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

450.soplex: -QxSSSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- /F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

453.povray: -QxSSSE3(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias /F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

410.bwaves: `-QxSSSE3 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000`

416.gamess: `-QxSSSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000`

434.zeusmp: `-QxSSSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- /F1000000000`

437.leslie3d: `-QxSSSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000`

459.GemsFDTD: `-QxSSSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qopt-prefetch /F1000000000`

465.tonto: `-QxSSSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll4 -Qauto /F1000000000`

Benchmarks using both Fortran and C:

435.gromacs: `-QxSSSE3`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000`

436.cactusADM: `basepeak = yes`

454.calculix: `-QxSSSE3 -Qipo -O3 -Qprec-div- /F1000000000`

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-ic11.0-win32-revA.20090710.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.20090710.xml`

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