SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

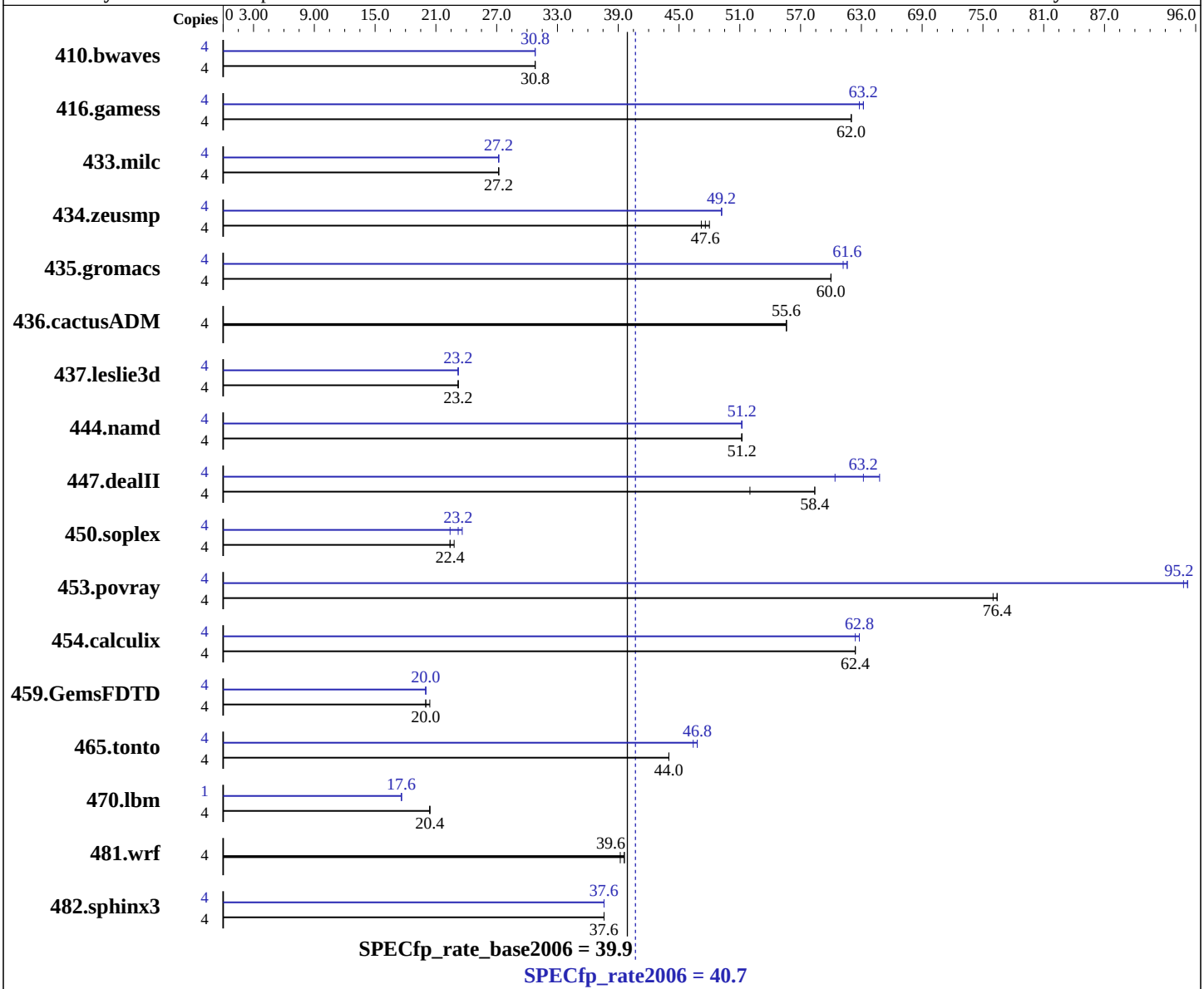
Intel DQ45CB motherboard (Intel Core 2 Quad Q8300)

SPECfp®_rate2006 = 40.7

SPECfp_rate_base2006 = 39.9

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 Q8300
CPU Characteristics:	
CPU MHz:	2500
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	1763	30.8	**1764**	**30.8**	1764	30.8	4	**1762**	**30.8**	1763	30.8	1762	30.8
416.gamess	4	**1262**	**62.0**	1262	62.0	1262	62.0	4	1242	63.2	**1243**	**63.2**	1245	62.8
433.milc	4	1355	27.2	**1356**	**27.2**	1356	27.2	4	1351	27.2	**1351**	**27.2**	1353	27.2
434.zeusmp	4	761	48.0	**765**	**47.6**	771	47.2	4	739	49.2	740	49.2	**740**	**49.2**
435.gromacs	4	**475**	**60.0**	475	60.0	477	60.0	4	466	61.2	465	61.6	**465**	**61.6**
436.cactusADM	4	861	55.6	**861**	**55.6**	862	55.6	4	861	55.6	**861**	**55.6**	862	55.6
437.leslie3d	4	1632	23.2	1631	23.2	**1632**	**23.2**	4	**1618**	**23.2**	1619	23.2	1618	23.2
444.namd	4	**627**	**51.2**	626	51.2	627	51.2	4	628	51.2	627	51.2	**627**	**51.2**
447.dealII	4	877	52.0	**784**	**58.4**	782	58.4	4	759	60.4	**725**	**63.2**	706	64.8
450.soplex	4	1468	22.8	1489	22.4	**1481**	**22.4**	4	**1450**	**23.2**	1418	23.6	1482	22.4
453.povray	4	280	76.0	**279**	**76.4**	279	76.4	4	223	95.2	**223**	**95.2**	225	94.8
454.calculix	4	528	62.4	530	62.4	**530**	**62.4**	4	527	62.8	**527**	**62.8**	527	62.4
459.GemsFDTD	4	**2103**	**20.0**	2103	20.0	2100	20.4	4	2115	20.0	2118	20.0	**2117**	**20.0**
465.tonto	4	**894**	**44.0**	893	44.0	896	44.0	4	845	46.4	840	46.8	**840**	**46.8**
470.lbm	4	2675	20.4	2677	20.4	**2676**	**20.4**	1	780	17.6	**780**	**17.6**	780	17.6
481.wrf	4	1131	39.6	1134	39.2	**1134**	**39.6**	4	1131	39.6	1134	39.2	**1134**	**39.6**
482.sphinx3	4	2079	37.6	2076	37.6	**2078**	**37.6**	4	2070	37.6	**2068**	**37.6**	2065	37.6

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:
-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

C++ benchmarks:
-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features
/F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

Benchmarks using both Fortran and C:
-QxSSE4.1 -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: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Oa /F1000000000

470.lbm: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

482.sphinx3: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qunroll2 /F1000000000

C++ benchmarks:

444.namd: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Oa /F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

447.dealII: -QxSSE4.1(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: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- /F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

453.povray: -QxSSE4.1(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: `-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000`

416.gamess: `-QxSSE4.1`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000`

434.zeusmp: `-QxSSE4.1`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- /F1000000000`

437.leslie3d: `-QxSSE4.1`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000`

459.GemsFDTD: `-QxSSE4.1`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qopt-prefetch /F1000000000`

465.tonto: `-QxSSE4.1`(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: `-QxSSE4.1`(pass 2) `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000`

436.cactusADM: `basepeak = yes`

454.calculix: `-QxSSE4.1 -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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Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 01:20:21 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 23 June 2009.