



SPEC[®] CFP2006 Result

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Intel Corporation

SPECfp[®]_rate2006 = 41.1

Intel DQ45CB motherboard (Intel Core 2 Quad Q8400)

SPECfp_rate_base2006 = 40.7

CPU2006 license: 13

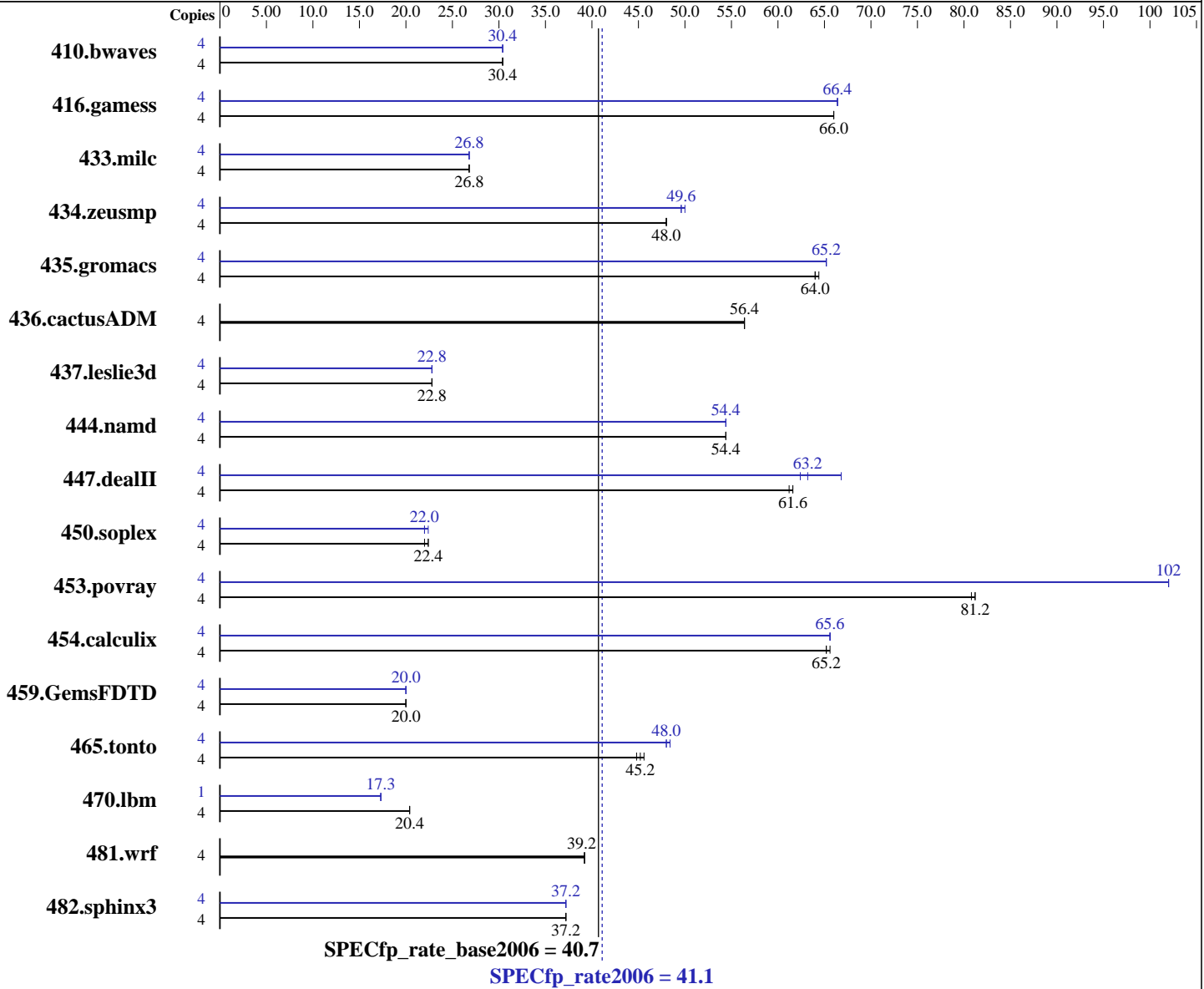
Test sponsor: Intel Corporation

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: 2666
 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	<u>1792</u>	<u>30.4</u>	1791	30.4	4	1792	30.4	1790	30.4	<u>1790</u>	<u>30.4</u>
416.gamess	4	1187	66.0	<u>1187</u>	<u>66.0</u>	1188	66.0	4	1181	66.4	<u>1182</u>	<u>66.4</u>	1182	66.4
433.milc	4	1370	26.8	<u>1370</u>	<u>26.8</u>	1370	26.8	4	<u>1367</u>	<u>26.8</u>	1366	26.8	1367	26.8
434.zeusmp	4	761	48.0	<u>759</u>	<u>48.0</u>	756	48.0	4	<u>732</u>	<u>49.6</u>	727	50.0	735	49.6
435.gromacs	4	<u>446</u>	<u>64.0</u>	444	64.4	446	64.0	4	<u>438</u>	<u>65.2</u>	439	65.2	438	65.2
436.cactusADM	4	848	56.4	<u>848</u>	<u>56.4</u>	849	56.4	4	848	56.4	<u>848</u>	<u>56.4</u>	849	56.4
437.leslie3d	4	1651	22.8	1648	22.8	<u>1650</u>	<u>22.8</u>	4	<u>1635</u>	<u>22.8</u>	1635	22.8	1638	22.8
444.namd	4	588	54.4	588	54.4	<u>588</u>	<u>54.4</u>	4	589	54.4	588	54.4	<u>588</u>	<u>54.4</u>
447.dealII	4	744	61.6	746	61.2	<u>744</u>	<u>61.6</u>	4	<u>722</u>	<u>63.2</u>	687	66.8	735	62.4
450.soplex	4	1501	22.4	<u>1502</u>	<u>22.4</u>	1510	22.0	4	1511	22.0	<u>1507</u>	<u>22.0</u>	1502	22.4
453.povray	4	263	80.8	<u>263</u>	<u>81.2</u>	262	81.2	4	209	102	209	102	<u>209</u>	<u>102</u>
454.calculix	4	504	65.6	<u>505</u>	<u>65.2</u>	506	65.2	4	<u>503</u>	<u>65.6</u>	504	65.6	503	65.6
459.GemsFDTD	4	2124	20.0	2122	20.0	<u>2122</u>	<u>20.0</u>	4	<u>2135</u>	<u>20.0</u>	2138	20.0	2134	20.0
465.tonto	4	880	44.8	865	45.6	<u>870</u>	<u>45.2</u>	4	816	48.4	<u>817</u>	<u>48.0</u>	819	48.0
470.lbm	4	2695	20.4	2695	20.4	<u>2695</u>	<u>20.4</u>	1	793	17.3	793	17.3	<u>793</u>	<u>17.3</u>
481.wrf	4	1135	39.2	1145	39.2	<u>1141</u>	<u>39.2</u>	4	1135	39.2	1145	39.2	<u>1141</u>	<u>39.2</u>
482.sphinx3	4	2094	37.2	<u>2094</u>	<u>37.2</u>	2095	37.2	4	2085	37.2	2088	37.2	<u>2086</u>	<u>37.2</u>

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

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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:

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

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