



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®_rate2006 = 57.5

Intel DH67BLB3 Motherboard (Intel Pentium G840)

SPECfp_rate_base2006 = 56.7

CPU2006 license: 13

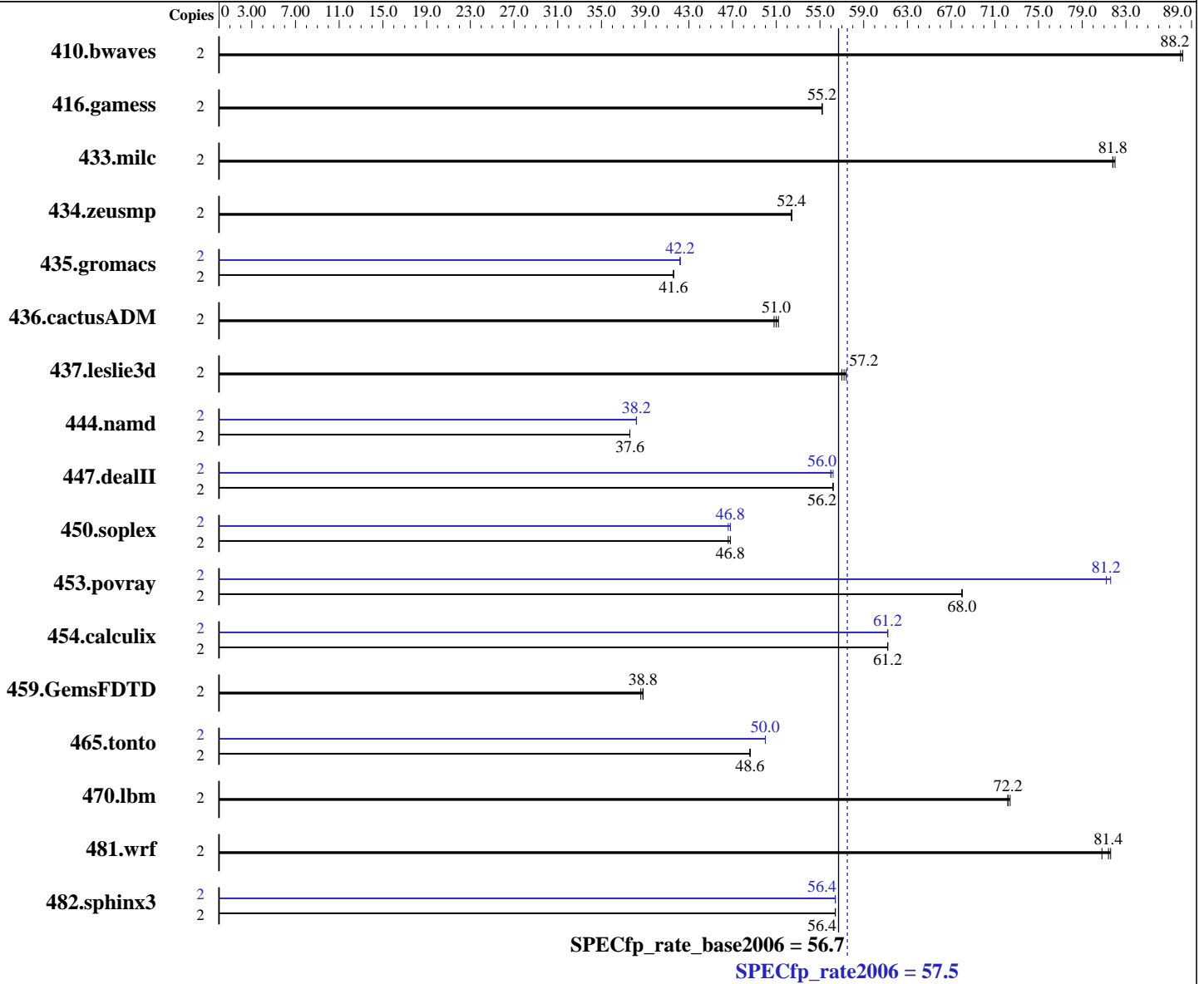
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jul-2011

Hardware Availability: May-2011

Software Availability: Apr-2011



Hardware

CPU Name: Intel Pentium G840
 CPU Characteristics:
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 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 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: 3 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	2	309	88.0	<u>309</u>	<u>88.2</u>	308	88.2	2	309	88.0	<u>309</u>	<u>88.2</u>	308	88.2
416.gamess	2	710	55.2	709	55.2	<u>710</u>	<u>55.2</u>	2	710	55.2	709	55.2	<u>710</u>	<u>55.2</u>
433.milc	2	225	81.8	224	82.0	<u>224</u>	<u>81.8</u>	2	225	81.8	224	82.0	<u>224</u>	<u>81.8</u>
434.zeusmp	2	348	52.4	348	52.4	<u>348</u>	<u>52.4</u>	2	348	52.4	348	52.4	<u>348</u>	<u>52.4</u>
435.gromacs	2	343	41.6	343	41.6	<u>343</u>	<u>41.6</u>	2	338	42.2	338	42.2	<u>338</u>	<u>42.2</u>
436.cactusADM	2	467	51.2	471	50.8	<u>469</u>	<u>51.0</u>	2	467	51.2	471	50.8	<u>469</u>	<u>51.0</u>
437.leslie3d	2	<u>329</u>	<u>57.2</u>	330	57.0	328	57.4	2	<u>329</u>	<u>57.2</u>	330	57.0	328	57.4
444.namd	2	427	37.6	427	37.6	<u>427</u>	<u>37.6</u>	2	421	38.2	<u>421</u>	<u>38.2</u>	421	38.2
447.dealII	2	408	56.2	407	56.2	<u>407</u>	<u>56.2</u>	2	<u>408</u>	<u>56.0</u>	408	56.2	409	56.0
450.soplex	2	358	46.6	<u>357</u>	<u>46.8</u>	356	46.8	2	357	46.6	356	46.8	<u>356</u>	<u>46.8</u>
453.povray	2	<u>157</u>	<u>68.0</u>	156	68.0	157	68.0	2	<u>131</u>	<u>81.2</u>	130	81.6	131	81.2
454.calculix	2	<u>269</u>	<u>61.2</u>	269	61.2	269	61.2	2	<u>270</u>	<u>61.2</u>	270	61.2	270	61.2
459.GemsFDTD	2	548	38.8	549	38.6	<u>548</u>	<u>38.8</u>	2	548	38.8	549	38.6	<u>548</u>	<u>38.8</u>
465.tonto	2	405	48.6	405	48.6	<u>405</u>	<u>48.6</u>	2	394	50.0	<u>394</u>	<u>50.0</u>	393	50.0
470.lbm	2	381	72.2	<u>380</u>	<u>72.2</u>	380	72.4	2	381	72.2	<u>380</u>	<u>72.2</u>	380	72.4
481.wrf	2	276	80.8	274	81.6	<u>274</u>	<u>81.4</u>	2	276	80.8	274	81.6	<u>274</u>	<u>81.4</u>
482.sphinx3	2	692	56.4	690	56.4	<u>691</u>	<u>56.4</u>	2	<u>691</u>	<u>56.4</u>	692	56.4	691	56.4

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

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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



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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

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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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