



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Intel Corporation

Intel DX58SO2 Motherboard (Intel Core i7-975 Extreme Edition)

SPECfp®2006 = 46.6

SPECfp_base2006 = 45.3

CPU2006 license: 13

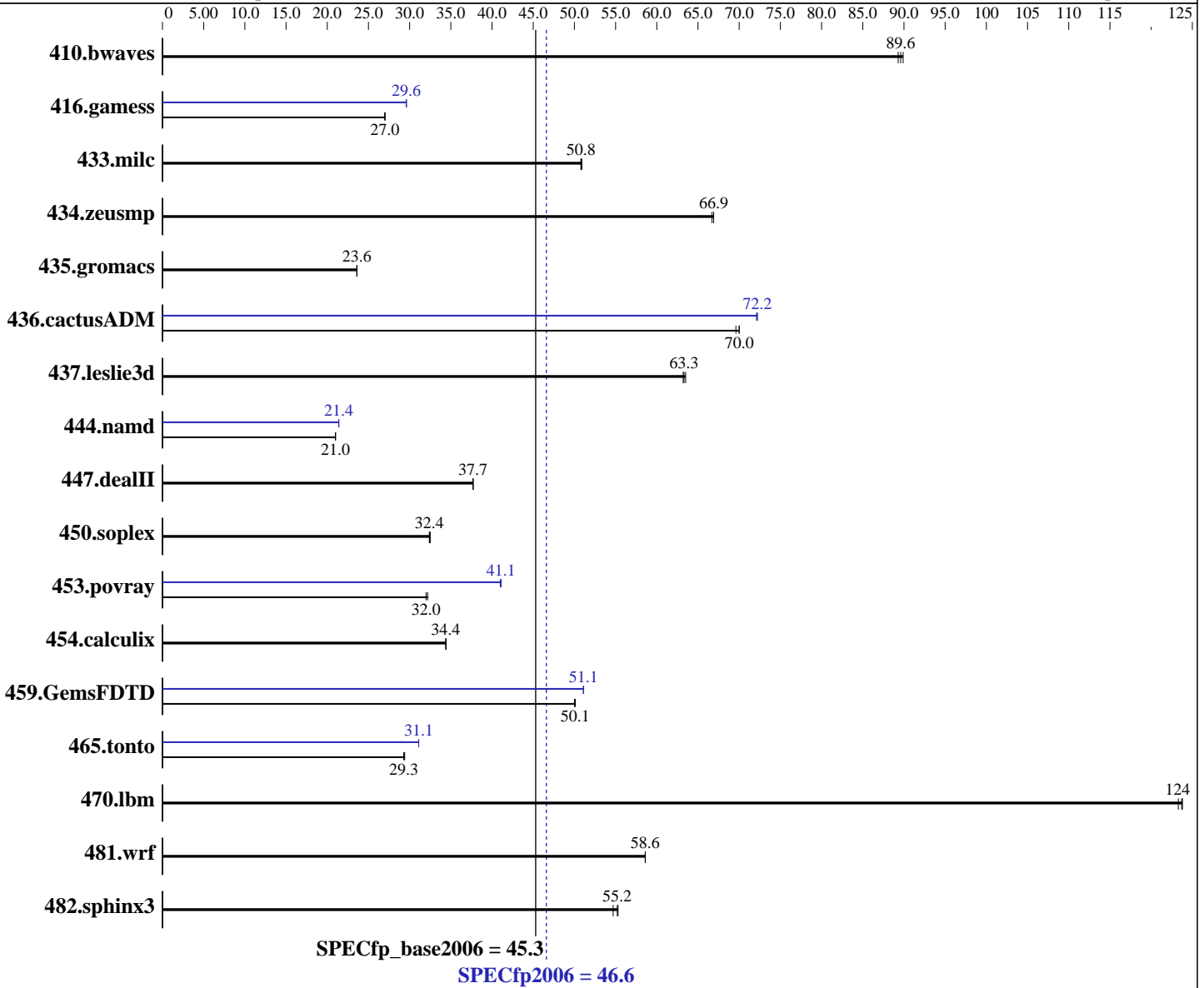
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jul-2011

Hardware Availability: Mar-2011

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i7-975 Extreme Edition
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 3333
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 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

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Software

Operating System: Windows 7 Ultimate (64-bit)
 Compiler: Intel C++ Compiler XE for Intel64 Version 12.0.3.163 Build 20110217
 Intel Visual Fortran Compiler XE for Intel64 Version 12.0.3.163 Build 20110217
 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
 Auto Parallel: Yes
 File System: NTFS

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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 12 GB (3 x 4 GB 2Rx8 PC3-8600U-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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	151	89.9	<u>152</u>	<u>89.6</u>	152	89.3	151	89.9	<u>152</u>	<u>89.6</u>	152	89.3
416.gamess	726	27.0	725	27.0	<u>725</u>	<u>27.0</u>	662	29.6	662	29.6	<u>662</u>	<u>29.6</u>
433.milc	<u>181</u>	<u>50.8</u>	180	50.9	181	50.8	<u>181</u>	<u>50.8</u>	180	50.9	181	50.8
434.zeusmp	136	66.9	137	66.7	<u>136</u>	<u>66.9</u>	136	66.9	137	66.7	<u>136</u>	<u>66.9</u>
435.gromacs	302	23.6	<u>302</u>	<u>23.6</u>	302	23.6	302	23.6	<u>302</u>	<u>23.6</u>	302	23.6
436.cactusADM	172	69.6	<u>171</u>	<u>70.0</u>	171	70.0	166	72.2	166	72.1	<u>166</u>	<u>72.2</u>
437.leslie3d	<u>148</u>	<u>63.3</u>	149	63.2	148	63.5	<u>148</u>	<u>63.3</u>	149	63.2	148	63.5
444.namd	382	21.0	<u>382</u>	<u>21.0</u>	382	21.0	376	21.4	376	21.4	<u>376</u>	<u>21.4</u>
447.dealII	304	37.7	<u>304</u>	<u>37.7</u>	304	37.7	304	37.7	<u>304</u>	<u>37.7</u>	304	37.7
450.soplex	256	32.5	258	32.4	<u>258</u>	<u>32.4</u>	256	32.5	258	32.4	<u>258</u>	<u>32.4</u>
453.povray	<u>166</u>	<u>32.0</u>	166	32.0	165	32.2	130	41.1	130	41.0	<u>130</u>	<u>41.1</u>
454.calculix	240	34.4	<u>240</u>	<u>34.4</u>	240	34.4	240	34.4	<u>240</u>	<u>34.4</u>	240	34.4
459.GemsFDTD	212	50.1	<u>212</u>	<u>50.1</u>	212	50.0	<u>208</u>	<u>51.1</u>	208	51.1	208	51.1
465.tonto	335	29.4	336	29.3	<u>335</u>	<u>29.3</u>	316	31.1	317	31.1	<u>316</u>	<u>31.1</u>
470.lbm	111	123	<u>111</u>	<u>124</u>	111	124	111	123	<u>111</u>	<u>124</u>	111	124
481.wrf	191	58.6	<u>191</u>	<u>58.6</u>	191	58.6	191	58.6	<u>191</u>	<u>58.6</u>	191	58.6
482.sphinx3	357	54.7	353	55.3	<u>353</u>	<u>55.2</u>	357	54.7	353	55.3	<u>353</u>	<u>55.2</u>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

General Notes

Tested systems can be used with Shin-G ATX case,
PC Power and Cooling 1200W power supply
OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter
System was configured with an ATI HD5770 discrete graphics card

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- -Qparallel -Qansi-alias
-Qopt-prefetch -Qauto-ilp32 /F1000000000

C++ benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch -Qcxx-features -Qauto-ilp32 /F1000000000 shlw64M.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch /F1000000000

Benchmarks using both Fortran and C:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias
-Qopt-prefetch -Qauto-ilp32 /F1000000000



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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: basepeak = yes

C++ benchmarks:

444.namd: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000
sh1W64M.lib -link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qansi-alias -Qauto-ilp32
/F1000000000 sh1W64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

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

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Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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

465.tonto: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qauto -Qinline-calloc
/F1000000000

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel -Qunroll2
-Qauto-ilp32 /F1000000000

454.calculix: basepeak = yes

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-ic12-winx64-revB.20110808.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.20110808.xml>

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

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