



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®2006 = 42.0

Intel DP55KG Motherboard (Intel Core i7-860)

SPECfp_base2006 = 40.3

CPU2006 license: 13

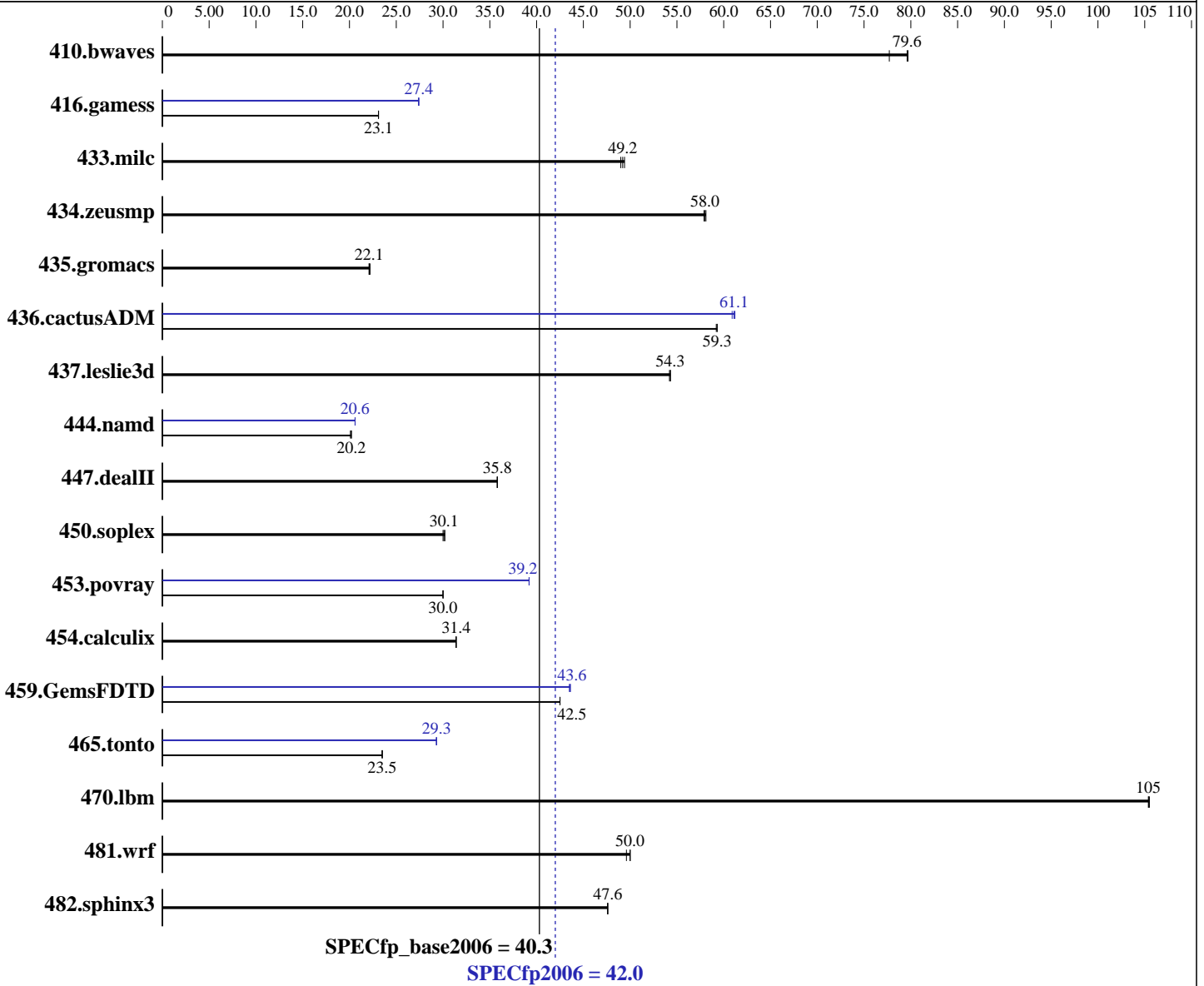
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jul-2011

Hardware Availability: Mar-2011

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i7-860
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 2800
 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: 8 GB (2 x 4 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	175	77.7	171	79.6	171	79.7	175	77.7	171	79.6	171	79.7
416.gamess	847	23.1	847	23.1	848	23.1	715	27.4	715	27.4	715	27.4
433.milc	186	49.4	188	49.0	187	49.2	186	49.4	188	49.0	187	49.2
434.zeusmp	157	58.0	157	58.1	157	57.9	157	58.0	157	58.1	157	57.9
435.gromacs	322	22.1	322	22.1	322	22.2	322	22.1	322	22.1	322	22.2
436.cactusADM	202	59.3	202	59.2	202	59.3	196	61.1	195	61.2	196	60.9
437.leslie3d	173	54.2	173	54.3	173	54.3	173	54.2	173	54.3	173	54.3
444.namd	398	20.1	398	20.2	398	20.2	390	20.6	390	20.6	390	20.6
447.dealII	319	35.8	319	35.8	319	35.8	319	35.8	319	35.8	319	35.8
450.soplex	278	30.0	277	30.1	277	30.2	278	30.0	277	30.1	277	30.2
453.povray	177	30.0	177	30.0	177	30.0	136	39.2	136	39.2	136	39.2
454.calculix	263	31.4	263	31.4	263	31.4	263	31.4	263	31.4	263	31.4
459.GemsFDTD	249	42.5	250	42.5	250	42.5	244	43.6	244	43.5	243	43.6
465.tonto	418	23.5	418	23.5	419	23.5	335	29.3	335	29.3	335	29.3
470.lbm	130	106	130	105	130	105	130	106	130	105	130	105
481.wrf	225	49.6	223	50.0	223	50.0	225	49.6	223	50.0	223	50.0
482.sphinx3	410	47.6	410	47.6	410	47.6	410	47.6	410	47.6	410	47.6

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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Thu Jul 24 00:25:04 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 August 2011.