



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®2006 = **58.1**

Intel DH67BLB3 motherboard (Intel Core i7-2700K)

SPECfp_base2006 = **56.1**

CPU2006 license: 13

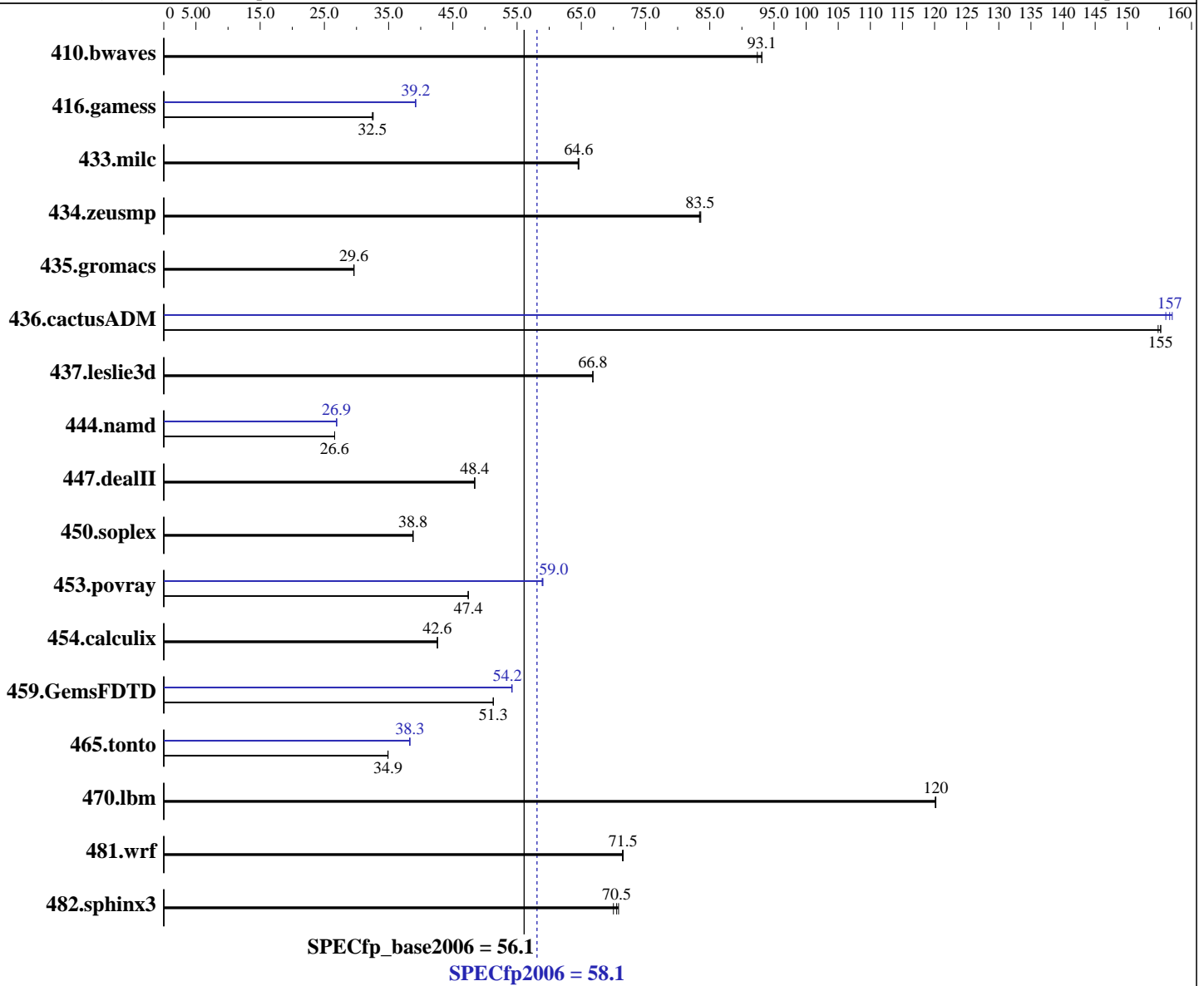
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2011

Hardware Availability: Nov-2011

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i7-2700K
 CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
 CPU MHz: 3500
 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 SP1 (64-bit)
 Compiler: C/C++: Version 12.0.3.176 of Intel C++ Studio XE for Windows;
 Fortran: Version 12.0.3.176 of Intel Visual Fortran Studio XE for Windows;
 Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1

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-11)
 Disk Subsystem: Intel 160 GB SSD
 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	147	92.4	146	93.1	146	93.1	147	92.4	146	93.1	146	93.1
416.gamess	602	32.5	602	32.5	602	32.6	500	39.2	500	39.2	500	39.2
433.milc	142	64.6	142	64.6	142	64.5	142	64.6	142	64.6	142	64.5
434.zeusmp	109	83.6	109	83.5	109	83.4	109	83.6	109	83.5	109	83.4
435.gromacs	241	29.6	241	29.6	241	29.6	241	29.6	241	29.6	241	29.6
436.cactusADM	77.0	155	77.0	155	77.2	155	76.6	156	76.1	157	76.3	157
437.leslie3d	141	66.8	141	66.8	141	66.8	141	66.8	141	66.8	141	66.8
444.namd	301	26.6	301	26.6	301	26.6	298	26.9	298	26.9	298	26.9
447.dealII	236	48.4	236	48.4	236	48.4	236	48.4	236	48.4	236	48.4
450.soplex	215	38.8	215	38.8	215	38.8	215	38.8	215	38.8	215	38.8
453.povray	112	47.4	112	47.4	112	47.4	90.2	59.0	90.3	58.9	90.2	59.0
454.calculix	194	42.6	194	42.6	194	42.6	194	42.6	194	42.6	194	42.6
459.GemsFDTD	207	51.3	207	51.3	207	51.3	196	54.2	196	54.2	196	54.2
465.tonto	282	34.9	282	34.9	282	34.9	257	38.3	257	38.3	257	38.3
470.lbm	114	120	114	120	114	120	114	120	114	120	114	120
481.wrf	156	71.5	156	71.5	156	71.4	156	71.5	156	71.5	156	71.4
482.sphinx3	278	70.0	275	70.8	276	70.5	278	70.0	275	70.8	276	70.5

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

Component Notes

Tested systems can be used with Shin-G ATX case,
 PC Power and Cooling 1200W power supply
 System was configured with an ATI HD 6990 discrete graphics card

General Notes

OMP_NUM_THREADS set to number of processors cores
 KMP_AFFINITY set to granularity=fine,scatter



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Base 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

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.lelie3d: -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:

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

C++ benchmarks:

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

Fortran benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
/F1000000000

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

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: -QxAVX(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: -QxAVX(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

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Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: basepeak = yes

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

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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

465.tonto: -QxAVX(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: -QxAVX(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 files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revC.20111012.html>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revC.20111012.xml>

<http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings-revC.xml>



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

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