



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®2006 = 30.5

Intel DH57JG Motherboard (Intel Core i5-650)

SPECfp_base2006 = 29.1

CPU2006 license: 13

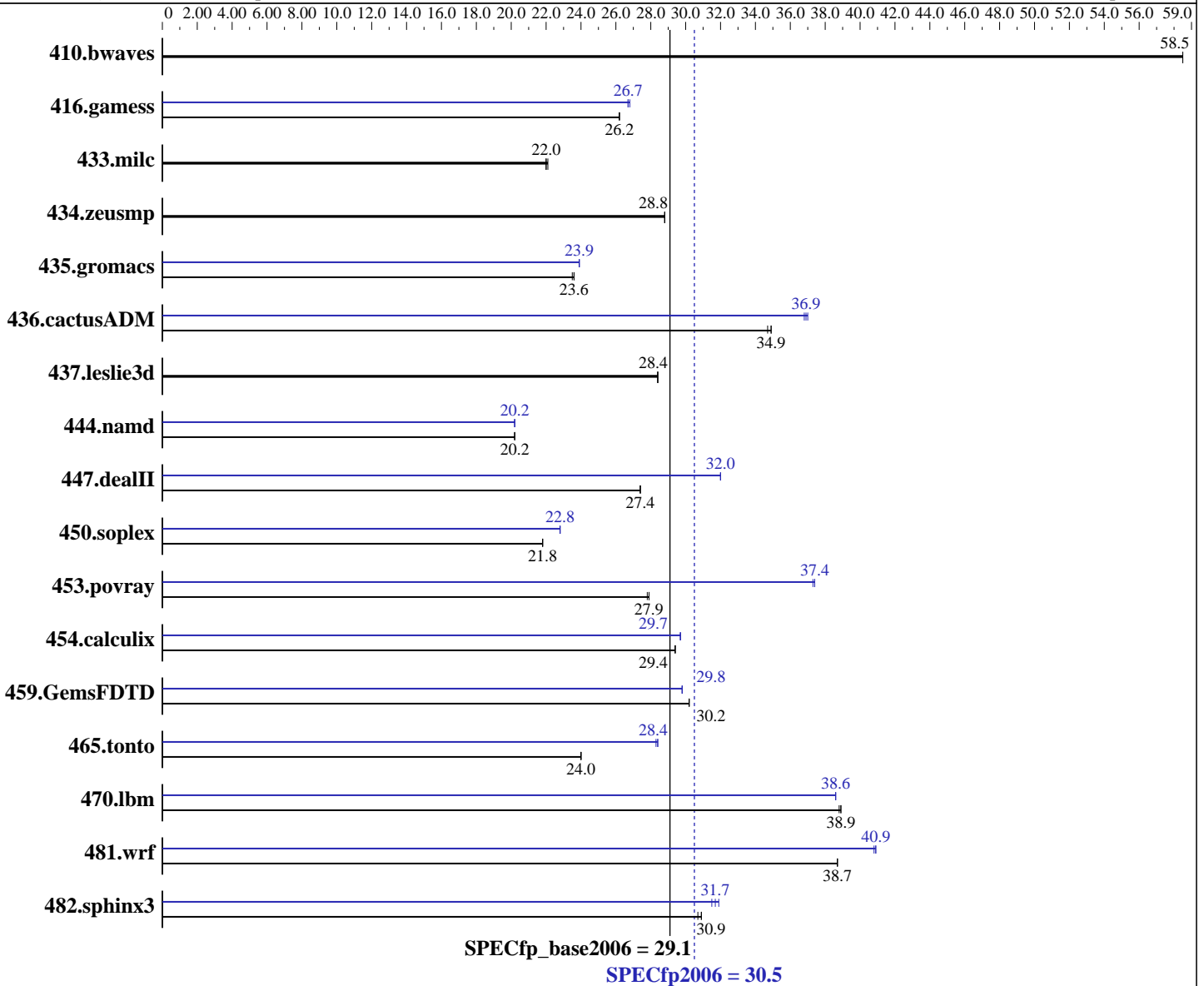
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Sep-2010

Hardware Availability: Jan-2010

Software Availability: Sep-2009



Hardware

CPU Name: Intel Core i5-650
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3200
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 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 Professional 11.1 for Intel 64
 Build 20090903 Package ID: w_cproc_p_11.1.045
 Intel Visual Fortran Compiler Professional 11.1 for Intel 64
 Build 20090903 Package ID: w_cproc_p_11.1.045, w_cprof_p_11.1.045
 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
 Auto Parallel: Yes

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L3 Cache: 4 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

File System: NTFS
System State: Default
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: None
SmartHeap Library Version 8.1 from <http://www.microquill.com/>

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	232	58.5	232	58.5	<u>232</u>	<u>58.5</u>	232	58.5	232	58.5	<u>232</u>	<u>58.5</u>
416.gamess	748	26.2	747	26.2	<u>747</u>	<u>26.2</u>	732	26.8	734	26.7	<u>732</u>	<u>26.7</u>
433.milc	416	22.1	<u>417</u>	<u>22.0</u>	417	22.0	416	22.1	<u>417</u>	<u>22.0</u>	417	22.0
434.zeusmp	316	28.8	<u>316</u>	<u>28.8</u>	316	28.8	316	28.8	<u>316</u>	<u>28.8</u>	316	28.8
435.gromacs	304	23.5	<u>303</u>	<u>23.6</u>	302	23.6	298	23.9	<u>299</u>	<u>23.9</u>	299	23.9
436.cactusADM	344	34.7	<u>342</u>	<u>34.9</u>	342	34.9	<u>324</u>	<u>36.9</u>	323	37.0	324	36.8
437.leslie3d	331	28.4	<u>331</u>	<u>28.4</u>	331	28.4	331	28.4	<u>331</u>	<u>28.4</u>	331	28.4
444.namd	<u>397</u>	<u>20.2</u>	397	20.2	397	20.2	<u>398</u>	<u>20.2</u>	397	20.2	398	20.2
447.dealII	418	27.4	418	27.4	<u>418</u>	<u>27.4</u>	357	32.0	<u>357</u>	<u>32.0</u>	357	32.0
450.soplex	<u>383</u>	<u>21.8</u>	383	21.8	383	21.8	366	22.8	366	22.8	<u>366</u>	<u>22.8</u>
453.povray	191	27.8	191	27.9	<u>191</u>	<u>27.9</u>	<u>142</u>	<u>37.4</u>	142	37.4	143	37.3
454.calculix	<u>280</u>	<u>29.4</u>	280	29.4	280	29.4	<u>278</u>	<u>29.7</u>	277	29.7	278	29.7
459.GemsFDTD	351	30.2	<u>352</u>	<u>30.2</u>	352	30.2	356	29.8	<u>356</u>	<u>29.8</u>	356	29.8
465.tonto	409	24.0	<u>409</u>	<u>24.0</u>	410	24.0	347	28.4	348	28.3	<u>347</u>	<u>28.4</u>
470.lbm	354	38.8	<u>354</u>	<u>38.9</u>	353	38.9	356	38.6	<u>356</u>	<u>38.6</u>	356	38.6
481.wrf	<u>289</u>	<u>38.7</u>	289	38.7	289	38.7	273	40.9	<u>273</u>	<u>40.9</u>	274	40.8
482.sphinx3	<u>631</u>	<u>30.9</u>	634	30.7	630	30.9	612	31.9	620	31.5	<u>615</u>	<u>31.7</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

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 /Qlowercase
 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 -Qlowercase /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 -Qlowercase
 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 -Qopt-prefetch
-Qauto-ilp32 /F1000000000

C++ benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qopt-prefetch
-Qcxx-features -Qauto-ilp32 /F1000000000 shlW64M.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -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: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qansi-alias -Qparallel
-Qauto-ilp32 /F1000000000

482.sphinx3: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Qauto-ilp32 /F1000000000

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.dealIII: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Qopt-prefetch
-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- -Qunroll4 -Qansi-alias -Qauto-ilp32
/F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

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

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-alloc
/F1000000000

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

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: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qauto-ilp32 /F1000000000

481.wrf: Same as 454.calculix

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.20100302.01.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.20100302.01.xml>



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