



SPEC[®] CFP2006 Result

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Intel Corporation

SPECfp[®]2006 = **31.4**

Intel DH57JG Motherboard (Intel Core i3-540)

SPECfp_base2006 = **30.5**

CPU2006 license: 13

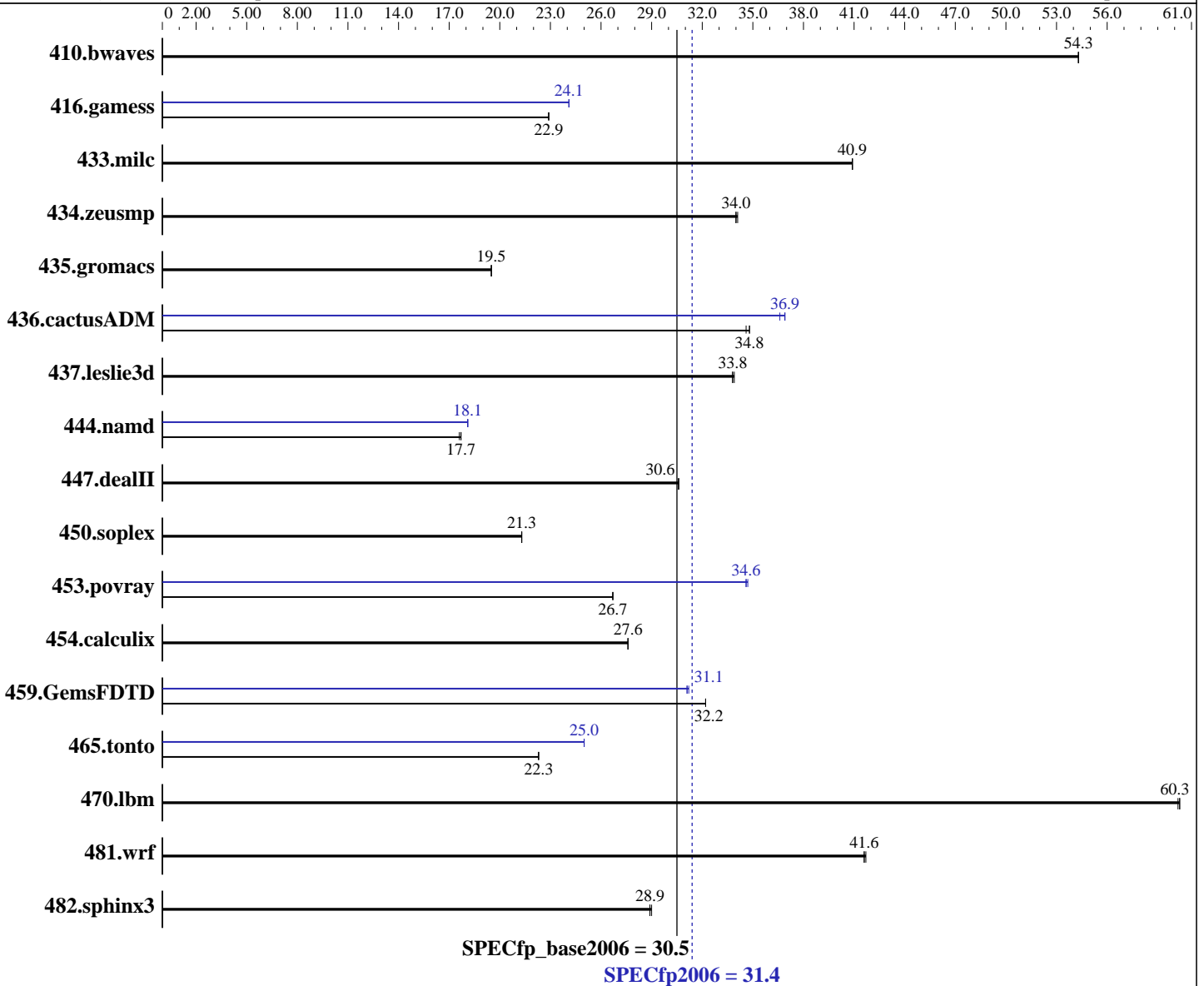
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Jul-2011

Hardware Availability: Jan-2010

Software Availability: Apr-2011



Hardware	
CPU Name:	Intel Core i3-540
CPU Characteristics:	
CPU MHz:	3067
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 XE for Intel64 Version 12.0.3.176 Build 20110309 Intel Visual Fortran Compiler XE for Intel64 Version 12.0.3.176 Build 20110309 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
Auto Parallel:	Yes
File System:	NTFS

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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

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	<u>250</u>	<u>54.3</u>	250	54.3	250	54.3	<u>250</u>	<u>54.3</u>	250	54.3	250	54.3
416.gamess	855	22.9	855	22.9	<u>855</u>	<u>22.9</u>	<u>813</u>	<u>24.1</u>	813	24.1	813	24.1
433.milc	224	40.9	<u>224</u>	<u>40.9</u>	224	40.9	224	40.9	<u>224</u>	<u>40.9</u>	224	40.9
434.zeusmp	<u>267</u>	<u>34.0</u>	267	34.1	268	34.0	<u>267</u>	<u>34.0</u>	267	34.1	268	34.0
435.gromacs	<u>367</u>	<u>19.5</u>	367	19.5	366	19.5	<u>367</u>	<u>19.5</u>	367	19.5	366	19.5
436.cactusADM	345	34.6	343	34.8	<u>344</u>	<u>34.8</u>	324	36.9	326	36.6	<u>324</u>	<u>36.9</u>
437.leslie3d	<u>278</u>	<u>33.8</u>	278	33.8	277	33.9	<u>278</u>	<u>33.8</u>	278	33.8	277	33.9
444.namd	454	17.7	<u>454</u>	<u>17.7</u>	455	17.6	443	18.1	<u>444</u>	<u>18.1</u>	444	18.1
447.dealII	<u>374</u>	<u>30.6</u>	373	30.6	374	30.6	<u>374</u>	<u>30.6</u>	373	30.6	374	30.6
450.soplex	392	21.3	392	21.3	<u>392</u>	<u>21.3</u>	392	21.3	392	21.3	<u>392</u>	<u>21.3</u>
453.povray	200	26.7	199	26.7	<u>199</u>	<u>26.7</u>	154	34.6	<u>154</u>	<u>34.6</u>	154	34.7
454.calculix	299	27.6	<u>299</u>	<u>27.6</u>	299	27.6	299	27.6	<u>299</u>	<u>27.6</u>	299	27.6
459.GemsFDTD	<u>329</u>	<u>32.2</u>	329	32.2	330	32.2	341	31.2	341	31.1	<u>341</u>	<u>31.1</u>
465.tonto	442	22.3	442	22.3	<u>442</u>	<u>22.3</u>	<u>393</u>	<u>25.0</u>	393	25.0	394	25.0
470.lbm	228	60.2	<u>228</u>	<u>60.3</u>	228	60.3	228	60.2	<u>228</u>	<u>60.3</u>	228	60.3
481.wrf	268	41.7	269	41.6	<u>268</u>	<u>41.6</u>	268	41.7	269	41.6	<u>268</u>	<u>41.6</u>
482.sphinx3	674	28.9	673	29.0	<u>673</u>	<u>28.9</u>	674	28.9	673	29.0	<u>673</u>	<u>28.9</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

C++ benchmarks:
 icl -Qvc9

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Base Compiler Invocation (Continued)

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 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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