



SPEC[®] CFP2006 Result

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Intel Corporation

SPECfp[®]2006 = **28.7**

Intel DH61WW motherboard (Intel Pentium G860)

SPECfp_base2006 = **25.2**

CPU2006 license: 13

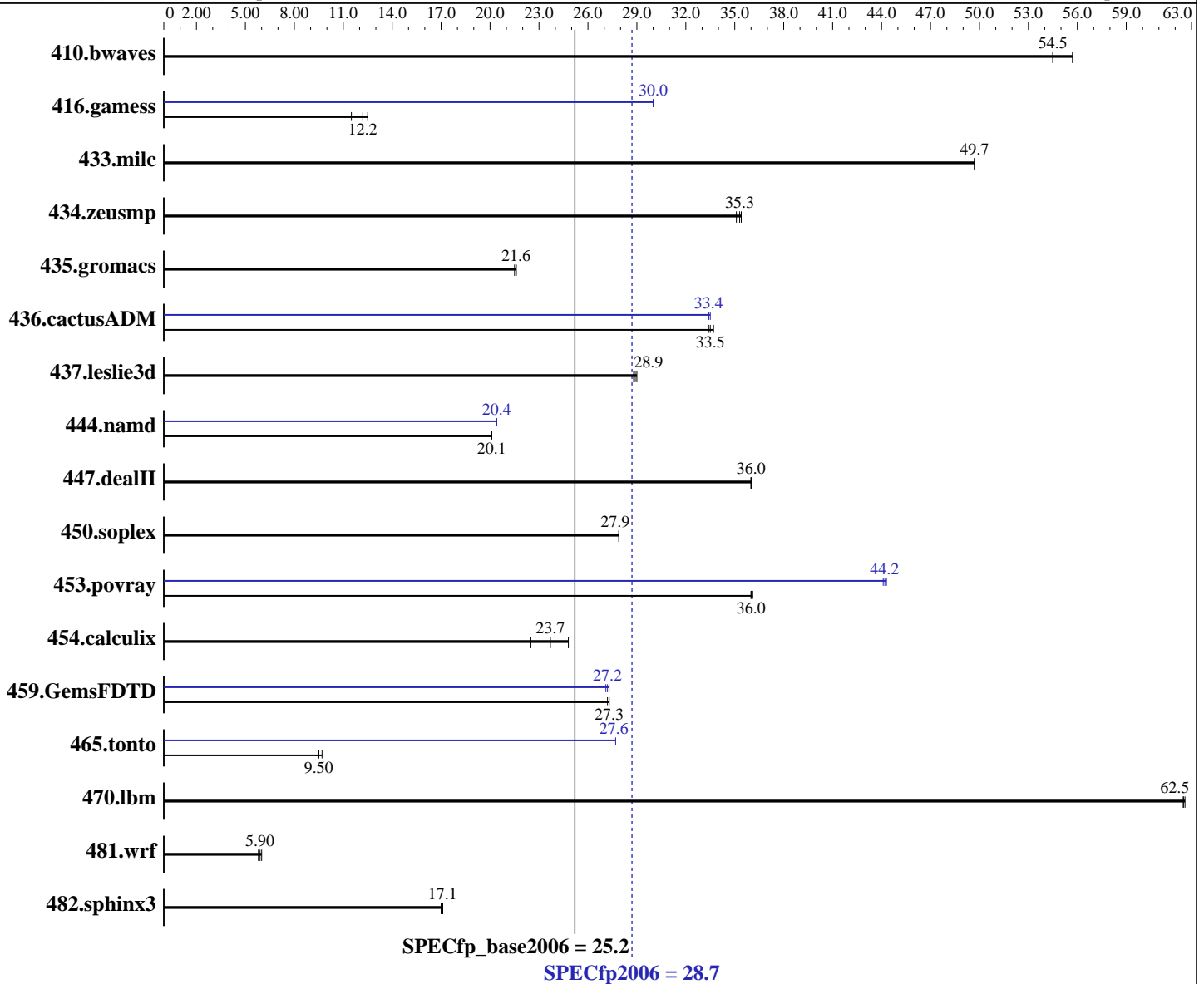
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2011

Hardware Availability: Sep-2011

Software Availability: Apr-2011



Hardware

CPU Name: Intel Pentium G860
 CPU Characteristics:
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 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: C/C++: Version 12.0.3.176 of Intel C++ Studio XE for Windows;
 Fortran: Version 12.0.3.176 of Intel 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: 3 MB I+D on chip per chip
 Other Cache: None
 Memory: 2 GB (2 x 1 GB 2Rx4 PC3-10600U-9)
 Disk Subsystem: 1 TB Seagate 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	244	55.7	<u>249</u>	<u>54.5</u>	249	54.5	244	55.7	<u>249</u>	<u>54.5</u>	249	54.5
416.gamess	1697	11.5	<u>1600</u>	<u>12.2</u>	1563	12.5	653	30.0	<u>653</u>	<u>30.0</u>	653	30.0
433.milc	185	49.7	185	49.7	<u>185</u>	<u>49.7</u>	185	49.7	185	49.7	<u>185</u>	<u>49.7</u>
434.zeusmp	<u>258</u>	<u>35.3</u>	259	35.1	257	35.4	<u>258</u>	<u>35.3</u>	259	35.1	257	35.4
435.gromacs	332	21.5	<u>331</u>	<u>21.6</u>	330	21.6	332	21.5	<u>331</u>	<u>21.6</u>	330	21.6
436.cactusADM	<u>356</u>	<u>33.5</u>	355	33.7	358	33.4	358	33.4	<u>358</u>	<u>33.4</u>	356	33.5
437.leslie3d	327	28.8	<u>325</u>	<u>28.9</u>	324	29.0	327	28.8	<u>325</u>	<u>28.9</u>	324	29.0
444.namd	<u>399</u>	<u>20.1</u>	399	20.1	399	20.1	393	20.4	<u>393</u>	<u>20.4</u>	393	20.4
447.dealII	<u>318</u>	<u>36.0</u>	318	36.0	318	36.0	<u>318</u>	<u>36.0</u>	318	36.0	318	36.0
450.soplex	<u>299</u>	<u>27.9</u>	299	27.9	299	27.9	<u>299</u>	<u>27.9</u>	299	27.9	299	27.9
453.povray	<u>148</u>	<u>36.0</u>	148	36.0	148	36.1	121	44.1	<u>120</u>	<u>44.2</u>	120	44.3
454.calculix	333	24.8	<u>349</u>	<u>23.7</u>	367	22.5	333	24.8	<u>349</u>	<u>23.7</u>	367	22.5
459.GemsFDTD	390	27.2	<u>389</u>	<u>27.3</u>	389	27.3	<u>390</u>	<u>27.2</u>	389	27.3	391	27.1
465.tonto	1037	9.50	<u>1034</u>	<u>9.50</u>	1016	9.70	356	27.6	<u>356</u>	<u>27.6</u>	356	27.7
470.lbm	<u>220</u>	<u>62.5</u>	220	62.6	220	62.5	<u>220</u>	<u>62.5</u>	220	62.6	220	62.5
481.wrf	<u>1906</u>	<u>5.90</u>	1918	5.80	1874	6.00	<u>1906</u>	<u>5.90</u>	1918	5.80	1874	6.00
482.sphinx3	1137	17.1	<u>1140</u>	<u>17.1</u>	1147	17.0	1137	17.1	<u>1140</u>	<u>17.1</u>	1147	17.0

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

General Notes

Binaries compiled on a system with 1x Intel Core i7-860 CPU
 + 8GB memory using Windows 7 Enterprise 64-bit
 OMP_NUM_THREADS set to number of processor 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:

-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

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

-QxSSE4.2 -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: -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.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 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-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.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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