



SPEC[®] CFP2006 Result

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Intel Corporation

SPECfp[®]_rate2006 = 63.2

Intel DH67BL Motherboard (Intel Pentium G870)

SPECfp_rate_base2006 = 62.3

CPU2006 license: 13

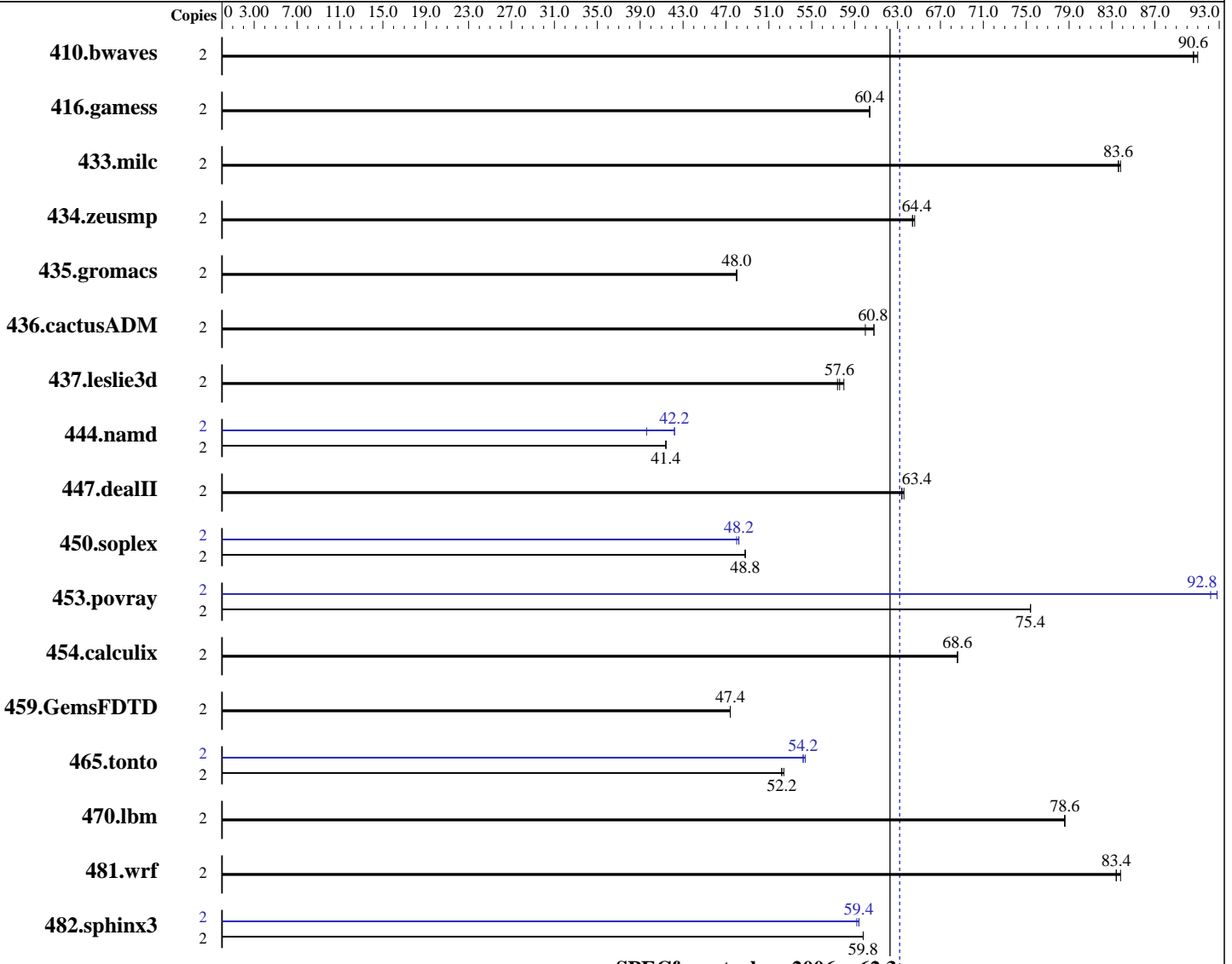
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Sep-2012

Hardware Availability: Jun-2012

Software Availability: Apr-2011



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Hardware

CPU Name: Intel Pentium G870
 CPU Characteristics:
 CPU MHz: 3100
 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: Microsoft Windows 7 Ultimate
 6.1.7601 Service Pack 1 Build 7601
 Compiler: C/C++: Version 12.1.0.229 of Intel C++ Studio XE for Windows;
 Fortran: Version 12.1.0.229 of Intel Fortran Studio XE for Windows;
 Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1
 Auto Parallel: No

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L3 Cache: 3 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600U-9)
 Disk Subsystem: 1 TB Seagate SATA, 7200 RPM
 Other Hardware: None

File System: NTFS
 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							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
410.bwaves	2	300	90.6	299	91.0	300	90.6	2	300	90.6	299	91.0	300	90.6		
416.gamess	2	648	60.4	648	60.4	648	60.4	2	648	60.4	648	60.4	648	60.4		
433.milc	2	220	83.6	219	83.8	219	83.6	2	220	83.6	219	83.8	219	83.6		
434.zeusmp	2	282	64.4	282	64.4	282	64.6	2	282	64.4	282	64.4	282	64.6		
435.gromacs	2	298	48.0	298	48.0	298	48.0	2	298	48.0	298	48.0	298	48.0		
436.cactusADM	2	393	60.8	393	60.8	399	60.0	2	393	60.8	393	60.8	399	60.0		
437.leslie3d	2	324	58.0	328	57.4	326	57.6	2	324	58.0	328	57.4	326	57.6		
444.namd	2	388	41.4	388	41.4	388	41.4	2	381	42.2	381	42.2	405	39.6		
447.dealII	2	360	63.4	360	63.6	361	63.4	2	360	63.4	360	63.6	361	63.4		
450.soplex	2	342	48.8	343	48.8	342	48.8	2	346	48.2	347	48.0	346	48.2		
453.povray	2	141	75.4	141	75.4	141	75.4	2	115	92.8	115	92.2	115	92.8		
454.calculix	2	241	68.6	240	68.6	240	68.6	2	241	68.6	240	68.6	240	68.6		
459.GemsFDTD	2	448	47.4	448	47.4	448	47.4	2	448	47.4	448	47.4	448	47.4		
465.tonto	2	377	52.2	376	52.4	376	52.2	2	362	54.4	363	54.2	363	54.2		
470.lbm	2	349	78.6	349	78.6	349	78.6	2	349	78.6	349	78.6	349	78.6		
481.wrf	2	268	83.4	266	83.8	268	83.4	2	268	83.4	266	83.8	268	83.4		
482.sphinx3	2	653	59.8	652	59.8	653	59.8	2	657	59.4	658	59.2	657	59.4		

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

Compiler Invocation Notes

ipsxe-comp-vars batch file invoked with intel64

Submit Notes

Processes were bound to specific processors using the start command with the /affinity switch. The config file option 'submit' was used to generate the affinity mask for each process.



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Platform Notes

Sysinfo program C:\CPU200~1.17A\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on Clt386077E02EFB Sat Sep 15 15:26:59 2012

This section contains SUT (System Under Test) info as seen by
some common utilities. To remove or add to this section, see:
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

Trying 'systeminfo'

OS Name : Microsoft Windows 7 Ultimate
OS Version : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: INTEL_
System Model : DH67BL_
Processor(s) : 1 Processor(s) Installed.
 [01]: Intel64 Family 6 Model 42 Stepping 7 GenuineIntel ~3100 Mhz
BIOS Version : Intel Corp. BLH6710H.86A.0156.2012.0615.1908, 6/15/2012
Total Physical Memory: 8,091 MB

Trying 'wmic cpu get /value'

DeviceID : CPU0
L2CacheSize : 512
L3CacheSize : 3072
MaxClockSpeed : 3100
Name : Intel(R) Pentium(R) CPU G870 @ 3.10GHz
NumberOfCores : 2
NumberOfLogicalProcessors: 2

(End of data from sysinfo program)

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

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- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qcxx-features -Qauto-ilp32 /F1000000000 shlw64M.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
/F1000000000 -link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE



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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: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

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: -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- -Qopt-prefetch -Qauto-ilp32
/F1000000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

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Peak Optimization Flags (Continued)

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll4 -Qauto /F10000000000
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

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-ic12.1-official-windows.20120117.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.20120117.xml>

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

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