SPEC® CFP2006 Result

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Intel Corporation

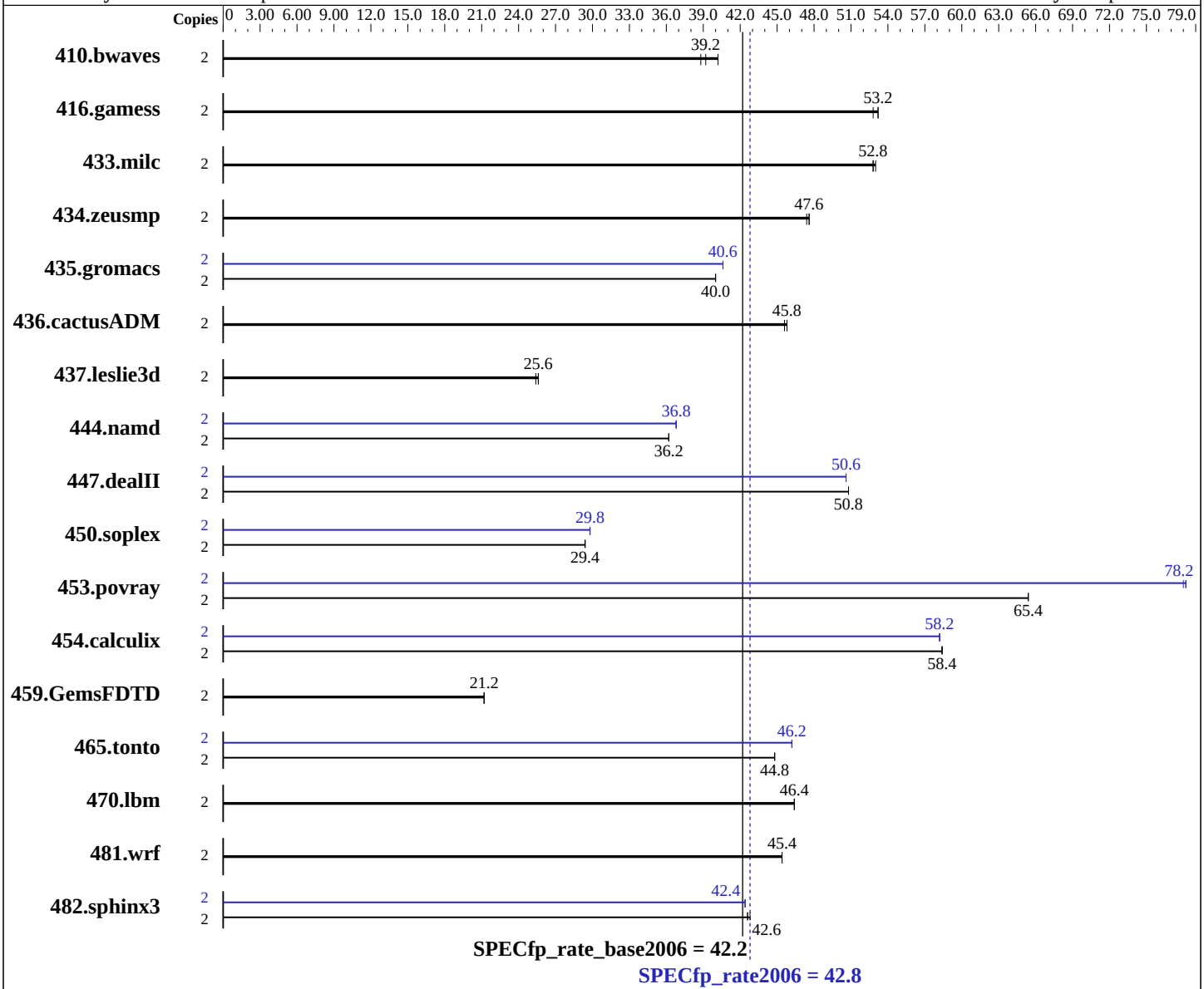
Intel DH61WW motherboard (Intel Pentium G630)

SPECfp®_rate2006 = 42.8

SPECfp_rate_base2006 = 42.2

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 G630
CPU Characteristics:	
CPU MHz:	2700
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++: 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:	No

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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, running at 1066 MHz)
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	**693**	**39.2**	699	38.8	677	40.2	2	**693**	**39.2**	699	38.8	677	40.2
416.gamess	2	742	52.8	**737**	**53.2**	737	53.2	2	742	52.8	**737**	**53.2**	737	53.2
433.milc	2	347	53.0	347	52.8	**347**	**52.8**	2	347	53.0	347	52.8	**347**	**52.8**
434.zeusmp	2	382	47.6	384	47.4	**383**	**47.6**	2	382	47.6	384	47.4	**383**	**47.6**
435.gromacs	2	357	40.0	**357**	**40.0**	357	40.0	2	**352**	**40.6**	352	40.6	352	40.6
436.cactusADM	2	**523**	**45.8**	525	45.6	521	45.8	2	**523**	**45.8**	525	45.6	521	45.8
437.leslie3d	2	**734**	**25.6**	733	25.6	737	25.4	2	**734**	**25.6**	733	25.6	737	25.4
444.namd	2	443	36.2	**443**	**36.2**	443	36.2	2	436	36.8	437	36.8	**436**	**36.8**
447.dealII	2	450	50.8	**450**	**50.8**	451	50.8	2	452	50.6	**452**	**50.6**	451	50.6
450.soplex	2	**569**	**29.4**	569	29.4	569	29.4	2	560	29.8	**560**	**29.8**	560	29.8
453.povray	2	163	65.4	163	65.4	**163**	**65.4**	2	136	78.2	137	78.0	**136**	**78.2**
454.calculix	2	283	58.4	283	58.4	**283**	**58.4**	2	**283**	**58.2**	283	58.2	283	58.2
459.GemsFDTD	2	999	21.2	**997**	**21.2**	997	21.2	2	999	21.2	**997**	**21.2**	997	21.2
465.tonto	2	439	44.8	439	44.8	**439**	**44.8**	2	**426**	**46.2**	426	46.2	426	46.2
470.lbm	2	**591**	**46.4**	591	46.4	592	46.4	2	**591**	**46.4**	591	46.4	592	46.4
481.wrf	2	493	45.4	492	45.4	**492**	**45.4**	2	493	45.4	492	45.4	**492**	**45.4**
482.sphinx3	2	916	42.6	**913**	**42.6**	910	42.8	2	917	42.4	**918**	**42.4**	919	42.4

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

Submit Notes

```
The config file option 'submit' was used.
 The start command with the /affinity switch was used to bind processes to cores
```

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
```

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 -Qauto-ilp32
/F1000000000            -link /FORCE:MULTIPLE
```

C++ benchmarks:
```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qcxx-features
-Qauto-ilp32 /F1000000000 shlW64M.lib            -link /FORCE:MULTIPLE
```

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Base Optimization Flags (Continued)

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

Benchmarks using both Fortran and C:
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32
/F1000000000 -link /FORCE:MULTIPLE

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

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Peak Optimization Flags (Continued)

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

Fortran benchmarks:

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 /F1000000000
-link /FORCE:MULTIPLE

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 -link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qauto-ilp32 /F1000000000
-link /FORCE:MULTIPLE

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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