



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®_rate2006 = 42.8

Intel DH61WW motherboard (Intel Pentium G630)

SPECfp_rate_base2006 = 42.2

CPU2006 license: 13

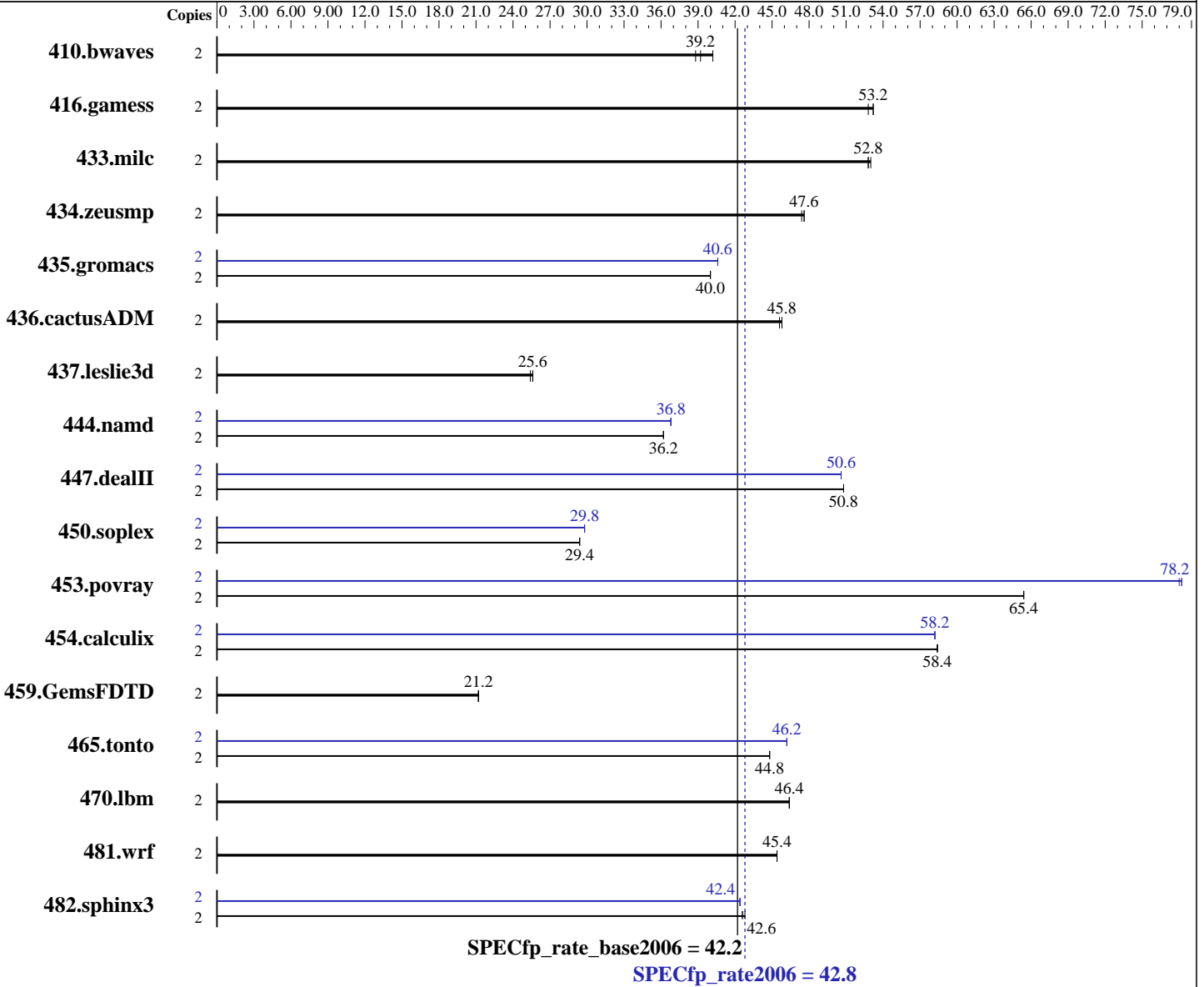
Test sponsor: Intel Corporation

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



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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
sh1W64M.lib -link /FORCE:MULTIPLE
```

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Peak Optimization Flags (Continued)

```
447.dealIII: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
            -Qscalar-rep- -Qauto-ilp32 /F1000000000 sh1W64M.lib
            -link /FORCE:MULTIPLE
```

```
450.soplex: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
            -Qipo -O3 -Qauto-ilp32 /F1000000000 sh1W64M.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 sh1W64M.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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