



SPEC[®] CFP2006 Result

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Intel Corporation

SPECfp[®]_rate2006 = 88.7

Intel DH61WW motherboard (Intel Core i5-2300)

SPECfp_rate_base2006 = 87.4

CPU2006 license: 13

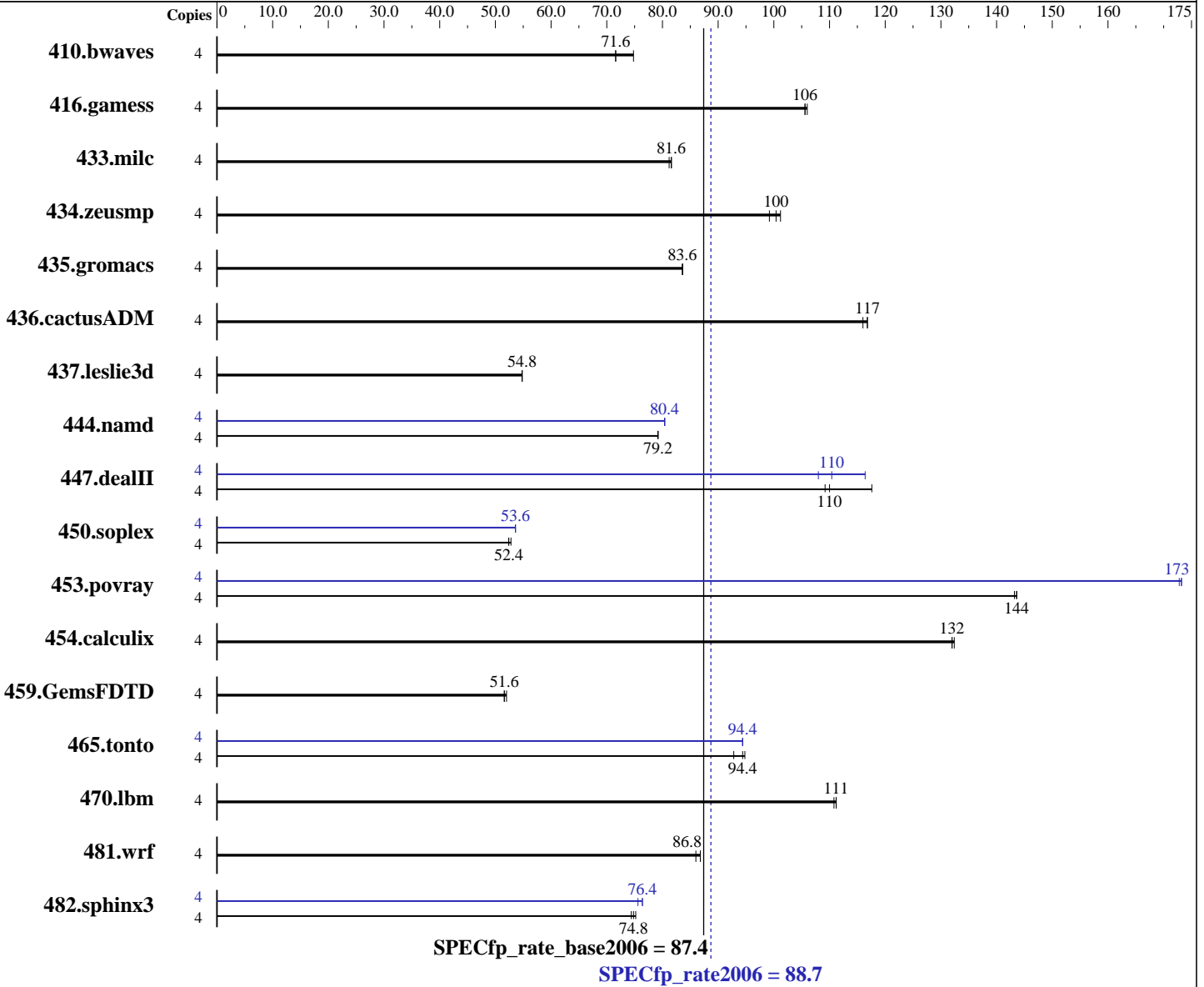
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2011

Hardware Availability: Jan-2011

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i5-2300
 CPU Characteristics: Intel Turbo Boost Technology up to 3.1 GHz
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 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: No
 File System: NTFS

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L3 Cache: 6 MB I+D on chip per chip
Other Cache: None
Memory: 4 GB (2 x 2 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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	728	74.8	<u>759</u>	<u>71.6</u>	760	71.6	4	728	74.8	<u>759</u>	<u>71.6</u>	760	71.6
416.gamess	4	<u>740</u>	<u>106</u>	740	106	740	106	4	<u>740</u>	<u>106</u>	740	106	740	106
433.milc	4	450	81.6	<u>450</u>	<u>81.6</u>	451	81.2	4	450	81.6	<u>450</u>	<u>81.6</u>	451	81.2
434.zeusmp	4	360	101	<u>363</u>	<u>100</u>	366	99.2	4	360	101	<u>363</u>	<u>100</u>	366	99.2
435.gromacs	4	<u>342</u>	<u>83.6</u>	341	83.6	342	83.6	4	<u>342</u>	<u>83.6</u>	341	83.6	342	83.6
436.cactusADM	4	<u>410</u>	<u>117</u>	412	116	410	117	4	<u>410</u>	<u>117</u>	412	116	410	117
437.leslie3d	4	<u>688</u>	<u>54.8</u>	687	54.8	688	54.8	4	<u>688</u>	<u>54.8</u>	687	54.8	688	54.8
444.namd	4	405	79.2	<u>405</u>	<u>79.2</u>	405	79.2	4	399	80.4	<u>399</u>	<u>80.4</u>	399	80.4
447.dealII	4	389	118	<u>416</u>	<u>110</u>	420	109	4	393	116	<u>414</u>	<u>110</u>	424	108
450.soplex	4	<u>634</u>	<u>52.4</u>	635	52.4	632	52.8	4	624	53.6	622	53.6	<u>623</u>	<u>53.6</u>
453.povray	4	149	143	<u>148</u>	<u>144</u>	148	144	4	<u>123</u>	<u>173</u>	123	173	123	173
454.calculix	4	<u>250</u>	<u>132</u>	250	132	250	132	4	<u>250</u>	<u>132</u>	250	132	250	132
459.GemsFDTD	4	819	52.0	<u>821</u>	<u>51.6</u>	825	51.6	4	819	52.0	<u>821</u>	<u>51.6</u>	825	51.6
465.tonto	4	414	94.8	<u>418</u>	<u>94.4</u>	424	92.8	4	416	94.4	<u>417</u>	<u>94.4</u>	418	94.4
470.lbm	4	494	111	<u>495</u>	<u>111</u>	495	111	4	494	111	<u>495</u>	<u>111</u>	495	111
481.wrf	4	514	86.8	519	86.0	<u>516</u>	<u>86.8</u>	4	514	86.8	519	86.0	<u>516</u>	<u>86.8</u>
482.sphinx3	4	<u>1042</u>	<u>74.8</u>	1039	75.2	1045	74.4	4	1020	76.4	<u>1022</u>	<u>76.4</u>	1031	75.6

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



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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:

-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32 /F1000000000
-link /FORCE:MULTIPLE

C++ benchmarks:

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

Fortran benchmarks:

-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias /F1000000000
-link /FORCE:MULTIPLE

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
-QxAVX -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: -QxAVX -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
-Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE
```

C++ benchmarks:

```
444.namd: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Oa -Qauto-ilp32 /F1000000000 sh1W64M.lib
-link /FORCE:MULTIPLE
```

```
447.dealIII: -QxAVX(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
```

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Peak Optimization Flags (Continued)

450.soplex: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qauto-ilp32 /F1000000000 sh1W64M.lib
-link /FORCE:MULTIPLE

453.povray: -QxAVX(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: -QxAVX(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: basepeak = yes

436.cactusADM: basepeak = yes

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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