



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®_rate2006 = 115

Intel DX58SO motherboard (Intel Core i7-980X)

SPECfp_rate_base2006 = 112

CPU2006 license: 13

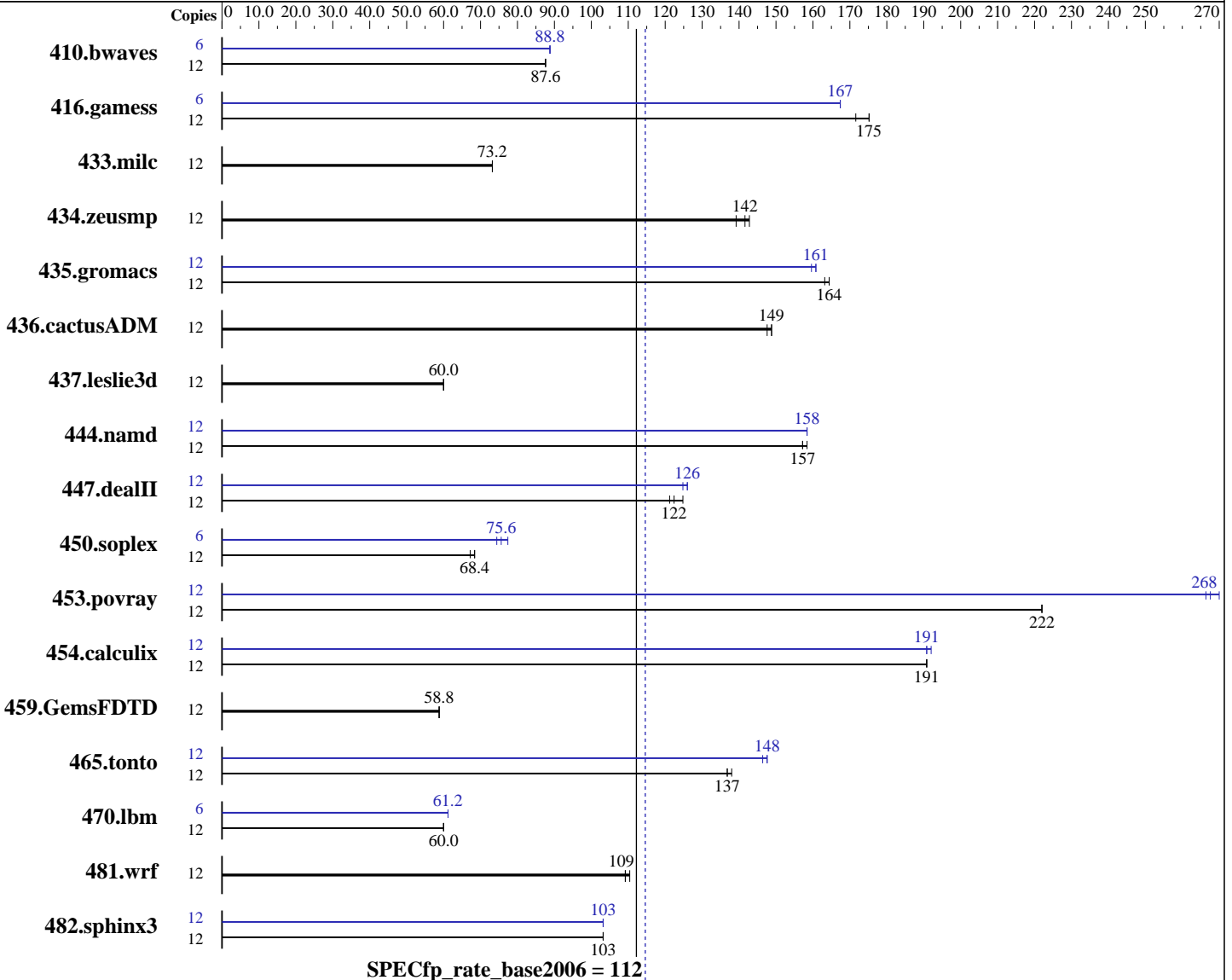
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Mar-2010

Hardware Availability: Mar-2010

Software Availability: Oct-2009



Hardware

CPU Name: Intel Core i7-980X
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 3333
 FPU: Integrated
 CPU(s) enabled: 6 cores, 1 chip, 6 cores/chip, 2 threads/core
 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: Intel C++ Compiler Professional 11.1 for Intel 64
 Build 20090903 Package ID: w_cproc_p_11.1.045
 Intel Visual Fortran Compiler Professional 11.1 for Intel 64
 Build 20090903 Package ID: w_cproc_p_11.1.045, w_cprof_p_11.1.045
 Microsoft Visual Studio 2008 Professional SP1 (for libraries)
 Auto Parallel: No

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L3 Cache: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 12 GB (3x4GB Samsung M378B5273BH1-CF8 DDR3-1066 CL7)
 Disk Subsystem: Intel X25-M 160GB SSD
 Other Hardware: None

File System: NTFS
 System State: Default
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 Other Software: None
 SmartHeap Library Version 8.1 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	12	1868	87.6	1866	87.6	1866	87.6	6	918	88.8	918	88.8	917	88.8
416.gamess	12	1343	175	1345	175	1369	172	6	703	167	702	167	702	167
433.milc	12	1503	73.2	1502	73.2	1502	73.2	12	1503	73.2	1502	73.2	1502	73.2
434.zeusmp	12	767	143	768	142	785	139	12	767	143	768	142	785	139
435.gromacs	12	522	164	522	164	523	163	12	537	160	532	161	534	161
436.cactusADM	12	966	149	964	149	971	148	12	966	149	964	149	971	148
437.leslie3d	12	1883	60.0	1882	60.0	1881	60.0	12	1883	60.0	1882	60.0	1881	60.0
444.namd	12	611	157	611	157	610	158	12	607	158	606	158	606	158
447.dealII	12	1116	122	1132	121	1103	125	12	1091	126	1092	126	1098	125
450.soplex	12	1464	68.4	1472	68.4	1477	67.2	6	675	74.4	647	77.4	660	75.6
453.povray	12	287	222	287	222	288	222	12	237	270	239	268	239	266
454.calculix	12	519	191	519	191	519	191	12	517	191	519	191	517	192
459.GemsFDTD	12	2172	58.8	2173	58.8	2172	58.8	12	2172	58.8	2173	58.8	2172	58.8
465.tonto	12	856	138	861	137	861	137	12	807	146	802	148	799	148
470.lbm	12	2730	60.0	2729	60.0	2729	60.0	6	1343	61.2	1343	61.2	1343	61.2
481.wrf	12	1221	109	1220	110	1224	109	12	1221	109	1220	110	1224	109
482.sphinx3	12	2269	103	2271	103	2269	103	12	2270	103	2272	103	2271	103

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.
 Windows start command was used to bind copies to processors

General Notes

Tested systems can be used with Shin-G ATX case,
 PC Power and Cooling 1200W power supply
 System was configured with an ATI 5970 discrete graphics card



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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 /Qlowercase
 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 -Qlowercase /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 -Qlowercase
 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- -Qopt-prefetch -Qauto-ilp32
/F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:

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

Fortran benchmarks:

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

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

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

```
482.sphinx3: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll2 -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: -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
```

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Peak Optimization Flags (Continued)

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- -Qunroll4 -Qansi-alias -Qauto-ilp32
/F1000000000 sh1W64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

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

416.gamess: Same as 410.bwaves

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 file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.20100302.01.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.20100302.01.xml>



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