SPEC® CFP2006 Result
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Intel Corporation

$SPECfp^{®}\_rate2006 = 112$

Intel DH67BLB3 Motherboard (Intel Core i7-2600K)
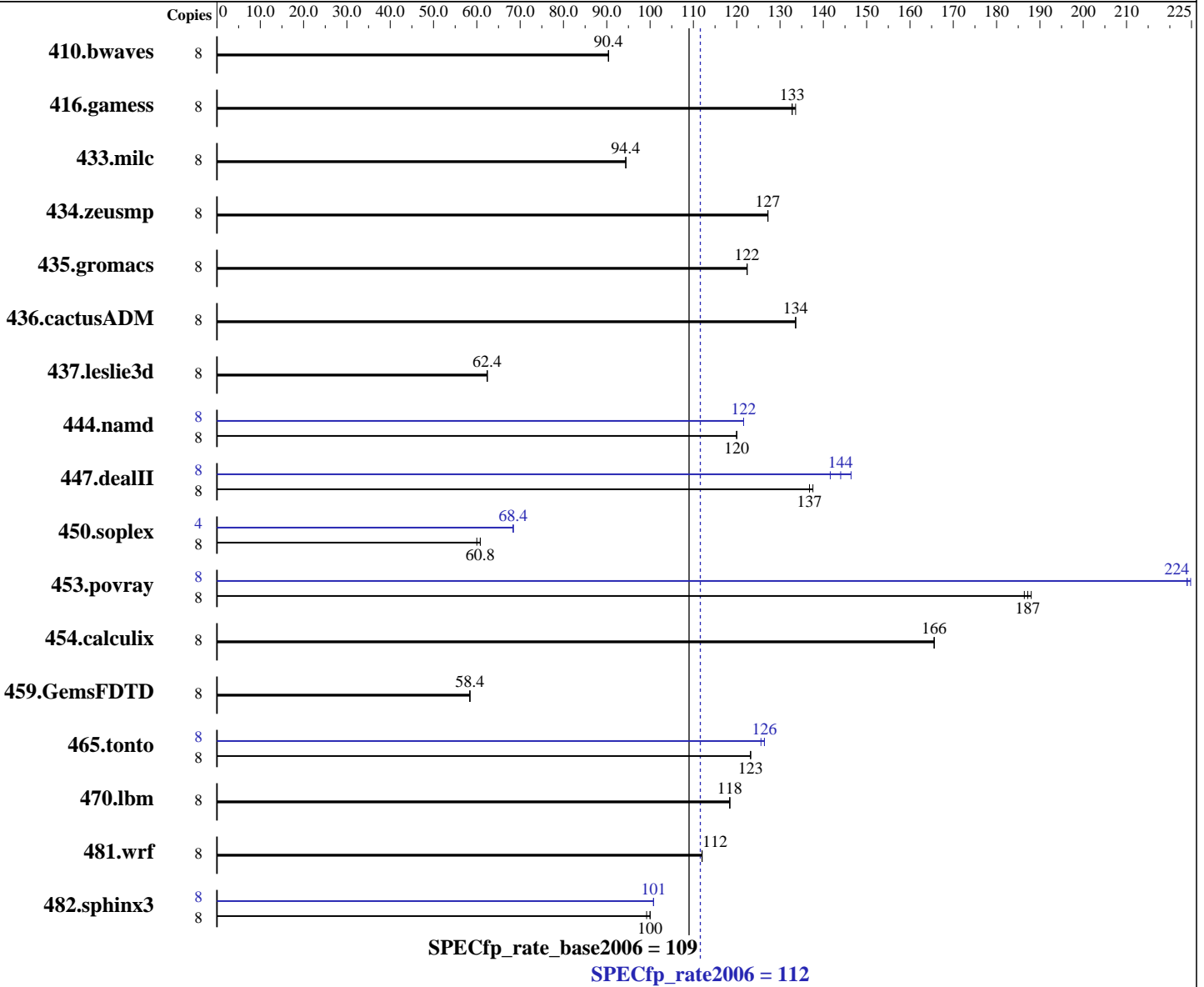
$SPECfp\_rate\_base2006 = 109$

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Apr-2011
Hardware Availability: Mar-2011
Software Availability: Apr-2011

Copies		
410.bwaves	8	90.4
416.gamess	8	133
433.milc	8	94.4
434.zeusmp	8	127
435.gromacs	8	122
436.cactusADM	8	134
437.leslie3d	8	62.4
444.namd	8	122
	8	120
447.dealII	8	144
	8	137
450.soplex	4	68.4
	8	60.8
453.povray	8	224
	8	187
454.calculix	8	166
459.GemsFDTD	8	58.4
465.tonto	8	126
	8	123
470.lbm	8	118
481.wrf	8	112
482.sphinx3	8	101
	8	100

SPECfp_rate_base2006 = 109

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Hardware
CPU Name: Intel Core i7-2600K
CPU Characteristics: Intel Turbo Boost Technology up to 3.8 GHz
CPU MHz: 3400
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 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
Continued on next page

Software
Operating System: Windows 7 Ultimate (64-bit)
Compiler: Intel C++ Compiler XE for Intel64
Version 12.0.3.163 Build 20110217
Intel Visual Fortran Compiler XE for Intel64
Version 12.0.3.163 Build 20110217
Microsoft Visual Studio 2008 Professional SP1
(for libraries)
Auto Parallel: No
File System: NTFS
Continued on next page

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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600U-9)
Disk Subsystem: Seagate 1 TB 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	8	1208	90.4	1206	90.4	**1206**	**90.4**	8	1208	90.4	1206	90.4	**1206**	**90.4**
416.gamess	8	1176	134	**1180**	**133**	1181	133	8	1176	134	**1180**	**133**	1181	133
433.milc	8	**777**	**94.4**	777	94.4	777	94.4	8	**777**	**94.4**	777	94.4	777	94.4
434.zeusmp	8	571	127	**571**	**127**	573	127	8	571	127	**571**	**127**	573	127
435.gromacs	8	466	122	**467**	**122**	467	122	8	466	122	**467**	**122**	467	122
436.cactusADM	8	716	134	**715**	**134**	714	134	8	716	134	**715**	**134**	714	134
437.leslie3d	8	1205	62.4	**1205**	**62.4**	1206	62.4	8	1205	62.4	**1205**	**62.4**	1206	62.4
444.namd	8	535	120	**535**	**120**	535	120	8	528	122	527	122	**528**	**122**
447.dealII	8	668	137	**667**	**137**	665	138	8	645	142	**634**	**144**	627	146
450.soplex	8	**1104**	**60.8**	1102	60.8	1105	60.0	4	487	68.4	**488**	**68.4**	488	68.4
453.povray	8	226	188	**227**	**187**	228	186	8	190	224	189	225	**190**	**224**
454.calculix	8	398	166	399	166	**398**	**166**	8	398	166	399	166	**398**	**166**
459.GemsFDTD	8	**1462**	**58.4**	1462	58.4	1462	58.4	8	**1462**	**58.4**	1462	58.4	1462	58.4
465.tonto	8	640	123	638	123	**638**	**123**	8	625	126	621	126	**625**	**126**
470.lbm	8	926	118	**926**	**118**	927	118	8	926	118	**926**	**118**	927	118
481.wrf	8	799	112	799	112	**799**	**112**	8	799	112	799	112	**799**	**112**
482.sphinx3	8	**1565**	**100**	1563	100	1566	99.2	8	1552	101	1550	101	**1551**	**101**

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

General Notes

    Tested systems can be used with Shin-G ATX case,
    PC Power and Cooling 1200W power supply

Base Compiler Invocation

C benchmarks:
    icl -Qvc9 -Qstd=c99

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Base Compiler Invocation (Continued)

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:
```
-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
```

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

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CPU2006 license: 13	**Test date:** Apr-2011
Test sponsor: Intel Corporation	**Hardware Availability:** Mar-2011
Tested by: Intel Corporation	**Software Availability:** Apr-2011

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 shlW64M.lib
-link /FORCE:MULTIPLE

447.dealII: -QxAVX(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: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qauto-ilp32 /F1000000000 shlW64M.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
shlW64M.lib   -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

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-revB.html
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12-winx64-revB.xml
http://www.spec.org/cpu2006/flags/Intel-Windows-Platform-Settings.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
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