



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®_rate2006 = 113

Intel DZ68DB motherboard (Intel Core i7-2600K)

SPECfp_rate_base2006 = 110

CPU2006 license: 13

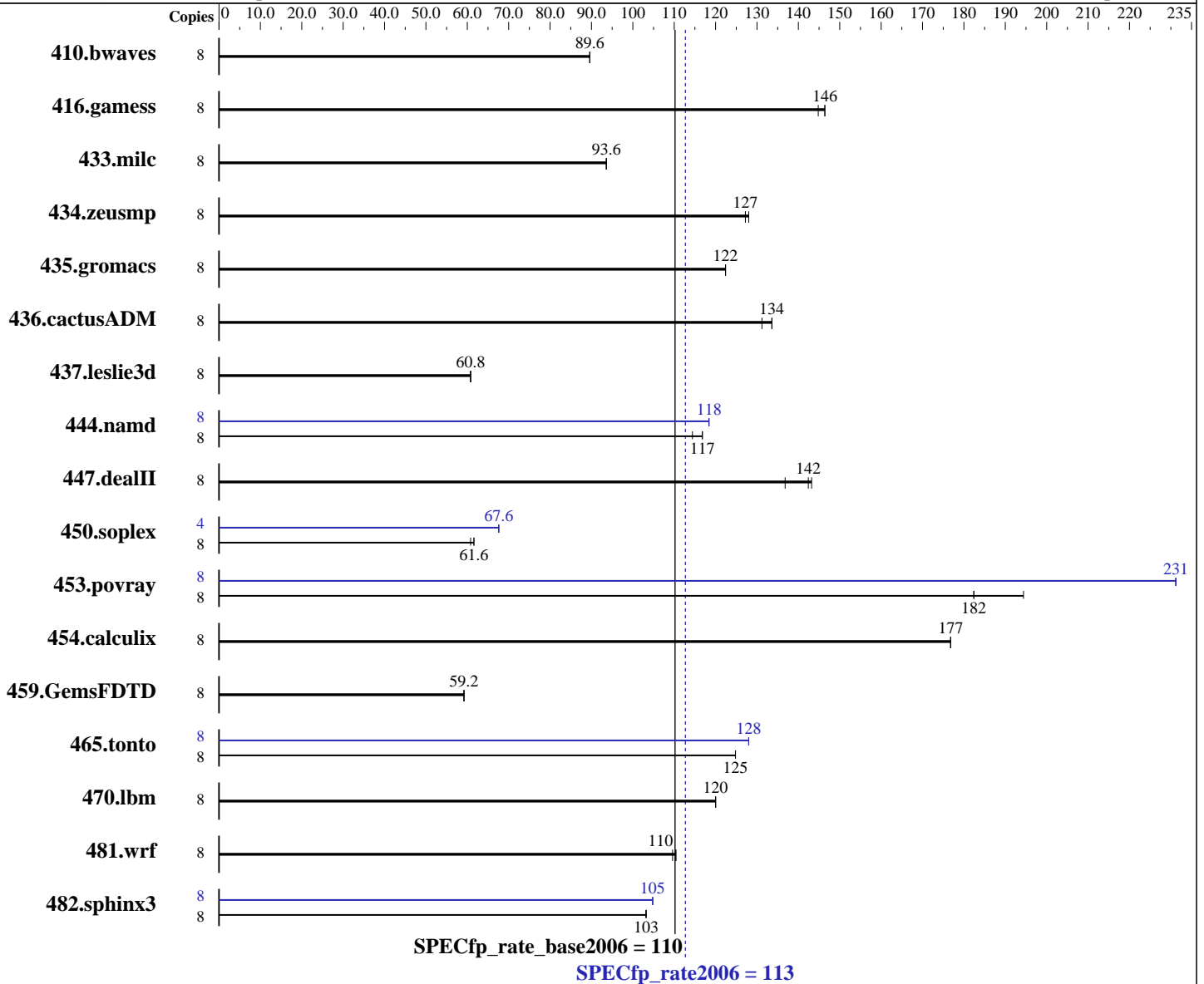
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Aug-2011

Hardware Availability: May-2011

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i7-2600K
 CPU Characteristics: Intel Turbo Boost Technology up to 3.8 GHz
 CPU MHz: 3401
 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

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Software

Operating System: Windows 7 Ultimate (64-bit)
 Microsoft Windows 7 Ultimate
 6.1.7601 Service Pack 1 Build 7601
 Compiler: C/C++: Version 12.1.0.229 of Intel C++ Studio XE for Windows;
 Fortran: Version 12.1.0.229 of Intel Fortran Studio XE for Windows;
 Libraries: Version 15.00.30729.01 of Microsoft Visual Studio 2008 Professional SP1

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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: 1 TB Seagate SATA, 7200 RPM
 Other Hardware: None

Auto Parallel: No
 File System: NTFS
 System State: Default
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap Library Version 9.01

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	1212	89.6	1212	89.6	1212	89.6	8	1212	89.6	1212	89.6	1212	89.6
416.gamess	8	1085	145	1068	146	1070	146	8	1085	145	1068	146	1070	146
433.milc	8	782	93.6	782	93.6	782	93.6	8	782	93.6	782	93.6	782	93.6
434.zeusmp	8	571	127	571	127	569	128	8	571	127	571	127	569	128
435.gromacs	8	468	122	468	122	468	122	8	468	122	468	122	468	122
436.cactusADM	8	715	134	729	131	716	134	8	715	134	729	131	716	134
437.leslie3d	8	1233	60.8	1235	60.8	1234	60.8	8	1233	60.8	1235	60.8	1234	60.8
444.namd	8	549	117	561	114	548	117	8	543	118	543	118	542	118
447.dealII	8	645	142	668	137	638	143	8	645	142	668	137	638	143
450.soplex	8	1086	61.6	1087	61.6	1094	60.8	4	494	67.6	495	67.6	494	67.6
453.povray	8	219	194	233	182	234	182	8	184	231	184	231	184	231
454.calculix	8	373	177	373	177	373	177	8	373	177	373	177	373	177
459.GemsFDTD	8	1432	59.2	1432	59.2	1432	59.2	8	1432	59.2	1432	59.2	1432	59.2
465.tonto	8	633	125	631	125	631	125	8	615	128	614	128	614	128
470.lbm	8	917	120	917	120	917	120	8	917	120	917	120	917	120
481.wrf	8	812	110	811	110	813	110	8	812	110	811	110	813	110
482.sphinx3	8	1508	103	1507	103	1507	103	8	1489	105	1491	105	1488	105

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

Compiler Invocation Notes

ipsxe-comp-vars batch file invoked with intel64

Submit Notes

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

Platform Notes

Sysinfo program D:\CPU200~1.17A\Docs\sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on CltE06995ABEA80 Wed Aug 24 20:18:31 2011

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Platform Notes (Continued)

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: <http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

Trying 'systeminfo'

```
OS Name       : Microsoft Windows 7 Ultimate
OS Version    : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: INTEL_
System Model   : DZ68DB__
Processor(s)  : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 42 Stepping 7 GenuineIntel ~3401 Mhz
BIOS Version  : Intel Corp. DBZ6810H.86A.0014.2011.0413.1049, 4/13/2011
Total Physical Memory: 8,099 MB
```

Trying 'wmic cpu get /value'

```
DeviceID      : CPU0
L2CacheSize   : 1024
L3CacheSize   : 8192
MaxClockSpeed : 3401
Name          : Intel(R) Core(TM) i7-2600K CPU @ 3.40GHz
NumberOfCores : 4
NumberOfLogicalProcessors: 8
```

(End of data from sysinfo program)

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
```

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Base Compiler Invocation (Continued)

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

```

C++ benchmarks:

```

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

```

Fortran benchmarks:

```

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

```

Benchmarks using both Fortran and C:

```

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

```



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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.dealII: basepeak = yes

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:

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Peak Optimization Flags (Continued)

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-ic12.1-official-windows.html>

<http://www.spec.org/cpu2006/flags/Intel-Platform-Settings-V1.2-revA.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.xml>

<http://www.spec.org/cpu2006/flags/Intel-Platform-Settings-V1.2-revA.xml>

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For other inquiries, please contact webmaster@spec.org.

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