



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®2006 = **63.5**

Intel DH67BL motherboard (Intel Core i7-2700K)

SPECfp_base2006 = **61.4**

CPU2006 license: 13

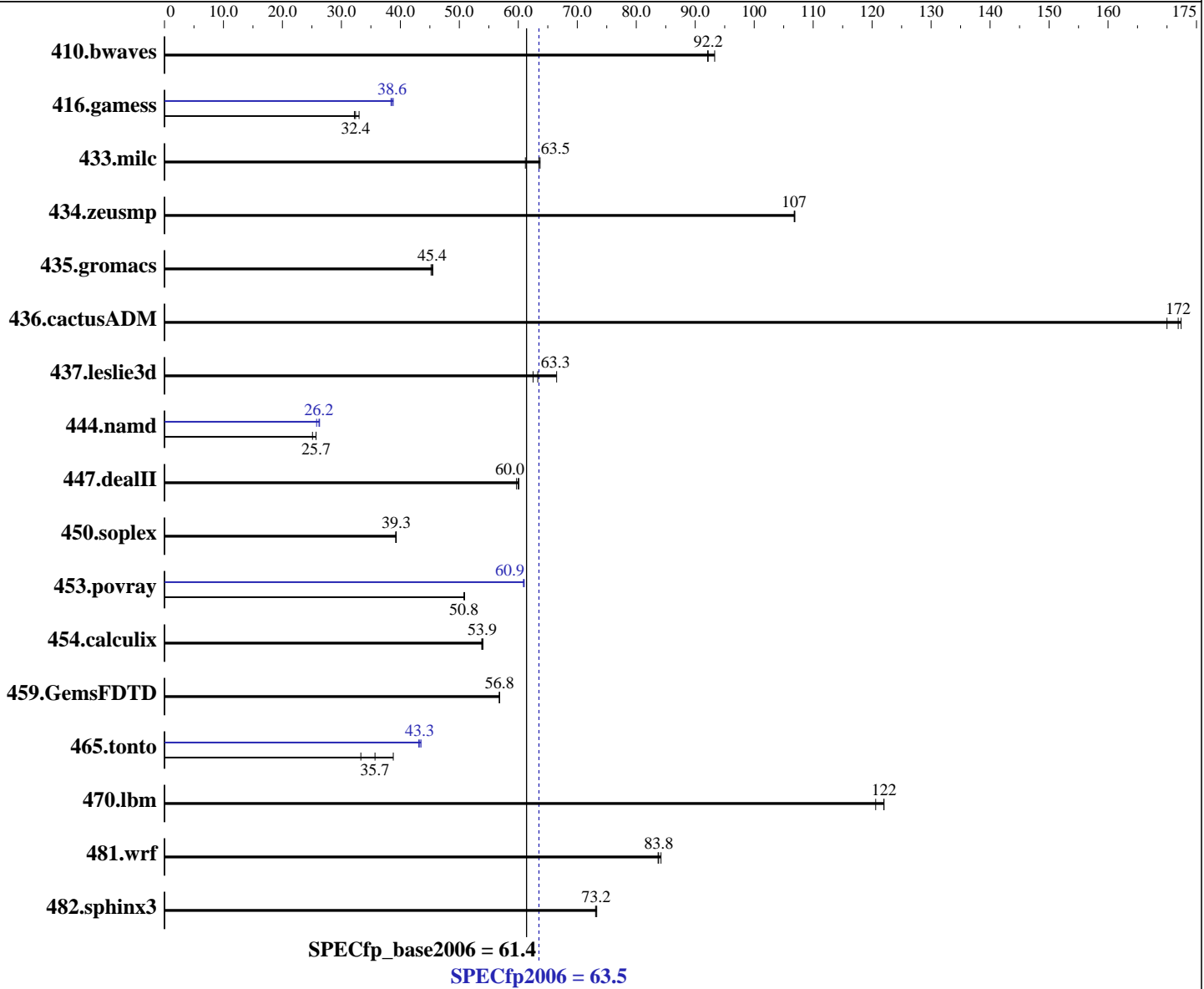
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2014

Hardware Availability: Dec-2012

Software Availability: Oct-2013



Hardware

CPU Name: Intel Core i7-2700K
 CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
 CPU MHz: 3500
 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: Microsoft Windows 8.1 Pro
 6.3.9600 N/A Build 9600
 Compiler: C/C++: Version 14.0.1.139 of Intel C++ Studio XE for Windows;
 Fortran: Version 14.0.1.139 of Intel Fortran Studio XE for Windows;
 Libraries: Version 16.00.30319.01 of Microsoft Visual Studio 2010 Professional SP1
 Auto Parallel: Yes

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L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 GB (2 x 4 GB 2Rx4 PC3-10600U-9)
 Disk Subsystem: 180 GB Intel SSD 530
 Other Hardware: None

File System: NTFS
 System State: Default
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: SmartHeap Library Version 10.0 from <http://www.microquill.com/>

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	146	93.3	148	92.1	147	92.2	146	93.3	148	92.1	147	92.2
416.gamess	593	33.0	604	32.4	609	32.2	511	38.4	505	38.8	507	38.6
433.milc	150	61.2	144	63.7	145	63.5	150	61.2	144	63.7	145	63.5
434.zeusmp	85.1	107	85.2	107	85.2	107	85.1	107	85.2	107	85.2	107
435.gromacs	157	45.5	158	45.2	157	45.4	157	45.5	158	45.2	157	45.4
436.cactusADM	69.5	172	69.3	172	70.3	170	69.5	172	69.3	172	70.3	170
437.leslie3d	148	63.3	141	66.5	150	62.5	148	63.3	141	66.5	150	62.5
444.namd	312	25.7	313	25.7	320	25.1	305	26.3	306	26.2	311	25.8
447.dealII	191	60.0	192	59.7	191	60.1	191	60.0	192	59.7	191	60.1
450.soplex	213	39.2	212	39.3	212	39.3	213	39.2	212	39.3	212	39.3
453.povray	105	50.9	105	50.8	105	50.8	87.4	60.9	87.2	61.0	87.3	60.9
454.calculix	153	53.9	153	54.0	153	53.8	153	53.9	153	54.0	153	53.8
459.GemsFDTD	187	56.8	187	56.8	187	56.8	187	56.8	187	56.8	187	56.8
465.tonto	275	35.7	253	38.8	295	33.3	229	43.1	227	43.3	226	43.5
470.lbm	113	122	113	122	114	121	113	122	113	122	114	121
481.wrf	133	83.7	133	84.2	133	83.8	133	83.7	133	84.2	133	83.8
482.sphinx3	267	73.1	266	73.3	266	73.2	267	73.1	266	73.3	266	73.2

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

Compiler Invocation Notes

To compile these binaries, the Intel Compiler 14.0 was set up to generate 64-bit binaries with the command:
 "ipsxe-comp-vars.bat intel64 vs2010" (shortcut provided in the Intel(r) Parallel Studio XE 2013 program folder)

Platform Notes

Sysinfo program C:\SPEC14.0\Docs\sysinfo
 \$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
 running on IVB9600 Wed May 28 22:13:03 2014

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

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Platform Notes (Continued)

<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

Trying 'systeminfo'

```

OS Name       : Microsoft Windows 8.1 Pro
OS Version    : 6.3.9600 N/A Build 9600
System Manufacturer: INTEL_
System Model   : DH67BL__
Processor(s)  : 1 Processor(s) Installed.
               [01]: Intel64 Family 6 Model 42 Stepping 7 GenuineIntel ~3501 Mhz
BIOS Version  : Intel Corp. BLH6710H.86A.0160.2012.1204.1156, 12/4/2012
Total Physical Memory: 8,099 MB

```

Trying 'wmic cpu get /value'

```

DeviceID      : CPU0
L2CacheSize   : 1024
L3CacheSize   : 8192
MaxClockSpeed : 3501
Name          : Intel(R) Core(TM) i7-2700K CPU @ 3.50GHz
NumberOfCores : 4
NumberOfLogicalProcessors: 8

```

(End of data from sysinfo program)

BIOS: SATA mode set to RAID

Windows Disk Driver: Intel Rapid Storage Technology 12.0.1.1019

Component Notes

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

General Notes

```

OMP_NUM_THREADS set to number of processors cores
KMP_AFFINITY set to granularity=fine,scatter
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 -Qvc10 -Qstd=c99
```

C++ benchmarks:

```
icl -Qvc10
```

Fortran benchmarks:

```
ifort
```

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Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

```
icl -Qvc10 -Qstd=c99 ifort
```

Base Portability Flags

```

410.bwaves: -DSPEC_CPU_P64
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
-Qoption,cpp,--ms_incompat_treatment_of_commas_in_macros
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_NEED_INVHYP -DNEED_INVHYP
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- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000
```

C++ benchmarks:

```
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qcxx-features -Qauto-ilp32 /F1000000000 shlW64M.lib
-link /FORCE:MULTIPLE
```

Fortran benchmarks:

```
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
/F1000000000
```

Benchmarks using both Fortran and C:

```
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000
```



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Peak Compiler Invocation

C benchmarks:

icl -Qvc10 -Qstd=c99

C++ benchmarks:

icl -Qvc10

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc10 -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: basepeak = yes

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: basepeak = yes

450.soplex: basepeak = yes

453.povray: -QxAVX(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: basepeak = yes

416.gamess: -QxAVX(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep-
/F1000000000

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Peak Optimization Flags (Continued)

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 -Qinline-calloc
/F1000000000

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic14.0-official-windows.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-windows.xml>

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

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