



SPEC® CFP2006 Result

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Intel Corporation

SPECfp®2006 = **49.3**

Intel DH77KC motherboard (Intel Core i5-3470T)

SPECfp_base2006 = **46.5**

CPU2006 license: 13

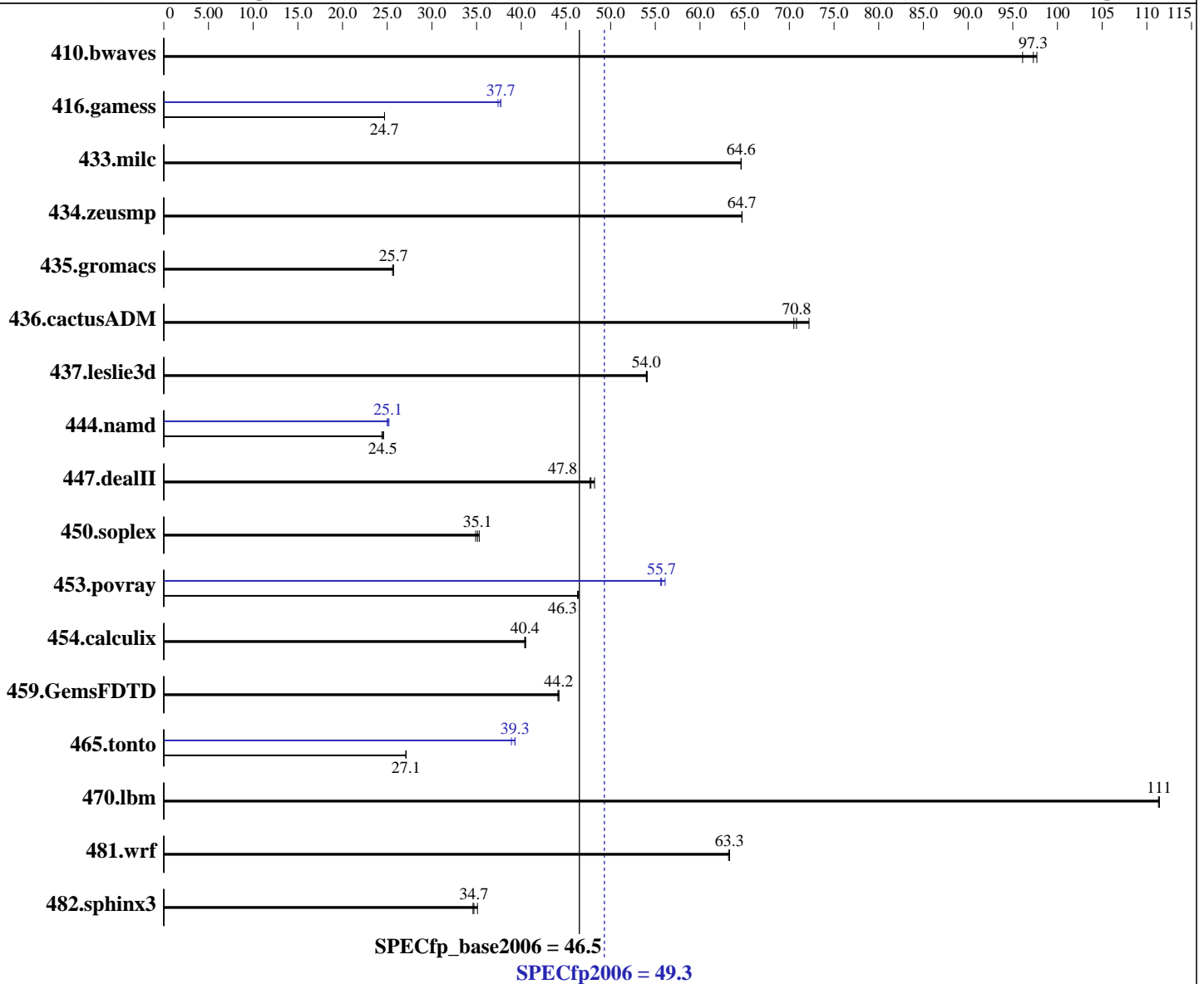
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2012

Hardware Availability: Apr-2012

Software Availability: Apr-2011



Hardware

CPU Name: Intel Core i5-3470T
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 2900
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 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 7 Ultimate (64-bit)
 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
 Auto Parallel: Yes
 File System: NTFS

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L3 Cache: 3 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 GB (2 x 4 GB 2Rx4 PC3-12800U-11)
 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	139	97.7	140	97.3	141	96.1	139	97.7	140	97.3	141	96.1
416.gamess	792	24.7	792	24.7	792	24.7	520	37.7	524	37.4	519	37.7
433.milc	142	64.6	142	64.6	142	64.6	142	64.6	142	64.6	142	64.6
434.zeusmp	141	64.7	141	64.7	141	64.7	141	64.7	141	64.7	141	64.7
435.gromacs	278	25.7	277	25.7	279	25.6	278	25.7	277	25.7	279	25.6
436.cactusADM	169	70.8	166	72.2	169	70.5	169	70.8	166	72.2	169	70.5
437.leslie3d	174	54.1	174	54.0	174	54.0	174	54.1	174	54.0	174	54.0
444.namd	326	24.6	328	24.5	329	24.4	320	25.0	318	25.2	320	25.1
447.dealII	237	48.2	239	47.8	240	47.7	237	48.2	239	47.8	240	47.7
450.soplex	236	35.3	238	35.1	239	34.9	236	35.3	238	35.1	239	34.9
453.povray	115	46.3	115	46.3	115	46.4	95.6	55.6	94.8	56.1	95.5	55.7
454.calculix	204	40.4	204	40.4	204	40.5	204	40.4	204	40.4	204	40.5
459.GemsFDTD	241	44.1	240	44.2	240	44.2	241	44.1	240	44.2	240	44.2
465.tonto	363	27.1	364	27.1	364	27.1	251	39.3	250	39.3	253	38.9
470.lbm	123	111	123	111	124	111	123	111	123	111	124	111
481.wrf	177	63.3	177	63.3	177	63.2	177	63.3	177	63.3	177	63.2
482.sphinx3	562	34.7	555	35.1	563	34.6	562	34.7	555	35.1	563	34.6

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 was set up to generate 64-bit binaries with the command: "ipsxe-comp-vars.bat intel64 vs2008" (shortcut provided in the Intel(r) Parallel Studio XE 2011 program folder)

Platform Notes

Sysinfo program C:\CPU200~1.17A\Docs\sysinfo
 \$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
 running on CltE840F20AA0BD Tue May 15 22:57:33 2012

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'

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Platform Notes (Continued)

OS Name : Microsoft Windows 7 Ultimate
 OS Version : 6.1.7601 Service Pack 1 Build 7601
 System Manufacturer: INTEL_
 System Model : DH77KC__
 Processor(s) : 1 Processor(s) Installed.
 [01]: Intel64 Family 6 Model 58 Stepping 9 GenuineIntel ~2901 Mhz
 BIOS Version : Intel Corp. KCH7710H.86A.0069.2012.0224.1825, 2/24/2012
 Total Physical Memory: 8,090 MB

```
Trying 'wmic cpu get /value'
DeviceID : CPU0
L2CacheSize : 512
L3CacheSize : 3072
MaxClockSpeed : 2901
Name : Intel(R) Core(TM) i5-3470T CPU @ 2.90GHz
NumberOfCores : 2
NumberOfLogicalProcessors: 4
```

(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

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 -Qvc9 -Qstd=c99

C++ benchmarks:
 icl -Qvc9

Fortran benchmarks:
 ifort

Benchmarks using both Fortran and C:
 icl -Qvc9 -Qstd=c99 ifort



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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- -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

```

Peak Compiler Invocation

C benchmarks:

```

icl -Qvc9 -Qstd=c99

```

C++ benchmarks:

```

icl -Qvc9

```

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Peak Compiler Invocation (Continued)

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: 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

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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Peak Optimization Flags (Continued)

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-ic12.1-official-windows.20120117.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-windows.20120117.xml>

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

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