



# SPEC® CFP2006 Result

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ASUSTeK Computer Inc.  
(Test Sponsor: Intel Corporation)

SPECfp®2006 = 29.3

Asus P6T Deluxe (Intel Core i7-920)

SPECfp\_base2006 = 27.7

CPU2006 license: 13

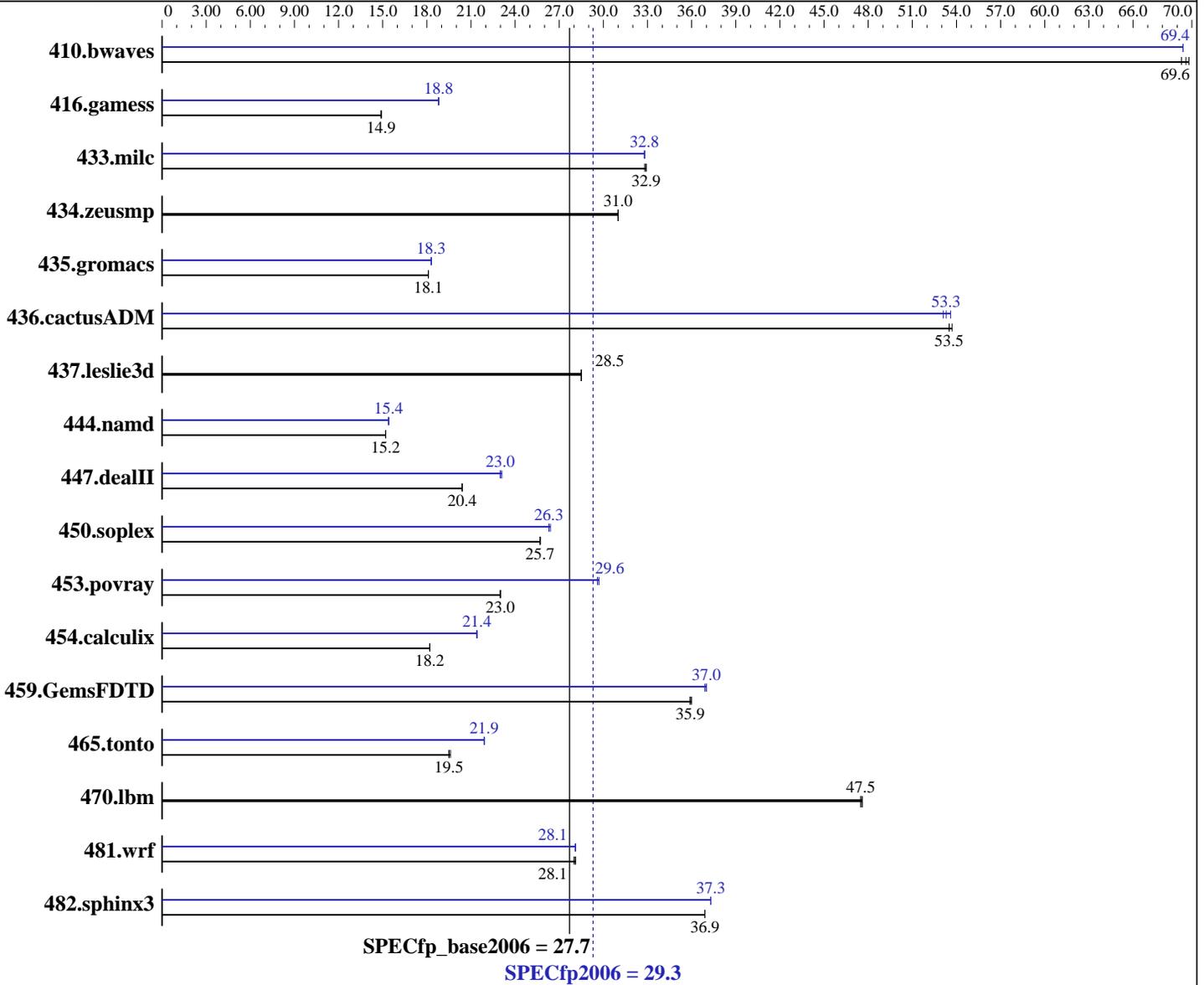
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2008

Hardware Availability: Nov-2008

Software Availability: Nov-2008



## Hardware

CPU Name: Intel Core i7-920  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.93 GHz  
 CPU MHz: 2667  
 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 Vista Ultimate w/ SP1 (64-bit)  
 Compiler: Intel C++ Compiler Professional 11.0 for IA32  
 Build 20080930 Package ID: w\_cproc\_p\_11.0.054  
 Intel Visual Fortran Compiler Professional 11.0 for IA32  
 Build 20080930 Package ID: w\_cprof\_p\_11.0.054  
 Microsoft Visual Studio 2008 (for libraries)  
 Auto Parallel: Yes  
 File System: NTFS

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L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 12 GB (6 x 2GB Samsung M378B5673DZ1-CF8 DDR3-1066 CL7)  
Disk Subsystem: 80 GB Intel X-25M SATA Solid-State Drive  
Other Hardware: None

System State: Default  
Base Pointers: 32-bit  
Peak Pointers: 32-bit  
Other Software: SmartHeap Library Version 8.1 from <http://www.microquill.com/>

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	196	69.3	<b>195</b>	<b>69.6</b>	195	69.8	196	69.4	196	69.4	<b>196</b>	<b>69.4</b>
416.gamess	1314	14.9	<b>1312</b>	<b>14.9</b>	1311	14.9	1043	18.8	<b>1043</b>	<b>18.8</b>	1041	18.8
433.milc	279	32.9	<b>279</b>	<b>32.9</b>	280	32.8	280	32.8	280	32.8	<b>280</b>	<b>32.8</b>
434.zeusmp	<b>294</b>	<b>31.0</b>	294	31.0	293	31.0	<b>294</b>	<b>31.0</b>	294	31.0	293	31.0
435.gromacs	394	18.1	395	18.1	<b>395</b>	<b>18.1</b>	391	18.3	<b>391</b>	<b>18.3</b>	391	18.3
436.cactusADM	223	53.5	223	53.7	<b>223</b>	<b>53.5</b>	225	53.1	<b>224</b>	<b>53.3</b>	223	53.6
437.leslie3d	329	28.5	<b>330</b>	<b>28.5</b>	330	28.5	329	28.5	<b>330</b>	<b>28.5</b>	330	28.5
444.namd	526	15.2	<b>526</b>	<b>15.2</b>	526	15.2	<b>522</b>	<b>15.4</b>	522	15.4	522	15.4
447.dealII	560	20.4	<b>560</b>	<b>20.4</b>	560	20.4	496	23.1	497	23.0	<b>497</b>	<b>23.0</b>
450.soplex	325	25.7	<b>324</b>	<b>25.7</b>	324	25.7	316	26.4	317	26.3	<b>317</b>	<b>26.3</b>
453.povray	231	23.0	231	23.0	<b>231</b>	<b>23.0</b>	179	29.7	180	29.6	<b>180</b>	<b>29.6</b>
454.calculix	<b>453</b>	<b>18.2</b>	452	18.2	453	18.2	386	21.4	<b>386</b>	<b>21.4</b>	386	21.4
459.GemsFDTD	295	36.0	<b>296</b>	<b>35.9</b>	296	35.9	287	37.0	287	36.9	<b>287</b>	<b>37.0</b>
465.tonto	503	19.6	<b>503</b>	<b>19.5</b>	504	19.5	450	21.9	450	21.9	<b>450</b>	<b>21.9</b>
470.lbm	<b>289</b>	<b>47.5</b>	289	47.5	289	47.6	<b>289</b>	<b>47.5</b>	289	47.5	289	47.6
481.wrf	399	28.0	<b>398</b>	<b>28.1</b>	398	28.1	397	28.1	<b>398</b>	<b>28.1</b>	398	28.1
482.sphinx3	528	36.9	<b>528</b>	<b>36.9</b>	528	36.9	522	37.3	522	37.3	<b>522</b>	<b>37.3</b>

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

## General Notes

Tested systems can be used with Shin-G ATX case,  
PC Power and Cooling 1200W power supply  
System was configured with nVidia GTX 280 discrete graphics card  
Binaries were built on Windows Vista Ultimate (32-bit)  
OMP\_NUM\_THREADS set to number of logical processors as seen by the OS  
KMP\_AFFINITY set to physical,0

## Base Compiler Invocation

C benchmarks:  
icl -Qvc9 -Qc99

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## Base Compiler Invocation (Continued)

C++ benchmarks:  
icl -Qvc9  
  
Fortran benchmarks:  
ifort  
  
Benchmarks using both Fortran and C:  
icl -Qvc9 -Qc99 ifort

## Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore  
444.namd: -TP  
447.dealII: -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
453.povray: -DSPEC\_CPU\_WINDOWS\_ICL  
454.calculix: -DSPEC\_CPU\_NOZMODIFIER -Qlowercase  
481.wrf: -DSPEC\_CPU\_WINDOWS\_ICL

## Base Optimization Flags

C benchmarks:  
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qopt-prefetch  
/F1000000000  
  
C++ benchmarks:  
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qopt-prefetch  
-Qcxx-features /F1000000000 shlw32m.lib  
-link /FORCE:MULTIPLE  
  
Fortran benchmarks:  
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qopt-prefetch  
/F1000000000  
  
Benchmarks using both Fortran and C:  
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qparallel -Qopt-prefetch  
/F1000000000

## Peak Compiler Invocation

C benchmarks:  
icl -Qvc9 -Qc99  
  
C++ benchmarks:  
icl -Qvc9

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## Peak Compiler Invocation (Continued)

Fortran benchmarks:  
ifort

Benchmarks using both Fortran and C:  
icl -Qvc9 -Qc99 ifort

## Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore  
444.namd: -TP  
447.dealII: -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
453.povray: -DSPEC\_CPU\_WINDOWS\_ICL  
454.calculix: -DSPEC\_CPU\_NOZMODIFIER -Qlowercase  
481.wrf: -DSPEC\_CPU\_WINDOWS\_ICL

## Peak Optimization Flags

C benchmarks:

433.milc: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Oa /F1000000000

470.lbm: basepeak = yes

482.sphinx3: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll2 /F1000000000

C++ benchmarks:

444.namd: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Oa /F1000000000 shlw32m.lib  
-link /FORCE:MULTIPLE

447.dealII: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qunroll2 -Qopt-prefetch  
-Qansi-alias -Qscalar-rep- /F1000000000 shlw32m.lib  
-link /FORCE:MULTIPLE

450.soplex: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- /F1000000000 shlw32m.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 /F1000000000  
shlw32m.lib -link /FORCE:MULTIPLE

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## Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel /F1000000000

416.gamess: -QxSSE4.2(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

459.GemsFDTD: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qopt-prefetch -Qparallel /F1000000000

465.tonto: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 -Qauto /F1000000000

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 /F1000000000

436.cactusADM: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Qopt-prefetch -Qparallel /F1000000000

454.calculix: -QxSSE4.2 -Qipo -O3 -Qprec-div- /F1000000000

481.wrf: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel /F1000000000

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.20090713.html>

<http://www.spec.org/cpu2006/flags/Intel-Win32-Platform.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-win32-revA.20090713.xml>

<http://www.spec.org/cpu2006/flags/Intel-Win32-Platform.xml>



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