



# SPEC<sup>®</sup> CFP2006 Result

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## ASUSTeK Computer Inc.

## SPECfp<sup>®</sup>\_rate2006 = 78.9

### Asus P6T Deluxe (Intel Core i7-920)

## SPECfp\_rate\_base2006 = 76.0

CPU2006 license: 13

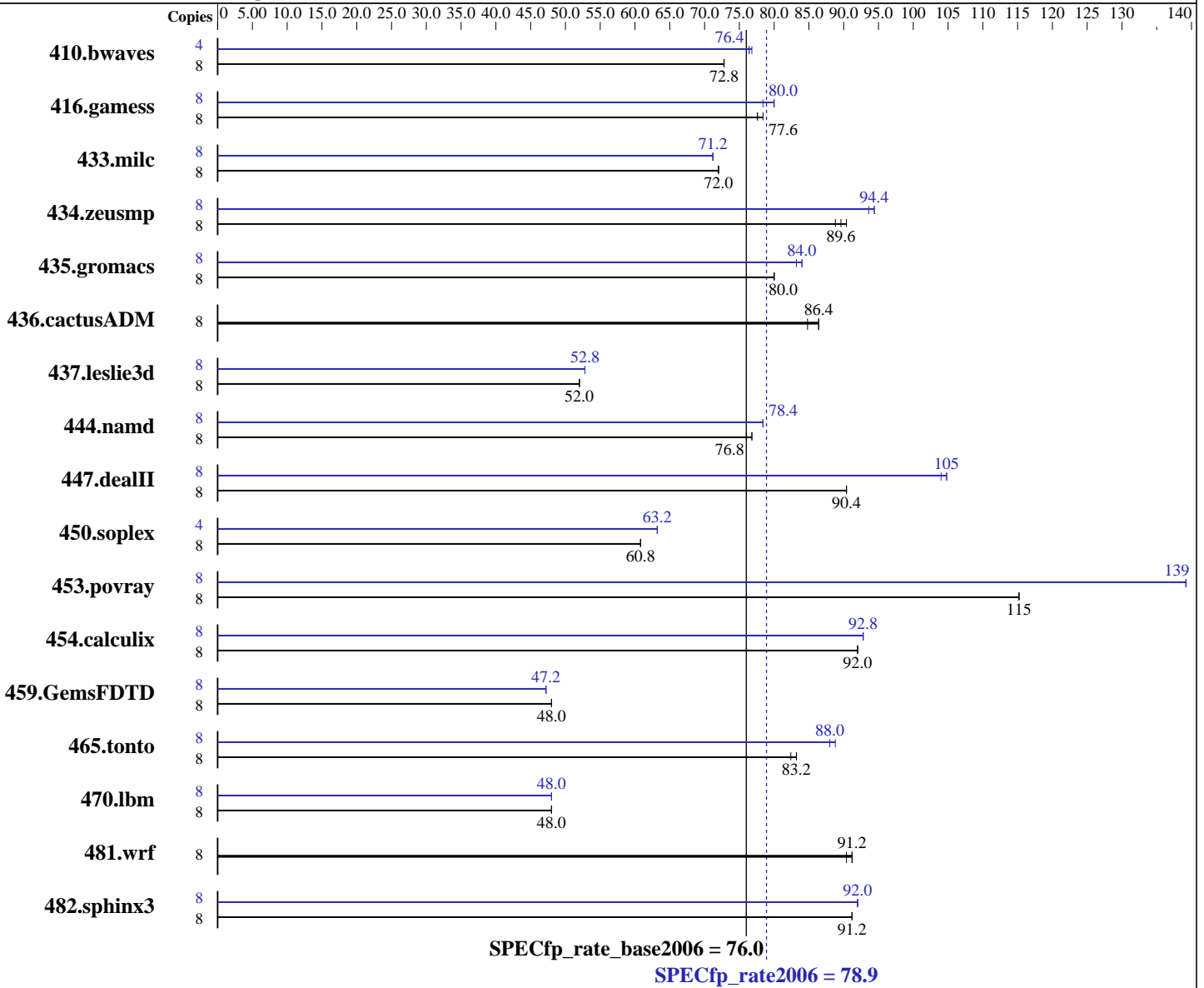
Test sponsor: Intel Corporation

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: No  
 File System: NTFS

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## Hardware (Continued)

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

## Software (Continued)

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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	1489	72.8	1488	72.8	<b>1488</b>	<b>72.8</b>	4	710	76.4	<b>710</b>	<b>76.4</b>	709	76.8
416.gamess	8	1994	78.4	2017	77.6	<b>2013</b>	<b>77.6</b>	8	<b>1965</b>	<b>80.0</b>	2001	78.4	1965	80.0
433.milc	8	1025	72.0	1025	72.0	<b>1025</b>	<b>72.0</b>	8	<b>1026</b>	<b>71.2</b>	1026	71.2	1026	71.2
434.zeusmp	8	<b>813</b>	<b>89.6</b>	821	88.8	804	90.4	8	<b>774</b>	<b>94.4</b>	776	93.6	773	94.4
435.gromacs	8	717	80.0	<b>715</b>	<b>80.0</b>	714	80.0	8	686	83.2	682	84.0	<b>683</b>	<b>84.0</b>
436.cactusADM	8	1133	84.8	<b>1107</b>	<b>86.4</b>	1104	86.4	8	1133	84.8	<b>1107</b>	<b>86.4</b>	1104	86.4
437.leslie3d	8	<b>1437</b>	<b>52.0</b>	1437	52.0	1437	52.0	8	1433	52.8	<b>1433</b>	<b>52.8</b>	1433	52.8
444.namd	8	843	76.0	<b>838</b>	<b>76.8</b>	838	76.8	8	820	78.4	<b>819</b>	<b>78.4</b>	819	78.4
447.dealII	8	1013	90.4	<b>1012</b>	<b>90.4</b>	1012	90.4	8	874	105	879	104	<b>874</b>	<b>105</b>
450.soplex	8	<b>1100</b>	<b>60.8</b>	1100	60.8	1099	60.8	4	528	63.2	<b>528</b>	<b>63.2</b>	527	63.2
453.povray	8	<b>369</b>	<b>115</b>	368	115	370	115	8	<b>306</b>	<b>139</b>	306	139	306	139
454.calculix	8	717	92.0	<b>716</b>	<b>92.0</b>	715	92.0	8	710	92.8	709	92.8	<b>709</b>	<b>92.8</b>
459.GemsFDTD	8	1776	48.0	1771	48.0	<b>1771</b>	<b>48.0</b>	8	<b>1786</b>	<b>47.2</b>	1784	47.2	1795	47.2
465.tonto	8	<b>949</b>	<b>83.2</b>	948	83.2	955	82.4	8	<b>891</b>	<b>88.0</b>	890	88.8	891	88.0
470.lbm	8	2303	48.0	<b>2303</b>	<b>48.0</b>	2303	48.0	8	<b>2303</b>	<b>48.0</b>	2303	48.0	2303	48.0
481.wrf	8	985	90.4	<b>981</b>	<b>91.2</b>	980	91.2	8	985	90.4	<b>981</b>	<b>91.2</b>	980	91.2
482.sphinx3	8	1703	91.2	<b>1703</b>	<b>91.2</b>	1705	91.2	8	1697	92.0	1698	92.0	<b>1697</b>	<b>92.0</b>

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.

## 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)



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## Compiler Invocation

C benchmarks:

icl -Qvc9 -Qc99

C++ benchmarks:

icl -Qvc9

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc9 -Qc99 ifort

## 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- -Qopt-prefetch /F1000000000

C++ benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features  
/F1000000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

Benchmarks using both Fortran and C:

-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

## 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

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## Peak Optimization Flags (Continued)

470.lbm: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch  
/F1000000000

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 -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

### Fortran benchmarks:

410.bwaves: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch  
/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: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- /F1000000000

437.leslie3d: -QxSSE4.2(pass 2) -Qprof\_gen(pass 1) -Qprof\_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

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

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## Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

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

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-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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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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