



# SPEC® CFP2006 Result

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**Intel Corporation**

**SPECfp®2006 = 22.3**

Asus P5E3 Deluxe (Intel Core 2 Extreme QX9650)

**SPECfp\_base2006 = 21.4**

CPU2006 license: 13

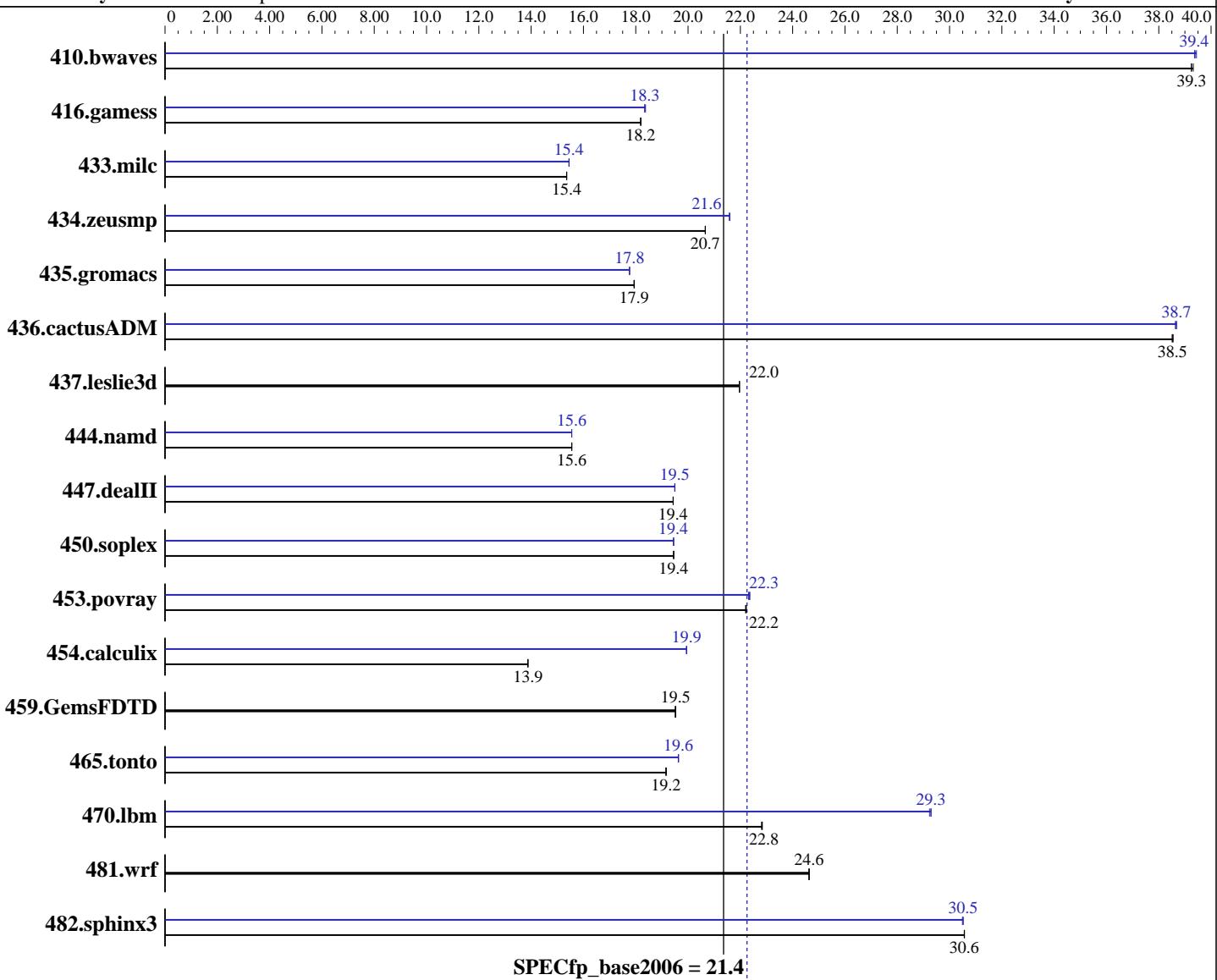
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007



## Hardware

CPU Name: Intel Core 2 Extreme QX9650  
 CPU Characteristics: 3.00 GHz 1333 MHz FSB  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip  
 CPU(s) orderable: 1 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

## Software

Operating System: Windows Vista64 Ultimate  
 Compiler: Intel C++ Compiler for IA32 version 10.1 Build 20070913 Package ID: w\_cc\_p\_10.1.011  
 Intel Fortran Compiler for IA32 version 10.1 Build 20070913 Package ID: w\_fc\_p\_10.1.011  
 Microsoft Visual Studio 2005 SP1 (for libraries)  
 Auto Parallel: Yes  
 File System: NTFS  
 System State: Default

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L3 Cache:	None	Base Pointers:	32-bit
Other Cache:	None	Peak Pointers:	32-bit
Memory:	4 GB (4x1GB Corsair TWIN3X2048-1333C9DHX DDR3-1333 CL9)	Other Software:	SmartHeap Library Version 8.1 from <a href="http://www.microquill.com/">http://www.microquill.com/</a>
Disk Subsystem:	Seagate 320GB NCQ SATA, 16MB cache, 7200 RPM		
Other Hardware:	None		

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<b>346</b>	<b>39.3</b>	346	39.2	346	39.3	<b>345</b>	39.4	<b>345</b>	<b>39.4</b>	345	39.4
416.gamess	1076	18.2	1077	18.2	<b>1076</b>	<b>18.2</b>	<b>1067</b>	<b>18.3</b>	1067	18.3	1066	18.4
433.milc	597	15.4	598	15.4	<b>598</b>	<b>15.4</b>	<b>594</b>	<b>15.4</b>	594	15.4	594	15.5
434.zeusmp	440	20.7	440	20.7	<b>440</b>	<b>20.7</b>	422	21.6	422	21.6	<b>422</b>	<b>21.6</b>
435.gromacs	398	17.9	398	17.9	<b>398</b>	<b>17.9</b>	<b>402</b>	<b>17.8</b>	402	17.8	402	17.8
436.cactusADM	<b>310</b>	<b>38.5</b>	310	38.5	310	38.5	309	38.7	309	38.6	<b>309</b>	<b>38.7</b>
437.leslie3d	<b>428</b>	<b>22.0</b>	428	22.0	428	22.0	<b>428</b>	<b>22.0</b>	428	22.0	428	22.0
444.namd	516	15.6	<b>516</b>	<b>15.6</b>	516	15.6	516	15.6	<b>516</b>	<b>15.6</b>	516	15.6
447.dealII	589	19.4	589	19.4	<b>589</b>	<b>19.4</b>	587	19.5	<b>587</b>	<b>19.5</b>	587	19.5
450.soplex	<b>429</b>	<b>19.4</b>	429	19.5	429	19.4	429	19.4	<b>429</b>	<b>19.4</b>	429	19.5
453.povray	240	22.2	239	22.2	<b>240</b>	<b>22.2</b>	238	22.3	238	22.4	<b>238</b>	<b>22.3</b>
454.calculix	<b>594</b>	<b>13.9</b>	594	13.9	595	13.9	<b>414</b>	<b>19.9</b>	414	19.9	414	19.9
459.GemsFDTD	<b>543</b>	<b>19.5</b>	544	19.5	543	19.5	<b>543</b>	<b>19.5</b>	544	19.5	543	19.5
465.tonto	513	19.2	514	19.2	<b>514</b>	<b>19.2</b>	<b>501</b>	<b>19.6</b>	501	19.6	501	19.6
470.lbm	602	22.8	<b>602</b>	<b>22.8</b>	602	22.8	<b>469</b>	<b>29.3</b>	469	29.3	470	29.2
481.wrf	454	24.6	<b>453</b>	<b>24.6</b>	453	24.6	454	24.6	<b>453</b>	<b>24.6</b>	453	24.6
482.sphinx3	<b>638</b>	<b>30.6</b>	638	30.6	638	30.6	<b>639</b>	30.5	<b>639</b>	30.5	<b>639</b>	<b>30.5</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, Antec NeoPower 480W power supply Product description located as of 11/2007:

<http://www.asus.com/products.aspx?l1=3&l2=11&l3=572&l4=0&model=1872&modelmenu=1>

The system bus runs at 1333 MHz

System was configured with Asus EN8800GTX discrete graphics card

Binaries were built on Windows Vista32

The following VS 2005 SP1 updates were applied: KB926601 and KB932232

## Base Compiler Invocation

C benchmarks:

icl -Qvc8 -Qc99

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<b>CPU2006 license:</b> 13 <b>Test sponsor:</b> Intel Corporation <b>Tested by:</b> Intel Corporation	<b>Test date:</b> Nov-2007 <b>Hardware Availability:</b> Nov-2007 <b>Software Availability:</b> Nov-2007

## Base Compiler Invocation (Continued)

## C++ benchmarks:   *icl -Ovc8*

## Fortran benchmarks: ifort

Benchmarks using both Fortran and C:  
  `icl -Ovc8 -Oc99 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:

-fast -Qparallel /F1000000000 libguide40.lib

## C++ benchmarks:

```
-fast -Qparallel -Qcxx_features /F100000000000 shlw32m.lib  
libguide40.lib -link /FORCE:MULTIPLE
```

## Fortran benchmarks:

-fast -Qparallel /F1000000000 libguide40.lib

Benchmarks using both Fortran and C:

-fast -Qparallel /F100000000 libguide40.lib

## Peak Compiler Invocation

## C benchmarks:

icl -Qvc8 -Qc99

## C++ benchmarks:

icl -Qvc8

## Fortran benchmarks: ifort

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## Peak Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

  icl -Qvc8 -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: -fast -Qunroll12 -Oa /F1000000000 libguide40.lib  
470.lbm: -fast -Qunroll12 -Qscalar-rep- -Qprefetch /F1000000000 libguide40.lib  
482.sphinx3: -fast -Qunroll12 /F1000000000 libguide40.lib

C++ benchmarks:

444.namd: -fast -Oa -Qcxx\_features /F1000000000 shlw32m.lib  
libguide40.lib -link /FORCE:MULTIPLE  
447.dealII: -fast -Qunroll12 -Qprefetch -Qcxx\_features /F1000000000  
shlw32m.lib libguide40.lib -link /FORCE:MULTIPLE  
450.soplex: -fast -Qparallel -Qcxx\_features /F1000000000 shlw32m.lib  
libguide40.lib -link /FORCE:MULTIPLE  
453.povray: -fast -Qunroll4 -Qcxx\_features /F1000000000 shlw32m.lib  
libguide40.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: -fast -Qparallel -Qprefetch /F1000000000 libguide40.lib  
416.gamess: -fast -Qunroll12 -Ob0 -Qansi-alias -Qscalar-rep-  
/F1000000000 libguide40.lib  
434.zeusmp: -QxT -O2 -Qprec-div- -Qunroll0 -Qscalar-rep- /F1000000000  
libguide40.lib

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## Peak Optimization Flags (Continued)

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -fast -Qunroll14 -Qauto /F1000000000 libguide40.lib

Benchmarks using both Fortran and C:

435.gromacs: -fast -Oa -Qprefetch /F1000000000 libguide40.lib

436.cactusADM: -fast -Qunroll12 -Qparallel -Qprefetch /F1000000000 libguide40.lib

454.calculix: -fast -Qunroll-aggressive /F1000000000 libguide40.lib

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-ic10-ia32-intel64-linux-flags.20090714.09.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.09.xml>

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

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