



SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

SPECfp®_rate2006 = 52.0

Asus P5E3 Premium (Intel Core 2 Quad Q9450)

SPECfp_rate_base2006 = 50.0

CPU2006 license: 13

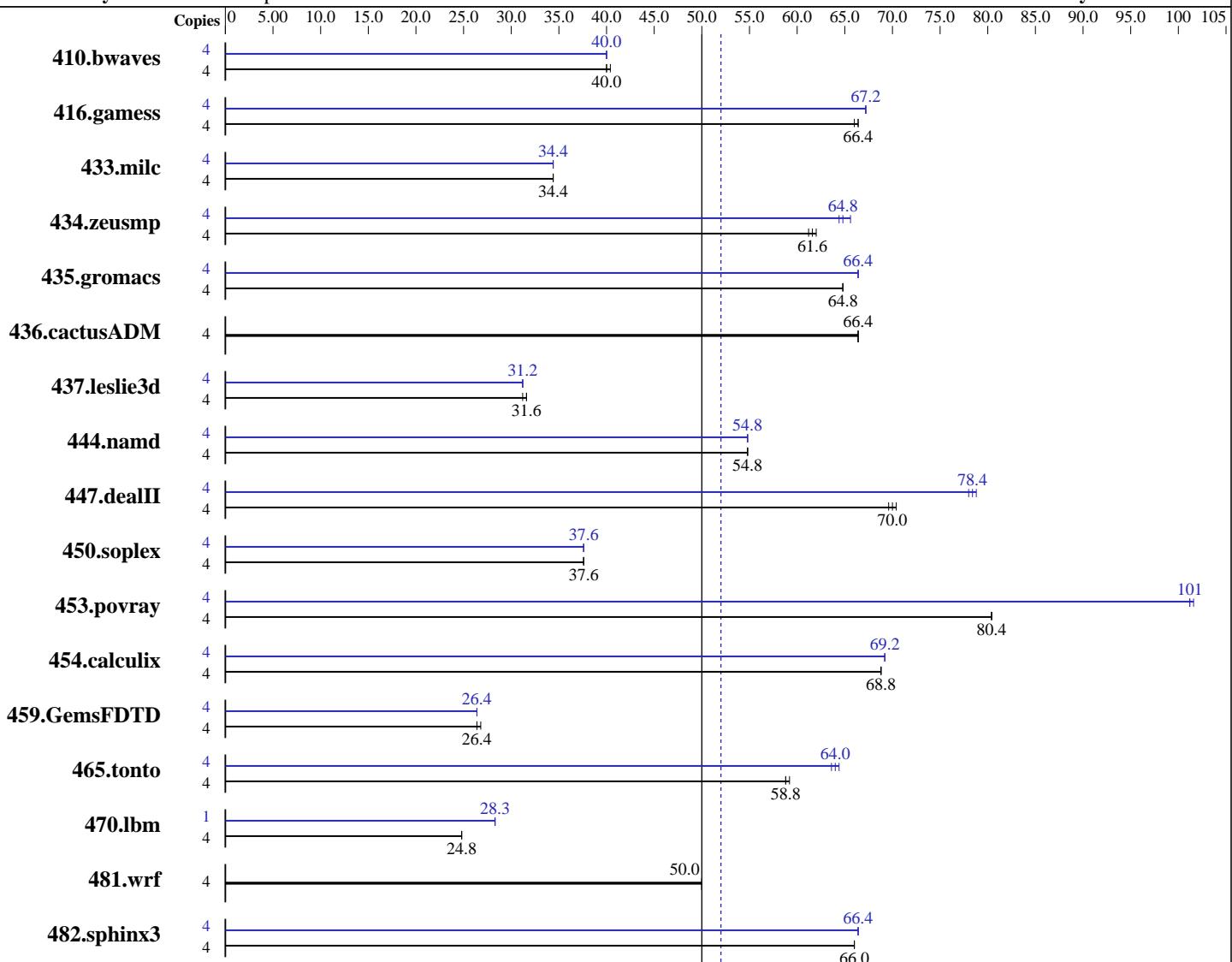
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Oct-2008

Hardware Availability: Apr-2008

Software Availability: Nov-2008



SPECfp_rate_base2006 = 50.0

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Hardware

CPU Name: Intel Core 2 Quad Q9450
 CPU Characteristics:
 CPU MHz: 2667
 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 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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L3 Cache:	None	System State:	Default
Other Cache:	None	Base Pointers:	32-bit
Memory:	4 GB (4 x 1GB Corsair CM3X1024-1333C9DHX DDR3-1333 CL9)	Peak Pointers:	32-bit
Disk Subsystem:	80 GB Intel X-25M SATA Solid-State Drive	Other Software:	SmartHeap Library Version 8.1 from http://www.microquill.com/
Other Hardware:	None		

Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1353	40.0	<u>1353</u>	40.0	1352	40.4	4	1352	40.0	<u>1353</u>	40.0	1353	40.0	1353	40.0
416.gamess	4	<u>1183</u>	66.4	1183	66.0	1182	66.4	4	<u>1164</u>	67.2	1165	67.2	1164	67.2	1164	67.2
433.milc	4	1070	34.4	<u>1070</u>	34.4	1070	34.4	4	1067	34.4	<u>1067</u>	34.4	1067	34.4	1067	34.4
434.zeusmp	4	595	61.2	<u>590</u>	61.6	587	62.0	4	566	64.4	<u>561</u>	64.8	554	65.6		
435.gromacs	4	<u>441</u>	64.8	441	64.8	441	64.8	4	431	66.4	<u>431</u>	66.4	431	66.4		
436.cactusADM	4	718	66.4	719	66.4	<u>719</u>	66.4	4	718	66.4	719	66.4	<u>719</u>	66.4		
437.leslie3d	4	<u>1195</u>	31.6	1194	31.6	1198	31.2	4	1199	31.2	1200	31.2	<u>1199</u>	31.2		
444.namd	4	585	54.8	<u>585</u>	54.8	585	54.8	4	<u>586</u>	54.8	586	54.8	586	54.8	586	54.8
447.dealII	4	650	70.4	656	69.6	<u>654</u>	70.0	4	586	78.0	581	78.8	<u>584</u>	78.4		
450.soplex	4	888	37.6	<u>889</u>	37.6	891	37.6	4	886	37.6	<u>887</u>	37.6	888	37.6		
453.povray	4	<u>264</u>	80.4	264	80.4	265	80.4	4	<u>210</u>	101	210	102	210	101		
454.calculix	4	481	68.8	<u>481</u>	68.8	481	68.8	4	<u>478</u>	69.2	477	69.2	478	69.2		
459.GemsFDTD	4	1601	26.4	1591	26.8	<u>1600</u>	26.4	4	1611	26.4	1615	26.4	<u>1612</u>	26.4		
465.tonto	4	667	59.2	<u>668</u>	58.8	670	58.8	4	613	64.4	<u>613</u>	64.0	618	63.6		
470.lbm	4	2201	24.8	2199	24.8	<u>2200</u>	24.8	1	486	28.3	485	28.3	<u>486</u>	28.3		
481.wrf	4	<u>893</u>	50.0	897	50.0	892	50.0	4	<u>893</u>	50.0	897	50.0	892	50.0		
482.sphinx3	4	1183	66.0	1185	66.0	<u>1183</u>	66.0	4	1173	66.4	1172	66.4	<u>1172</u>	66.4		

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

The system bus runs at 1333 MHz

System was configured with nVidia GTX 280 discrete graphics card
Binaries were built on Windows Vista Ultimate (32-bit)



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Base Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qc99
```

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:

```
-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000
```

C++ benchmarks:

```
-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features  
/F1000000000 shlw32m.lib -link /FORCE:MULTIPLE
```

Fortran benchmarks:

```
-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000
```

Benchmarks using both Fortran and C:

```
-QxSSE4.1 -Qipo -O3 -Qprec-div- -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.deallII: -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: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
           -Qipo -O3 -Qprec-div- -Oa /F1000000000
470.lbm: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch
           /F1000000000
482.sphinx3: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qunroll12 /F1000000000
```

C++ benchmarks:

```
444.namd: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
           -Qipo -O3 -Qprec-div- -Oa /F1000000000 shlw32m.lib
           -link /FORCE:MULTIPLE
447.deallII: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
             -Qipo -O3 -Qprec-div- -Qunroll12 -Qansi-alias
             -Qscalar-rep- /F1000000000 shlw32m.lib
             -link /FORCE:MULTIPLE
450.soplex: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
             -Qipo -O3 -Qprec-div- /F1000000000 shlw32m.lib
             -link /FORCE:MULTIPLE
453.povray: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
             -Qipo -O3 -Qprec-div- -Qunroll14 -Qansi-alias /F1000000000
             shlw32m.lib
             -link /FORCE:MULTIPLE
```

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Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: -QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch
/F1000000000

416.gamess: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias
-Qscalar-rep- /F1000000000

434.zeusmp: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- /F1000000000

437.leslie3d: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

459.GemsFDTD: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qunroll2 -Ob0 -Qopt-prefetch
/F1000000000

465.tonto: -QxSSE4.1(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: -QxSSE4.1(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
-Qipo -O3 -Qprec-div- -Qopt-prefetch /F1000000000

436.cactusADM: basepeak = yes

454.calculix: -QxSSE4.1 -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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