# SPEC® CFP2006 Result

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## ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

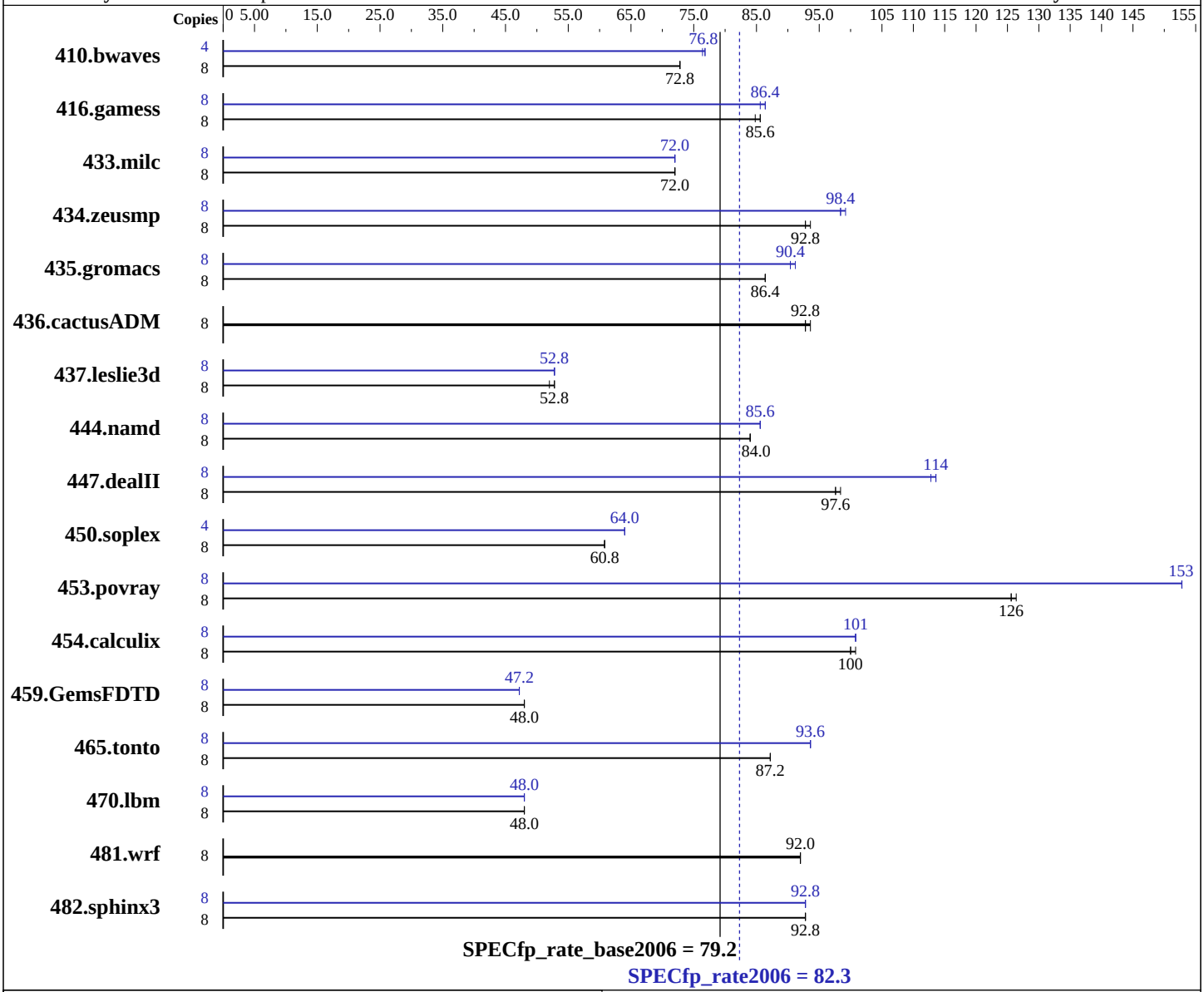
## Asus P6T Deluxe (Intel Core i7-940)

SPECfp®_rate2006 = 82.3

SPECfp_rate_base2006 = 79.2

**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 i7-940 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.20 GHz |
| CPU MHz: | 2933 |
| 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<br>Build 20080930 Package ID: w_cproc_p_11.0.054<br>Intel Visual Fortran Compiler Professional 11.0 for IA32<br>Build 20080930 Package ID: w_cprof_p_11.0.054<br>Microsoft Visual Studio 2008 (for libraries) |
| Auto Parallel: | No |
| 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 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 8 | 1487 | 72.8 | **1486** | **72.8** | 1486 | 72.8 | 4 | 709 | 76.8 | **709** | **76.8** | 710 | 76.4 |
| 416.gamess | 8 | **1827** | **85.6** | 1839 | 84.8 | 1824 | 85.6 | 8 | 1830 | 85.6 | 1805 | 86.4 | **1816** | **86.4** |
| 433.milc | 8 | **1021** | **72.0** | 1021 | 72.0 | 1022 | 72.0 | 8 | **1023** | **72.0** | 1022 | 72.0 | 1023 | 72.0 |
| 434.zeusmp | 8 | 786 | 92.8 | 775 | 93.6 | **783** | **92.8** | 8 | **740** | **98.4** | 736 | 99.2 | 740 | 98.4 |
| 435.gromacs | 8 | 659 | 86.4 | **659** | **86.4** | 660 | 86.4 | 8 | **632** | **90.4** | 628 | 91.2 | 632 | 90.4 |
| 436.cactusADM | 8 | **1028** | **92.8** | 1025 | 93.6 | 1031 | 92.8 | 8 | **1028** | **92.8** | 1025 | 93.6 | 1031 | 92.8 |
| 437.leslie3d | 8 | 1436 | 52.0 | **1435** | **52.8** | 1434 | 52.8 | 8 | **1434** | **52.8** | 1435 | 52.8 | 1433 | 52.8 |
| 444.namd | 8 | **766** | **84.0** | 765 | 84.0 | 766 | 84.0 | 8 | 750 | 85.6 | **749** | **85.6** | 749 | 85.6 |
| 447.dealII | 8 | **935** | **97.6** | 940 | 97.6 | 931 | 98.4 | 8 | **808** | **114** | 812 | 113 | 807 | 114 |
| 450.soplex | 8 | 1095 | 60.8 | 1095 | 60.8 | **1095** | **60.8** | 4 | **521** | **64.0** | 521 | 64.0 | 521 | 64.0 |
| 453.povray | 8 | **338** | **126** | 338 | 126 | 339 | 126 | 8 | 279 | 153 | **279** | **153** | 279 | 153 |
| 454.calculix | 8 | 658 | 100 | 657 | 101 | **658** | **100** | 8 | **653** | **101** | 653 | 101 | 652 | 101 |
| 459.GemsFDTD | 8 | 1774 | 48.0 | **1771** | **48.0** | 1769 | 48.0 | 8 | 1786 | 47.2 | **1787** | **47.2** | 1787 | 47.2 |
| 465.tonto | 8 | 905 | 87.2 | 899 | 87.2 | **901** | **87.2** | 8 | **844** | **93.6** | 841 | 93.6 | 845 | 93.6 |
| 470.lbm | 8 | 2303 | 48.0 | **2303** | **48.0** | 2303 | 48.0 | 8 | 2304 | 48.0 | 2303 | 48.0 | **2303** | **48.0** |
| 481.wrf | 8 | **972** | **92.0** | 969 | 92.0 | 972 | 92.0 | 8 | **972** | **92.0** | 969 | 92.0 | 972 | 92.0 |
| 482.sphinx3 | 8 | 1687 | 92.8 | **1687** | **92.8** | 1687 | 92.8 | 8 | **1685** | **92.8** | 1685 | 92.8 | 1683 | 92.8 |

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)
```

## 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:
```
-QxSSE4.2 -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 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: -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

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## Peak Optimization Flags (Continued)

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

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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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