SPEC® CFP2006 Result

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ASUSTeK Computer Inc.

(Test Sponsor: Intel Corporation)

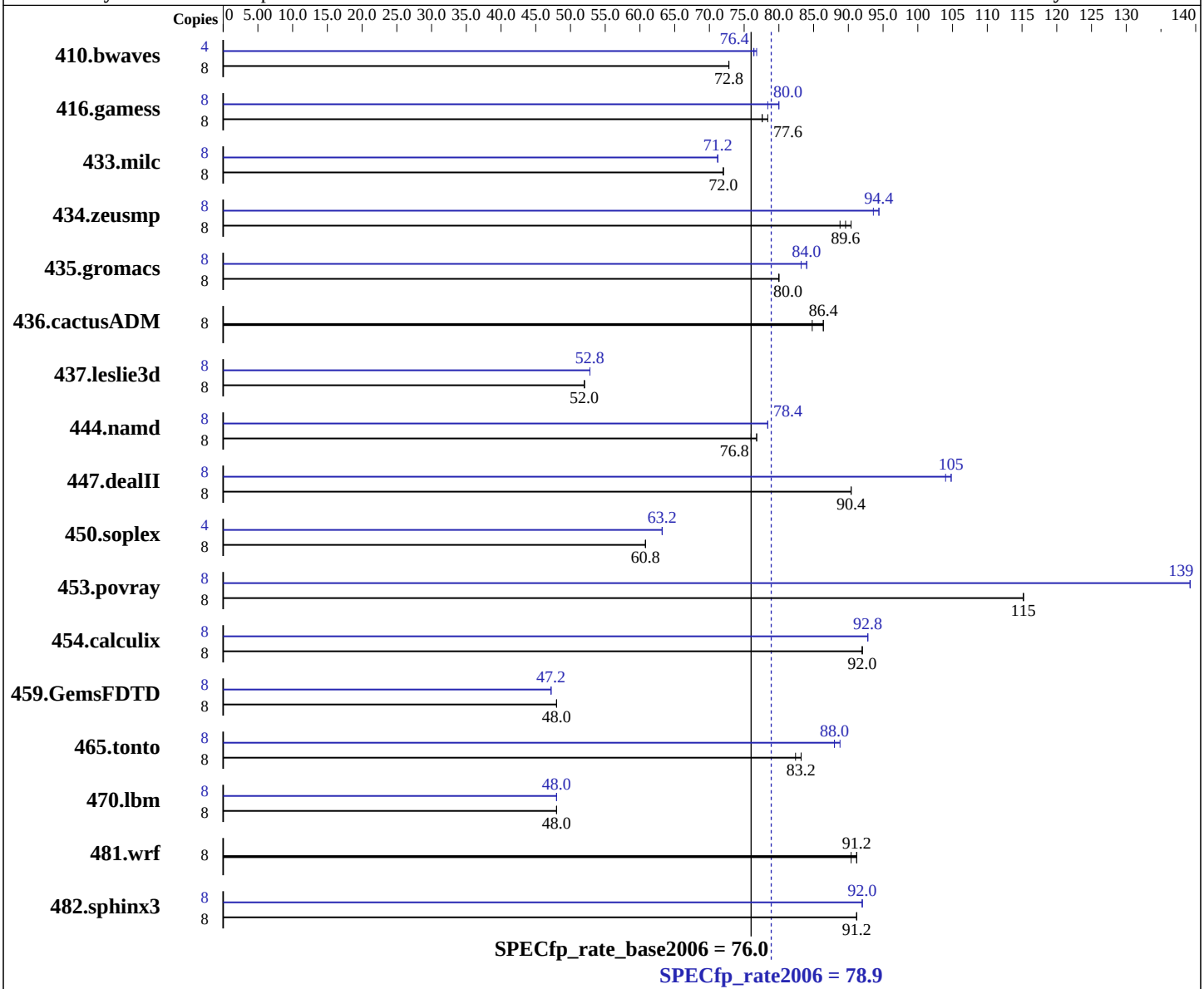
Asus P6T Deluxe (Intel Core i7-920)

SPECfp®_rate2006 = 78.9

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

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
```

Continued on next page

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 other inquiries, please contact webmaster@spec.org.

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