SPEC® CFP2006 Result

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Dell Inc.

(Test Sponsor: Intel Corporation)

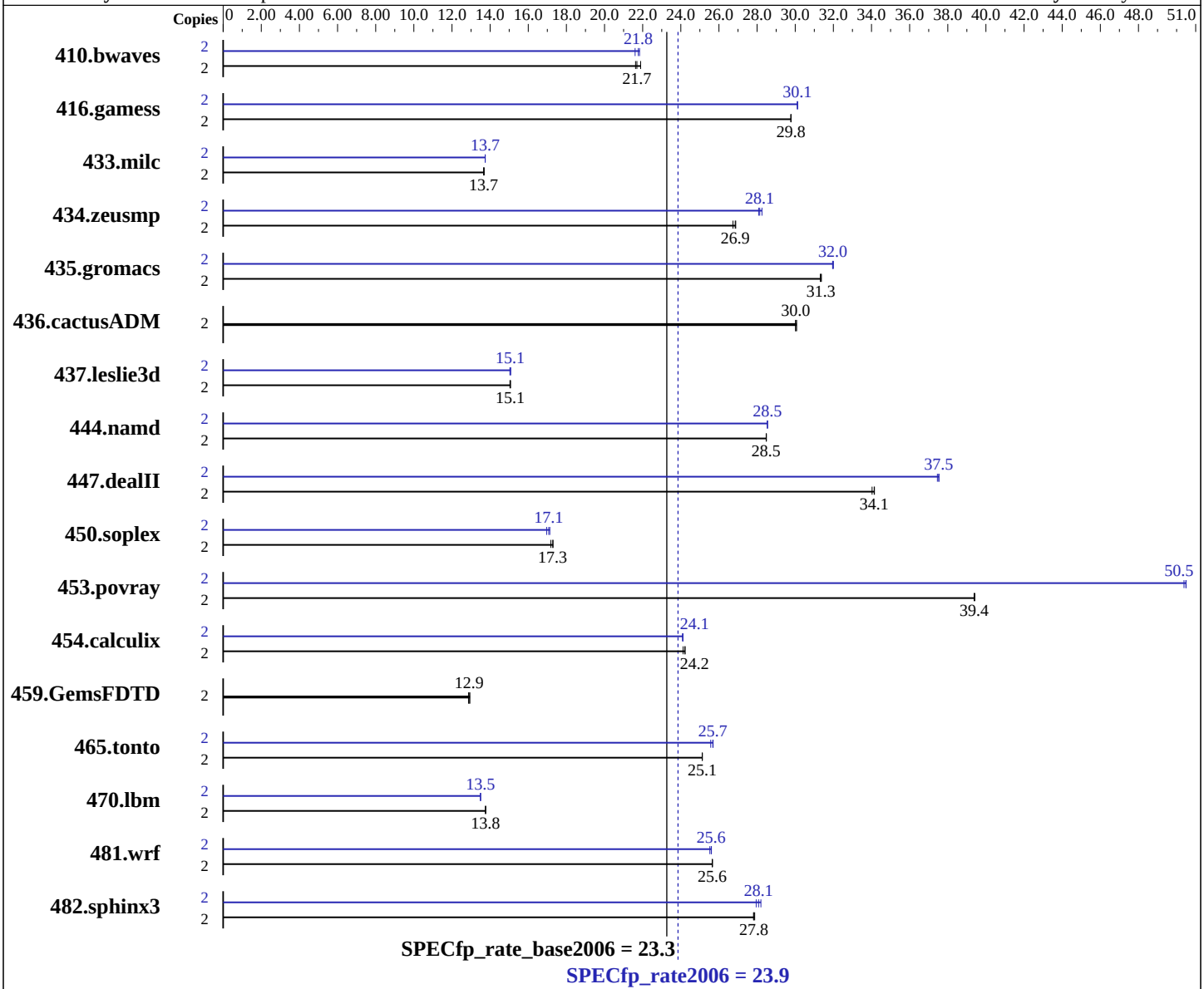
XPS M1730 (Intel Core 2 Extreme X7900)

SPECfp®_rate2006 = 23.9

SPECfp_rate_base2006 = 23.3

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: Jul-2007
Hardware Availability: Aug-2007
Software Availability: May-2007



Hardware

CPU Name:	Intel Core 2 Extreme X7900
CPU Characteristics:	
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip

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Software

Operating System:	Windows Vista Ultimate (32-bit)
Compiler:	Intel C++ and Fortran Compiler for IA32 version 10.0 Build 20070426 Package ID: W_CC_P_10.0.025 Microsoft Visual Studio .Net 2003 (for libraries)
Auto Parallel:	No
File System:	NTFS
System State:	Default
Base Pointers:	32-bit

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L3 Cache: None
Other Cache: None
Memory: 2 GB (2x1GB Qimonda DDR2-667 CL5)
Disk Subsystem: 80GB SATA, 7200 RPM
Other Hardware: None

Peak Pointers: 32-bit
Other Software: SmartHeap Library Version 8.0 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	2	1257	21.6	**1253**	**21.7**	1241	21.9	2	1258	21.6	1245	21.8	**1249**	**21.8**
416.gamess	2	**1315**	**29.8**	1315	29.8	1315	29.8	2	1300	30.1	**1300**	**30.1**	1301	30.1
433.milc	2	**1344**	**13.7**	1341	13.7	1344	13.7	2	1336	13.7	1336	13.7	**1336**	**13.7**
434.zeusmp	2	677	26.9	**678**	**26.9**	681	26.7	2	648	28.1	**647**	**28.1**	644	28.3
435.gromacs	2	**456**	**31.3**	455	31.4	456	31.3	2	**447**	**32.0**	447	32.0	446	32.0
436.cactusADM	2	795	30.1	**796**	**30.0**	796	30.0	2	795	30.1	**796**	**30.0**	796	30.0
437.leslie3d	2	1247	15.1	**1249**	**15.1**	1250	15.0	2	1247	15.1	1250	15.0	**1248**	**15.1**
444.namd	2	**563**	**28.5**	563	28.5	563	28.5	2	562	28.5	562	28.5	**562**	**28.5**
447.dealII	2	672	34.0	670	34.2	**670**	**34.1**	2	**610**	**37.5**	611	37.5	609	37.5
450.soplex	2	964	17.3	**965**	**17.3**	971	17.2	2	974	17.1	983	17.0	**977**	**17.1**
453.povray	2	270	39.4	270	39.4	**270**	**39.4**	2	211	50.4	211	50.5	**211**	**50.5**
454.calculix	2	**681**	**24.2**	684	24.1	681	24.2	2	684	24.1	**684**	**24.1**	685	24.1
459.GemsFDTD	2	1640	12.9	1649	12.9	**1645**	**12.9**	2	1640	12.9	1649	12.9	**1645**	**12.9**
465.tonto	2	783	25.1	**783**	**25.1**	783	25.1	2	766	25.7	770	25.6	**766**	**25.7**
470.lbm	2	**1997**	**13.8**	1997	13.8	1997	13.8	2	2036	13.5	**2036**	**13.5**	2036	13.5
481.wrf	2	**871**	**25.6**	871	25.7	871	25.6	2	**873**	**25.6**	875	25.5	872	25.6
482.sphinx3	2	1398	27.9	1402	27.8	**1400**	**27.8**	2	1382	28.2	1394	28.0	**1388**	**28.1**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

General Notes

```
nVidia GeForce 8700M GT discrete graphics card
Binaries were built on Windows XP Professional SP2
The start command with the /affinity switch was used to bind processes to cores
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc7.1 -Qc99
```

C++ benchmarks:

```
icl -Qvc7.1
```

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Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc7.1 -Qc99 ifort

Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG -DBOOST_NO_INTRINSIC_WCHAR_T
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Base Optimization Flags

C benchmarks:
-fast /F950000000 shlw32m.lib -link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qcxx_features /F950000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-fast /F950000000

Benchmarks using both Fortran and C:
-fast /F950000000

Peak Compiler Invocation

C benchmarks:
icl -Qvc7.1 -Qc99

C++ benchmarks:
icl -Qvc7.1

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc7.1 -Qc99 ifort

Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
-DBOOST_NO_INTRINSIC_WCHAR_T
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: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Oa
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2
-Qscalar-rep- -Qprefetch /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

482.sphinx3: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa
-Qcxx_features /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qprefetch
-Qcxx_features /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias
-Qcxx_features /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: -fast /F950000000

416.gamess: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Ob0
-Qansi-alias -Qscalar-rep- /F950000000

434.zeusmp: -Qprof_gen(pass 1) -Qprof_use(pass 2) -QxT -O2 -Qprec_div-
-Qunroll0 -Qscalar-rep- /F950000000

Continued on next page

Peak Optimization Flags (Continued)

437.leslie3d: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast /F950000000`

459.GemsFDTD: `basepeak = yes`

465.tonto: `Same as 437.leslie3d`

Benchmarks using both Fortran and C:

435.gromacs: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Oa /F950000000`

436.cactusADM: `basepeak = yes`

454.calculix: `-fast /F950000000`

481.wrf: `Same as 454.calculix`

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.20090714.47.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.20090714.47.xml`

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For other inquiries, please contact webmaster@spec.org.

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