SPEC® CFP2006 Result

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Dell Inc.

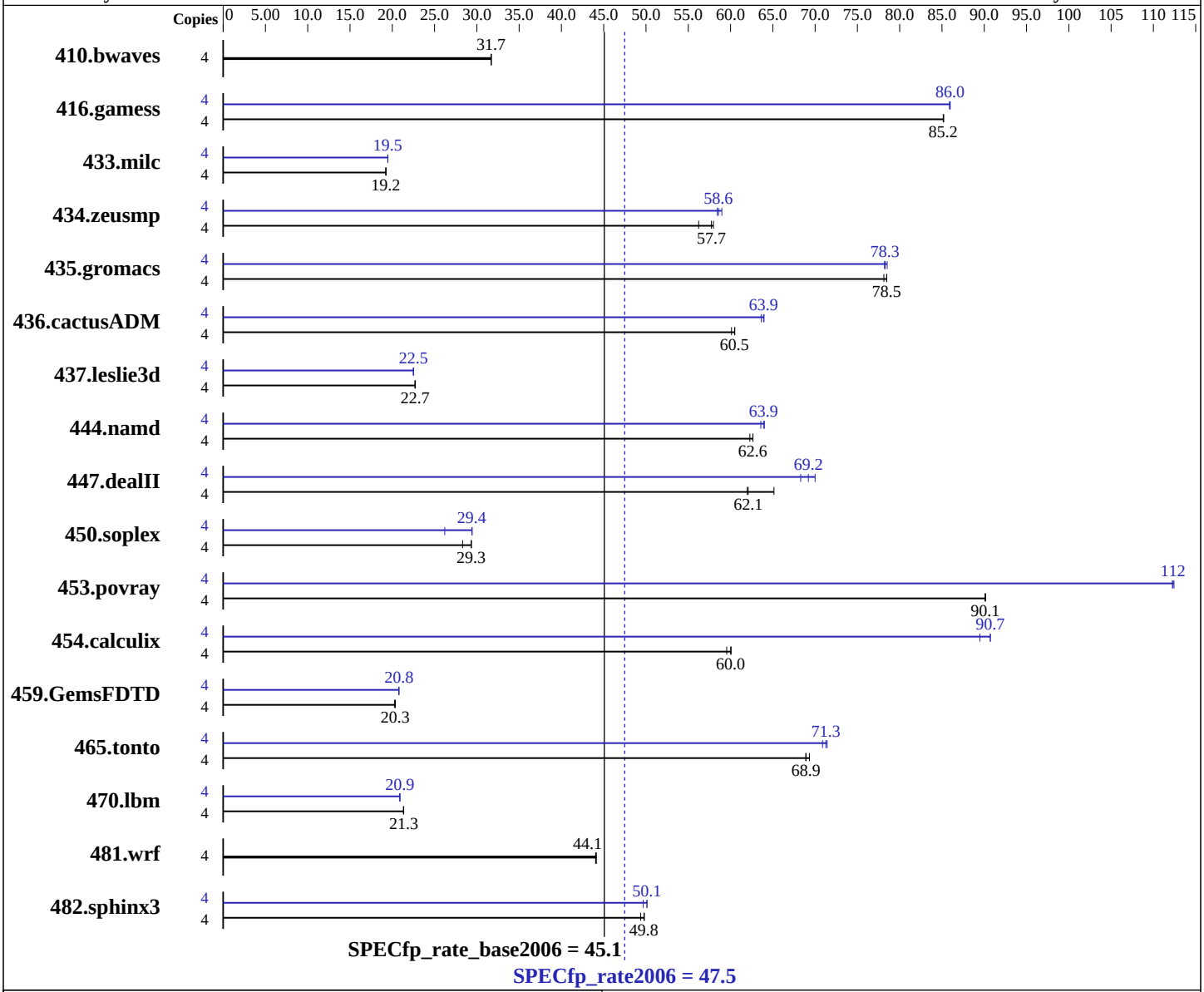
Dell Precision T3400 (Intel QX9650, 3.00 GHz)

SPECfp®_rate2006 = 47.5

SPECfp_rate_base2006 = 45.1

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Apr-2008
Hardware Availability: Jan-2008
Software Availability: Mar-2008



Hardware

CPU Name:	Intel Core 2 Extreme QX9650
CPU Characteristics:	1333 MHz Bus Speed
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

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Software

Operating System:	Windows Vista Ultimate (64-bit)
Compiler:	Intel C++ Compiler for Intel 64, Version 10.1 Build 20080312 Package ID: w_cc_p_10.1.021 Intel Visual Fortran Compiler for Intel 64, Version 10.0 Build 20080312 Package ID: w_fc_p_10.1.021 Microsoft Visual Studio 2005 SP1
Auto Parallel:	No
File System:	NTFS

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L3 Cache:	None
Other Cache:	None
Memory:	8 GB (4x2 GB 800 MHz ECC CL6 DDR2)
Disk Subsystem:	1 x 160 GB SATA 7200 RPM
Other Hardware:	None

System State:	Default
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap Library 8.1 for x64

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	**1715**	**31.7**	1716	31.7	1714	31.7	4	**1715**	**31.7**	1716	31.7	1714	31.7
416.gamess	4	920	85.2	919	85.2	**920**	**85.2**	4	**911**	**86.0**	912	85.9	911	86.0
433.milc	4	1907	19.3	**1908**	**19.2**	1909	19.2	4	1885	19.5	**1886**	**19.5**	1886	19.5
434.zeusmp	4	647	56.2	628	58.0	**630**	**57.7**	4	**621**	**58.6**	617	59.0	623	58.4
435.gromacs	4	366	78.1	364	78.5	**364**	**78.5**	4	**365**	**78.3**	364	78.5	365	78.2
436.cactusADM	4	790	60.5	795	60.1	**790**	**60.5**	4	747	64.0	**748**	**63.9**	751	63.6
437.leslie3d	4	1658	22.7	**1657**	**22.7**	1654	22.7	4	**1670**	**22.5**	1672	22.5	1670	22.5
444.namd	4	515	62.3	512	62.6	**512**	**62.6**	4	505	63.6	**502**	**63.9**	501	64.0
447.dealII	4	**737**	**62.1**	738	62.0	703	65.1	4	**661**	**69.2**	670	68.3	654	70.0
450.soplex	4	1178	28.3	1136	29.4	**1138**	**29.3**	4	1273	26.2	**1135**	**29.4**	1133	29.4
453.povray	4	236	90.1	**236**	**90.1**	236	90.1	4	**189**	**112**	189	112	190	112
454.calculix	4	554	59.5	549	60.1	**550**	**60.0**	4	**364**	**90.7**	364	90.7	369	89.5
459.GemsFDTD	4	2095	20.3	2084	20.4	**2087**	**20.3**	4	2045	20.8	2041	20.8	**2041**	**20.8**
465.tonto	4	**571**	**68.9**	571	68.9	568	69.3	4	**552**	**71.3**	551	71.4	555	70.9
470.lbm	4	2579	21.3	2574	21.4	**2574**	**21.3**	4	2632	20.9	**2630**	**20.9**	2630	20.9
481.wrf	4	1014	44.0	**1014**	**44.1**	1012	44.1	4	1014	44.0	**1014**	**44.1**	1012	44.1
482.sphinx3	4	1579	49.4	**1567**	**49.8**	1565	49.8	4	1569	49.7	1556	50.1	**1556**	**50.1**

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

Base Compiler Invocation

C benchmarks:
```
icl -Qstd=c99
```

C++ benchmarks:
```
icl
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qstd=c99 ifort
```

Base Portability Flags

410.bwaves: -DSPEC_CPU_P64
416.gamess: -DSPEC_CPU_P64
433.milc: -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -DSPEC_CPU_P64
436.cactusADM: -DSPEC_CPU_P64 -Qlowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -DSPEC_CPU_P64 -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -DSPEC_CPU_P64

Base Optimization Flags

C benchmarks:
-fast -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qauto-ilp32 -Qcxx_features /F1000000000 shlw64m.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:
-fast -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-fast -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

Peak Compiler Invocation

C benchmarks:
icl -Qstd=c99

C++ benchmarks:
icl

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll2 -Oa /F1000000000 -link /FORCE:MULTIPLE

470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll2 -Qscalar-rep- -Qprefetch /F1000000000 -link /FORCE:MULTIPLE

482.sphinx3: -fast -Qauto-ilp32 -Qunroll2 /F1000000000 -link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Oa -Qcxx_features /F1000000000 shlw64m.lib -link /FORCE:MULTIPLE

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll2 -Qprefetch -Qcxx_features /F1000000000 shlw64m.lib -link /FORCE:MULTIPLE

450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qcxx_features /F1000000000 shlw64m.lib -link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll4 -Qansi-alias -Qcxx_features /F1000000000 shlw64m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000 -link /FORCE:MULTIPLE

434.zeusmp: -Qprof_gen(pass 1) -Qprof_use(pass 2) -QxT -O2 -Qprec-div- -Qunroll0 -Qscalar-rep- /F1000000000 -link /FORCE:MULTIPLE

437.leslie3d: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qprefetch /F1000000000 -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

459.GemsFDTD: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qauto-ilp32 -Qunroll2 -Ob0 -Qprefetch /F1000000000 -link /FORCE:MULTIPLE`

465.tonto: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qauto-ilp32 -Qunroll4 -Qauto /F1000000000 -link /FORCE:MULTIPLE`

Benchmarks using both Fortran and C:

435.gromacs: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qauto-ilp32 -Oa -Qprefetch /F1000000000 -link /FORCE:MULTIPLE`

436.cactusADM: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qauto-ilp32 -Qunroll2 -Qprefetch /F1000000000 -link /FORCE:MULTIPLE`

454.calculix: `-fast -Qauto-ilp32 -Qunroll-aggressive /F1000000000 -link /FORCE:MULTIPLE`

481.wrf: `basepeak = yes`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/dell.ic10.1.windows.flags.20090714.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/dell.ic10.1.windows.flags.20090714.xml`

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