SPEC® CFP2006 Result

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Dell Inc.

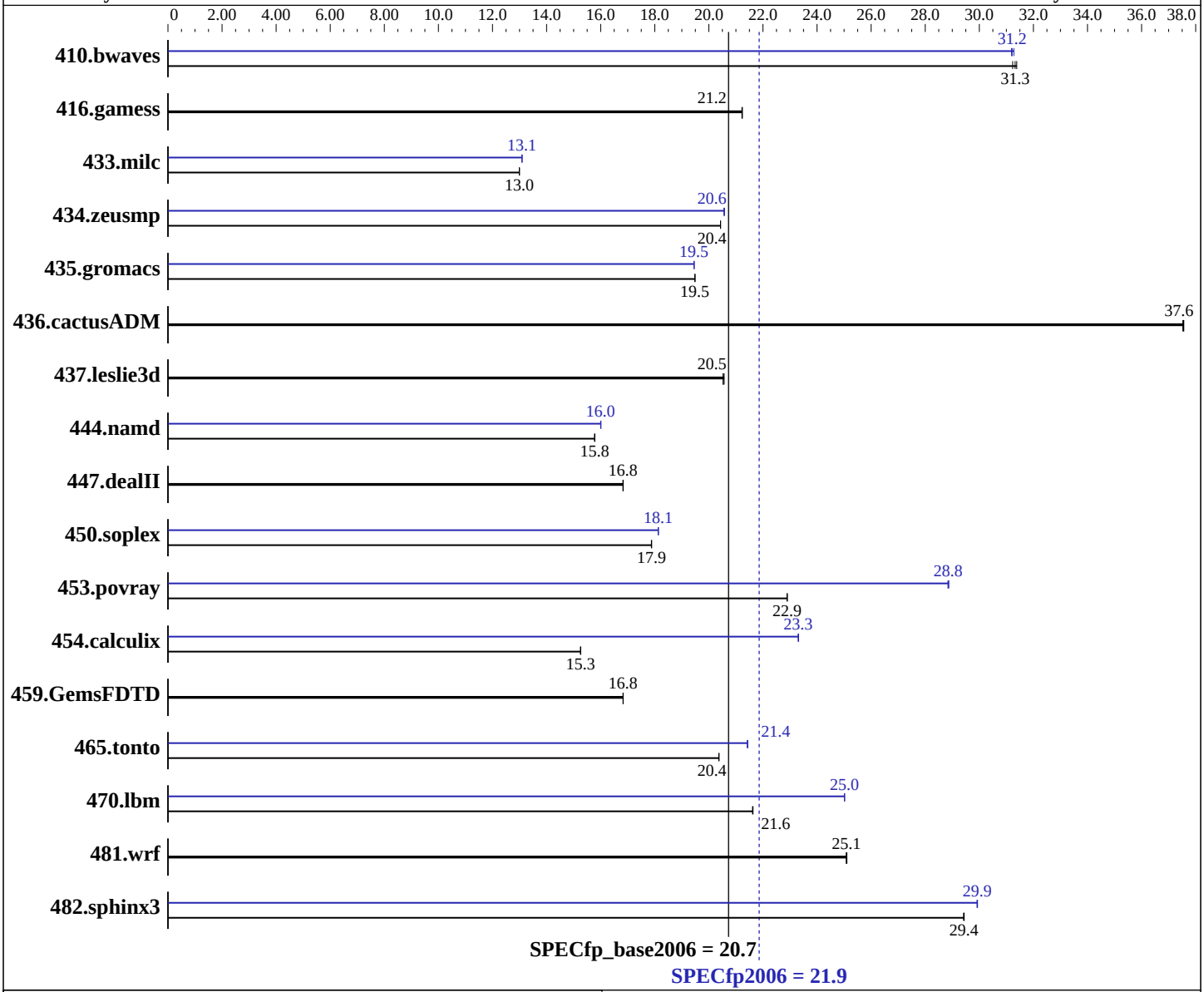
Dell Precision T3400 (Intel QX9650, 3.00 GHz)

SPECfp®2006 = 21.9

SPECfp_base2006 = 20.7

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

Test date: Dec-2007
Hardware Availability: Jan-2008
Software Availability: Nov-2007



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 XP Professional x64 Edition SP2
Compiler:	Intel C++ Compiler for Intel 64, Version 10.1 Build 20070809 Package ID: w_cc_p_10.1.011 Intel Visual Fortran Compiler for Intel 64, Version 10.0 Build 20070809 Package ID: w_fc_p_10.1.011 Microsoft Visual Studio 2005 SP1
Auto Parallel:	Yes
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 80 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	433	31.4	**434**	**31.3**	435	31.2	**435**	**31.2**	434	31.3	436	31.2
416.gamess	**922**	**21.2**	922	21.2	923	21.2	**922**	**21.2**	922	21.2	923	21.2
433.milc	707	13.0	**707**	**13.0**	706	13.0	**701**	**13.1**	701	13.1	701	13.1
434.zeusmp	445	20.4	**445**	**20.4**	445	20.4	443	20.6	442	20.6	**443**	**20.6**
435.gromacs	366	19.5	**366**	**19.5**	366	19.5	**367**	**19.5**	367	19.5	367	19.5
436.cactusADM	318	37.5	318	37.6	**318**	**37.6**	318	37.5	318	37.6	**318**	**37.6**
437.leslie3d	458	20.5	457	20.6	**458**	**20.5**	458	20.5	457	20.6	**458**	**20.5**
444.namd	508	15.8	508	15.8	**508**	**15.8**	**501**	**16.0**	501	16.0	501	16.0
447.dealII	680	16.8	680	16.8	**680**	**16.8**	680	16.8	680	16.8	**680**	**16.8**
450.soplex	466	17.9	467	17.9	**466**	**17.9**	**460**	**18.1**	460	18.1	460	18.1
453.povray	232	22.9	232	22.9	**232**	**22.9**	**184**	**28.8**	184	28.9	184	28.8
454.calculix	541	15.3	541	15.3	**541**	**15.3**	**354**	**23.3**	354	23.3	354	23.3
459.GemsFDTD	630	16.8	**630**	**16.8**	631	16.8	630	16.8	**630**	**16.8**	631	16.8
465.tonto	483	20.4	483	20.4	**483**	**20.4**	459	21.4	459	21.4	**459**	**21.4**
470.lbm	636	21.6	**635**	**21.6**	635	21.6	549	25.0	**549**	**25.0**	549	25.0
481.wrf	445	25.1	445	25.1	**445**	**25.1**	445	25.1	445	25.1	**445**	**25.1**
482.sphinx3	662	29.4	663	29.4	**662**	**29.4**	**651**	**29.9**	652	29.9	651	29.9

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

General Notes

```
Binaries were built on Windows Vista Ultimate (64-bit)
```

Base Compiler Invocation

C benchmarks:

```
icl -Qstd=c99
```

C++ benchmarks:

```
icl
```

Fortran benchmarks:

```
ifort
```

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Base Compiler Invocation (Continued)

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 -Qparallel /F1000000000 shlw64mt.lib
libguide40.lib -link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qauto-ilp32 -Qparallel -Qcxx_features /F1000000000
shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-fast -Qauto-ilp32 -Qparallel /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-fast -Qauto-ilp32 -Qparallel /F1000000000 libguide40.lib
-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 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll2 -Qscalar-rep- -Qprefetch /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

482.sphinx3: -fast -Qauto-ilp32 -Qunroll2 /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Oa -Qcxx_features /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qparallel -Qcxx_features /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32 -Qunroll4 -Qansi-alias -Qcxx_features /F1000000000 shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: `-fast -Qauto-ilp32 -Qparallel -Qprefetch /F1000000000 libguide40.lib -link /FORCE:MULTIPLE`

416.gamess: `basepeak = yes`

434.zeusmp: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-QxT -O2 -Qprec-div- -Qunroll0 -Qscalar-rep- /F1000000000 libguide40.lib -link /FORCE:MULTIPLE`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `basepeak = yes`

465.tonto: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -Qauto-ilp32 -Qunroll4 -Qauto /F1000000000 libguide40.lib -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 libguide40.lib -link /FORCE:MULTIPLE`

436.cactusADM: `basepeak = yes`

454.calculix: `-fast -Qauto-ilp32 -Qunroll-aggressive /F1000000000 libguide40.lib -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.20090714.01.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.20090714.01.xml`

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