SPEC® CFP2006 Result

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Dell Inc.

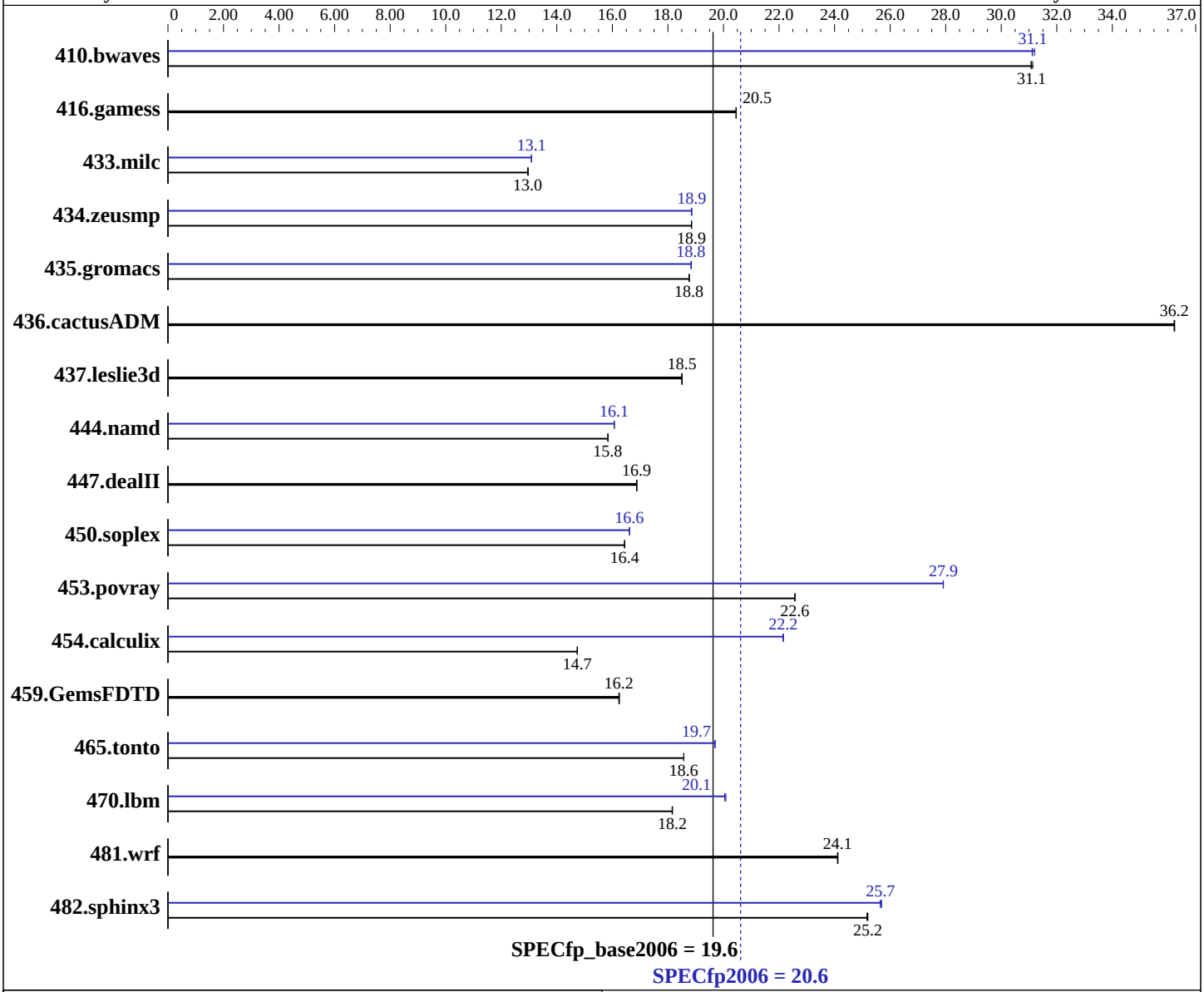
Dell Precision T3400 (Intel QX6850, 3.00 GHz)

SPECfp®2006 = 20.6

SPECfp_base2006 = 19.6

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

Test date: Dec-2007
Hardware Availability: Oct-2007
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Core 2 Extreme QX6850
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:	8 MB I+D on chip per chip, 4 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 8.0 for x64

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	**437**	**31.1**	437	31.1	436	31.1	**436**	**31.1**	437	31.1	435	31.2
416.gamess	**957**	**20.5**	957	20.5	957	20.5	**957**	**20.5**	957	20.5	957	20.5
433.milc	**709**	**13.0**	709	13.0	708	13.0	**701**	**13.1**	701	13.1	701	13.1
434.zeusmp	483	18.8	483	18.9	**483**	**18.9**	483	18.9	483	18.9	**483**	**18.9**
435.gromacs	381	18.8	**381**	**18.8**	380	18.8	**379**	**18.8**	379	18.8	379	18.8
436.cactusADM	330	36.2	330	36.2	**330**	**36.2**	330	36.2	330	36.2	**330**	**36.2**
437.leslie3d	508	18.5	508	18.5	**508**	**18.5**	508	18.5	508	18.5	**508**	**18.5**
444.namd	**506**	**15.8**	506	15.8	506	15.8	499	16.1	499	16.1	**499**	**16.1**
447.dealII	**678**	**16.9**	678	16.9	678	16.9	**678**	**16.9**	678	16.9	678	16.9
450.soplex	**507**	**16.4**	507	16.4	507	16.4	502	16.6	502	16.6	**502**	**16.6**
453.povray	**236**	**22.6**	236	22.6	236	22.6	191	27.9	**191**	**27.9**	191	27.9
454.calculix	560	14.7	560	14.7	**560**	**14.7**	**372**	**22.2**	373	22.1	372	22.2
459.GemsFDTD	653	16.3	654	16.2	**653**	**16.2**	653	16.3	654	16.2	**653**	**16.2**
465.tonto	530	18.6	530	18.6	**530**	**18.6**	500	19.7	499	19.7	**500**	**19.7**
470.lbm	757	18.1	756	18.2	**757**	**18.2**	686	20.0	**685**	**20.1**	684	20.1
481.wrf	**463**	**24.1**	463	24.1	463	24.1	**463**	**24.1**	463	24.1	463	24.1
482.sphinx3	773	25.2	775	25.2	**774**	**25.2**	**760**	**25.7**	760	25.6	758	25.7

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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