



SPEC® CFP2006 Result

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Dell Inc.

SPECfp®2006 = 20.6

Dell Precision T3400 (Intel QX6850, 3.00 GHz)

SPECfp_base2006 = 19.6

CPU2006 license: 55

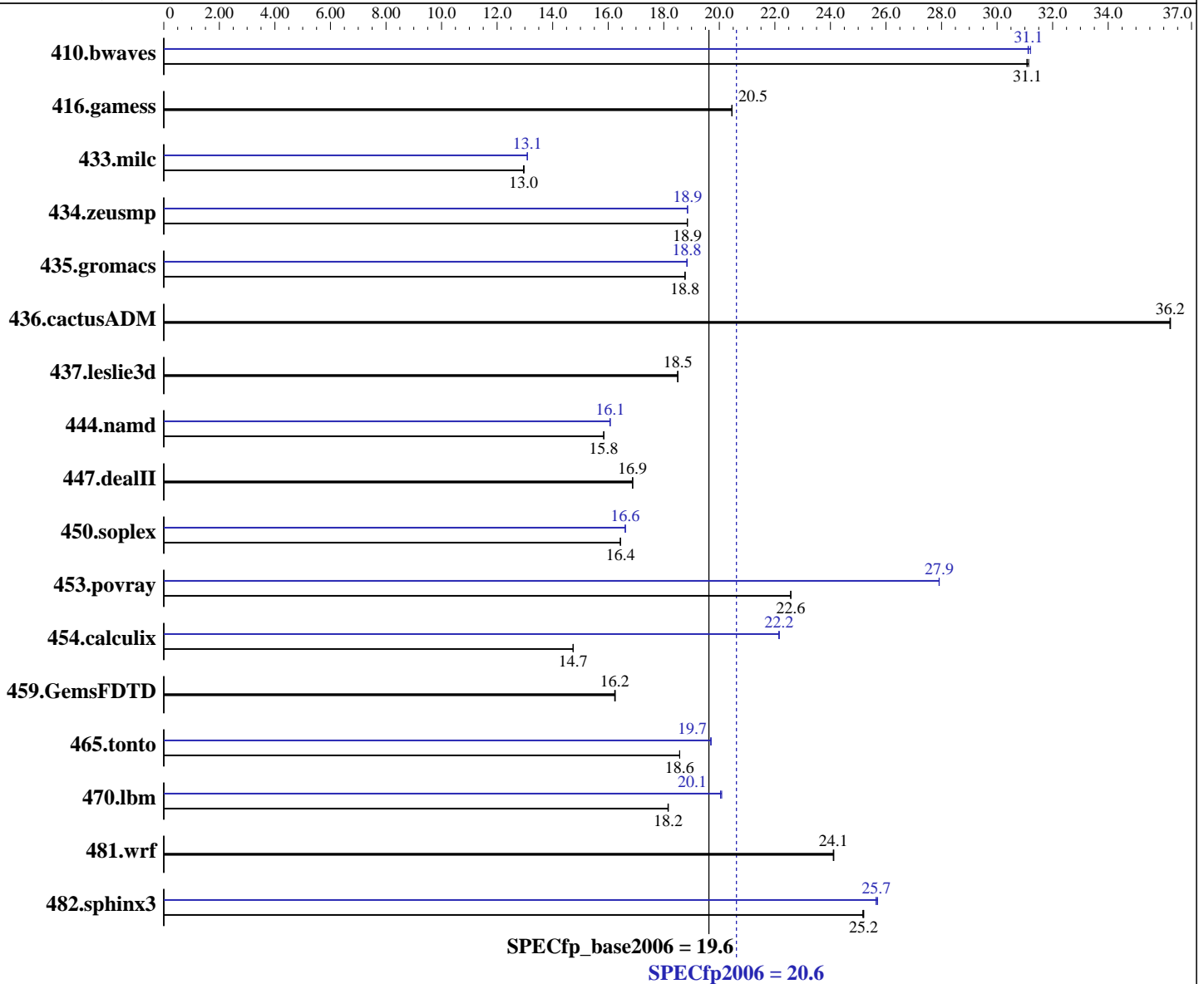
Test date: Dec-2007

Test sponsor: Dell Inc.

Hardware Availability: Oct-2007

Tested by: Dell Inc.

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

Continued on next page

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

Continued on next page



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

Continued on next page



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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

```



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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-
-Qunroll10 -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
-Qunroll14 -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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For other inquiries, please contact webmaster@spec.org.

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