SPEC® CFP2006 Result

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Dell Inc.

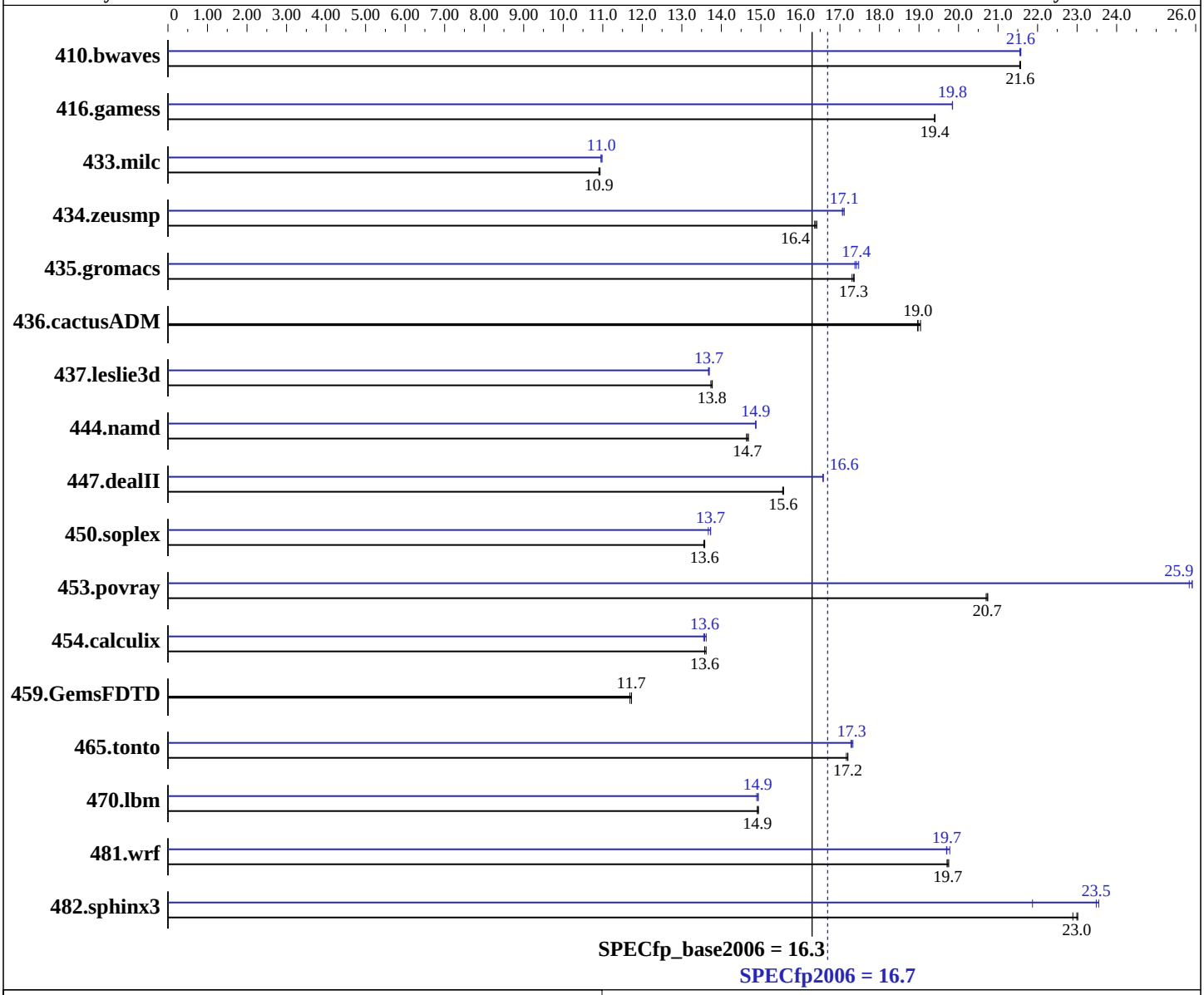
Dell Precision M6300 (Intel X7900, 2.80 GHz)

SPECfp®2006 = 16.7

SPECfp_base2006 = 16.3

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

Test date: Aug-2007
Hardware Availability: Aug-2007
Software Availability: Jun-2007



Hardware

CPU Name:	Intel Core 2 Extreme X7900
CPU Characteristics:	800 MHz Bus Speed
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 XP Professional x64 Edition SP2
Compiler:	Intel C++ Compiler for Intel 64, Version 10.0 Build 20070426 Package ID: W_CC_P_10.0.025 Intel Visual Fortran Compiler for Intel 64, Version 10.0 Build 20070426 Package ID: W_FC_P_10.0.025 Microsoft Visual Studio 2005 SP1
Auto Parallel:	No
File System:	NTFS

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L3 Cache:	None
Other Cache:	None
Memory:	4 GB (2x2 GB 667 MHz CL5 DDR2)
Disk Subsystem:	1 x 120GB 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	630	21.6	631	21.5	**630**	**21.6**	631	21.6	630	21.6	**630**	**21.6**
416.gamess	1010	19.4	**1009**	**19.4**	1009	19.4	**987**	**19.8**	986	19.8	987	19.8
433.milc	840	10.9	842	10.9	**842**	**10.9**	838	11.0	**837**	**11.0**	836	11.0
434.zeusmp	**555**	**16.4**	556	16.4	554	16.4	533	17.1	532	17.1	**533**	**17.1**
435.gromacs	**412**	**17.3**	413	17.3	411	17.4	**410**	**17.4**	409	17.5	411	17.4
436.cactusADM	630	19.0	628	19.0	**630**	**19.0**	630	19.0	628	19.0	**630**	**19.0**
437.leslie3d	**683**	**13.8**	683	13.8	684	13.7	**687**	**13.7**	686	13.7	687	13.7
444.namd	548	14.6	546	14.7	**547**	**14.7**	**539**	**14.9**	539	14.9	539	14.9
447.dealII	735	15.6	**735**	**15.6**	736	15.6	690	16.6	690	16.6	**690**	**16.6**
450.soplex	614	13.6	**614**	**13.6**	615	13.6	610	13.7	607	13.7	**608**	**13.7**
453.povray	257	20.7	257	20.7	**257**	**20.7**	**205**	**25.9**	205	25.9	206	25.8
454.calculix	**608**	**13.6**	606	13.6	608	13.6	**608**	**13.6**	606	13.6	609	13.6
459.GemsFDTD	908	11.7	**905**	**11.7**	905	11.7	908	11.7	**905**	**11.7**	905	11.7
465.tonto	572	17.2	**572**	**17.2**	573	17.2	**569**	**17.3**	569	17.3	568	17.3
470.lbm	920	14.9	**921**	**14.9**	921	14.9	920	14.9	923	14.9	**921**	**14.9**
481.wrf	**566**	**19.7**	567	19.7	566	19.8	**567**	**19.7**	565	19.8	567	19.7
482.sphinx3	**848**	**23.0**	851	22.9	847	23.0	891	21.9	828	23.5	**830**	**23.5**

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

Base Optimization Flags

C benchmarks:
-fast -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-fast /F950000000 -link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-fast -Qauto_ilp32 /F950000000 -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: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Oa -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

470.lbm: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Qscalar-rep- -Qprefetch -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

482.sphinx3: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

447.dealII: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qprefetch -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

450.soplex: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

453.povray: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: ONESTEP -fast /F950000000 -link /FORCE:MULTIPLE

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

434.zeusmp: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -QxT -O2 -Qprec-div- -Qunroll0 -Qscalar-rep- /F950000000 -link /FORCE:MULTIPLE

437.leslie3d: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F950000000 -link /FORCE:MULTIPLE

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 -Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -fast -Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE

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/dell.ic10.windows.flags.html

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

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