SPEC® CFP2006 Result

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Dell Inc.

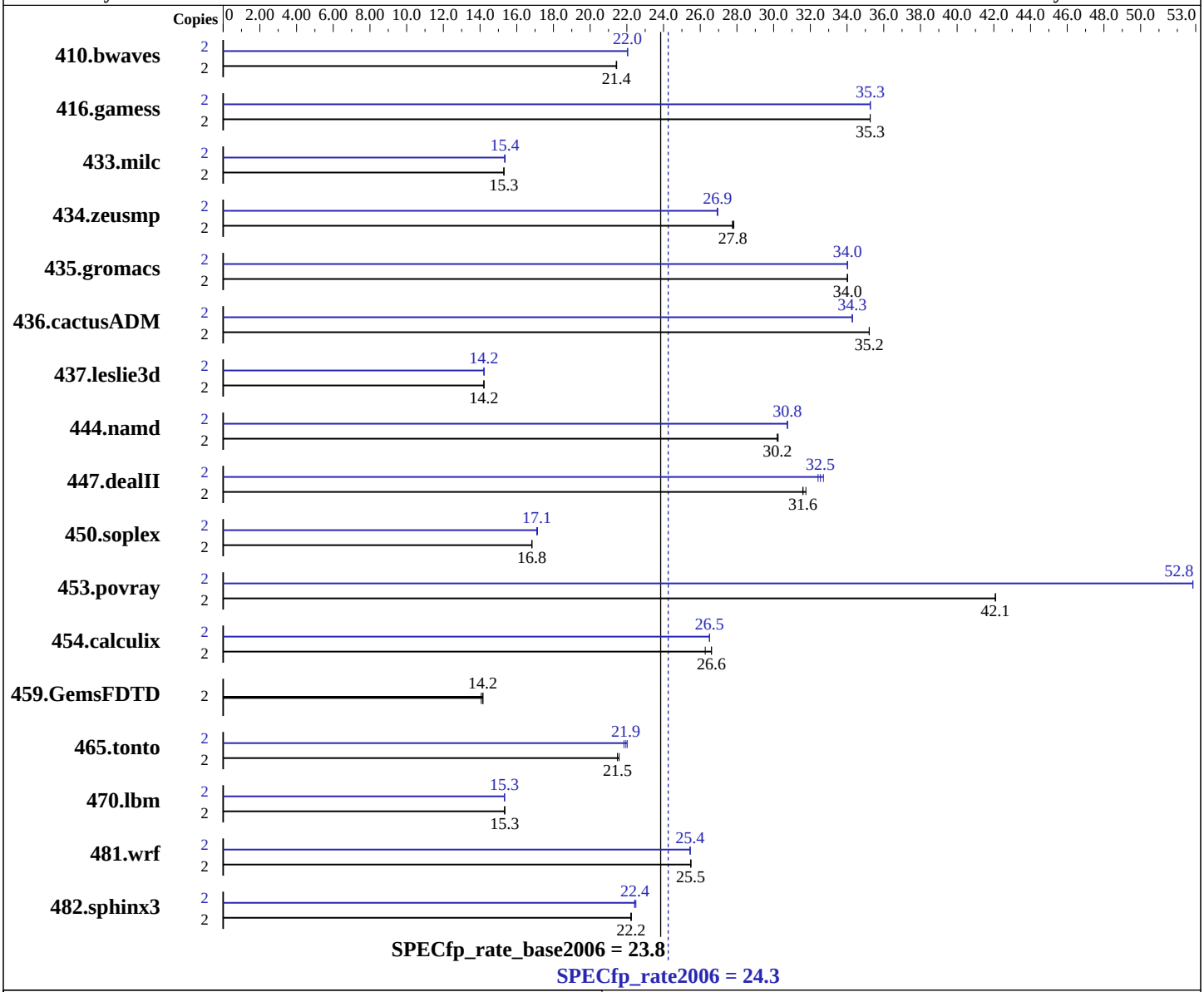
Dell Precision 690 (Intel Xeon 5160, 3.00 GHz)

SPECfp®_rate2006 = 24.3

SPECfp_rate_base2006 = 23.8

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

Test date: Jan-2007
Hardware Availability: May-2006
Software Availability: Jan-2007



Hardware

CPU Name:	Intel Xeon 5160
CPU Characteristics:	1333 MHz Bus Speed
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1,2 chips
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
Compiler:	Intel C++ Compiler 9.1 for IA32 (20061103Z) Intel FORTRAN Compiler 9.1 for IA32 (20061103Z) Microsoft Visual Studio 2005
Auto Parallel:	No
File System:	NTFS
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit

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L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB 667 MHz ECC CL5 DDR2 FB-DIMM)
Disk Subsystem: 1 x 72 GB SAS 10K RPM
Other Hardware: None

Other Software: MicroQuill SmartHeap Library 8.0

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	1269	21.4	1267	21.4	**1268**	**21.4**	2	1233	22.0	**1233**	**22.0**	1233	22.0
416.gamess	2	1110	35.3	1111	35.3	**1111**	**35.3**	2	1111	35.3	**1111**	**35.3**	1110	35.3
433.milc	2	1200	15.3	1200	15.3	**1200**	**15.3**	2	1195	15.4	1197	15.3	**1195**	**15.4**
434.zeusmp	2	**655**	**27.8**	656	27.8	654	27.8	2	676	26.9	675	27.0	**675**	**26.9**
435.gromacs	2	420	34.0	**420**	**34.0**	420	34.0	2	**420**	**34.0**	420	34.0	420	34.0
436.cactusADM	2	679	35.2	679	35.2	**679**	**35.2**	2	697	34.3	**697**	**34.3**	697	34.3
437.leslie3d	2	1323	14.2	1323	14.2	**1323**	**14.2**	2	1322	14.2	**1323**	**14.2**	1323	14.2
444.namd	2	530	30.2	531	30.2	**531**	**30.2**	2	521	30.8	522	30.7	**522**	**30.8**
447.dealII	2	720	31.8	**724**	**31.6**	724	31.6	2	699	32.7	706	32.4	**703**	**32.5**
450.soplex	2	**991**	**16.8**	991	16.8	991	16.8	2	**975**	**17.1**	974	17.1	976	17.1
453.povray	2	**253**	**42.1**	253	42.1	253	42.1	2	201	52.9	201	52.8	**201**	**52.8**
454.calculix	2	**620**	**26.6**	620	26.6	628	26.3	2	622	26.5	**622**	**26.5**	623	26.5
459.GemsFDTD	2	1499	14.2	1509	14.1	**1500**	**14.2**	2	1499	14.2	1509	14.1	**1500**	**14.2**
465.tonto	2	**916**	**21.5**	912	21.6	916	21.5	2	894	22.0	901	21.8	**897**	**21.9**
470.lbm	2	1792	15.3	1790	15.3	**1791**	**15.3**	2	1792	15.3	1792	15.3	**1792**	**15.3**
481.wrf	2	**877**	**25.5**	877	25.5	876	25.5	2	**878**	**25.4**	878	25.4	878	25.5
482.sphinx3	2	**1753**	**22.2**	1754	22.2	1752	22.2	2	**1737**	**22.4**	1733	22.5	1739	22.4

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

General Notes

```
BIOS Settings
  Adjacent Cache Line Prefetch set to ON:
   Prefetch data in order to shorten execution
   cycles and maximize data processing efficiency.

  Snoop Filter set to OFF
   Snoop Filter preserves cache coherency while minimizing
   snoops to remote nodes.

32-bit binaries were built on Windows XP Professional x64 Edition
```

Base Compiler Invocation

C benchmarks:
icl -Qc99

C++ benchmarks:
icl

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qc99 ifort

Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG -DBOOST_NO_INTRINSIC_WCHAR_T
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Base Optimization Flags

C benchmarks:
-fast /F512000000 shlW32M.lib -link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qcxx_features /F512000000 shlW32M.lib -link /FORCE:MULTIPLE

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

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

Peak Compiler Invocation

C benchmarks:
icl -Qc99

C++ benchmarks:
icl

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Peak Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qc99 ifort

Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG -DBOOST_NO_INTRINSIC_WCHAR_T
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

Peak Optimization Flags

C benchmarks:
ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F512000000 shlW32M.lib -link /FORCE:MULTIPLE

C++ benchmarks:
ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features /F512000000 shlW32M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F1000000000 -link /FORCE:MULTIPLE

416.gamess: ONESTEP -fast /F1000000000 -link /FORCE:MULTIPLE

434.zeusmp: Same as 410.bwaves

437.leslie3d: Same as 410.bwaves

459.GemsFDTD: basepeak = yes

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: -fast /F1000000000 -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

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

454.calculix: `Same as 436.cactusADM`

481.wrf: `Same as 435.gromacs`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/dell.cpu2006.ic91.flags.20090715.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/dell.cpu2006.ic91.flags.20090715.xml`

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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