SPEC® CFP2006 Result
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Dell Inc.

Dell Precision T3500 (Intel Xeon W3580, 3.33 GHz)

$SPECfp^{®}2006 =$ 38.6

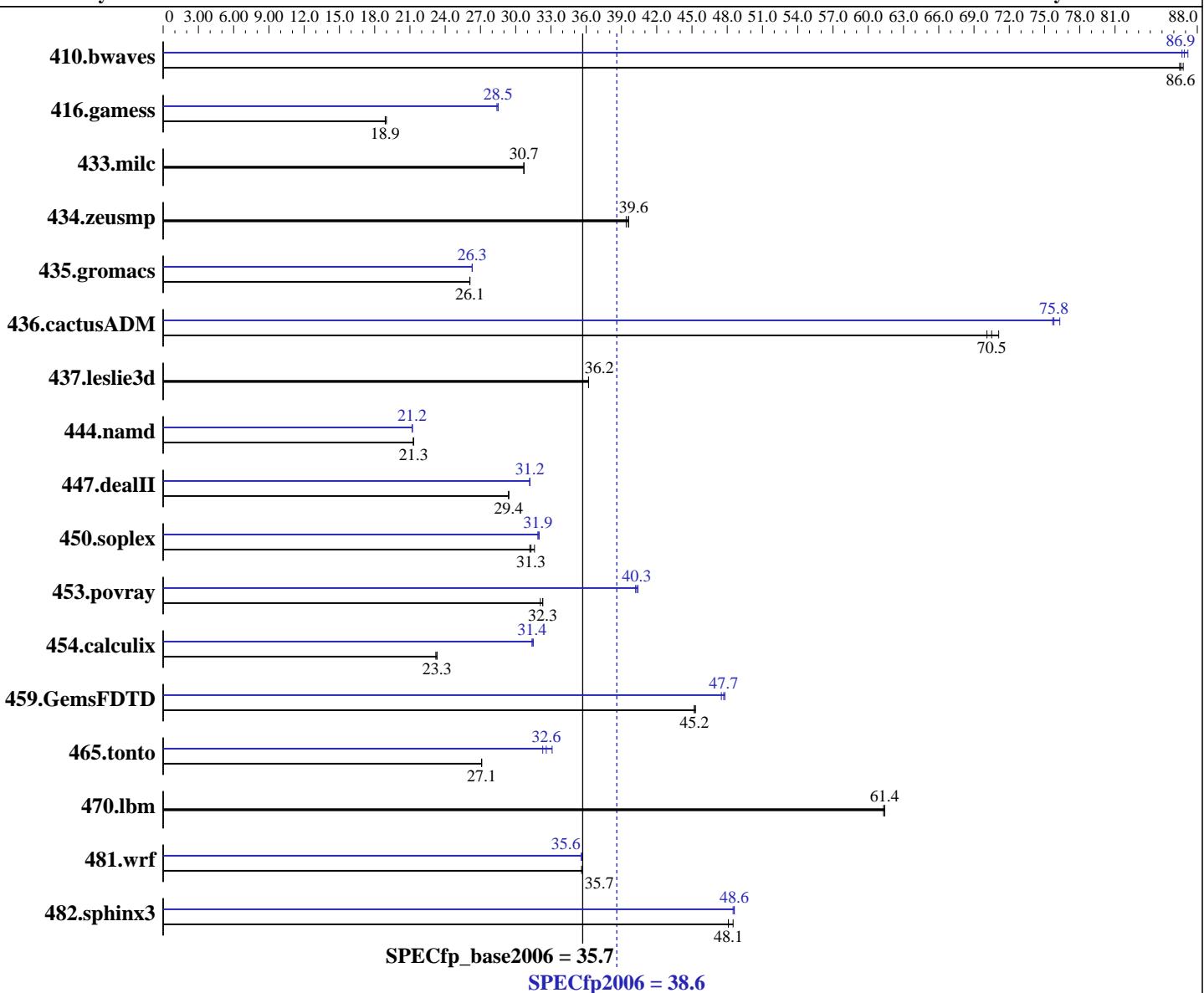$SPECfp\_base2006 =$ 35.7

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

Test date: Jul-2009
Hardware Availability: Aug-2009
Software Availability: Feb-2009

Benchmark	Peak	Base
410.bwaves	86.9	86.6
416.gamess	28.5	18.9
433.milc		30.7
434.zeusmp		39.6
435.gromacs	26.3	26.1
436.cactusADM	75.8	70.5
437.leslie3d		36.2
444.namd	21.2	21.3
447.dealII	31.2	29.4
450.soplex	31.9	31.3
453.povray	40.3	32.3
454.calculix	31.4	23.3
459.GemsFDTD	47.7	45.2
465.tonto	32.6	27.1
470.lbm		61.4
481.wrf	35.6	35.7
482.sphinx3	48.6	48.1

SPECfp_base2006 = 35.7
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Hardware

CPU Name: Intel Xeon W3580
CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz: 3333
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
CPU(s) orderable: 1 chip
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
Continued on next page

Software

Operating System: Windows Vista Ultimate SP1 (64-bit)
Compiler: Intel C++ Compiler for Intel 64, Version 11.0
Build 20090131 Package ID: w_cproc_p_11.0.072
Intel Visual Fortran Compiler for Intel 64, Version 11.0
Build 20090131 Package ID: w_cprof_p_11.0.072
Microsoft Visual Studio 2008 SP1
Auto Parallel: Yes
File System: NTFS
Continued on next page

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L3 Cache:	8 MB I+D on chip per chip	System State:	Default
Other Cache:	None	Base Pointers:	32/64-bit
Memory:	24 GB (6x4 GB PC3-10600E)	Peak Pointers:	32/64-bit
Disk Subsystem:	1 x 80GB SATA 7200 RPM	Other Software:	MicroQuill SmartHeap Library 8.1 for x64
Other Hardware:	None		

Results Table

Benchmark	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
410.bwaves	157	86.8	157	86.5	**157**	**86.6**	156	87.2	**156**	**86.9**	157	86.7
416.gamess	**1034**	**18.9**	1032	19.0	1034	18.9	689	28.4	688	28.5	**688**	**28.5**
433.milc	**299**	**30.7**	299	30.7	299	30.7	**299**	**30.7**	299	30.7	299	30.7
434.zeusmp	231	39.4	230	39.6	**230**	**39.6**	231	39.4	230	39.6	**230**	**39.6**
435.gromacs	274	26.1	274	26.1	**274**	**26.1**	**272**	**26.3**	272	26.3	271	26.3
436.cactusADM	171	70.1	168	71.1	**170**	**70.5**	157	76.3	**158**	**75.8**	158	75.7
437.leslie3d	260	36.2	**260**	**36.2**	260	36.2	260	36.2	**260**	**36.2**	260	36.2
444.namd	377	21.3	**376**	**21.3**	376	21.3	378	21.2	**378**	**21.2**	378	21.2
447.dealII	389	29.4	**389**	**29.4**	389	29.4	367	31.2	**367**	**31.2**	367	31.2
450.soplex	267	31.2	**266**	**31.3**	264	31.6	**261**	**31.9**	261	31.9	261	32.0
453.povray	166	32.1	165	32.3	**165**	**32.3**	132	40.4	132	40.2	**132**	**40.3**
454.calculix	355	23.3	**355**	**23.3**	355	23.2	263	31.4	**263**	**31.4**	262	31.5
459.GemsFDTD	234	45.3	**235**	**45.2**	235	45.2	222	47.8	**223**	**47.7**	223	47.5
465.tonto	**363**	**27.1**	363	27.1	363	27.1	304	32.3	298	33.1	**302**	**32.6**
470.lbm	224	61.4	**224**	**61.4**	224	61.3	224	61.4	**224**	**61.4**	224	61.3
481.wrf	**313**	**35.7**	313	35.7	314	35.6	314	35.6	**314**	**35.6**	314	35.6
482.sphinx3	402	48.5	406	48.1	**405**	**48.1**	**401**	**48.6**	401	48.6	402	48.5

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

Platform Notes

```
    BIOS Settings
      Hyperthreading: ENABLE
```

General Notes

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

Base Compiler Invocation

```
    C benchmarks:
        icl -Qvc9 -Qstd=c99
```

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Base Compiler Invocation (Continued)

C++ benchmarks:
```
icl -Qvc9
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qvc9 -Qstd=c99 ifort
```

Base Portability Flags

```
  410.bwaves: -DSPEC_CPU_P64 /assume:underscore
  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:
```
-QxSSE4.2 -Qauto-ilp32 -Qipo -O3 -Qprec-div- -Qparallel
-Qopt-prefetch /F512000000
```

C++ benchmarks:
```
-QxSSE4.2 -Qauto-ilp32 -Qipo -O3 -Qprec-div- -Qparallel
-Qopt-prefetch -Qcxx_features /F512000000 shlw64mt.lib
        -link /FORCE:MULTIPLE
```

Fortran benchmarks:
```
-QxSSE4.2 -Qauto-ilp32 -Qipo -O3 -Qprec-div- -Qparallel
-Qopt-prefetch /F1000000000
```

Benchmarks using both Fortran and C:
```
-QxSSE4.2 -Qauto-ilp32 -Qipo -O3 -Qprec-div- -Qparallel
-Qopt-prefetch /F1000000000
```

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$SPECfp\_base2006 =$ 35.7

CPU2006 license: 55		**Test date:**	Jul-2009
Test sponsor: Dell Inc.		**Hardware Availability:**	Aug-2009
Tested by: Dell Inc.		**Software Availability:**	Feb-2009

Peak Compiler Invocation

C benchmarks:
```
icl -Qvc9 -Qstd=c99
```

C++ benchmarks:
```
icl -Qvc9
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qvc9 -Qstd=c99 ifort
```

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: `-QxSSE4.2 -Qauto-ilp32 -Qipo -O3 -Qprec-div- -Qunroll2`
`/F512000000`

C++ benchmarks:

444.namd: `-Qprof_gen(pass 1) -QxSSE4.2(pass 2) -Qauto-ilp32(pass 2)`
`-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Oa /F512000000`
`shlw64mt.lib          -link /FORCE:MULTIPLE`

447.dealII: `-Qprof_gen(pass 1) -QxSSE4.2(pass 2) -Qauto-ilp32(pass 2)`
`-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2`
`-Qopt-prefetch -Qansi-alias -Qscalar-rep- /F512000000`
`shlw64mt.lib          -link /FORCE:MULTIPLE`

450.soplex: `-Qprof_gen(pass 1) -QxSSE4.2 -Qauto-ilp32`
`-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- /F512000000`
`shlw64mt.lib          -link /FORCE:MULTIPLE`

453.povray: `-Qprof_gen(pass 1) -QxSSE4.2(pass 2) -Qauto-ilp32(pass 2)`
`-Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4`
`-Qansi-alias /F512000000 shlw64mt.lib`
`                -link /FORCE:MULTIPLE`

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Peak Optimization Flags (Continued)

Fortran benchmarks:

```
410.bwaves: -QxSSE4.2 -Qauto-ilp32 -Qipo -O3 -Qprec-div-
            -Qopt-prefetch -Qparallel /F1000000000

416.gamess: -Qprof_gen(pass 1) -QxSSE4.2(pass 2) -Qauto-ilp32(pass 2)
            -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0
            -Qansi-alias -Qscalar-rep- /F1000000000

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -Qprof_gen(pass 1) -QxSSE4.2(pass 2) -Qauto-ilp32(pass 2)
            -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2 -Ob0
            -Qopt-prefetch -Qparallel /F1000000000

465.tonto: -Qprof_gen(pass 1) -QxSSE4.2(pass 2) -Qauto-ilp32(pass 2)
           -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll4 -Qauto
           /F1000000000
```

Benchmarks using both Fortran and C:

```
435.gromacs: -Qprof_gen(pass 1) -QxSSE4.2(pass 2) -Qauto-ilp32(pass 2)
             -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch
             /F1000000000

436.cactusADM: -Qprof_gen(pass 1) -QxSSE4.2(pass 2) -Qauto-ilp32(pass 2)
               -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qunroll2
               -Qopt-prefetch -Qparallel /F1000000000

454.calculix: -QxSSE4.2 -Qauto-ilp32 -Qipo -O3 -Qprec-div- /F1000000000

481.wrf: -QxSSE4.2 -Qauto-ilp32 -Qipo -O3 -Qprec-div-
         -Qopt-prefetch -Qparallel /F1000000000
```

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/dell.flags.ic11.0.win.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/dell.flags.ic11.0.win.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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