



# SPEC® CFP2006 Result

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Dell Inc.

**SPECfp®2006 = 18.7**

Dell Precision M6300 (Intel X9000, 2.80 GHz)

**SPECfp\_base2006 = 17.8**

CPU2006 license: 55

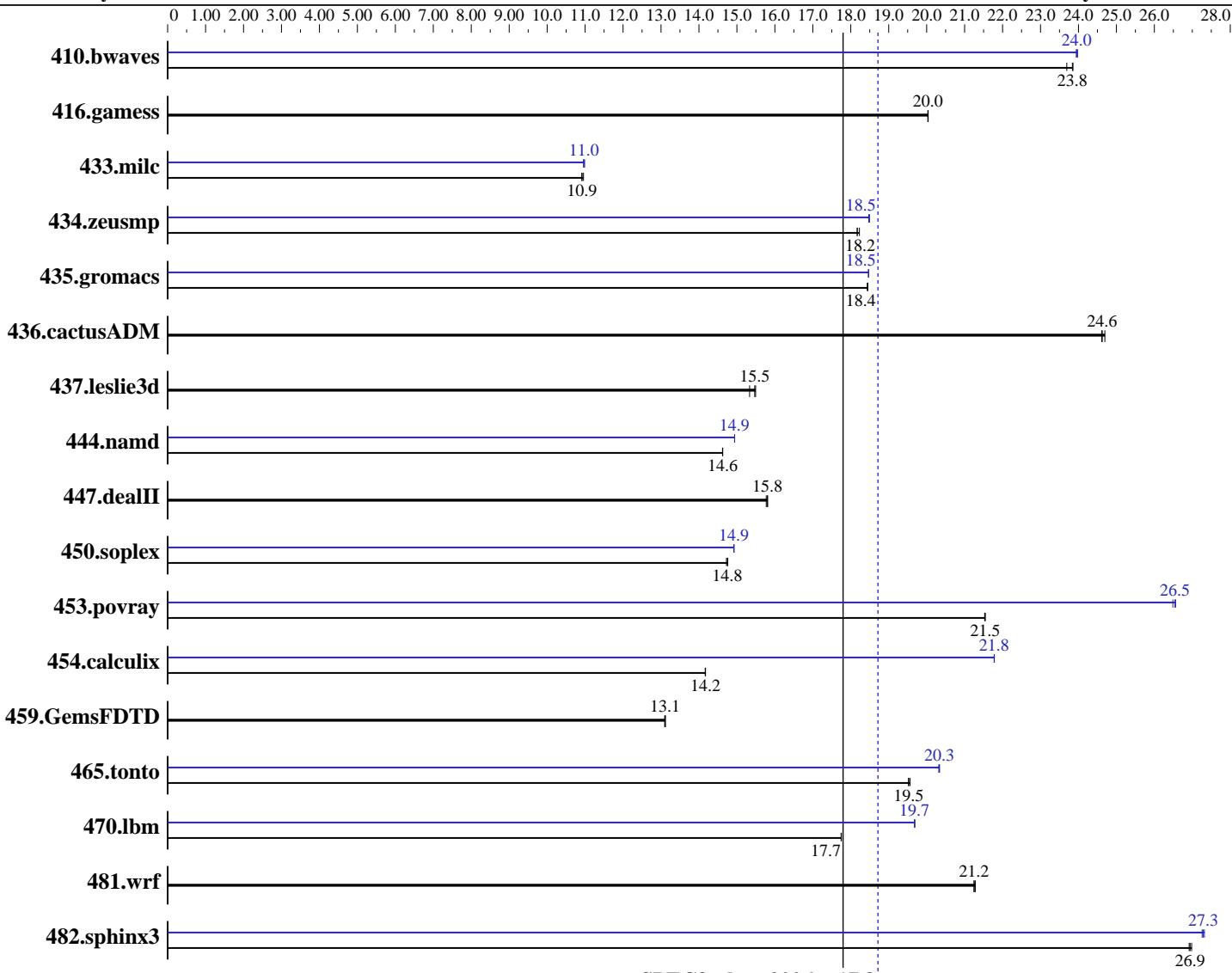
Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Apr-2008

Hardware Availability: Mar-2008

Software Availability: Mar-2008



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## Hardware

CPU Name: Intel Core 2 Extreme X9000  
 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: 6 MB I+D on chip per chip

## Software

Operating System: Windows Vista Ultimate (64-bit)  
 Compiler: Intel C++ Compiler for Intel 64, Version 10.1  
 Build 20080312 Package ID: w\_cc\_p\_10.1.021  
 Intel Visual Fortran Compiler for Intel 64,  
 Version 10.0  
 Build 20080312 Package ID: w\_fc\_p\_10.1.021  
 Microsoft Visual Studio 2005 SP1  
 Auto Parallel: Yes  
 File System: NTFS

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L3 Cache:	None	System State:	Default
Other Cache:	None	Base Pointers:	32/64-bit
Memory:	4 GB (2x2 GB 667 MHz CL5 DDR2)	Peak Pointers:	32/64-bit
Disk Subsystem:	1 x 120GB SATA 7200 RPM	Other Software:	MicroQuill SmartHeap Library 8.1 for x64
Other Hardware:	None		

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio										
410.bwaves	574	23.7	<b>570</b>	<b>23.8</b>	570	23.9	<b>567</b>	<b>24.0</b>	568	23.9	567	24.0
416.gamess	<b>977</b>	<b>20.0</b>	977	20.0	977	20.0	<b>977</b>	<b>20.0</b>	977	20.0	977	20.0
433.milc	838	11.0	841	10.9	<b>841</b>	<b>10.9</b>	836	11.0	<b>837</b>	<b>11.0</b>	838	11.0
434.zeusmp	499	18.2	<b>501</b>	<b>18.2</b>	501	18.2	492	18.5	493	18.5	<b>492</b>	<b>18.5</b>
435.gromacs	387	18.4	<b>387</b>	<b>18.4</b>	387	18.5	<b>387</b>	<b>18.5</b>	387	18.5	387	18.5
436.cactusADM	485	24.6	<b>485</b>	<b>24.6</b>	484	24.7	<b>485</b>	<b>24.6</b>	<b>485</b>	<b>24.6</b>	484	24.7
437.leslie3d	613	15.3	607	15.5	<b>608</b>	<b>15.5</b>	613	15.3	607	15.5	<b>608</b>	<b>15.5</b>
444.namd	549	14.6	548	14.6	<b>548</b>	<b>14.6</b>	<b>537</b>	<b>14.9</b>	537	14.9	537	14.9
447.dealII	725	15.8	724	15.8	<b>724</b>	<b>15.8</b>	725	15.8	724	15.8	<b>724</b>	<b>15.8</b>
450.soplex	566	14.7	565	14.8	<b>565</b>	<b>14.8</b>	559	14.9	<b>559</b>	<b>14.9</b>	559	14.9
453.povray	247	21.5	247	21.5	<b>247</b>	<b>21.5</b>	201	26.5	<b>200</b>	<b>26.5</b>	200	26.6
454.calculix	582	14.2	582	14.2	<b>582</b>	<b>14.2</b>	379	21.8	379	21.8	<b>379</b>	<b>21.8</b>
459.GemsFDTD	810	13.1	<b>809</b>	<b>13.1</b>	809	13.1	810	13.1	<b>809</b>	<b>13.1</b>	809	13.1
465.tonto	504	19.5	503	19.6	<b>504</b>	<b>19.5</b>	484	20.3	<b>484</b>	<b>20.3</b>	484	20.3
470.lbm	<b>774</b>	<b>17.7</b>	774	17.7	774	17.8	<b>698</b>	<b>19.7</b>	698	19.7	698	19.7
481.wrf	<b>526</b>	<b>21.2</b>	525	21.3	526	21.2	<b>526</b>	<b>21.2</b>	525	21.3	526	21.2
482.sphinx3	724	26.9	<b>723</b>	<b>26.9</b>	722	27.0	<b>715</b>	<b>27.3</b>	<b>714</b>	<b>27.3</b>	713	27.3

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

## Base Compiler Invocation

C benchmarks:

  icl -Qstd=c99

C++ benchmarks:

  icl

Fortran benchmarks:

  ifort

Benchmarks using both Fortran and C:

  icl -Qstd=c99 ifort



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## 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 libguide40.lib
    -link /FORCE:MULTIPLE

```

C++ benchmarks:

```

-fast -Qauto-ilp32 -Qparallel -Qcxx_features /F1000000000
    shlw64m.lib libguide40.lib -link /FORCE:MULTIPLE

```

Fortran benchmarks:

```

-fast -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
```

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## Peak Compiler Invocation (Continued)

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 libguide40.lib
           -link /FORCE:MULTIPLE
```

```
470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
           -Qunroll2 -Qscalar-rep- -Qprefetch /F1000000000
           libguide40.lib -link /FORCE:MULTIPLE
```

```
482.sphinx3: -fast -Qauto-ilp32 -Qunroll2 /F1000000000 libguide40.lib
              -link /FORCE:MULTIPLE
```

C++ benchmarks:

```
444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
           -Oa -Qcxx_features /F1000000000 shlw64m.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 shlw64m.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
           shlw64m.lib libguide40.lib -link /FORCE:MULTIPLE
```

Fortran benchmarks:

```
410.bwaves: -fast -Qauto-ilp32 -Qparallel -Qprefetch /F1000000000
             libguide40.lib -link /FORCE:MULTIPLE
```

416.gamess: basepeak = yes

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## Peak Optimization Flags (Continued)

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.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.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.0.

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