SPEC® CFP2006 Result

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Dell Inc.

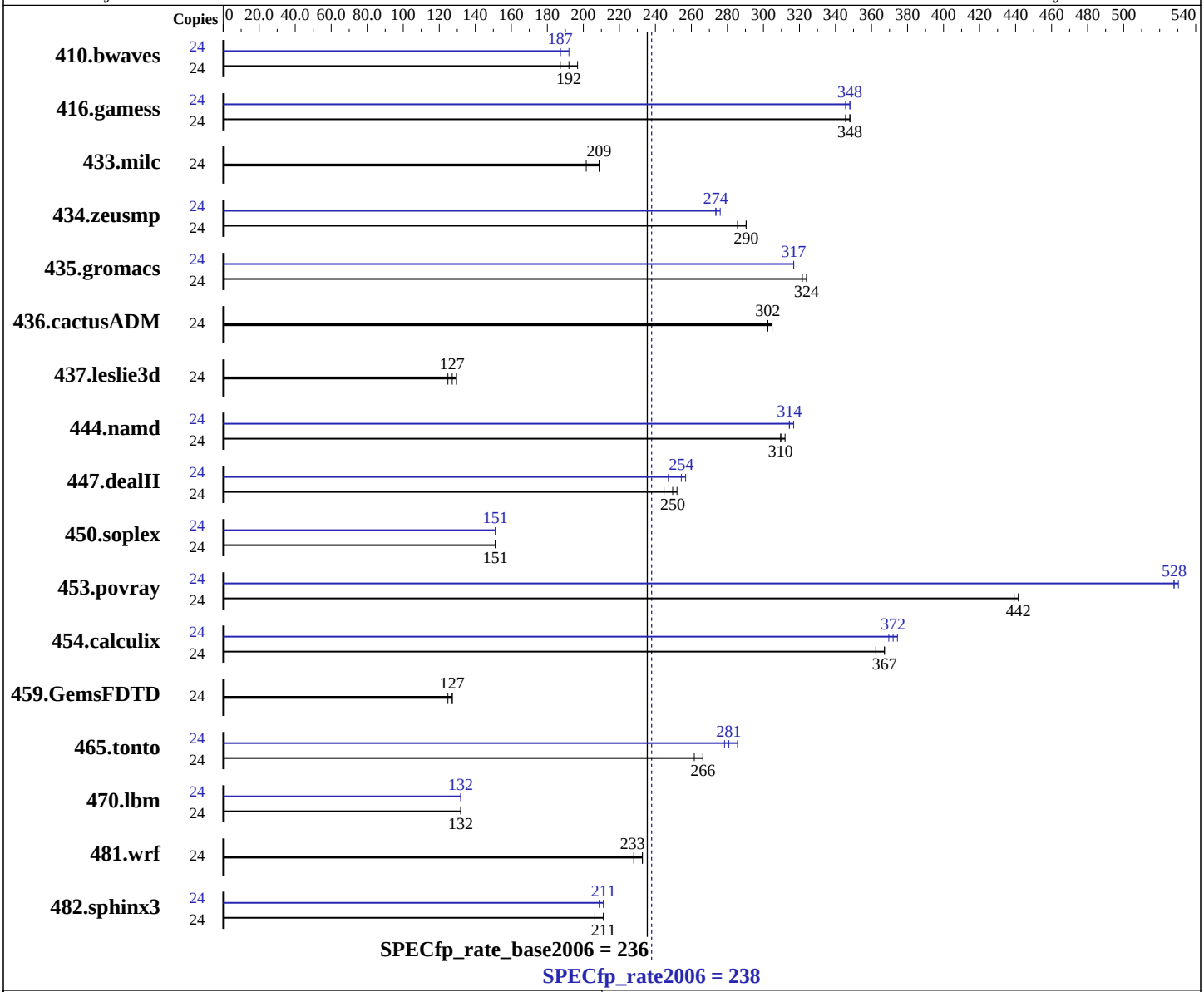
Dell Precision T7500 (Intel Xeon X5680, 3.33 GHz)

SPECfp®_rate2006 = 238

SPECfp_rate_base2006 = 236

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

Test date: Mar-2010
Hardware Availability: Mar-2010
Software Availability: Dec-2009



Hardware

CPU Name:	Intel Xeon X5680
CPU Characteristics:	Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz:	3333
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core

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Software

Operating System:	Windows 7 Professional (64-bit)
Compiler:	Intel C++ Compiler Professional for Intel 64, Version 11.1 Build 20091130 Package ID: w_cproc_p_11.1.054 Intel Visual Fortran Compiler Professional for Intel 64, Version 11.1 Build 20091130 Package ID: w_cprof_p_11.1.054 Microsoft Visual Studio 2008 SP1
Auto Parallel:	No
File System:	NTFS

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L3 Cache:	12 MB I+D on chip per chip
Other Cache:	None
Memory:	48 GB (12x4 GB PC3-10600R)
Disk Subsystem:	1 x 300 GB SATA 10000 RPM
Other Hardware:	None

System State:	Default
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap Library 8.1 for x64

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	24	1753	187	**1704**	**192**	1667	197	24	1705	192	1745	187	**1743**	**187**
416.gamess	24	1356	346	**1355**	**348**	1352	348	24	1358	346	**1355**	**348**	1354	348
433.milc	24	1093	202	1054	209	**1054**	**209**	24	1093	202	1054	209	**1054**	**209**
434.zeusmp	24	767	286	750	290	**754**	**290**	24	801	274	**798**	**274**	790	276
435.gromacs	24	529	324	531	322	**530**	**324**	24	541	317	540	317	**540**	**317**
436.cactusADM	24	949	302	945	305	**945**	**302**	24	949	302	945	305	**945**	**302**
437.leslie3d	24	1813	125	1746	130	**1769**	**127**	24	1813	125	1746	130	**1769**	**127**
444.namd	24	**619**	**310**	617	312	623	310	24	**611**	**314**	611	314	610	317
447.dealII	24	1086	252	1122	245	**1102**	**250**	24	1107	247	1070	257	**1079**	**254**
450.soplex	24	**1328**	**151**	1333	151	1326	151	24	**1327**	**151**	1330	151	1327	151
453.povray	24	289	442	291	439	**290**	**442**	24	242	528	240	530	**242**	**528**
454.calculix	24	545	362	540	367	**540**	**367**	24	**531**	**372**	536	370	530	374
459.GemsFDTD	24	2053	125	**2015**	**127**	1993	127	24	2053	125	**2015**	**127**	1993	127
465.tonto	24	884	266	**887**	**266**	902	262	24	828	286	845	278	**842**	**281**
470.lbm	24	**2498**	**132**	2511	132	2491	132	24	**2497**	**132**	2506	132	2491	132
481.wrf	24	1171	228	1149	233	**1150**	**233**	24	1171	228	1149	233	**1150**	**233**
482.sphinx3	24	2209	211	**2223**	**211**	2257	206	24	**2223**	**211**	2239	209	2213	211

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

Platform Notes

```
BIOS Settings
     Memory Node Interleaving: NUMA
               Hyper-Threading: ENABLE
```

General Notes

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

Base 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

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- -Qopt-prefetch
/F512000000

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

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

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Base Optimization Flags (Continued)

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

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: `-QxSSE4.1 -Qipo -O3 -Qprec-div- -Qopt-prefetch /F512000000`

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 -Qansi-alias -Qscalar-rep- /F512000000 shlw64mt.lib -link /FORCE:MULTIPLE`

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Peak Optimization Flags (Continued)

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

Fortran benchmarks:

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

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

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: basepeak = yes

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

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.flags.ic11.0.win.20100330.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.20100330.xml

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