SPEC® CFP2006 Result

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Dell Inc.

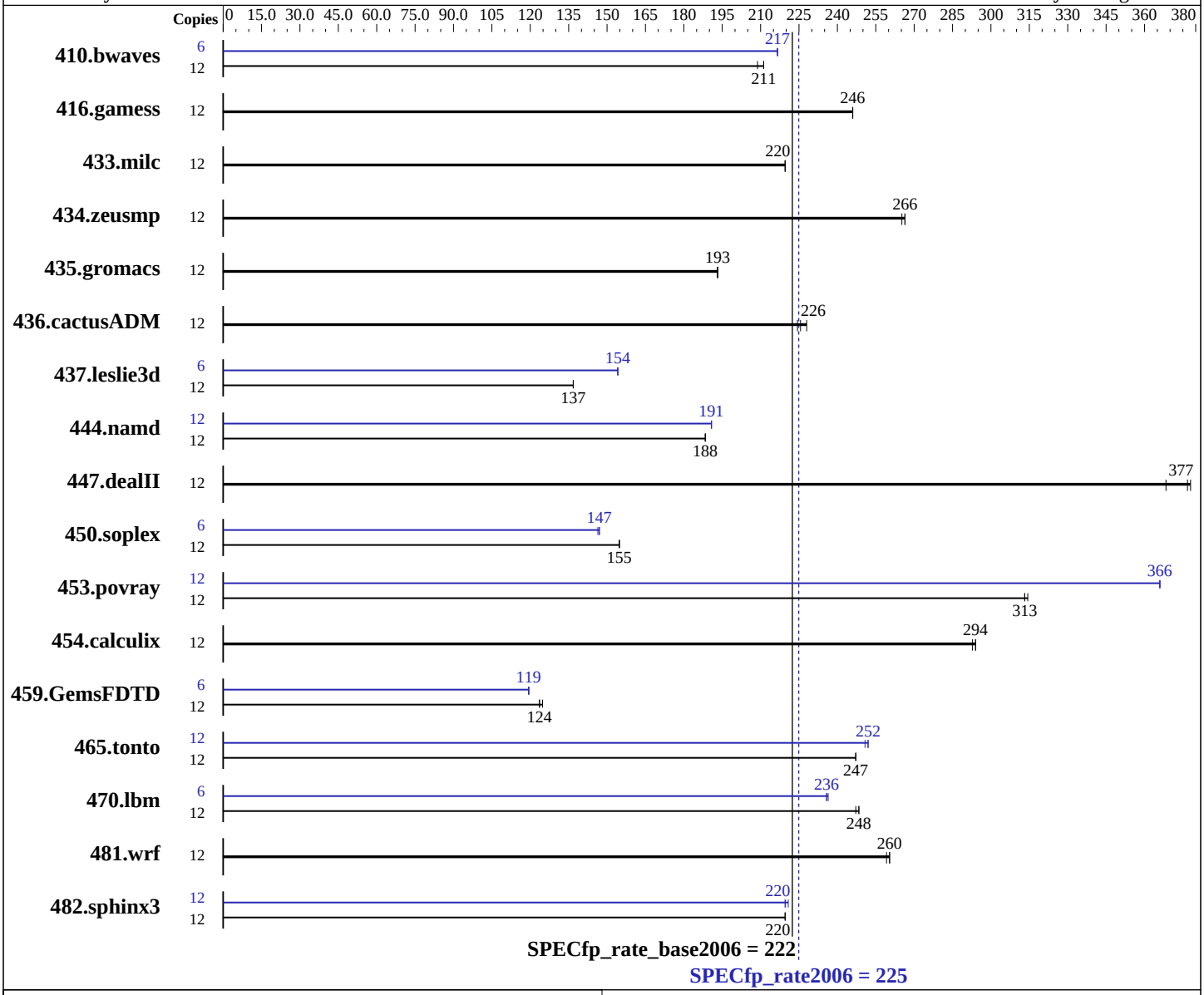
Dell Precision T3610 (Intel Xeon E5-1650 v2, 3.50 GHz)

SPECfp®_rate2006 = 225

SPECfp_rate_base2006 = 222

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

Test date: Nov-2013
Hardware Availability: Sep-2013
Software Availability: Aug-2011



Hardware

CPU Name:	Intel Xeon E5-1650 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.90 GHz
CPU MHz:	3500
FPU:	Integrated
CPU(s) enabled:	6 cores, 1 chip, 6 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 7 Professional (64-bit) SP1
Compiler:	C/C++: Version 12.1.0.233 of Intel C++ Studio XE for Windows Fortran: Version 12.1.0.233 of Intel Visual Fortran Compiler for Intel64 C/C++: Version 2010 of Microsoft Visual Studio
Auto Parallel:	No
File System:	NTFS
System State:	Default

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 32 GB (8 x 4 GB 1Rx8 PC3-14900R-13, ECC)
Disk Subsystem: 1 x 500 GB SATA III 7200 RPM
Other Hardware: None

Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	12	782	209	**774**	**211**	773	211	6	**376**	**217**	377	217	376	217
416.gamess	12	**954**	**246**	955	246	954	246	12	**954**	**246**	955	246	954	246
433.milc	12	**502**	**220**	502	220	503	220	12	**502**	**220**	502	220	503	220
434.zeusmp	12	411	265	410	266	**410**	**266**	12	411	265	410	266	**410**	**266**
435.gromacs	12	443	193	**443**	**193**	443	193	12	443	193	**443**	**193**	443	193
436.cactusADM	12	640	224	**636**	**226**	630	228	12	640	224	**636**	**226**	630	228
437.leslie3d	12	**823**	**137**	823	137	824	137	6	365	154	**365**	**154**	365	154
444.namd	12	510	188	**510**	**188**	510	188	12	505	191	504	191	**505**	**191**
447.dealII	12	373	368	**365**	**377**	363	378	12	373	368	**365**	**377**	363	378
450.soplex	12	649	155	**648**	**155**	647	155	6	**341**	**147**	341	147	342	146
453.povray	12	204	313	203	314	**204**	**313**	12	**175**	**366**	174	366	175	366
454.calculix	12	339	293	**337**	**294**	337	294	12	339	293	**337**	**294**	337	294
459.GemsFDTD	12	1028	124	**1028**	**124**	1023	125	6	**533**	**119**	532	119	533	119
465.tonto	12	**479**	**247**	479	247	478	247	12	**469**	**252**	470	251	468	252
470.lbm	12	665	248	666	247	**665**	**248**	6	**349**	**236**	349	236	349	236
481.wrf	12	**516**	**260**	517	259	515	260	12	**516**	**260**	517	259	515	260
482.sphinx3	12	**1067**	**220**	1065	220	1067	220	12	1061	221	1064	220	**1063**	**220**

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

Submit Notes

```
The config file option 'submit' was used.
```

Operating System Notes

```
Set power configuration to High Performance and disabled monitor blanking and sleep timer
```

Platform Notes

```
Sysinfo program c:\cpu2006.v1.2/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ \8787f7622badcf24e01c368b1db4377c
running on T3610-GLDN-PC Wed Nov 20 10:55:07 2013

This section contains SUT (System Under Test) info as seen by
```

Continued on next page

Platform Notes (Continued)

```
some common utilities.  To remove or add to this section, see:
  http://www.spec.org/cpu2006/Docs/config.html#sysinfo

Trying 'systeminfo'
OS Name       : Microsoft Windows 7 Professional
OS Version    : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: Dell Inc.
System Model  : Precision T3610
Processor(s)  : 1 Processor(s) Installed.
     [01]: Intel64 Family 6 Model 62 Stepping 4 GenuineIntel ~3501 Mhz
BIOS Version  : Dell Inc. A03, 9/5/2013
Total Physical Memory: 32,712 MB

Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 1536
L3CacheSize   : 12288
MaxClockSpeed : 3501
Name          : Intel(R) Xeon(R) CPU E5-1650 v2 @ 3.50GHz
NumberOfCores : 6
NumberOfLogicalProcessors: 12

(End of data from sysinfo program)
```

General Notes

```
Binaries were compiled on a Precision T1600 system with a single Xeon E3-1200 CPU and 16GB memory using Windows 7 Professional 64-bit
```

Base Compiler Invocation

C benchmarks:
```
icl -Qvc10 -Qstd=c99
```

C++ benchmarks:
```
icl -Qvc10
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qvc10 -Qstd=c99 ifort
```

Base Portability Flags

410.bwaves: `-DSPEC_CPU_P64 -names:lowercase`
416.gamess: `-DSPEC_CPU_P64`

Continued on next page

Base Portability Flags (Continued)

433.milc: -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -DSPEC_CPU_P64
436.cactusADM: -DSPEC_CPU_P64 -names:lowercase /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_NEED_INVHYP -DNEED_INVHYP
454.calculix: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -names:lowercase
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:
-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32 /F512000000

C++ benchmarks:
-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias -Qcxx-features
-Qauto-ilp32 /F512000000 shlw64m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:
-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias /F1000000000

Benchmarks using both Fortran and C:
-QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32 /F1000000000

Peak Compiler Invocation

C benchmarks:
icl -Qvc10 -Qstd=c99

C++ benchmarks:
icl -Qvc10

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc10 -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: -QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias -Qauto-ilp32 /F512000000

482.sphinx3: -QxAVX -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias -Qauto-ilp32 /F512000000

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Oa -Qauto-ilp32 /F512000000 shlw64m.lib -link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo -O3 -Qauto-ilp32 /F512000000 shlw64m.lib -link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qauto-ilp32 /F512000000 shlw64m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: -QxAVX -Qipo -O3 -Qprec-div- -Qansi-alias /F1000000000

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: Same as 410.bwaves

459.GemsFDTD: Same as 410.bwaves

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

Benchmarks using both Fortran and C:

Continued on next page

Peak Optimization Flags (Continued)

435.gromacs: `basepeak = yes`

436.cactusADM: `basepeak = yes`

454.calculix: `basepeak = yes`

481.wrf: `basepeak = yes`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Dell-ic12.1-Windows.html`
`http://www.spec.org/cpu2006/flags/Dell-platform-Precision.20131217.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Dell-ic12.1-Windows.xml`
`http://www.spec.org/cpu2006/flags/Dell-platform-Precision.20131217.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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