



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

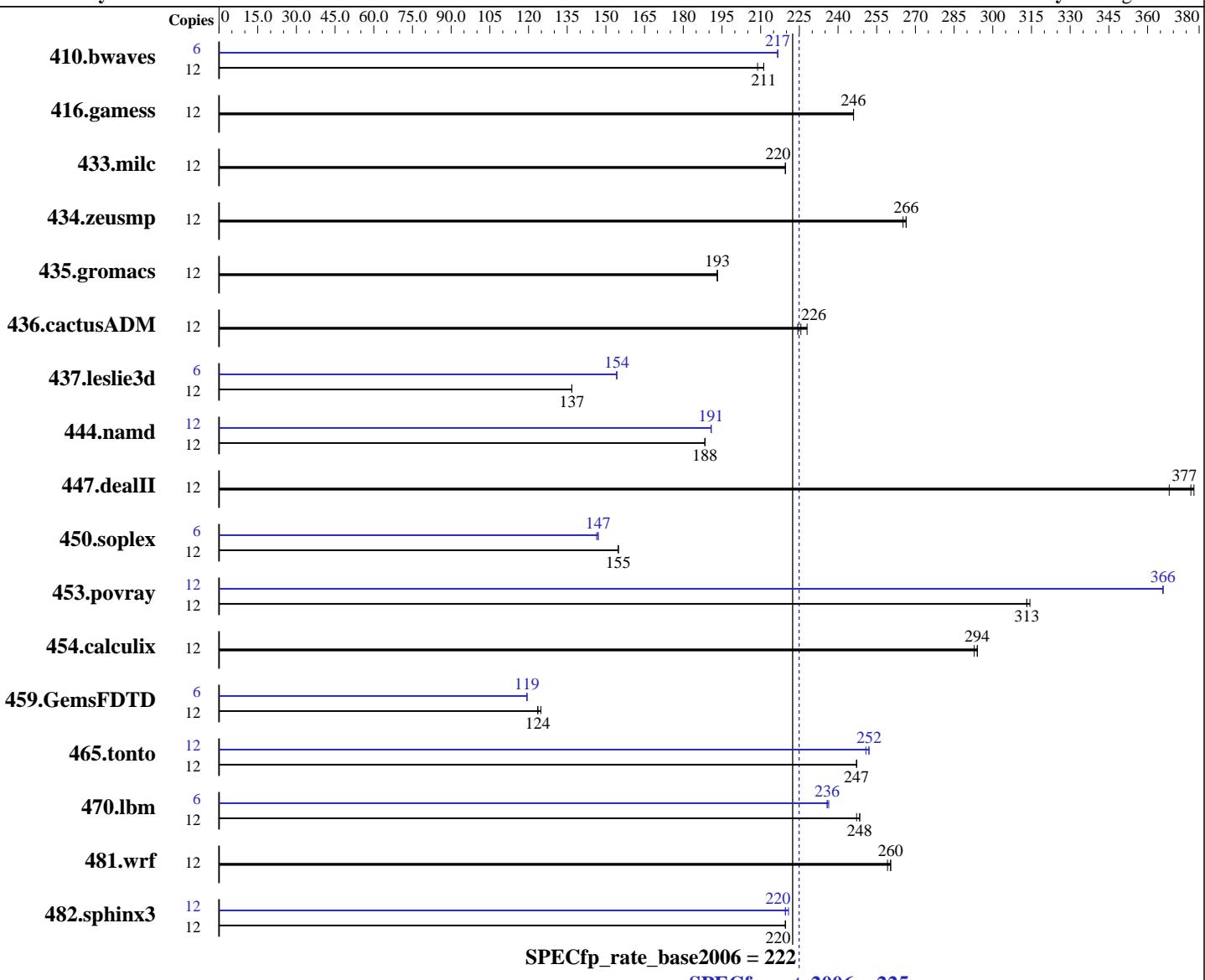
Test sponsor: Dell Inc.

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

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:
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 $ $Date::: 2011-08-16 #$
running on T3610-GLDN-PC Wed Nov 20 10:55:07 2013
```

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

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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

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| | |
|--|---|
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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
```



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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- -Qunroll12 -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



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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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